Oracle® Database

Release Notes

10*g* Release 2 (10.2) for AIX

B19074-15

February 2012

This document contains important information that was not included in the platform-specific or product-specific documentation for this release. This document supplements *Oracle Database Readme* and may be updated after it is released. To check for updates to this document and to view other Oracle documentation, refer to the Documentation section on the Oracle Technology Network (OTN) Web site:

http://www.oracle.com/technetwork/indexes/documentation/index.html

For additional information about this release, refer to the readme files located in the `$ORACLE_HOME/relnotes` directory.

> **Note:**   The Database Quick Installation Guides are no longer available in printed format. These documents are available with the media in the same location as the software and on Oracle Technology Network.

This document contains the following topics:

- Certification Information
- Unsupported Products
- Software Contents on Installation Media
- Preinstallation Requirements
- Installation, Configuration, and Upgrade Issues
- Other Known Issues
- Documentation Corrections and Additions
- Documentation Accessibility

1 Certification Information

The latest certification information for Oracle Database 10*g* Release 2 (10.2) is available on My Oracle Support (formerly Oracle*MetaLink*) at:

https://support.oracle.com

JDK 5 Certification

Starting with Oracle Database 10*g* Release 2 (10.2.0.2), JDK 5 is supported for JDBC applications.

ORACLE®

AIX 6.1 Certification

Starting with Oracle Database 10*g* Release 2 (10.2.0.3), AIX 6.1 (64 bit) operating system is supported. Refer to "Preinstallation Requirements" for more information.

The latest information on patches and support for this release is available on My Oracle Support (formerly Oracle*MetaLink*) (https://support.oracle.com) document 282036.1.

ODBC Certification

Starting with Oracle Database 10*g* Release 2 (10.2.0.4), ODBC driver is supported on AIX operating systems.

2 Unsupported Products

The following products are not supported with Oracle Database 10*g* Release 2 (10.2):

- Grid Control Support

  Oracle Database 10*g* Release 2 (10.2) can be managed as a target by Grid Control 10.1.0.4. However, Oracle Database 10*g* Release 2 is not supported by Grid Control 10.1.0.4 as a repository.

- JDBC 1.2 driver

  JDBC 1.2 driver is not supported on AIX 5.3

- Radius with the CHAP protocol

- Network Attached Storage (NAS) Devices

3 Software Contents on Installation Media

The following products and documentation are located on the first DVD:

- Oracle Database 10*g* Release 2 (10.2) software and documentation

- Oracle Database Companion Products 10*g* Release 2 (10.2) software and documentation

- Oracle Database 10*g* Release 2 (10.2) Documentation Library

The following products and documentation are located on the second DVD:

- Oracle Clusterware 10*g* Release 2 (10.2) software and documentation

- Oracle Database Client 10*g* Release 2 (10.2) software and documentation

- Oracle Gateway 10*g* Release 2 (10.2) software and documentation

- Oracle Database 10*g* Release 2 (10.2) Documentation Library

4 Preinstallation Requirements

In addition to the information in the installation guides, the following section contains the system requirements for AIX 6.1.

You must review the following sections before installing Oracle Database on AIX 6L:

- Operating System Requirement

- Operating System Filesets for AIX 6L

4.1 Operating System Requirement

In addition to the supported operating systems listing in the installation guide, AIX 6L, version 6.1, 64-bit kernel is supported with service pack 01 (6100-00-01) or later.

Refer to *Oracle Database Installation Guide for AIX 5L Based Systems (64-Bit)* for additional information on operating system listings.

4.2 Operating System Filesets for AIX 6L

The following filesets are supported on Oracle Database 10*g* Release 2:

- `bos.adt.base`

- `bos.adt.lib`

- `bos.adt.libm`

- `bos.perf.libperfstat`

- `bos.perf.perfstat`

- `bos.perf.proctools`

- `xlC.aix61.rte:9.0.0.1`

- `xlC.rte:9.0.0.1`

4.3 Oracle Installations

Installing on AIX 6L requires the following installations:

- Oracle patch 6613550

- Oracle Database 10*g* Release 2 (10.2.0.1)

- Oracle Database patch set 10*g* Release 2 (10.2.0.3)

4.4 32-Bit Kernel Support

Oracle Database 10*g* Release 2 (10.2) supports 32-bit kernel for single-instance databases but does not support 32-bit kernel for Oracle Real Application Clusters (Oracle RAC).

