
HP OpenView Service Quality Manager



Release Notes

Edition: 1.4

for the HP-UX and Microsoft Windows Operating Systems

March 2007

© Copyright 2007 Hewlett-Packard Company, L.P.

Legal Notices

Warranty

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

The information contained herein is subject to change without notice.

Restricted Rights Legend

Confidential computer software. Valid license from HP required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

Copyright Notices

© Copyright 2004-2007 Hewlett-Packard Development Company, L.P.

Trademark Notices

Adobe®, Acrobat®, and PostScript® are trademarks of Adobe Systems Incorporated.

HP-UX Release 10.20 and later and HP-UX Release 11.00 and later (in both 32 and 64-bit configurations) on all HP 9000 computers are Open Group UNIX 95 branded products.

Java™ and all Java based trademarks and logos are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and other countries.

Microsoft®, Windows®, Windows NT® and Windows® XP are U.S. registered trademarks of Microsoft Corporation.

Oracle® is a registered US trademark of Oracle Corporation, Redwood City, California.

UNIX® is a registered trademark of The Open Group.

Contents

Preface	5
Chapter 1	7
Introduction	7
1.1 Product Goals	7
1.2 What's new in SQM 1.40?	7
1.3 Corrected Problems	10
1.3.1 User Interfaces.....	10
1.3.2 Core components.....	10
1.3.3 Service Adapters and Gateways	11
Chapter 2	12
Software Prerequisites	12
2.1 HP-UX Software Prerequisites.....	12
2.2 Windows Software Prerequisites	13
Chapter 3	14
Packaging and Installation.....	14
3.1 Kit Hierarchy.....	14
3.2 Installation	16
Chapter 4	17
Known Problems and Limitations	17
4.1 Known Problems	17
4.1.1 User Interfaces.....	17
4.1.2 Core components.....	17
4.1.3 Service Adapters and Gateways	17
4.2 Known Limitations	18
4.2.1 User Interfaces.....	18
4.2.2 Core components.....	19
4.2.3 Service Adapters and Gateways	21
4.2.4 User Documentation	21
Chapter 5	22
SQM Documentation Set	22
5.1 SQM Core Documentation.....	22
5.2 SQM SA and Gateways Documentation.....	22
5.3 Value Packs	23
5.4 Other Documentation.....	23

Chapter 6	24
Software Availability in Native Languages	24
Chapter 7	25
Migration Guide.....	25
7.1 Known Migration Problems and Limitations.....	25
7.1.1 Known Problems.....	25
7.1.2 Known Limitations.....	25
7.2 Migration Paths	25
7.2.1 Integration system.....	26
7.2.2 Production System.....	27
7.3 Migration Steps	28
7.3.1 Binaries / Migration tools Installation	28
7.3.2 Platform Migration.....	29
7.3.3 Personal settings migration	30
7.3.4 Post-migration tasks	31
7.4 Databases Migration	31
7.4.1 SRM	32
7.4.2 SPDM.....	33
7.4.3 DataMart	33
7.5 SA Migration (including Value Pack)	33
7.5.1 SQLSA regeneration (you are owner of the SQL SA)	33
7.5.2 SA Installation	34
7.6 Reporting Migration.....	35
7.7 Gateway migration	36
7.7.1 Gateway installation.....	36
7.7.2 Complete Script Gateway migration	36
7.8 Databases Upgrade	37
7.8.1 Oracle10g installation	37
7.8.2 Oracle Pre-Upgrade tasks	37
7.8.3 Databases upgrade from 9.2.0.6.0 to 10.2.0.3.0	38
7.8.4 Add sqmadm user to dba group	48

Preface

This document is the release notes of the HP OpenView Service Quality Manager (SQM) 1.40. It covers all the SQM product components including the Service Adapters, Gateways, and Value Packs. It also covers the migration from SQM 1.30 to this SQM 1.40. This document should be read prior to install the product.

The prerequisites for installing and the installation procedures are described into the installation guide manuals.

Intended Audience

This document addresses administrators, service designers and service operators who will be exposed to OpenView SQM.

Associated Documents

The OpenView SQM documentation set is detailed in the Chapter 5.

Software Versions

The term UNIX is used as a generic reference to the operating system, unless otherwise specified.

The software versions referred to in this document are as follows:

SQM	UNIX	Windows
1.40	HP-UX 11.11	XP

Typographical Conventions

Courier font for:

- Source code and examples of file contents
- Commands that you enter on the screen
- Path names
- Keyboard key names

Italic text for:

- Filenames, programs, and parameters
- The names of other documents referenced in this manual

Bold text for:

- New terms
- Important words

Support

You can visit the HP OpenView support web site at:

<http://support.openview.hp.com/support.jsp>

This Web site provides contact information and details about the products, services, and supports that HP OpenView offers.

HP OpenView online software support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valued support customer, you can benefit by using the support site to:

- Search for knowledge documents of interest
- Submit enhancement requests online
- Download software patches
- Submit and track progress on support cases
- Manage a support contract
- Look up HP support contacts
- Review information about available services
- Enter discussions with other software customers
- Research and register for software training

Introduction

1.1 Product Goals

HP OpenView SQM is the OpenView solution dedicated to service quality management. The *OpenView SQM Overview* document contains an introduction to service quality management and a description of the SQM features.

1.2 What's new in SQM 1.40?

Core product

- A new calculation scheduling feature called '*Sampling Scheduling*' allows synchronizing of calculation of a complete service model with the delivery of data from a common media layer.

The calculation of secondary data, which was previously determined by SQM Engine calculation period, can now be launched at specific time intervals and synchronized on data reception.

This new functionality allows:

- The SQM Core engine to be started at specified interval (ex: every 15 minutes: 10:15, 10:30...), and this interval is provided per service.
- The calculation of secondary parameters is done when all required primary parameters have been collected for a given interval. The mediation layer is normalizing and aligning all collected measures to provide correct secondary Key Quality Indicators.

A complete description of the sampling scheduling is given in the *OpenView SQM Sampling Scheduling User's Guide*

- Enhanced reporting capabilities:

To continuously improve SQM reports accuracy, new reporting enhancements are implemented in this release:

- The periods of data collection failure (known as "No Value" periods) are now used for summarization calculation (average, min, max) and are available for custom reports instead of being discarded.
- Support for the new Sampling Scheduling feature is also offered in the reporting. Thus, if no measure is published for a parameter at a sample timestamp, the DataMart views will show a replicate of the previous one at this timestamp. Of course, those replicated measures are handled by the late calculation tool as any other measures.

A description of the changes in the Reporting can be found in the *OpenView SQM Reporting Customization and User's Guide*, while the changes in the DataMart are documented in the *OpenView SQM Datamart User's Guide*.

Service Adapters

- A new SQM/TeMIP Real Time integration (TeMIP Fault Service Adapter)

This Service Adapter provides a mean to forward immediately a problem identified on TeMIP Fault Management Platform, to a SQM affected service or service component.

This new adapter is complementing the existing TeMIP Fault Statistics adapter, which was providing alarm statistics on critical network resources.

The TeMIP Fault Service Adapter supports the following functionalities:

- Collects real-time problem alarms from TeMIP and translates into a service status in SQM
- Provides an automatic discovery mechanism of service resources
- Exposes TeMIP problem metrics: Problem Status (deduced from a Problem Alarm severity), Problem Duration, Statistics on problem raw events: Number of raw symptoms, Initial raw event timestamp, Latest detected raw event timestamp...
- Automatic resynchronization between SQM and TeMIP systems.

For more information, please refer to *OpenView SQM TeMIP Fault Service Adapter User's Guide*.

Value Pack

- Mobile Data Service Value Pack extension.

The Mobile Data Service (MDS) Value Pack is extended to include:

- New "MMS" service
- Support for 3G services
- Support for roaming users
- Enhanced WAP infrastructure model
- End to end accessibility monitoring for content applications
 - TCP, HTTP, FTP, SMTP, POP3
- Enhanced Customer care service component
 - GB923av1.5 SLA Management Handbook compliant
- Management of 'redundancy' now available for key backbone equipment
- Pre-integration of "Mobile Subscriber Experience" value pack (Service Definition merged).

For more information, please refer to *OpenView SQM Mobile Data Services Value Pack User's Guide*.

- IP Multimedia Services Value Pack extension for IPTV.

The IP Multimedia Services Value Pack is extended for IPTV:

- Improving QoSmetrics integration with real Service Adapter and service model (QoSmetrics is a probe vendor providing video, voice and data related KPIs)
- Upgrading the IPTV Service Model with new data source: TeMIP

- Improving TMF KQI compliance
- Upgrading with new components: application servers, gateways

For more information, please refer to *OpenView SQM Internet Protocol Multimedia Service Value Pack User's Guide*.

- Mobile Subscriber Experience Value Pack

The Mobile Subscriber Experience Value Pack is deprecated with SQM 1.40 and pre-integrated into the Mobile Data Service Value Pack (refer to above).

1.3 Corrected Problems

1.3.1 User Interfaces

PR #	Problem Description
57988	SD#200277597 Impossible to connect the <i>SLA Admin</i> UI to the <i>UI Server</i> . The reason is that the <i>RepoUrlAdmin</i> still refers to the old Tibco name while the new name is <i>AUTH_<platform_name></i>
59886	Impossible to access <i>SQM Tibco Repository</i> through the Windows <i>Tibco Designer 5.3</i>

1.3.2 Core components

PR #	Problem Description
58861	With huge collection rates, the <i>Time Aggregation</i> feature can lead to serious performance degradations on <i>SPDM</i> .
59987	SD#200322037 On HP-UX system with <i>ServiceGuard</i> , the following error has been reported: (<i>PROBE_TIMEOUT=40</i> and <i>PROBE_INTERVAL=60</i>) This error comes from the use by <i>SQM</i> of an old version of <i>hatimerun</i> (v0.99). <i>SQM</i> has to migrate to the version 1.11 of <i>hatimerun</i> ..
61403	SD#200371018 In the <i>DataMart</i> databases, <i>SCI_xxxx_CI_DAT</i> views retrieve all the performance measures of a <i>SI</i> or <i>SCI</i> . This works fine when it concerns a <i>SCI</i> . But, when it concerns a <i>SI</i> , the result is incorrect (the view is always empty).
61524	SD#200370005 <i>DataMart/Reporting</i> : In some cases, the <i>maximum</i> value calculated in aggregated data (for instance: hourly aggregated data) is wrong whereas the <i>minimum</i> and the <i>average</i> values are correct. This problem appears from time to time, but not in a predictable manner.
62179	SD#200397170 A huge collection rate combined with an huge amount of <i>SCD</i> in <i>Sampling Mode</i> , can lead to serious performance degradations on <i>SPDM</i> . This degradation is linked to the increasing size of the <i>SPDM RAW_DATA</i> table.
62232	SD# 200397170 Restarting the <i>SPDM</i> in ' <i>Synchronization</i> ' mode may lead to inconsistent <i>Calculation Engine</i> generation. Therefore, after its startup, the <i>SPDM</i> is no more able to correctly process the collected measures.

