



April 2009 Oracle Critical Patch Update for Ex Libris Products Using 9.2.0.8

CONFIDENTIAL INFORMATION

The information herein is the property of Ex Libris Ltd. or its affiliates and any misuse or abuse will result in economic loss. DO NOT COPY UNLESS YOU HAVE BEEN GIVEN SPECIFIC WRITTEN AUTHORIZATION FROM EX LIBRIS LTD.

This document is provided for limited and restricted purposes in accordance with a binding contract with Ex Libris Ltd. or an affiliate. The information herein includes trade secrets and is confidential.

DISCLAIMER

The information in this document will be subject to periodic change and updating. Please confirm that you have the most current documentation. There are no warranties of any kind, express or implied, provided in this documentation, other than those expressly agreed upon in the applicable Ex Libris contract. This information is provided AS IS. Unless otherwise agreed, Ex Libris shall not be liable for any damages for use of this document, including, without limitation, consequential, punitive, indirect or direct damages.

Any references in this document to third-party material (including third-party Web sites) are provided for convenience only and do not in any manner serve as an endorsement of that third-party material or those Web sites. The third-party materials are not part of the materials for this Ex Libris product and Ex Libris has no liability for such materials.

TRADEMARKS

"Ex Libris," the Ex Libris bridge, Primo, Aleph, Alephino, Voyager, SFX, MetaLib, Verde, DigiTool, Preservation, URM, Voyager, ENCompass, Endeavor eZConnect, WebVoyage, Citation Server, LinkFinder and LinkFinder Plus, and other marks are trademarks or registered trademarks of Ex Libris Ltd. or its affiliates.

The absence of a name or logo in this list does not constitute a waiver of any and all intellectual property rights that Ex Libris Ltd. or its affiliates have established in any of its products, features, or service names or logos.

Trademarks of various third-party products, which may include the following, are referenced in this documentation. Ex Libris does not claim any rights in these trademarks. Use of these marks does not imply endorsement by Ex Libris of these third-party products, or endorsement by these third parties of Ex Libris products.

Oracle is a registered trademark of Oracle Corporation.

UNIX is a registered trademark in the United States and other countries, licensed exclusively through X/Open Company Ltd.

Microsoft, the Microsoft logo, MS, MS-DOS, Microsoft PowerPoint, Visual Basic, Visual C++, Win32,

Microsoft Windows, the Windows logo, Microsoft Notepad, Microsoft Windows Explorer, Microsoft Internet Explorer, and Windows NT are registered trademarks and ActiveX is a trademark of the Microsoft Corporation in the United States and/or other countries.

Unicode and the Unicode logo are registered trademarks of Unicode, Inc.

Google is a registered trademark of Google, Inc.

Copyright Ex Libris Limited, 2009. All rights reserved.

Document released: June 2009

Web address: <http://www.exlibrisgroup.com>

Table of Contents

1	Before You Upgrade	4
	Upgrade Prerequisites	4
	Quick Upgrade Package Overview	4
	Pre-Upgrade Procedure	4
2	Upgrading Your Oracle Software and Database	6
	Upgrading Oracle Software	6
	Upgrading Oracle Databases	7
	<i>Recompiling Views in the Database</i>	9

1

Before You Upgrade

This section lists the prerequisites for upgrading, provides an overview of the quick upgrade package, and describes the pre-upgrade procedures that you should perform.

Upgrade Prerequisites

The upgrade of your Oracle software and databases must be performed by a local DBA only.

Before starting an upgrade, a full backup of all Oracle 9 software and databases is absolutely necessary.

Oracle 9.2.0.8 has been tested and can be implemented for all Ex Libris applications that work with Oracle 9i. For information as to whether the application and application version with which you are working supports Oracle 9i, refer to the documentation for your application.

Quick Upgrade Package Overview

The package contains Oracle 9.2.0.8 software and has been pre-built by Ex Libris. This package is recommended for Ex Libris applications that work with Oracle 9i.