4.5 Configuring Shell Limits for Oracle RAC Installations

Unlimited shell values must be set for both the Oracle installation owner (`oracle`) and the `root` user. The `root` user requirement for unlimited is needed because the Oracle Clusterware daemon (`crsd`) runs as `root`.

Configure the shell limits setting to unlimited either by using the `smit` utility or by editing the `/etc/security/limits` file. Add the following lines to the `limits` file:

```
rss = -1
data = -1
```

This requirement supplements the description of shell limits in "Section 2.4.1, Configure Shell Limits" in *Oracle Database Oracle Clusterware and Oracle Real Application Clusters Installation Guide for AIX* 10*g* Release 2 (10.2).

5 Installation, Configuration, and Upgrade Issues

Review the following sections for information about issues that affect Oracle Database installation, configuration, and upgrade:

- Latest Upgrade Information
- Operating System Kernel Required for Oracle RAC
- Oracle RAC Support
- Upgrading of Oracle9i to Oracle Database 10g Release 2 on Raw Devices
- Installing Enterprise Security Manager
- Upgrading Oracle Cluster Ready Services from Release 10.1.0.2
- Installing Standard Edition on Automated Storage Management (ASM)
- extjob Executable Required Directory Permissions
- Modifying a Virtual IP Address Node Application
- Rootpre_aix.zip File Location
- Installing Oracle Database on AIX 6.1
- Installing Oracle Database Client into an Existing Oracle Home
- Database Installation Types
- Oracle Storage Compatibility Program Obsolete

5.1 Latest Upgrade Information

For late-breaking updates and best practices about preupgrades, postupgrades, compatibility, and interoperability discussions refer to note 466181.1 on My Oracle Support (formerly Oracle*MetaLink)* (https://support.oracle.com)

that links to "10g Upgrade Companion" page.

5.2 Operating System Kernel Required for Oracle RAC

Oracle RAC on AIX 5.3 requires a 64-bit kernel. Refer to Oracle*MetaLink* Note 169426.1 for instructions for switching between the 32-bit and 64-bit AIX kernels.

5.3 Oracle RAC Support

The list of supported installation options and supported storage types for Oracle Clusterware, Oracle RAC, and vendor clusterware are described in this section. Oracle plans to support additional Oracle Clusterware and Oracle RAC configurations in the future. Please check for updates to this document for the latest list of supported installation scenarios on the OTN Web site at:

http://www.oracle.com/technetwork/indexes/documentation/index.html

> **Note:** Environment variables `TMP` and `TMPDIR` should not point to a shared file system. These variables must point to a local file system. Similar behavior exists in Oracle Database 10*g* Release 1. This issue is tracked with Oracle bug 4553122.

5.4 Upgrading of Oracle9*i* to Oracle Database 10*g* Release 2 on Raw Devices

Use the following upgrade process if the database files are created on plain raw devices not using Logical Volume Manager (LVM). These steps are needed due to the skip offset differences between Oracle9*i* Release 2 and Oracle Database 10*g* Release 2. The skip offset for Oracle9*i* Release 2 is 4k bytes. Starting with Oracle Database 10*g* Release 2, the skip offset is 0 bytes.

1. Back up the database.

2. Back up each of the database file on the plain raw disks to a file using following command:

   ```
   # dd if=db_disk_name of=backup_file_name bs=512  skip=8
   ```

3. Restore the backed up database file to the disk using following commands:

   ```
   # dd if=backup_file_name of=db_disk_name bs=512
   ```

4. Follow the manual upgrade steps documented in Oracle Database Upgrade Guide.

5.5 Installing Enterprise Security Manager

To install Oracle Security Manager, install Oracle Database Client and then select the Administrator installation type.

5.6 Upgrading Oracle Cluster Ready Services from Release 10.1.0.2

This section lists the additional steps required when running the `preupdate` and `rootupgrade` scripts:

- When upgrading Oracle Cluster Release 10.1 to 10.2, run the following command as the `root` user after running the `preupdate.sh` script and then complete the Oracle Clusterware Release 10.2 installation:

  ```
  /usr/sbin/slibclean
  ```

- When upgrading Oracle Clusterware Release 10.1.0.2, activate the volume group before running the `rootupgrade` script. Use the following command to activate the volume group:

  ```
  /usr/sbin/vgchange -a s vg1
  ```

  where *vg1* is the volume group that stores the OCR and voting disks.