1.3.3 Service Adapters and Gateways

PR #	Problem Description
51151	<p>When a Data Feeder state changes more than once in a short period or time (i.e. quick lock/unlock on a Data Feeder), a critical error can be logged in the <i>SRM</i>, but there is no functional impact.</p> <p>Severity : CRITICAL</p> <p>Message : The list of <i>ScDFICollState</i> is supposed to not contain more than one occurrence of an <i>ScDFICollState</i></p>
61137	<p>The data collection from OVIS does not work.</p> <p>The problem comes from the 'interfacing' between the OVIS Service Adapter and the Service Adapter Common library.</p> <p>When the SA start the following error occurs:</p> <p>Unexpected Exception encountered: Connector.onCollectionUnlocked method requires that the provided collection is not null, and of type DFCollection.</p>
61512	<p>SD# 200374931</p> <p>SNMP traps emitted by the SNMP Action Executor may not be understandable by their receiver.</p> <p>The problem comes from the order of the <i>SNMP_TRAP_OID</i> and <i>SYSUPTIME</i> parameters.</p> <p>The SNMP Action Executor provides first the <i>SNMP_TRAP_OID</i> and then the <i>SYSUPTIME</i> while the RFC1905 require the order to be <i>SYSUPTIME</i> first then <i>SYSUPTIME</i>.</p>

Chapter 2

Software Prerequisites

2.1 HP-UX Software Prerequisites

Table 1 HP-UX Software Prerequisites

Product	Version	Used by	Note
HP-UX	11.11	SQM wide	Details of HP-UX bundles and tools are listed in the Installation Guide
HP C/ANSI C Developer's Bundle for HP-UX11.i	B3899BA B11.11.04	SPDM and DataMart	Bundled in PHSS_26952
HTTP Apache server for HP-UX	1.3.27	Reporting	
JSP Engine Apache Tomcat for HP-UX	4.1.27	Reporting	
BusinessObjects 6.5.1 / WebIntelligence 6.5 Server Products: <ul style="list-style-type: none">• WebIntelligence• Data Access pack for Oracle	6.5 6.5	Reporting	
Oracle for HP-UX	10.2.0.3	SQM wide	DST patches 5746875 and 5632264 are also needed If you experience problems with 5632264 patch for 10.2.0.3 you can use the 10.2.0.2 version as described in metalink note:396387.1
Oracle Client for HP-UX	9.2.0 or above SQL*Plus	Reporting	

2.2 Windows Software Prerequisites

The installation of SQM User Interfaces on Windows 2003 server is not supported.

Table 2 Windows Software Prerequisites

Product	Version	Used by	Note
Windows XP	SP1 or higher	SQM wide	
Oracle Client for Windows	9.2.0 or above SQL*Plus	Reporting	
BusinessObjects 6.5.1 / WebIntelligence 6.5 Server Products: <ul style="list-style-type: none">• WebIntelligence• Data Access pack for Oracle	6.5 6.5	Reporting	
Rational Rose Modeler	V7	Service Designer	The 'Modeler' edition is enough to use Service Designer Add-In, but any other edition can be used.

Other mandatory third-party software, such as Tibco, are packaged with SQM and are not documented in the tables above.

Chapter 3

Packaging and Installation

3.1 Kit Hierarchy

SQM 1.40 is packaged into two CD.

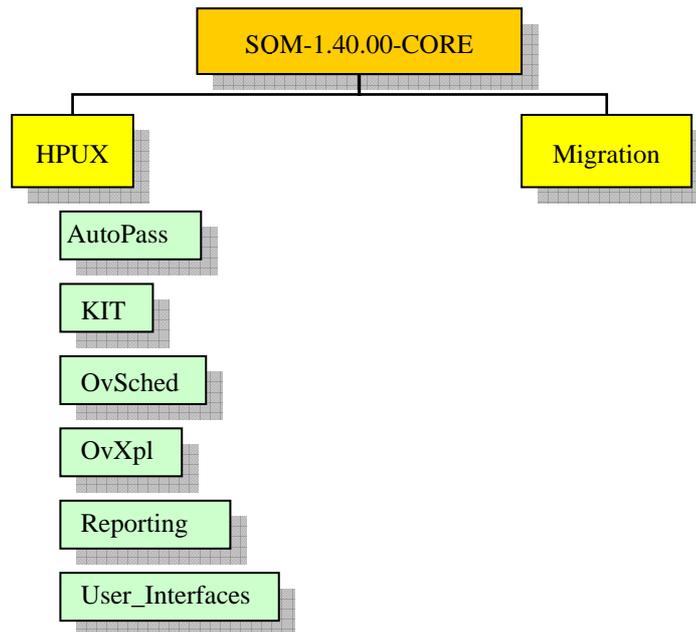
The first CD contains:

- The software kits for the Core components for HP-UX (folder SQM-1.40.00-CORE/HPUX)
- The Service Adapter and Gateway components (folder SQM-1.40.00-SAGTW)
- The migration tools (folder SQM-1.40.00-CORE/Migration)
- The SQM user documentation (folder SQM-1.40.00-DOCUMENTATION)

The second CD contains the software kits for:

- The Core components for Windows (folder SQM-1.40.00-COREWIN)
- The Value Packs (folder SQM-1.40.00-VALUEPACK).

Core components for HP-UX delivery hierarchy



The Root directory contains the '*sqm_install*' installation script.

The AutoPass directory contains the licensing software which is installed automatically with *sqm_install*. This is the same for the OVSched and OVXpl directories.

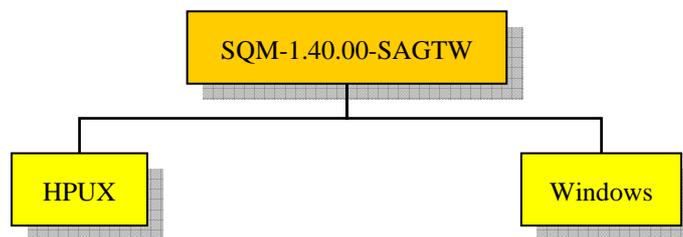
The KIT directory contains the SQM software package for the HP-UX Operating System. The software package can be installed with the supplied "*sqm_install*" script.

The Reporting directory contains the installer for the Reporting software on HP-UX.

The User_Interfaces directory contains the installer for the SLA Monitoring UI software for deployment through the Web with Web Start.

The Migration directory contains a tar file including the migration scripts.

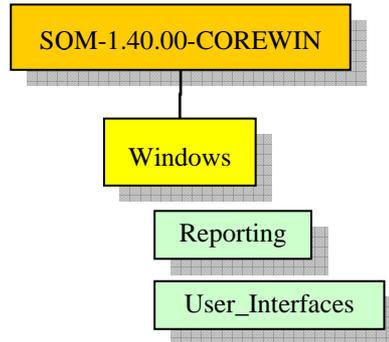
SA and Gateway components delivery hierarchy



The HPUX and Windows directories contain the installers for each product.

Core components for Windows delivery hierarchy

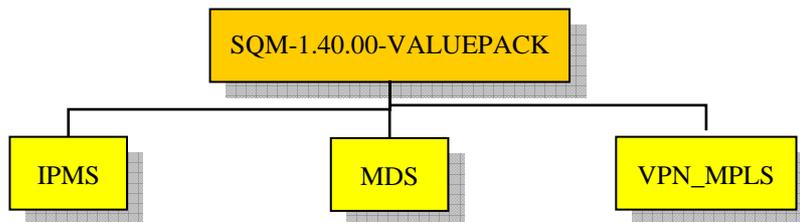
The Reporting directory contains the installer for the Reporting software on



Windows.

The User_Interfaces directory contains the installers for the User Interfaces and User Interface plug-in on Windows. It also contains the installer for the Kernel on Windows.

Value Pack components delivery hierarchy



Each directory contains the HP-UX and windows installers for the corresponding Value Pack.

The Value Packs Development Toolkit is available in the top directory.

3.2 Installation

Please refer to the *OpenView SQM Installation Guide* and to the *Installation, Configuration and User's Guide* of each product component for detailed information about the installation requirements and the installation procedures.

Chapter 4

Known Problems and Limitations

4.1 Known Problems

4.1.1 User Interfaces

PR #	Problem Description	Workaround
51076	Popup menu is no more displayed in the SLA Scope list. Related action was open.	Use a double-click to open the SLA.
52998	The <i>TeMIP Gateway</i> does not start. An error is raised indicating ' <i>enable to find libist_SQMSYSTEM.sl</i> '	Install the MIB subset. Refer to the <i>TeMIP Gateway User Guide</i> to know how to proceed with this installation

4.1.2 Core components

PR #	Problem Description	Workaround
52828	Despite improvements made in reports to bypass <i>Business Object</i> limitations, it may remain some unexpected page breaks.	None
61661	On platform with huge models and/or high collection rate, the <i>SPDM 'logged_event'</i> table may become full, avoiding the Calculation Engines to work properly.	Increase the <i>SPDM 'UTIL'</i> table space

4.1.3 Service Adapters and Gateways

PR #	Problem Description	Workaround
50958	<i>Script Gateway</i> : If the [backspace] key is pressed (for typo correction) during the script creation setup, this script will fail. An error is logged when starting the <i>Script Gateway</i> application. The configuration cannot be applied on the application.	Edit the XML description file, remove the special characters and call the <i>reload</i> AMI directive on the <i>Script Gateway</i> application.
52608	For <i>SQL Service Adapters</i> , the <i>temip_sc_configure.pl</i> script does not check that	Avoid using the script as <i>root</i> user for add, remove

	<p>the add/remove/list Connector options are executed by the <i>sqmadm</i> user.</p> <p>If the script is executed from the root account, it will cause file right permission problems when the script is executed as <i>sqmadm</i> user.</p>	and list Connector actions.
--	--	-----------------------------

4.2 Known Limitations

4.2.1 User Interfaces

PR #	Problem Description	Workaround
52075	<p>Keyboard shortcuts are only partially implemented in the <i>SLA Monitoring</i> UI.</p> <p>For example, when selecting a parameter, <code>CtrlB</code> add it to the dashboard while <code>CtrlD</code> (add a parameter to the default dashboard) has no effect.</p> <p>If trying to use the <code>CtrlR</code> shortcut to remove the parameter from the dashboard, instead the UI will propose to rename the parameter.</p>	
54046	It is not possible to get connected to <i>SLA Monitoring</i> UI or <i>SLA Admin</i> UI with a user (or a group) defined in Unix Yellow Pages	Use users and groups defined locally on the host (in <code>/etc/passwd</code> and <code>/etc/group</code>).
54080	On the <i>SLA Monitoring</i> UI, after an update, the 'monitoring scope' sorting order is not re-applied.	Select the sorting order you want after the update.
57808	<p>The <i>Service Designer</i> UI crash when you browse to find a '.mdl' to load.</p> <p>When launches the <i>Service Designer</i>, do 'open' operation, browse to find the '.mdl'. After changing directory several times, <i>Service Designer</i> will crash</p>	<p>Do not click or let the mouse cursor in the drawing area where files and directory are listed.</p> <p>Or use the <i>Look In and File Name</i> (with auto-completion) to navigate in directories.</p>
62311	In the <i>SLA Monitoring</i> UI, when a description of a Parameter or an SCI is too long, the corresponding tooltips might go over the screen size	<p>In your model definitions ('.xml' files), you can 'force' the carriage returns by adding <code>
</code> HTML tags (<code>&lt;br&gt;</code> sequence)</p> <p>Example: <pre><sc:Descr>This is a long description&lt;br&gt; which is now displayed&lt;br&gt;on several lines</sc:Descr></pre></p>