Pre-Upgrade Procedure

Before you upgrade, you must perform the following procedure.

- 1 Log on to the Oracle server as an Oracle user (typically `oracle`).

- 2 Use the following command to determine which operating system is installed on the Oracle server:

```
uname
```

Note that the upgrade packages on the Ex Libris FTP server (ftp.exlibris.co.il) are compatible with the Linux, Sun Solaris, and AIX operating systems.

- 3 Download the appropriate upgrade package from the `/oracle/920/<platform>/quick` directory on the Ex Libris FTP server.
- 4 Place the upgrade package in a temporary directory, such as `/exlibris/ftp_from_exlibris`.
- 5 Extract the package using the following:
 - the `tar` utility, if your Oracle server is running on a Linux platform
 - the `gnu_tar` utility, if your Oracle server is running on a Sun Solaris platform
 - the `gnu_tar_aix` utility, if your Oracle server is running on an AIX platform

For detailed instructions on using these utilities, see step 8 in [Upgrading Oracle Software](#).

The `tar` utility is available with your operating system installation. The `gnu_tar` and `gnu_tar_aix` utilities are available on the FTP server, along with the Oracle packages.

If you are working with the `gnu_tar_aix` utility, you must rename it to `gnu_tar` after downloading it. If you are working with either `gnu_tar` utility, you must change permissions after downloading the utility. To do so, use the following commands:

```
cd /exlibris/ftp_from_exlibris
chmod +x gnu_tar*
```

Note: Make sure that the `oraInst.loc` file resides on the Oracle server – in the `/var/opt/oracle` directory on a Sun Solaris OS and in the `/etc` directory on a Linux OS. The contents of the `oraInst.loc` file are as follows:

```
inventory_loc=/exlibris/app/oracle/product/920/oraInventory
inst_group=dba
```

2

Upgrading Your Oracle Software and Database

This section describes how to upgrade your Oracle software, as well as each database associated with Oracle 920.

Upgrading Oracle Software

The upgrade instructions below relate to a standard Oracle installation in the `/exlibris/app/oracle/product/920` directory. These instructions are relevant for customers using the quick upgrade package, according to Ex Libris recommendations.

To upgrade your Oracle software:

- 1 Log on to the Oracle server as an application user (for example, `aleph`, `metalib`, `dtl`, or `verde`).
- 2 Shut down the Ex Libris applications associated with Oracle 920.
- 3 Shut down all Oracle 9 databases.
- 4 Log on again to the Oracle server as an Oracle user (typically `oracle`).
- 5 Stop the Oracle listener:

```
lsnrctl stop
```

Note: You do not have to stop the listener processes related to other Oracle versions (8 or 10).

- 6 Back up the existing database and listener configurations:

```
cd $ORACLE_HOME
tar -cf ../../conf920.tar ./dbs ./network/admin/listener*
./network/admin/tnsnames*
```

- 7 Back up the current Oracle software located in the /exlibris/app/oracle/product/920 directory and remove or rename it:

```
cd $ORACLE_HOME/..
mv 920 9208
```

- 8 Extract the Oracle 9208 quick upgrade package from the temporary directory in which you placed it to the /exlibris/app/oracle/product directory:

```
cd /exlibris/app/oracle/product
```

- For Sun Solaris platforms:

```
cat /exlibris/<ftp_from_exlibris>/ora_9208_solaris.tar.gz_* | gnu_tar
-xzvf -
```

- For Linux platforms:

```
cat /exlibris/<ftp_from_exlibris>/ora_9208_linux.tar.gz_* | tar -xzvf -
```

- For AIX platforms:

```
cat /exlibris/<ftp_from_exlibris>/ora_9208_aix.tar.gz_* | gnu_tar -xzvf -
```

- 9 Restore the original configuration of the databases and listener:

```
cd $ORACLE_HOME
tar -xf ../../conf920.tar
```

- 10 Open the .cshrc file under \$ORACLE_HOME and change the ORACLE_SID environment variable to the appropriate variable.