5.7 Installing Standard Edition on Automated Storage Management (ASM)

When installing Standard Edition and the starter database on Oracle Automated Storage Management (ASM), the **Email enabled notification** check box on the Select Database Management Option page is disabled.

This issue is tracked with Oracle bug 4553151.

5.8 extjob Executable Required Directory Permissions

To enable the `extjob` executable to locate required libraries, the `$ORACLE_HOME/lib` directory and all of its parent directories must have execute permissions for `group` and `other`.

5.9 Modifying a Virtual IP Address Node Application

When modifying the name, IP address, or netmask of an existing virtual IP address (VIP) resource, use the `srvctl modify nodeapps` command and include the existing interfaces for the VIP in the -A argument. For example:

```
srvctl modify nodeapps -n mynode1 -A 100.200.300.40/255.255.255.0/eth0
```

This issue is tracked with Oracle bug 4500688.

5.10 Rootpre_aix.zip File Location

If you have downloaded Oracle Database 11*g* Release 1 prior to January 18, 2008 from Oracle Technology Network or media and were prompted to execute the `rootpre.sh` script, then you must install the `rootpre_aix.zip` file available on Oracle Technology Network:

http://download.oracle.com/otn/aix/oracle11g/rootpre_aix.zip

New customers do not have to download the `rootpre_aix.zip` file. You can directly download the Oracle Database 11g Release 1 software available on Oracle Technology Network:

http://www.oracle.com/technetwork/database/enterprise-edition/downloads/index.html

5.11 Installing Oracle Database on AIX 6.1

You must install Oracle Database Patch 6613550, Oracle Database 10.2.0.1, and Oracle Database Patch set 10.2.0.3 to proceed with the installation on AIX 6L. The following section lists all the installation steps:

1. Download patch 6613550:

    a. Log on to My Oracle Support (formerly Oracle*Metalink*). You must have a valid My Oracle Support Identifier (CSI) for it. Refer to https://support.oracle.com for more information.

    b. Enter 6613550 in the **Quick Find** field, click **Go**.

    c. Download patch 6613550 into a temporary directory on your computer.

    d. Switch user to `root`:

    ```
    $ su -
    password:
    #
    ```

    e. Unzip the files of this patch into `/temp` folder:

    ```
    cd /temp
    ```

    f.   Run the `rootpre.sh` script as follows:

```
# ./rootpre.sh
```

2. Set the `LANG` parameter to `C` for the remaining steps, as follows:

-   Bourne shell (sh), or Korn shell (ksh), or Bash shell (bash):

```
$LANG=C
```

-   C shell (csh):

```
% setenv LANG C
```

3. Install Oracle Database 10.2.0.1:

    a. Run Oracle Universal Installer with `-ignoreSysPrereqs` option:

```
$ ./runInstaller -ignoreSysPrereqs
```

    b. In the Select Installation Type screen, select Enterprise Edition installation type.

    c. In the Product-specific Prerequisites Checks page, check the following errors as **user specified** to continue with the installation:

       – Checking operating system requirements

       – Checking recommended operating system patches

    d. In the Select Configuration Option screen, select Install Database Software only option.

4. To install Patch Set Release 10.2.0.3, run Oracle Universal Installer with `-ignoreSysPrereqs` option as follows:

```
$ ./runInstaller -ignoreSysPrereqs
```

You must refer to patch set release note for preinstall, install, postinstall, and other known issues. Refer to metalink note 316900.1 for more information.

5. Create a database:

    a. Run Oracle Database Configuration Assistant as follows:

```
$ORACLE_HOME/bin/dbca
```

    b. Select General Purpose Database to create a starter database.

> **Note:** If `Lang=Ja_JP`, then Enterprise Manager Database Control fails to configure. To reconfigure Enterprise Manager Database Control, use the following steps:
>
> - `% export LANG=C`
>
> - `% emca -deconfig dbcontrol db`
>
> - `% emca -repos drop`
>
> - `% emca -repos create`
>
> - `% export ORACLE_HOSTNAME=hostname`
>
> - `% emca -config dbcontrol db`
>
> - `% emctl start dbconsole`

This issue is tracked with the Oracle bugs 4711923, 6278227, 4997291.