4.2.2 Core components

PR #	Problem Description	Workaround
49331	<p><i>DataMart</i>:</p> <p>Tunnel SLO are not supported by the <i>DataMart</i>.</p> <p>On Tunnel SLO (e.g. 20< Parameter <40), SQM considers that there are two SLO with independent status.</p> <p>The <i>SLA Monitoring</i> UI processes these statuses and displays a single status for a parameter that has this kind of SLO.</p> <p>In the <i>DataMart</i>, this processing is not done and we have data for the two SLO. These data cannot be exploited especially after Hourly/Daily aggregation.</p>	
53257	<p>When the table of a report contains more than 4 columns, the 5th and plus columns do not fit within the format of the report page.</p> <p>As a consequence, the 5 and plus columns of the table are neither displayed in the PDF document nor printed in report.</p>	
53719	<p>As explained in the '<i>information modeling</i>' document (chapter 2.9.4), there should not be several SLAs for the same 'Service Instance (SI)' / 'Customer' couple (because of compliance computation).</p> <p>This limitation also exists for the shared Service Component Instances (SCI). So, several SLAs should not monitor a same 'SCI' / 'Customer' couple (have a parameter with an SLO).</p> <p>Otherwise, the <i>SPDM</i> choose one of the SLA (the first alphabetically) for the compliance. Therefore, others SLAs will have a wrong compliance.</p> <p>Note: The <i>SRM</i> checks such semantic validation errors at SI level and logs warnings. However, the <i>SRM</i> does not validate the SCI levels.</p>	
56739	<p>It is not possible to start an application on a remote node using the '<i>temip_sc_start_application</i>' command.</p>	<p>Start the application locally to the node</p>
61647	<p>When a <i>TeMIP_Fault SA</i> is used to collect measures on a huge amount of instances (more than 5000 SI/SCI), the '<i>Collection State</i>' propagation may be long (more than half an hour).</p> <p>This can lead to a problem if the <i>Service Adapter proxy</i> is stopped and then restarted without having waited for the end of the <i>Collection State</i> propagation. In this case, the <i>Service Adapter</i> will not be able to come back to the good <i>Collection</i></p>	<p>Switch off the passive monitoring in the <i>DataCollector (DC)</i>.</p> <p>Please refer to the <i>SQM Administration Guide</i> document.</p>

	State (it will continuously change from Unknown to Available, then from Available to OffLine, to come back to Unknown, and so on ...)	
62195	<p>When a SCD has too many parameters, <i>SPDM</i> may try to generate a Calculation Engine PLSQL file containing a line longer than the maximum allowed 2499 characters length.</p> <p>This avoids the PLSQL file to be loaded so the corresponding Engine cannot be loaded successfully.</p>	<p>When such a problem occurs, the workaround is to manually edit the faulty <i>'.sql'</i> file and to split the PLSQL lines containing more than 2499 characters.</p> <p>To do this you have to logon with the <i>'sqmadm'</i> user and do the following operations:</p> <ul style="list-style-type: none"> - stop the <i>SPDM</i> - cd \$ORACLE_HOME/../../../../admin/spdm/generation/services/ - correct the faulty <i>'.sql'</i> files - export ORACLE_SID=spdm - sqlplus spdm/spdm - under sqlplus execute: @load_SXXX.sql (the <i>.SQL</i> of the Service Engine, calling all the <i>load_SXXX_CXXX_...sql</i>) - restart the <i>SPDM</i>
62307	<p>SQM does not allow Enumerates with more than 20 values.</p> <p>The DataMart has an additional constraint. It expects the Enumerate values to have consecutive identifiers going from 0 to 19.</p> <p>Therefore if, for instance, an Enumerate is defined with identifier incremented by 5 (0, 5, 10, 15 ...), the values with ID greater than 19 will be ignored by the DataMart.</p>	<p>Redefine the Enumerate with consecutive identifiers going from 0 to 19 (example: 0, 1, 2, 3, 4, 5, 6 ...)</p>
62554	<p>In HP-UX MC ServiceGuard environment, the Hawk Event Service does not belong to any 'package'.</p> <p>Therefore, if the machine hosting it crashes, this application will not be relocated.</p> <p>This problem will mainly impact the logging of the 'Self Management' events (useful for troubleshooting purpose).</p>	<p>Restart the Hawk Event Service manually on a running machine.</p> <p>To start this service, you can use the <i>temip_sc_hawk_event_service_start</i> command (in <i>\$TEMIP_SC_HOME/bin/</i>).</p>

4.2.3 Service Adapters and Gateways

PR #	Problem Description	Workaround
19012	<p>When a Data Feeder Instance is deleted or updated (for instance assigned to another Service Adapter application), the Service Adapter managing initially this Data Feeder Instance is not aware of the Data Feeder Instance deletion or update. As a result it continues to publish unexpected measures.</p> <p>The measures are duplicated when the Data Feeder Instance has been moved from a Service Adapter application to another.</p>	Stop and restart the Service Adapter application.

4.2.4 User Documentation

The full User Documentation set is given, but some documents still refer to the SQM V1.2 or SQM 1.30 versions.

Chapter 5

SQM Documentation Set

The manuals for Service Quality Manager are shipped as PDF files.

5.1 SQM Core Documentation

SQM Core documentation is made of the following manuals:

- OpenView SQM Overview
- OpenView SQM SLA Monitoring UI User's Guide
- OpenView SQM Service Designer UI User's Guide (updated)
- OpenView SQM SLA Administration UI User's Guide
- OpenView SQM Getting Started Guide
- OpenView SQM Installation Guide (updated)
- OpenView SQM Administration Guide (updated)
- OpenView SQM Information Modeling Reference Guide
- OpenView SQM Sampling Scheduling Guide (new)
- OpenView SQM Datamart User's Guide (updated)
- OpenView SQM DataMart Model Description (new)
- OpenView SQM Reporting Customization and User's Guide (updated)
- OpenView SQM Datamart Installation, Configuration and Administration Guide (updated)
- OpenView SQM Reporting Installation, Configuration and Administration Guide (updated)
- OpenView SQM Oracle Reference Guide (update 9i to 10g)
- OpenView SQM L10N Guidelines (updated)
- OpenView SQM Release Notes (updated)

5.2 SQM SA and Gateways Documentation

SQM SA and Gateways documentation is made of the following manuals:

- OpenView SQM Service Adapters User's Guide
- OpenView SQM SQL Service Adapter Toolkit Installation, Configuration and User's Guide
- OpenView SQM Service Adapters Software Development Toolkit Development Guide

- OpenView SQM Service Adapter Proxy Installation, Configuration and User's Guide
- OpenView SQM Service Adapter for OVIS Installation, Configuration and User's Guide
- OpenView SQM Service Adapter for OVSN Installation, Configuration and User's Guide
- OpenView SQM Service Adapter for OVSD Installation, Configuration and User's Guide
- OpenView SQM Service Adapter for OVO Installation, Configuration and User's Guide
- OpenView SQM Gateway for OVO Installation, Configuration and User's Guide
- OpenView SQM TeMIP Alarm Service Adapter Installation, Configuration and User's Guide
- OpenView SQM Cookbook for TeMIP integration with Acanthis KnowledgeWare
- OpenView SQM TeMIP Gateway Installation, Configuration and User's Guide
- OpenView SQM Script Gateway Installation, Configuration and User's Guide
- OpenView SQM Action Executor for Simple Network Management Protocol V2 Installation, Configuration and User's Guide
- OpenView SQM TeMIP real-time Fault Service Adapter Installation, Configuration and User's Guide (new)
- OpenView SQM MDS3G Probes Service Adapter Installation, Configuration and User's Guide (new)
- OpenView SQM mFormation Service Adapter Installation, Configuration and User's Guide (new)
- OpenView SQM QoS Metrics Service Adapter Installation, Configuration and User's Guide (new)

5.3 Value Packs

- OpenView SQM Mobile Data Services Value Pack User's Guide (updated)
- OpenView SQM Internet Protocol Multimedia Service Value Pack User's Guide (updated)
- OpenView SQM VPN Services over MPLS Value Pack User's Guide
- OpenView SQM Value Packs Development Toolkit User's Guide (new)

5.4 Other Documentation

The Tibco and AutoPass documents are packaged with the SQM Core documentation:

- Tibco Designer User's Guide
- Tibco Rendezvous Administration
- Tibco Hawk Administrator's Guide
- HP OpenView AutoPass Licensing Guide

Chapter 6

Software Availability in Native Languages

- The OpenView SQM user interfaces are supplied in US English.
- OpenView SQM supports UniCode character sets.
- OpenView SQM has been designed to support the installation in different language environment.
- OpenView SQM 1.40 can be localized.
- Manuals, online help, and references are only available in US English.

Migration Guide

This section describes the migration from SQM 1.30 to SQM 1.40.

The migration steps section lists the different tasks that you may have to perform and how to execute them.

The migration path section details different use cases depending on your situation and requirements.

Before the migration from SQM 1.30 to SQM 1.40, you must install all the SQM 1.30 e-Patches.

7.1 Known Migration Problems and Limitations

7.1.1 Known Problems

After applying the Oracle 9i to 10g Release 2 upgrade procedure, some dmprod packages can have an "INVALID" status (error ORA-00600 are raised in the final step of the procedure). Those packages, named PKG<#####>, are automatically rebuilt during the SQM migration procedure so these errors have no consequences.

7.1.2 Known Limitations

This document does not document the migration of a SQM platform running in a HP-UX MC ServiceGuard environment.

Such migrations will be addressed in a separate document.

7.2 Migration Paths

The migration documentation below describes two use cases:

- Migration of **Integration systems** that are 'test' systems where losing collected data is acceptable if it can simplify the migration.
- Migration of **Production systems** that are systems where we need as much as possible to avoid data loss, even if it implies a more complex migration process.

In this document, we assume that the new ORACLE_HOME of Oracle10g is *'/usr/ORACLE/u01/app/oracle/product/10.2.0'*, and the ORACLE_HOME of the Oracle9i is *'/usr/ORACLE/u01/app/oracle/product/9.2.0'*, and the oracle admin user is 'oracle', the DBA group is 'dba'.

Important Notices

Carefully read the migration procedure before to apply it.

The migration steps described below must strictly be run in the given order.

It is highly recommended to backup your databases before migration.

Pay attention on the user id to be used for each command: either *'root'* or *'sqmadm'*.

Ensure you have sufficient free disk space for:

- Oracle10g and Oracle patch 10.2.0.3 installation
 - Database upgrade (from 9.2.0.6.0 to 10.2.0.3.0)
 - Database backup (depends on the size of database to backup)
 - OV SQM binary installation (similar to 1.30)
 - Migration of data tree (similar to 1.30)
-

7.2.1 Integration system

My use case: I want to keep the platform environment (SA/Model/Instances) **but I accept to loose the data collected during the migration:**

1. Install Oracle10g and patches (refer to 7.8.1 Oracle10g installation)
2. Perform pre-upgrade tasks (refer to 7.8.2 Oracle Pre-Upgrade tasks)
3. Install the SAs and Gateways
4. Stop the 1.30 Platform / Stop the 1.30 Kernel (on all the hosts)
5. Add the user *'sqmadm'* to *'dba'* group (refer to 7.8.4 Add *sqmadm* user to *dba* group)
6. Install SQM 1.40 binaries and migration tools (refer to 7.3.1 Binaries / Migration tools Installation)
7. Upgrade databases from *9.2.0.6.0* to *10.2.0.3.0* one by one (refer to 7.8 Databases Upgrade)
8. Perform the databases migration for SRM / SPDM, **do not migrate DataMart DBs** (refer to 7.4 Databases Migration)
9. Perform the platform migration (refer to 7.3.2 Platform Migration)
10. Perform the personal settings migration (refer to 7.3.3 Personal settings migration)
11. Restart the 1.40 Kernel (on all the hosts if applicable)
12. Start the SQM 1.40 SRM
13. Switch SPDM *'SynchronizationMode'* to *'true'*, then start the SQM 1.40 SPDM component and wait for the end of its initialization (check its log for the end of its *internal model update* and its *activity resume*)
14. Start the SQM 1.40 *'slmonitoring'* and *'presentation'* directors
15. Start the SQM 1.40 acquisition director(s)
16. Migrate the Script Gateways (if any)
17. Start the SQM 1.40 Gateway director(s)
18. Test collection, UI Admin, UI Monitoring ...