- 11 Change permissions for the Oracle binary files:

```
chmod +s $ORACLE_HOME/bin/oracle
cd $ORACLE_HOME
find . -type d | xargs chmod +x
find . | xargs chmod +r
```

Upgrading Oracle Databases

The following procedure should be performed for each database associated with Oracle 920.

To upgrade your Oracle databases:

- 1 Log on to the Oracle server as an Oracle user (typically oracle).

- 2 Start the Oracle Net listener:

```
lsnrctl start
```

- 3 For each database instance running on the Oracle home being patched, connect to the database using SQL*Plus. Connect as SYSDBA and run the `catcpu.sql` script as follows:

```
cd $ORACLE_HOME/cpu/CPUPApr2009
sqlplus /nolog
SQL> CONNECT / AS SYSDBA
SQL> set pause off
SQL> STARTUP
SQL> @catcpu.sql
SQL> QUIT
```

Note: You must run the `catcpu.sql` script for any new database that you created or upgraded to 9i after applying the `CPUPOct2008` patch.

- 4 Check the log file for any errors.
- 5 If any invalid objects are reported, run the following commands:

```
cd $ORACLE_HOME/rdbms/admin
sqlplus /nolog
SQL> CONNECT / AS SYSDBA
SQL> set pause off
SQL> @utltp.sql
```

Note: For large numbers of objects, this compilation step can take some time. If you are applying this patch through the Enterprise Manager console, you are prompted to run this compilation script.

- 6 Verify that there are no additional invalid objects by executing the following command:
SQL> SELECT OBJECT_NAME FROM DBA_OBJECTS WHERE STATUS= 'INVALID' ;
- 7 Recompile views for all databases as described in [Recompiling Views in the Database](#).

Note: The time required to recompile the views and related objects depends on the total number of objects and your system configuration. In one internal Oracle test with approximately 2000 views and 4000 objects, the total execution time for `view_recompile_jan2008cpu.sql` and `utltp.sql` was about 30 minutes.

Recompiling Views in the Database

To recompile the views in the database:

- 1 Run the pre-check script (so named because it was initially released with CPUJan2008), which reports the maximum number of views and objects that may be recompiled:

```
cd $ORACLE_HOME/cpu/view_recompile
sqlplus /nolog
SQL> CONNECT / AS SYSDBA
      SQL> set pause off
SQL> @recompile_precheck_jan2008cpu.sql
SQL> QUIT
```

The purpose of this step is to help you determine whether view recompilation should be performed at the same time as the CPU installation, or scheduled for a later time.

- 2 Run the view recompilation script. Note that this script is run with the database in upgrade mode, which restricts connections as SYSDBA.

```
cd $ORACLE_HOME/cpu/view_recompile
sqlplus /nolog
SQL> CONNECT / AS SYSDBA
      SQL> set pause off
SQL> SHUTDOWN IMMEDIATE
SQL> STARTUP MIGRATE
SQL> @view_recompile_jan2008cpu.sql
SQL> SHUTDOWN;
SQL> STARTUP;
SQL> QUIT
```

- 3 Check the log file for any errors. The log file is in the current directory and is named vcomp_<sid>_<timestamp>.log.

- 4 If any invalid objects are reported, run the utlrp.sql script as follows:

```
cd $ORACLE_HOME/rdbms/admin
sqlplus /nolog
SQL> CONNECT / AS SYSDBA
      SQL> set pause off
SQL> @utlrp.sql
```

- 5 Manually recompile any invalid objects. For example:

```
SQL> alter package schemaname.packagename compile;
```

- 6 Verify that the view recompilation has been performed for the database by executing the following command:

```
SELECT * FROM registry$history where ID = '6452863';
```

If the view recompilation has been performed, this statement returns one or more rows. If the view recompilation has not been performed, this statement does not return any rows.

Once the upgrade is finished, start an Ex Libris application and perform sanity checks.