5.12 Installing Oracle Database Client into an Existing Oracle Home

Oracle Database Client can be installed in the same Oracle Database home if both products are at the same release level. For example, you can install Oracle Database Client 10*g* Release 2 (10.2) into an existing Oracle Database 10*g* Release 2 (10.2) home. If you apply a patch set before installing the client, then you must apply the patch set again.

5.13 Database Installation Types

If you perform a Custom installation, then ensure that you install only the components covered by your license. You cannot install Standard Edition using Custom installation.

5.14 Oracle Storage Compatibility Program Obsolete

Oracle Storage Compatibility Program (OSCP) is no longer valid. Disregard any content about OSCP in the *Oracle Database Installation Guide for AIX 5L Based Systems (64-Bit)*.

6 Other Known Issues

The following sections contain information about issues related to Oracle Database 10*g* and associated products:

- Performance Issues with Generic Connectivity

- Importing a User Certificate Into Oracle Wallet Using Oracle Wallet Manager

- Removing Metrics for Wait Classes Removes Them Permanently

- Hitachi HDLM for Storage

- Vendor Clusterware Restrictions for Node Names

6.1 Performance Issues with Generic Connectivity

There is a performance issue with Generic Connectivity (`hsodbc`). On the first query of a new connection, there could be significant delay up to several minutes. All subsequent SQL issued through the same dblink session will proceed without delay.

Check Oracle bug 4549924 for patch availability.

6.2 Importing a User Certificate Into Oracle Wallet Using Oracle Wallet Manager

Oracle Wallet Manager will fail to recognize the user certificate as valid if you capture the user certificate contents from the Oracle Certificate Authority site and save this as a flat file. This is because when saving as a flat file, all the lines of the user certificate are run together with no line breaks.

Workaround: Edit the user certificate. Insert a new line after `-----BEGIN CERTIFICATE-----` and a new line before `-----END CERTIFICATE-----`.

6.3 Removing Metrics for Wait Classes Removes Them Permanently

Do not remove the key values for the wait class metrics. Doing so removes them permanently and currently there is no easy way to recover them.

This issue is tracked with Oracle bug 4602952.

6.4 Hitachi HDLM for Storage

If you use Hitachi HDLM (dmlf devices) for storage, then automatic storage instances do not automatically identify the physical disk. Instead, the instances identify only the logical volume manager (LVM). This is because the physical disks can only be opened by programs running as `root`.

Physical disks have path names similar to the following:

- `/dev/rdlmfdrv8`

- `/dev/rdlmfdrv9`

> **Note:** To use ASM with HDLM, refer to Hitachi Dynamic Link Manager (HDLM) documentation or Hitachi support.

6.5 Vendor Clusterware Restrictions for Node Names

If you use a vendor clusterware with Oracle Clusterware and Oracle Real Application Clusters, then you must use the node names and host names registered with that vendor clusterware you have installed.

7 Documentation Corrections and Additions

This section lists the following corrections to the installation guides for AIX 5L-based Systems (64-Bit):

- In *Oracle Database Oracle Clusterware and Oracle Real Application Clusters Installation Guide*, Chapter 2, "Preinstallation," in the section "Oracle Clusterware Home Directory," it incorrectly lists the path `/u01/app/oracle/product/crs` as a possible

Oracle Clusterware home path. A default Oracle base path is `/u01/app/oracle`, and the Oracle Clusterware home must never be a subdirectory of the Oracle base directory.

A possible Oracle Clusterware home directory is in a path outside of the Oracle base directory. for example, if the Oracle base directory is `u01/app/oracle`, then the Oracle Clusterware home can be an option similar to one of the following:

```
u01/crs/
/u01/crs/oracle/product/10/crs
/crs/home
```

- In *Oracle Database Oracle Clusterware and Oracle Real Application Clusters Installation Guide*, Chapter 2, "Preinstallation," in the section "Oracle Clusterware Home Directory," it incorrectly lists the path `/u01/app/oracle/product/crs` as a possible Oracle Clusterware home path. A default Oracle base path is `/u01/app/oracle`, and the Oracle Clusterware home must never be a subdirectory of the Oracle base directory.