19. Perform the databases migration for DataMart DBs_(refer to 7.4 Databases Migration)
20. Perform the post-migration tasks (refer to 7.3.4 Post-migration tasks)
21. Start the SQM 1.40 '*slreporting*' director

7.2.2 Production System

My use case: I want to keep my platform environment (SA/Model/Instances) **and I want to:**

- **Avoid data loss:** Service Adapters will be stopped for several minutes → some data can be lost
 - **Minimize impact on computed values:** the SPDM will be unavailable for several minutes → some calculation steps will be lost
1. Install Oracle10g and patches (refer to 7.8.1 Oracle10g installation)
 2. Perform pre-upgrade tasks (refer to 7.8.2 Oracle Pre-Upgrade tasks)
 3. Install SQM 1.40 binaries and migration tools (refer to 7.3.1 Binaries / Migration tools Installation)
 4. Install existing Service Adapters one by one (refer to 7.5 SA Migration , including the Value Pack ones)
 5. Install the existing Gateways one by one (refer to 7.7.1 Gateway installation)
 6. Stop the SQM 1.30 SLA Admin applications
 7. Stop the SQM 1.30 SRM
 8. Upgrade the SRM database from 9.2.0.6.0 to 10.2.0.3.0 (refer to 7.8 Databases Upgrade)
 9. Perform the database migration **for SRM DB** (refer to 7.4 Databases Migration)

Downtime starts here

- a. Stop all SAs and Gateways
- b. Stop SQM 1.30 Platform / Stop 1.30 Kernel on all the hosts (after the kernel stop, ensure that the '*rvd*' process is no more running; else, kill it)
- c. Add the user '*sqmadm*' to the '*dba*' group on all the hosts (refer to 7.8.4)
- d. Perform the platform migration (primary and secondary hosts if any, refer to 7.3.2 Platform Migration)
- e. Complete the migration of the Script Gateway (refer to 7.7.2 Complete Script Gateway migration)
- f. Perform the personal settings migration **for Common and SRM settings only** (refer to 7.3.3 Personal settings migration)
- g. Restart the 1.40 Kernel (on all the hosts if applicable)
- h. Restart the 1.40 SRM
- i. Upgrade the *sqlsa* database from 9.2.0.6.0 to 10.2.0.3.0 if any, and you can choose upgrade it or not, we recommend that you **do not** upgrade *sqlsa*.
- j. Restart the Service Adapter directors

End of downtime

10. Upgrade the SPDM database from 9.2.0.6.0 to 10.2.0.3.0 (refer to 7.8 Databases Upgrade)
11. Perform the database migration **for SPDM DB** (refer to 7.4 Databases Migration)
12. Restart the Gateway directors
13. Complete the personal settings migration (refer to 7.3.3 Personal settings migration)
14. Switch SPDM '*SynchronizationMode*' to '*true*', then start the SQM 1.40 SPDM component and wait for the end of its initialization (check its log for the end of its internal model update and its activity resume)
15. Upgrade the Logger database from 9.2.0.6.0 to 10.2.0.3.0 (refer to 7.8 Databases Upgrade)
16. Start the SQM 1.40 '*slmonitoring*' director
17. Start the SQM 1.40 '*presentation*' director
18. Upgrade the DataMart databases from 9.2.0.6.0 to 10.2.0.3.0 one by one (refer to 7.8 Databases Upgrade)
19. Perform the databases migration **for DataMart DBs** (refer to 7.4 Databases Migration)
20. Perform the post-migration tasks (refer to 7.3.4 Post-migration tasks)
21. Start the DataMart

7.3 Migration Steps

7.3.1 Binaries / Migration tools Installation

The new SQM 1.40 subsets have to be installed in a new *<TEMIP_SC_HOME>* directory using '*sqm_install*' (**do not install SQM 1.40 binaries over SQM 1.30 binaries**).

This has to be done on each SQM host (**primary and secondary ones if any**). Refer to *SQM Installation Guide* for details.

Example (on primary host):

- Before the migration, binaries are in */opt/OV/SQM*
- Install the SQM 1.40 kit in *<TEMIP_SC_HOME_V140>*

CD_DIRECTORY refers to the location where you have put or mounted the software package.

```
root# sqm_install <TEMIP_SC_HOME_V140> $CD_DIRECTORY/SQM-1.40.00/SQM-1.40.00-CORE/HPUX/KIT typical
(if reporting was installed)
root# sqm_install <TEMIP_SC_HOME_V140> $CD_DIRECTORY/SQM-1.40.00/SQM-1.40.00-CORE/HPUX/KIT reporting
```

Install the migration scripts (to be done on *slmonitoring* / *reporting* / *SA* / *GTW* hosts):

```
root# cd <TEMIP_SC_HOME_V140>
root# gunzip < $CD_DIRECTORY/SQM-1.40.00/SQM-1.40.00-CORE/Migration/SQMMIGRATIONV140.tar.gz | tar xvf -
```

7.3.2 Platform Migration

Prerequisite: SQM 1.30 platform and kernel have been stopped.

7.3.2.1 Primary host migration

Part 1 – Setup the 1.40 platform

Perform a SQM 1.40 setup (**platform configuration and deployment ONLY**) using a different platform name (slmv14). You can keep the same port number.

Important Notices

- No previous *sqmadm* environment variables must be loaded (we recommend to use a new *xterm*).
- If you want your 1.40 platform to use **RVRD** (example: if your 1.30 platform used it), you must declare it in your platform description **before** the setup. To do this, set `<MessagingDaemons routerFlag="True">` in the `$TEMIP_SC_HOME/etc/platform_desc.cfg` file.

```
root# cd <TEMIP_SC_HOME_V140>
root# export TEMIP_SC_HOME=`pwd`
root# export ORACLE_HOME=<your NEW ORACLE_HOME>
root# export DISPLAY=<your DISPLAY>
root# cd setup
root# ./temip_sc_gui_setup
```

Part 2 – Migrate the repository

Check that all SQM and Tibco processes are down, and kill the remaining ones if any:

```
root# ps -efx | grep SQM
root# ps -efx | grep rvd
root# ps -efx | grep rvr
```

Upgrade the 1.30 repository to integrate new configuration variables:

```
root# . <TEMIP_SC_VAR_HOME_V140>/temip_sc_env.sh
root#
$TEMIP_SC_HOME/migration/v140/scripts/migrate_repository.sh
Would you like enter the EXISTING v1.3 TEMIP_SC_VAR_HOME
directory(/var/opt/OV/SQM/slmv13) :
EXISTING v1.3 TEMIP_SC_VAR_HOME is /var/opt/OV/SQM/slmv13.
Would you like enter the NEW v1.4 TEMIP_SC_VAR_HOME
directory(/var/opt/OV/SQM/slmv14) :
NEW v1.4 TEMIP_SC_VAR_HOME is /var/opt/OV/SQM/slmv14.
Logfile of
/opt/OV/SQMV140/migration/v140/scripts/migrate_repository.sh is
available in
/var/opt/OV/SQM/slmv14/log/migration_repository_2007xxxx.log
Would you like enter the
ORACLE_HOME(/usr/ORACLE/u01/app/oracle/product/10.2.0)?
Please check the log:
/var/opt/OV/SQM/slmv14/log/migration_repository_2007xxxx.log
DONE ...
```

Part 3 – Migrate the data tree

Perform data tree migration and update SAI_name into the SRM database: run the following command in order to migrate TEMIP_SC_VAR_HOME (this operation can be very long if the system hosts SAs):

```

root# . <TEMIP_SC_VAR_HOME_V140>/temip_sc_env.sh
root#
$TEMIP_SC_HOME/migration/v140/scripts/migrate_data_tree.sh
Would you like enter the EXISTING v1.3 TEMIP_SC_VAR_HOME
directory: (/var/opt/OV/SQM/slmv13)
EXISTING v1.3 TEMIP_SC_VAR_HOME is /var/opt/OV/SQM/slmv13.
Would you like enter the NEW v1.4 TEMIP_SC_VAR_HOME
directory: (/var/opt/OV/SQM/slmv14)
Please check the log:
...
DONE ...

```

7.3.2.2 Secondary host migration

Prerequisite: primary host migrated and kernel started.

The following steps must be done on each secondary host.

Check that all SQM and Tibco processes are down, and kill the remaining ones if any:

```

root# ps -efx | grep SQM
root# ps -efx | grep rvd
root# ps -efx | grep rvrd

```

Copy *platform_desc.cfg* from the primary host.

Example:

```

root# cd <TEMIP_SC_HOME_V140>/tmp
root# rcp <Primary
Server>:<TEMIP_SC_HOME_V140>/tmp/platform_desc.cfg .

```

Ensure that no *<host>* entry is defined for the secondary host you are migrating. If an entry exists, edit *platform_desc.cfg* to remove it

Example:

```

root# cd <TEMIP_SC_HOME_V140>/tmp/
root# grep <secondary_hostname> platform_desc.cfg
root#

```

Run *temip_sc_setup* in order to deploy kernel.

Example:

```

root# cd <TEMIP_SC_HOME_V140>/setup/bin
root# temip_sc_setup -all -NI -migrate

```

Perform data tree migration: run the following command in order to migrate your TEMIP_SC_VAR_HOME (this operation can be very long if the system hosts SAs):

```

root# . <TEMIP_SC_VAR_HOME_V140>/temip_sc_env.sh
root# cd $TEMIP_SC_HOME/migration/v140/scripts/
root# ./migrate_data_tree.sh -part1
Would you like enter the EXISTING v1.3 TEMIP_SC_VAR_HOME
directory: (/var/opt/OV/SQM/slmv13)
EXISTING v1.3 TEMIP_SC_VAR_HOME is /var/opt/OV/SQM/slmv13.
Would you like enter the NEW v1.4 TEMIP_SC_VAR_HOME
directory: (/var/opt/OV/SQM/slmv14)
Please check the log:
...
DONE ...

```

7.3.3 Personal settings migration

If you did specific customization of your 1.30 platform do not forget to apply them on your newly 1.40 platform (this is not done by the migration scripts).

Common settings

The `temip_sc_env.sh` file stores the platform environment variables. You may have 'customized' it on your 1.30 platform. To keep these changes you need to reapply them in your new 1.40 `temip_sc_env.sh` (located under `<TEMIP_SC_VAR_HOME>`).

Please pay special attention to the `TEMIP_SC_JDBC_DRIVER_CLASSPATH` variable. When this variable is set, it is used by SQM to determine the JDBC driver to use.

Component settings

For each file customized on 1.30 do a diff with new 1.40 file and apply your customization.

The following lists files that are usually customized:

- Launcher: in `$TEMIP_SC_HOME/adapter/bin/` directory
- Config files: in `$TEMIP_SC_VAR_HOME/SLM/<ApplicationName>/config/` directories

Example: If you did modification in SPDM launcher:

```
% diff $TEMIP_SC_HOME_V130/adapter/bin/spdm_launch.sh
$TEMIP_SC_HOME_V140/adapter/bin/spdm_launch.sh
6a7,8
> ${TEMIP_SC_HOME}/lib/velocity-dep-1.4.jar:\
> ${TEMIP_SC_HOME}/lib/TeSCSpdmExpr.jar:\
18c20
< export JAVA_ARG="-Xmx512M -Xms128M"
---
> export JAVA_ARG=" -Xmx128M "
```

In this case you will have to update the `JAVA_ARG` command line argument of your 1.40 SPDM launcher. **DO NOT UPDATE** the jar files used in classpath, they have been updated for 1.40 (it's not a configurable section).