  A possible Oracle Clusterware home directory is in a path outside of the Oracle base directory. for example, if the Oracle base directory is `u01/app/oracle`, then the Oracle Clusterware home can be an option similar to one of the following:

  ```
  u01/crs/
  /u01/crs/oracle/product/10/crs
  /crs/home
  ```

- The *Oracle Database Oracle Clusterware and Oracle Real Application Clusters Installation Guide*, Chapter 2, "Pre-Installation Tasks," section 2.6.1, "IP Address Requirements," states that the virtual IP address (VIP) should respond to a `ping` command:

  During installation, Oracle Universal Installer uses the `ping` command to ensure that the VIP is reachable.

  The preceding statement is incorrect. Before installation, the VIP address should be configured in DHCP or `/etc/hosts`, or both, but it must not be assigned to a server that can respond to a `ping` command.

- In *Oracle Database Administrator's Reference for UNIX-Based Operating Systems*, Appendix H, "Database Limits," states the incorrect maximum value (`63`) for the `MAXINSTANCES1055` variable. The correct maximum limit for the variable is 1055 .

- The *Oracle Database Installation Guide for AIX 5L Based Systems (64-Bit)*, Chapter 2, "Pre-Installation Tasks," section 2.2.3, "Disk Space Requirements," the following values documented are incorrect. The updated values are as follows:

  Enterprise Edition 3.82 GB

  Standard Edition   3.78 GB

  Custom Install   3.95 GB

- In Oracle Database documentation, Oracle inventory group is represented as `oinstall`. However, it is not mandatory to use the same name, you can enter a different name for this group.

- In *Oracle Database Client Quick Installation Guide for 10g Release 2 (10.2) AIX 5L Based Systems*, section 7, bullet 9, "Configuring the oracle User's Environment" in *(64-Bit)*, says:

Add one of the following lines to the file to set the `AIXTHREAD_SCOPE` environment variable to `S` (system-wide thread scope):

- Bourne shell (sh), Bash shell (bash), or Korn shell (ksh):

  ```
  AIXTHREAD_SCOPE=S; export AIXTHREAD_SCOPE
  ```

- C shell (csh or tcsh):

  ```
  setenv AIXTHREAD_SCOPE S
  ```

This is incorrect. You are not required to set `AIXTHREAD_SCOPE` environment variable to `S`.

- In *Oracle Database Administrator's Reference for UNIX-Based Operating Systems*, Appendix H, "Database Limits," states incorrect value for control files as 10000 database blocks. The correct value is 25000 control file blocks with a block size of 4096 bytes.

- In *Oracle Database Administrator's Reference for UNIX-Based Operating Systems*, Appendix A.2.4, "Input-Output Slaves," the last two paragraphs have been modified as follows:

  There are times when you must turn off asynchronous I/O. For example, if instructed to do so by Oracle Support for debugging. You can use the `DISK_ASYNCH_IO` and `TAPE_ASYNCH_IO` parameters to switch off asynchronous I/O for disk or tape devices. `TAPE_ASYNCH_IO` support is only available when the Media Manager software supports it and for Recovery Manager, if `BACKUP_TAPE_IO_SLAVES` is true.

  Set the `DBWR_IO_SLAVES` parameter to greater than 0 only if the `DISK_ASYNCH_IO` parameter is set to false. Otherwise, the database writer process becomes a bottleneck. In this case, the optimal value on AIX for the `DBWR_IO_SLAVES` parameter is 4.

- In *Oracle Database Installation Guide for AIX 5L Based Systems (64-Bit)*, Chapter 4, section, "Installing Oracle Database 10g Products from the Companion CD," erroneously states that JPublisher and Oracle SQLJ are installed. The correct information is that JPublisher is not a part of Companion CD and Oracle SQLJ Demos are installed with the Companion CD instead of Oracle SQLJ.

- In *Oracle Database Companion CD Installation Guide for AIX 5L Based Systems (64-Bit)*, Chapter 1, section, "Products Available in the Oracle Database 10g Products Installation Type," erroneously states that JPublisher and Oracle SQLJ are installed. The correct information is that JPublisher is not a part of Companion CD and Oracle SQLJ Demos are installed with the Companion CD instead of Oracle SQLJ.

> **Note:** The SQLJ Demos are installed if Oracle SQLJ was installed before running the Companion CD installation.

8 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.