7.3.4 Post-migration tasks

Once the SQM 1.40 platform has been successfully started:

- **Update your purge script** in order to use the environment corresponding to your new SQM 1.40 platform
- Turn back `SynchronizationMode` of SPDM to its original value (should be false) and re-export the repository
- If applicable, check if you need to update your customized SA discovery filter script (you need to do so if your discovery filter script include platform name, SA version ...)
- Cleanup the old SQM 1.30 directories (optional – we recommend not to clean this directories in order to be able to retrieve the data from the previous platform)

7.4 Databases Migration

The database schemas have changed in SQM 1.40. A migration procedure is necessary for each database to run SQM 1.40.

Preparatory operations

Before migrating the databases, you have to copy old database configuration into SQM 1.40 data tree:

```

root# mkdir /var/opt/OV/SQM/<V140 platform name>
root# chown sqmadm:sqmadm /var/opt/OV/SQM/<V140 platform name>
root# cd /var/opt/OV/SQM/<V140 platform name>
root# mkdir log
root# chown sqmadm:sqmadm log
root# chmod 775 log
sqmadm> cp -rp /var/opt/OV/SQM/<V130 platform name>/oracle
/var/opt/OV/SQM/<V140 platform Name>

```

And migrate the *temip_oracle_configuration.cfg*:

```

root# . <TEMIP_SC_VAR_HOME_V130>/temip_sc_env.sh
root# export TEMIP_SC_HOME=<TEMIP_SC_HOME_V140>
root# export
TEMIP_SC_VAR_HOME=/var/opt/OV/SQM/<V140 platform Name>
root# export
ORACLE_HOME=/usr/ORACLE/u01/app/oracle/product/10.2.0
root#
$TEMIP_SC_HOME/migration/v140/scripts/migrate_oracle_conf.sh
Update configuration file: /var/opt/OV/SQM/<V140 platform
Name>/oracle/conf/temip_oracle_configuration.cfg
Would you like enter the ORACLE_ROOT(/usr/ORACLE)?
Would you like enter the
ORACLE_BASE(/usr/ORACLE/u01/app/oracle)?
Would you like enter the ORACLE_VERSION(10.2.0)?
Would you like enter the
ORACLE_HOME(/usr/ORACLE/u01/app/oracle/product/10.2.0)?
ORACLE_ROOT is /usr/ORACLE
ORACLE_BASE is /usr/ORACLE/u01/app/oracle
ORACLE_VERSION is 10.2.0
ORACLE_HOME is /usr/ORACLE/u01/app/oracle/product/10.2.0
Would you like confirm these values(Y/N)?Y
Done.

```

Important Notice

We highly recommend to backup your databases before the migration in order to be able to redo DB migration in case of any problem.

Refer to *SQM Administration Guide* for SRM DB backup and *SQM Reference Guide for Oracle use* for SPDM and Datamart DB backup.

7.4.1 SRM

Prerequisite: SRM stopped / Database upgraded to 10g and Running / old database configuration copied from the 1.30 platform (see Preparatory operations of 7.4 Databases Migration)

Run the following commands:

```

root# export ORACLE_HOME=<NEW ORACLE_HOME>
root# export TEMIP_SC_HOME=<TEMIP_SC_HOME_V140>
root# export TEMIP_SC_VAR_HOME=/var/opt/OV/SQM/<V140 platform
name>
root# $TEMIP_SC_HOME/migration/v140/scripts/migrate_srm.sh

```

Please check the log file of migration script and make sure the migration is successful.

7.4.2 SPDM

This migration implies some changes in the SPDM schema and a reloading of SPDM engines.

Prerequisite: SPDM stopped / Database upgraded to 10g and Running / old database configuration copied from the 1.30 platform (see Preparatory operations of 7.4 Databases Migration)

Run the following commands:

```
root# export ORACLE_HOME=<NEW ORACLE_HOME>
root# export TEMIP_SC_HOME=<TEMIP_SC_HOME_V140>
root# export TEMIP_SC_VAR_HOME=/var/opt/OV/SQM/<V140 platform name>
root# $TEMIP_SC_HOME/migration/v140/scripts/migrate_spdm.sh
```

Please check the log file of the migration scripts and make sure the migration is successful.

7.4.3 DataMart

Please note that depending on the volume of data archived, the migration of the DataMart database can be very long.

Prerequisite: DataMart stopped / Database upgraded to 10g (Both Staging and Production databases) / old database configuration copied from the 1.30 platform (see Preparatory operations of 7.4 Databases Migration)

Run the following commands:

```
root# export ORACLE_HOME=<NEW ORACLE_HOME>
root# export TEMIP_SC_HOME=<TEMIP_SC_HOME_V140>
root# export TEMIP_SC_VAR_HOME=/var/opt/OV/SQM/<V140 platform name>
root# $TEMIP_SC_HOME/migration/v140/scripts/dm_db_migration.sh
```

Please check the log file of the migration scripts and make sure the migration is successful.

7.5 SA Migration (including Value Pack)

You can face two cases:

- **SQLSA:** if you are owner of the source of the kit you need to regenerate the SA using the SQM 1.40 SQL SA Toolkit
- Other (you are not owner of the source).
In such case you need to retrieve the new 1.40 kit to be installed (ask your provider).

The standard SQM SA kits are available within the SQM 1.40 delivery.

In case of **Value Pack:** the 1.40 SQLSA kits are delivered with the SQM 1.40 Value Pack under

```
$TEMIP_SC_HOME/SolutionSet/<ValuePack_name>/SQLSA/<SA_name>
```

7.5.1 SQLSA regeneration (you are owner of the SQL SA)

Prerequisite:

```
root# export TEMIP_SC_HOME=<TEMIP_SC_HOME_V140>
root# . $TEMIP_SC_HOME/jre/jre-setup.sh
```

```
root# export DISPLAY=<your_Display>
```

Because the platform setup has not been done and a `TEMIP_SC_VAR_HOME` directory is required for the SQL SA Toolkit you have to create it manually:

```
root# cd /var/opt/OV/SQM
root# mkdir -p <platform name V14>/log
root# mkdir -p <platform name V14>/trace
root# chown -R sqmadm:sqmadm <platform name V14>
```

Install the following subsets:

- SQMSAGTWCCOMMON-1.40.00.bin
- SQMSASQL-1.40.00.bin
- SQMSASQLTK-1.40.00.bin

Setup the SQLSA Toolkit.

```
root# cd
<TEMIP_SC_HOME V140>/ServiceAdaptersToolkit/Sql/v1_4/bin
root# ./temip_sc_setup_sqltk.sh
Using: TEMIP_SC_HOME=<TEMIP_SC_HOME_V140>
Enter value for "TEMIP_SC_VAR_HOME": /var/opt/OV/SQM/slmv14
Using previous settings...
Enter value for "TEMIP_SC_JDBC_DRIVER_CLASSPATH":
/usr/ORACLE/u01/app/oracle/product/10.2.0/jdbc/lib/ojdbc14.jar
Using:
TEMIP_SC_JDBC_DRIVER_CLASSPATH=/usr/ORACLE/u01/app/oracle/produ
ct/10.2.0/jdbc/lib/ojdbc14.jar
Please wait while checking and installing license.
```

Regenerate the SQL SA kit installed on your SQM platform (see Chapter 5.4 of the *SQL Service Adapter Toolkit Installation, Configuration and User's Guide*)

Note

The generated kit will be created at the location indicated in the *sqltk* file, it may overwrite the previous file, so, it is recommended to backup the previous one.

```
sqmadm> cd
<TEMIP_SC_HOME V140>/ServiceAdaptersToolkit/Sql/v1_4/bin
sqmadm> temip_sc_start_sqltk[.sh .bat] -clui
CMD> load C:\SQLSATKSAMPLE.sqltk
[INFORMATION] : Project loaded (C:\SQLSATKSAMPLE.sqltk).
CMD> Generate
[INFORMATION] : Generating kit...
[WARNING].... : TIMEINFO.v1_0.DAY : The 'units' should be
defined.
...
[INFORMATION] : Generating TIBCO application definition file.
[INFORMATION] : Generating archive file SQLSATKSAMPLE.zip'.
[INFORMATION] : Kit generated (C:\SQLSATKSAMPLE.zip).
CMD> quit
```

7.5.2 SA Installation

You have to install each SA on the SQM 1.40 platform and complete the installation manually. The setup/configuration phase described in the installation guides **must not been done** since you will reuse your old 1.30 configuration.

This has to be done under the 'root' account, `TEMIP_SC_HOME` must be set. Install the following subsets first (already done if you have installed the *SQL SA Toolkit*):

- SQMSAGTWCCOMMON-1.40.00.bin
- SQMSASQL-1.40.00.bin

Example, for SQL SA (including Ovo SA and TeMIP fault SA for *temip_sc_complete_install.sh*):

```
root# cd $TEMIP_SC_HOME
root# unzip /kits/SQLSATKSAMPLE.zip
root# cd $TEMIP_SC_HOME/ServiceAdapters/Sql/v1_4/<Your SQL SA Kit>_v1_0/bin
root# chmod u+x temip_sc_complete_install.sh
root# ./temip_sc_complete_install.sh
```

Do not recreate/configure the SA manually using *temip_sc_configure*. The following migration steps will allow you to retrieve your previous SA configuration.

Note

- **Initial Query:** If you defined an *Initial Query* for your SQM 1.30 SA, you have to update your SQM 1.40 SA property file located under your new installed 'properties' directory under
\$TEMIP_SC_HOME/ServiceAdapters/Sql/v1_4/<Your_SQL_SA>_v1_0/p
roperties
- For **OVSD**, if you do not use the default 'web-api.jar' do not forget to update it:

```
root# cd $TEMIP_SC_HOME/ServiceAdapters/OvSd/v1_4/lib
root# mv web-api.jar web-api-sp5.jar
root# mv web-api-sp9.jar web-api.jar
```

7.6 Reporting Migration

The BO Master universe has not changed in 1.40, but the BO Strategy file has been updated to provide more data for reports, and support of 10g Oracle database. You then need to perform the following operations for migrating your Reporting:

1. Backup the BO Master universe file

(This is a recommended operation).

Use the 'Import Universes' function in BO Supervisor / Designer tools, fetch out the Universe file from BO Repository to backup.

2. Recreate BO Repository database with Oracle 10g version

Prerequisite:

SQM 1.40 environment is ready/Oracle 10g is ready

Operations:

Stop running apache-tomcat

```
root# /opt/BOBJ/wserversctl stop
```

Stop running BO server

```
root# /opt/BOBJ/Enterprise6/setup/wstop
```

Drop BO Repository database 'borepos' through *temip_delete_database* tools(in new SQM 1.40 environment)

```
root# cd $TEMIP_SC_HOME/oracle/scripts
root# temip_delete_database borepos
```

Create the new 'borepos' database

```
root# temip_create_database borepos
```

3. Re-create BO bomain.key

Because the BO *bomain.key* stores the connection information to BO Repository, so with the changing of Oracle database version, you have to regenerate it.

Use BO supervisor tool to create the BO *bomain.key*.

4. Replace BO Strategy file

If you want to use the new BO Strategy file to provide more data in your reports, you should install the new SQMREPORTING for windows package.

The new *oracle.stg* file will be available at \$TEMIP_SC_HOME/Reporting/Strategies directory after installation, you can replace the same file in your BO environment.

5. Modify the config files of SQMReporting

Set the ORACLE_HOME to your new 10g oracle home in *MyWebiEnv.sh*, usually this file exists at:

```
/opt/BOBJ/Enterprise6/nodes/XXX/mycluster/MyWebiEnv.sh
```

If you had changed your Oracle Listener' port (new port is not 1521) for 10g migration, you should also modify the corresponding value in the *SQMReporting.xml* which is usually at /opt/BOBJ/tomcat/webapps directory.

For the same reason, you should also modify the corresponding entries to BO Repository database and Datamart Production database in the *tnsnames.ora*.

7.7 Gateway migration

7.7.1 Gateway installation

You have to install each Gateway on the SQM 1.40 platform and complete the installation manually. The configuration phase described in the installation guide **must not been done** since you will reuse your old 1.30 configuration.

This has to be done under the 'root' account, TEMIP_SC_HOME must be set. Install the following subsets first (already done if you have installed one SA):

- SQMSAGTWCCOMMON-1.40.00.bin

Note

For **the Script Gateway**, if your script files were located under your old TEMIP_SC_HOME (1.30) you have to copy them under your new TEMIP_SC_HOME (1.40)

7.7.2 Complete Script Gateway migration

For **Script Gateway** only:

- Update the *temip_sc_gtw_setup.xml* file (located under <TEMIP_SC_VAR_HOME_V140>/Gateways/Script/v1_4/) - Change <platform_name_v13> with <platform_name_v14>

- Change 'v1_3' with 'v1_4'
- Change <TEMIP_SC_HOME_V130> with <TEMIP_SC_HOME_V140>
- If your script files were located under TEMIP_SC_HOME, update *slmv14_acquisition_ScriptGateway_scripts.xml* file (located under <TEMIP_SC_VAR_HOME_V140>/Gateways/Script/v1_4/config):
 - Change <TEMIP_SC_HOME_V130> with <TEMIP_SC_HOME_V140>
 - Change 'v1_3' with 'v1_4'

7.8 Databases Upgrade

Important Notice

For the *sqlsa* database, you can choose to upgrade it or not. Because the database upgrade will take a long time (about 1 hour), if you decide to upgrade the *sqlsa*, the downtime will be more than 1 hour.

7.8.1 Oracle10g installation

Important Notice

You may need to reboot after the installation of the Oracle patch 10.2.0.3 (some system patches need a reboot).

1. We highly recommend that you run the Pre-Install check for 10gR2 that will check that your environment is well configured/sized
2. Install the **Oracle 10g** Release 2 (10.2.0) (server, Enterprise Edition) (refer to *Oracle 10g Release 2 (10.2) Quick Installation Guide* available at <http://www.oracle.com/pls/db102/homepage>)
3. Install the **Oracle 10g** Release 2 (10.2.0.3) Patch Set (refer to the *README.html* in your patch kit)
4. Install Oracle XSL patch **5689971** (view the *README* for patch installation)
5. Install Oracle DST patches **5746875** and **5632264** (view the *README* for patch installation)
6. Run the following commands to end the Oracle installation:

```
oracle# cd /usr/ORACLE/u01/app/oracle/product/
oracle# chmod 755 10.2.0
oracle# cd /usr/ORACLE/u01/app/oracle/product/10.2.0/bin
oracle# chmod 6755 oracle
oracle# cd /usr/ORACLE/u01/app/oracle/product/10.2.0
oracle# chmod -R 755 jdbc
```

7.8.2 Oracle Pre-Upgrade tasks

7.8.2.1 Running Pre-Upgrade information tool

Before to run upgrade from Oracle 9.2.0.6.0 to 10.2.0.3.0 it is important to validate that no warning/issue has occurred during this upgrade.

We highly recommend to run the **Pre-Upgrade information tool** and fix possible warnings/issues before to continue the Oracle upgrade. **Do this for all databases to be upgraded.**

Refer to *Oracle Database Upgrade Guide 10g Release 2 (10.2)* document, available at <http://www.oracle.com/pls/db102/homepage>

7.8.2.2 System tablespace

Because *SYSTEM tablespace* requires more resource with Oracle 10g you must set 'autoextend' to 'ON' before running upgrade.

Run the following command for each SQM database:

```
SQL> alter database datafile '<.../SYSTEM/system01.dbf>' autoextend on next 10M Maxsize 1990M;
```

For example, upgrade the SRM database (we assume that the location of the data file for system tablespace is:

```
/usr/ORACLE/u02/oradata/srm/SYSTEM/system01.dbf):
```

```
oracle# export
ORACLE_HOME=/usr/ORACLE/u01/app/oracle/product/9.2.0
oracle# export PATH=$ORACLE_HOME/bin:$PATH
oracle# export ORACLE_SID=srm
oracle# sqlplus system/manager
SQL# alter database datafile
'/usr/ORACLE/u02/oradata/srm/SYSTEM/system01.dbf' autoextend on
next 10M Maxsize 1990M;
```

7.8.3 Databases upgrade from 9.2.0.6.0 to 10.2.0.3.0

Important

We highly recommend you to backup your databases before upgrade

Refer to Oracle Database Upgrade Guide 10g Release 2 (10.2) document, available at <http://www.oracle.com/pls/db102/homepage>

There are several paths to upgrade the databases; you need to determine the upgrade path. We recommend upgrade database by DBUA in silent mode.

7.8.3.1 Configuration of the Listener

Make sure that there is **no** *listener.ora* **or** *tnsnames.ora* file under the directory <Oracle10g_HOME>/network/admin, and then enter the following command to make sure that the Oracle9i listener is running:

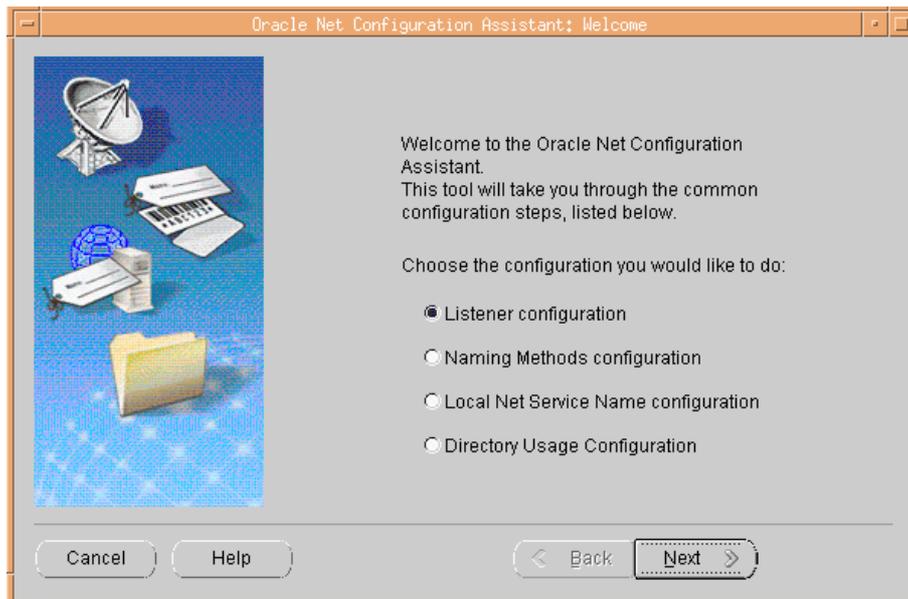
```
oracle# ps -ef |grep LISTENER
```

The output should be similar to the following:

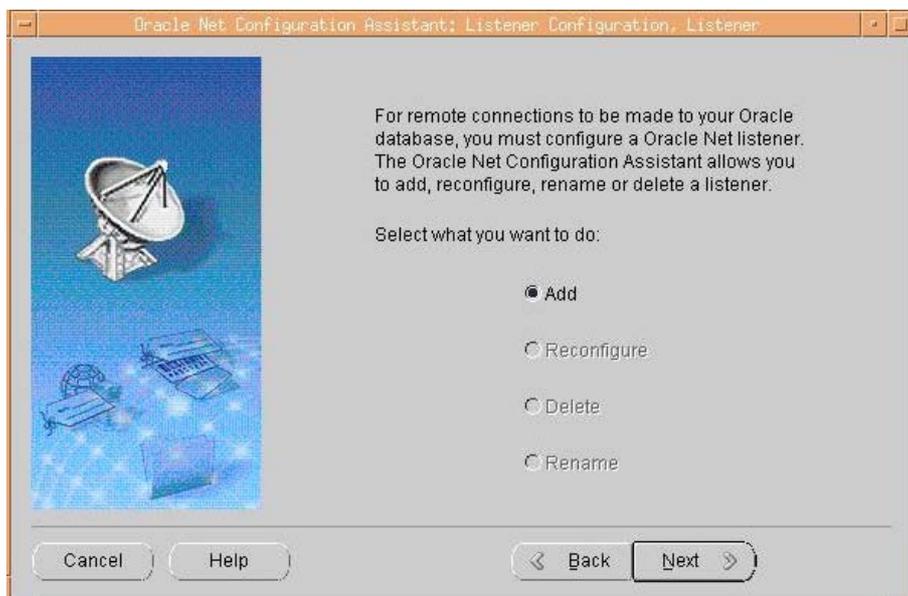
```
oracle# ps -ef |grep LISTENER
oracle 14666 1 0 16:15:12 ? 0:00
/usr/ORACLE/u01/app/oracle/product/9.2.0/bin/tnslsnr LISTENER
```

Then enter the following command to run the *Oracle Net Configuration Assistant*

```
oracle# export
ORACLE_HOME=/usr/ORACLE/u01/app/oracle/product/10.2.0
oracle# export DISPLAY=<your DISPLAY>
oracle# export PATH=$ORACLE_HOME/bin:$PATH
oracle# unset TNS_ADMIN
oracle# netca
```



Choose the **'Listener configuration'** and click on **'Next'**



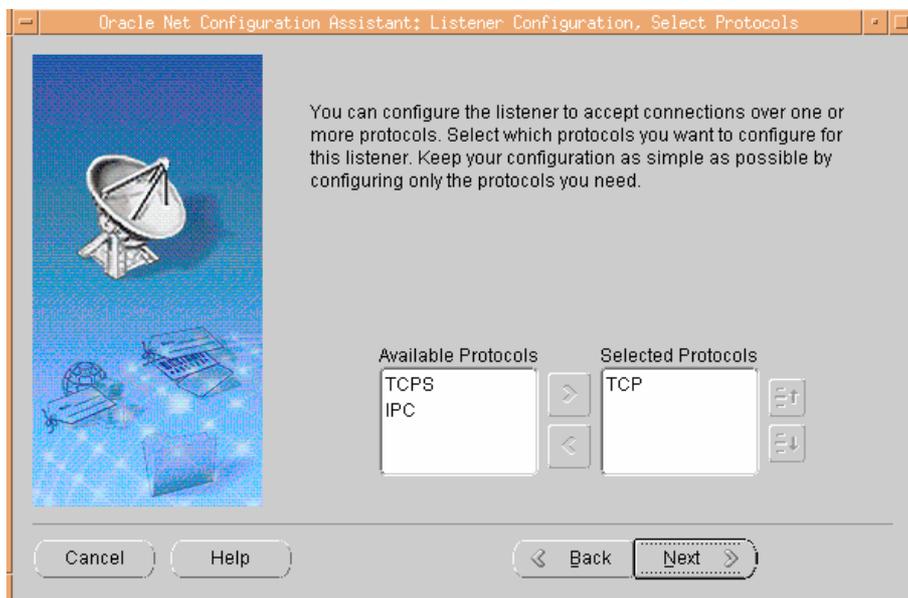
Ensure that **'Add'** is selected and click on **'Next'**



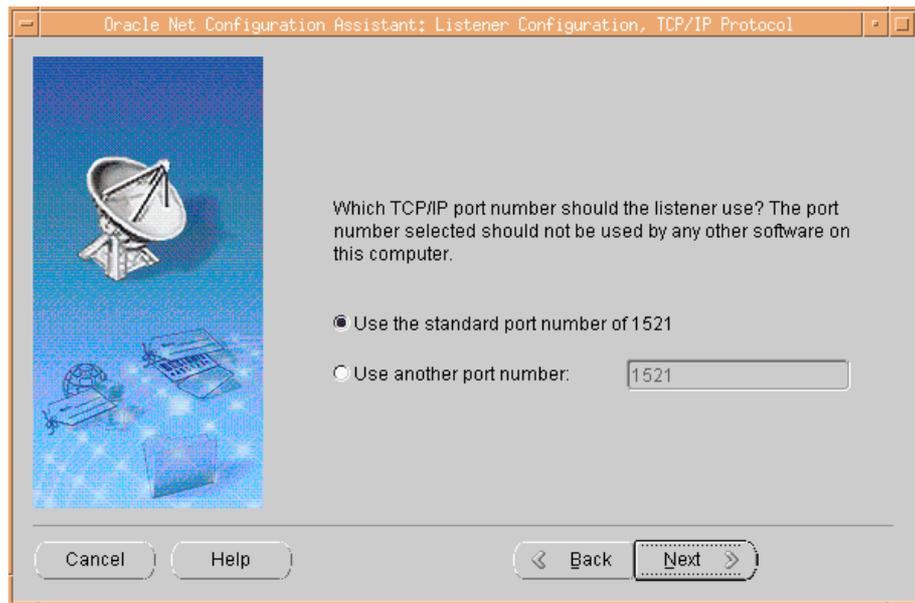
Use the default listener name, and click on **'Next'**

Note

If you met an error saying that *'another LISTENER is already running'*, please remove *'listener.ora'* and *'tnsnames.ora'* in `$ORACLE_HOME/network/admin` and retry the operation.



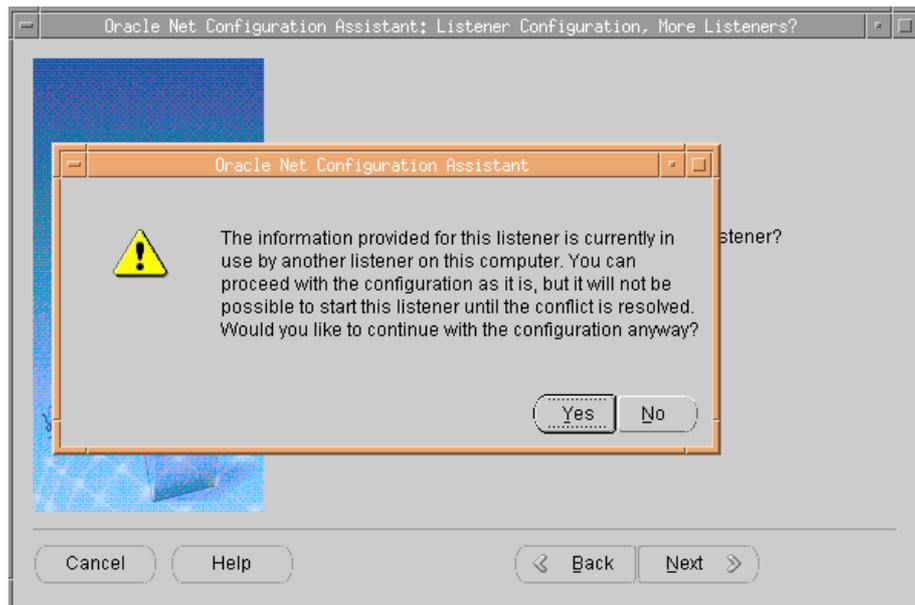
Click on **'Next'**



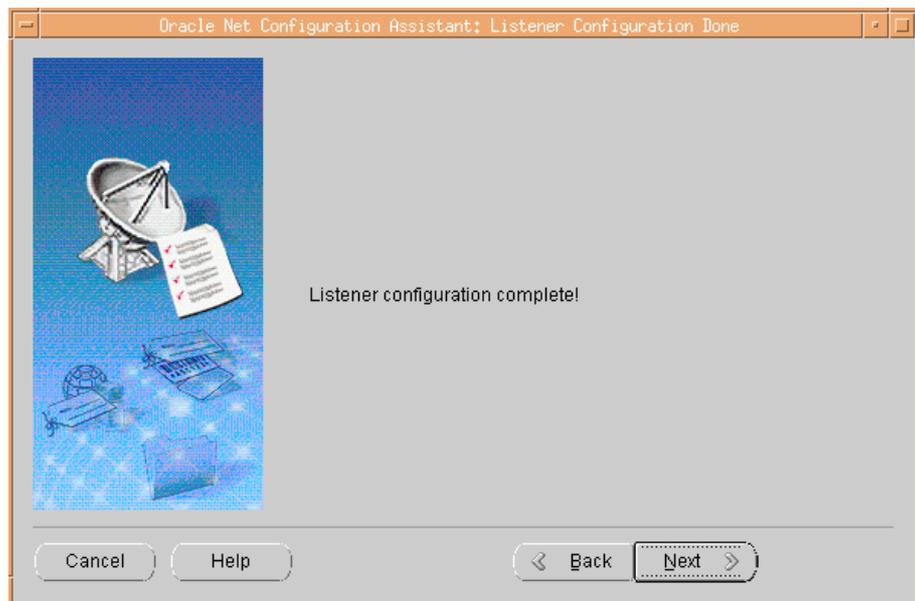
Use the standard port number and click on **'Next'**



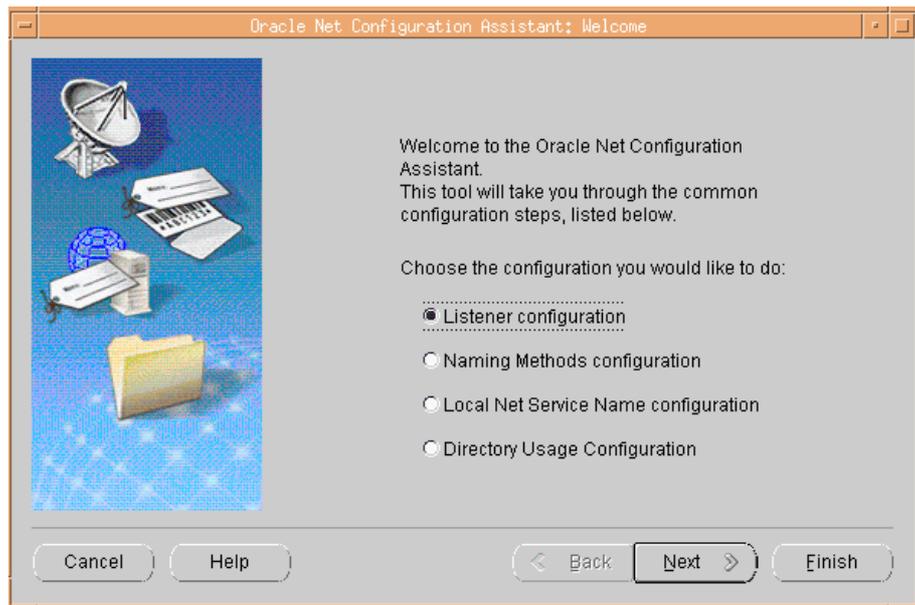
Ensure that **'No'** is selected and click on **'Next'**



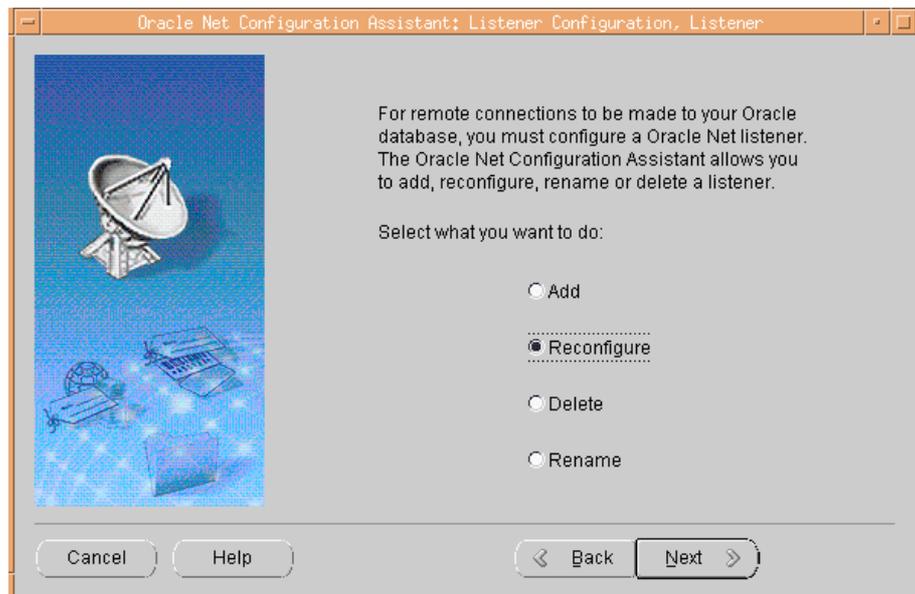
Click on 'Yes'



Click on 'Next'



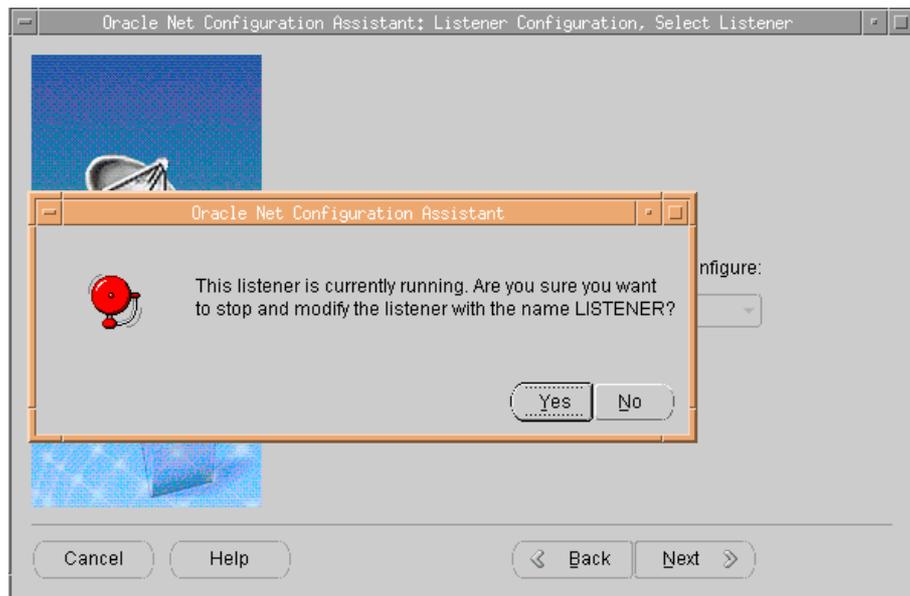
Click on **'Next'** again



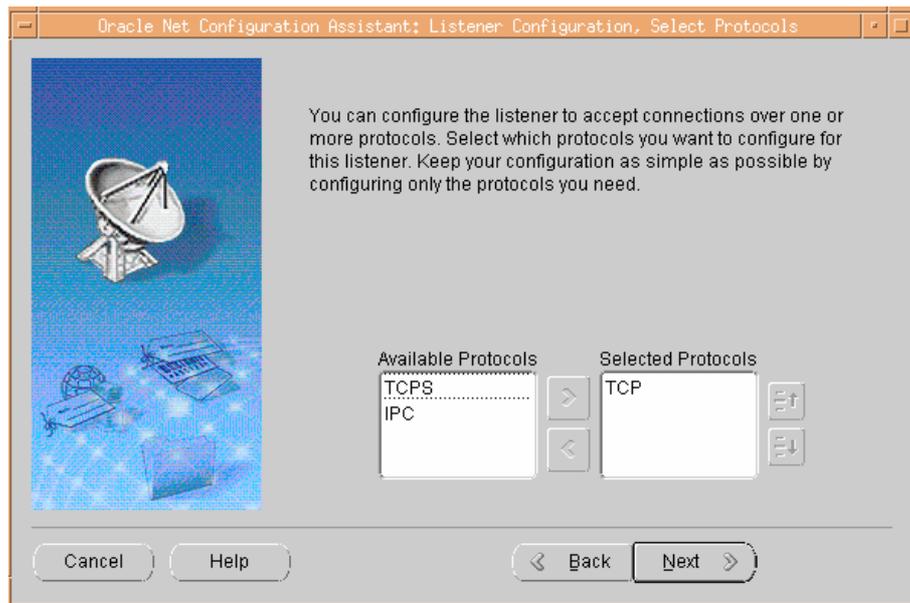
Select **'Reconfigure'** and click on **'Next'**



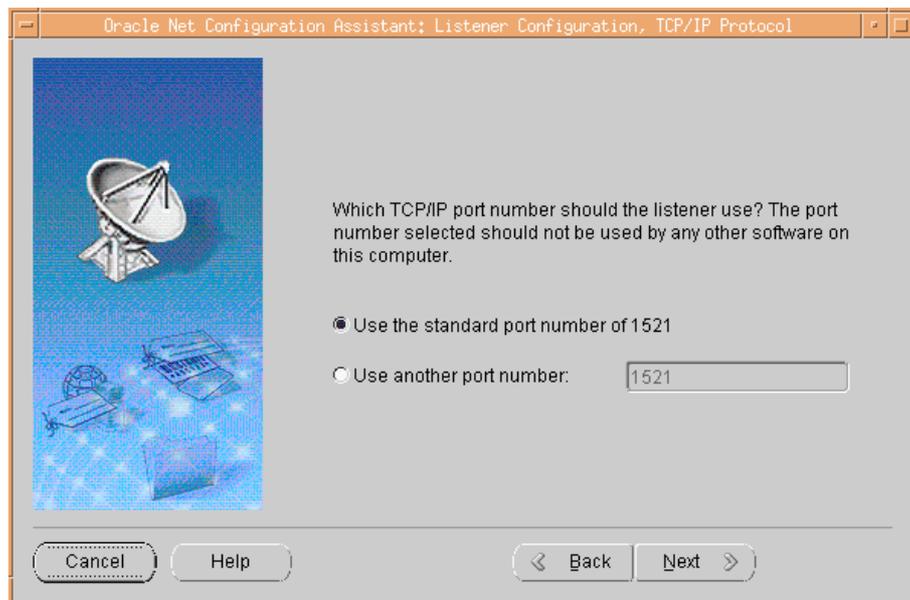
Click on 'Next'



Click on 'Yes'



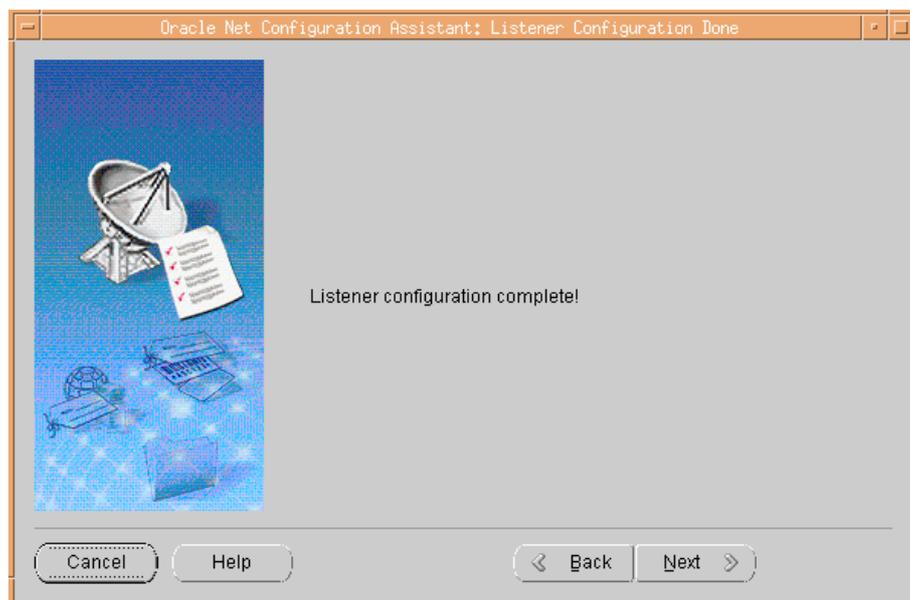
Click on **'Next'**



Use the standard port number and click on **'Next'**



Ensure that **'No'** is selected and click on **'Next'**



Click on **'Next'**, and then click on **'Finish'**.

At the end of this configuration, enter the following command:

```
oracle# ps -ef|grep LISTENER
```

The output should be similar to the following:

```
oracle# ps -ef|grep LISTENER
oracle 14588 1 0 15:40:27 ? 0:00
/usr/ORACLE/u01/app/oracle/product/10.2.0/bin/tnslsnr LISTENER
```

Note

Do not add Address or Database services for the new listener by Oracle Net Manager or manually before finishing all databases upgrade.

Do not stop / restart / reconfigure the new listener before finishing all databases upgrade.

7.8.3.2 Upgrade database by DBUA in silent mode

Important Notice

Before the upgrade, you must make sure that the new listener and the Oracle9i Databases to upgrade are running.

We highly recommend that you backup your databases before the upgrade.

Make sure that there is no **Welcome_<SID>.txt** under the directory `<Oracle10g_HOME>/cfgtoollogs/dbua/logs` when you upgrade the database '`<SID>`'. For example when you upgrade database SRM, then you need make sure there is no **Welcome_srm.txt** under this directory.

In the example below we assume that the password of system DBA user is '`manager`', enter the following command to upgrade the SRM database for example:

```
oracle# export
ORACLE_HOME=/usr/ORACLE/u01/app/oracle/product/10.2.0
oracle# PATH=$ORACLE_HOME/bin:$PATH
oracle# $ORACLE_HOME/bin/dbua -silent -sid srm
-sysDBAUserName system -sysDBAPassword manager
-recompile_invalid_objects true -oracleHome
/usr/ORACLE/u01/app/oracle/product/9.2.0
```

Note

Wait for the end of the upgrade, and check the log (under directories `<Oracle10g_HOME>/cfgtoollogs/dbua/<SID>` and `<Oracle10g_HOME>/cfgtoollogs/dbua/logs`) to make sure that the upgrade is successful.

You may encounter errors like ORA-06502, ORA-04063 or ORA-25205 while upgrading database by DBUA. You can ignore them.

7.8.3.3 Post upgrade task

After finishing **all** databases upgrade, you need to copy the *listener.ora* file from oracle9i to oracle10g,

```
oracle# cd
/usr/ORACLE/u01/app/oracle/product/9.2.0/network/admin
oracle# cp listener.ora
/usr/ORACLE/u01/app/oracle/product/10.2.0/network/admin
```

You also need to change the *ORACLE_HOME* in this file if needed.

For example, if you did not upgrade the *sqlsa* database, you must not change the *ORACLE_HOME* of *sqlsa* in *listener.ora*.

Following is an example of *listener.ora*:

```
LISTENER =
  (ADDRESS_LIST =
    (ADDRESS = (PROTOCOL = IPC) (KEY = dmprod))
    (ADDRESS = (PROTOCOL = IPC) (KEY = dmstag))
    (ADDRESS = (PROTOCOL = IPC) (KEY = logger))
    (ADDRESS = (PROTOCOL = IPC) (KEY = sqlsa))
    (ADDRESS = (PROTOCOL = IPC) (KEY = spdm))
    (ADDRESS = (PROTOCOL = IPC) (KEY = srm))
    (ADDRESS = (PROTOCOL = IPC) (KEY = borepos))
  )
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = IPC) (KEY = EXTPROC))
  )
  (ADDRESS = (PROTOCOL = TCP) (HOST =
goral.chn.hp.com) (PORT = 1521))
```

```

)
)
)
SID_LIST_LISTENER =
(SID_LIST =
(SID_DESC =
(GLOBAL_DBNAME = dmprod.goral.sqm)
(ORACLE_HOME = /usr/ORACLE/u01/app/oracle/product/10.2.0)
(SID_NAME = dmprod)
)
(SID_DESC =
(GLOBAL_DBNAME = dmstag.goral.sqm)
(ORACLE_HOME = /usr/ORACLE/u01/app/oracle/product/10.2.0)
(SID_NAME = dmstag)
)
(SID_DESC =
(GLOBAL_DBNAME = logger.goral.sqm)
(ORACLE_HOME = /usr/ORACLE/u01/app/oracle/product/10.2.0)
(SID_NAME = logger)
)
(SID_DESC =
(GLOBAL_DBNAME = sqlsa.goral.sqm)
(ORACLE_HOME = /usr/ORACLE/u01/app/oracle/product/9.2.0)
(SID_NAME = sqlsa)
)
(SID_DESC =
(GLOBAL_DBNAME = spdm.goral.sqm)
(ORACLE_HOME = /usr/ORACLE/u01/app/oracle/product/10.2.0)
(SID_NAME = spdm)
)
(SID_DESC =
(GLOBAL_DBNAME = srm.goral.sqm)
(ORACLE_HOME = /usr/ORACLE/u01/app/oracle/product/10.2.0)
(SID_NAME = srm)
)
(SID_DESC =
(SID_NAME = PLSExtProc)
(ORACLE_HOME = /usr/ORACLE/u01/app/oracle/product/10.2.0)
(PROGRAM = extproc)
)
(SID_DESC =
(GLOBAL_DBNAME = sqm.goral.chn.hph.com)
(ORACLE_HOME = /usr/ORACLE/u01/app/oracle/product/10.2.0)
(SID_NAME = sqmgoral)
)
(SID_DESC =
(GLOBAL_DBNAME = borepos.goral.sqm)
(ORACLE_HOME = /usr/ORACLE/u01/app/oracle/product/10.2.0)
(SID_NAME = borepos)
)
)
)

```

7.8.4 Add sqmadm user to dba group

Check if the *sqmadm* user is member of oracle *dba* group. You can use the *'id'* command.

Example (in this example, *sqmadm* is the primary group and *dba* is a secondary group):

```
root# id sqmadm
uid=103(sqmadm) gid=104(sqmadm) groups=103(dba)
```

If *sqmadm* user is not a member of the oracle *dba* group, you need to add *sqmadm* to this group. To do this, you have to ensure that no running process is owned by the user *sqmadm*, and that you are **not** logged with *sqmadm*.

Run the following command:

```
root# /usr/sbin/usermod -g sqmadm -G dba sqmadm
```