

# **Oracle® Application Server 10g**

Quick Installation and Upgrade Guide

10g (9.0.4) for Solaris Operating System (SPARC)

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**ORACLE®**

# 1 Introduction

Oracle Corporation recommends reviewing the *Oracle Application Server 10g Installation Guide* and the *Oracle Application Server 10g Release Notes* before installing Oracle Application Server in a production environment or if there is an existing Oracle software installation on the computer

This Oracle Application Server Quick Installation Guide describes procedures for installing the following Oracle Application Server installation types:

- **Java Developer Topology** - this consists of a J2EE and Web Cache middle tier.
- **Portal and Wireless Developer Topology** - this consists of a Portal and Wireless middle tier and an OracleAS Infrastructure 10g.

Table 1 shows the contents of the Oracle Application Server Quick Installation Guide:

**Table 1 Content of This Guide**

| <b>Section</b>               | <b>Contents</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Section 2,<br>"Requirements" | Section 2.1, "Check Requirements"<br>Section 2.2, "Check Solaris Operating System Patches" <ul style="list-style-type: none"><li>■ Section 2.2.1, "Solaris 8"</li><li>■ Section 2.2.2, "Solaris 9"</li></ul> Section 2.3, "Check Operating System Packages"<br>Section 2.4, "Create an Inventory Directory Group"<br>Section 2.5, "Create Database Groups"<br>Section 2.6, "Create an Operating System User"<br>Section 2.7, "Check Environment Variables"<br>Section 2.8, "Check Kernel Parameters"<br>Section 2.9, "Check Port Use"<br>Section 2.10, "Mounting Your CD-ROM or DVD"<br>Section 2.11, "Starting up the Installer" |

**Table 1 Content of This Guide (Cont.)**

| <b>Section</b>                                                                   | <b>Contents</b>                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Section 3,<br>"Installation"                                                     | Section 3.1, "Installing a Java Developer Topology"<br>Section 3.2, "Installing a Portal and Wireless Developer Topology" <ul style="list-style-type: none"><li>■ Section 3.2.1, "Installing an OracleAS Infrastructure 10g"</li><li>■ Section 3.2.2, "Installing a Portal and Wireless Instance"</li></ul> Section 3.3, "Accessing the Welcome Page" |
| Section 4, "Install OracleAS Metadata Repository in an Existing Oracle Database" |                                                                                                                                                                                                                                                                                                                                                       |

**Table 1 Content of This Guide (Cont.)**

| <b>Section</b>                              | <b>Contents</b>                                                                                                                                                                                                                                                                                              |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Section 5,<br>"Upgrade"                     | Section 5.1, "Conventions"<br>Section 5.2, "Performing Pre-Upgrade Tasks" <ul style="list-style-type: none"><li>■ Section 5.2.1, "Install Oracle Application Server 10g (9.0.4)"</li></ul> Section 5.3, "Performing a J2EE and Web Cache Upgrade"<br>Section 5.4, "Performing a Portal and Wireless Upgrade" |
| Section 6,<br>"Additional Resources"        | Section 6.1, "Oracle Support Services"<br>Section 6.2, "Version Updates"<br>Section 6.3, "Premium Services"<br>Section 6.4, "Quick Reference"                                                                                                                                                                |
| Section 7,<br>"Documentation Accessibility" | Section 7.1, "Accessibility of Code Examples in Documentation"                                                                                                                                                                                                                                               |

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**Note:** If you are installing on a computer with an existing Oracle home, Oracle recommends that you read the *Oracle Application Server 10g Installation Guide* and the *Oracle Application Server 10g Release Notes* before installation. To determine whether an Oracle installation exists, check whether the `/var/opt/oracle/oraInst.loc` file exists.

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**See Also:**

- *Oracle Application Server 10g Installation Guide*
- *Oracle Application Server 10g Upgrading to 10g (9.0.4)*

## 2 Requirements

This section describes pre-installation requirements for installation of Oracle Application Server. Oracle recommends that you review and complete the tasks listed in the following sections:

- Section 2.1, "Check Requirements"
- Section 2.2, "Check Solaris Operating System Patches"
- Section 2.3, "Check Operating System Packages"
- Section 2.4, "Create an Inventory Directory Group"
- Section 2.5, "Create Database Groups"
- Section 2.6, "Create an Operating System User"
- Section 2.7, "Check Environment Variables"
- Section 2.8, "Check Kernel Parameters"
- Section 2.9, "Check Port Use"
- Section 2.10, "Mounting Your CD-ROM or DVD"
- Section 2.11, "Starting up the Installer"

## 2.1 Check Requirements

Check that your computer meets the following disk space and memory requirements:

|                                                                        | <b>Java Developer Topology</b> | <b>Portal and Wireless Middle Tier</b> | <b>OracleAS Infrastructure 10g</b> |
|------------------------------------------------------------------------|--------------------------------|----------------------------------------|------------------------------------|
| Operating system                                                       | Solaris 8,<br>Solaris 9        | Solaris 8,<br>Solaris 9                | Solaris 8,<br>Solaris 9            |
| Memory                                                                 | 512 MB                         | 1 GB                                   | 1 GB                               |
| To determine the amount of memory, use the <b>prtcnf</b> command:      | (524288 kb)                    | (1048576 kb)                           | (1048576 kb)                       |
| <code>prompt&gt; prtcnf   grep Memory</code>                           |                                |                                        |                                    |
| Disk space <sup>1</sup>                                                | 450 MB                         | 975 MB                                 | 2.6 GB                             |
| To determine the amount of free disk space, use the <b>df</b> command: | (460800 kb)                    | (998400 kb)                            | (2726298 kb)                       |
| <code>prompt&gt; df -k dir.</code>                                     |                                |                                        |                                    |
| Space in /tmp                                                          | 150 MB                         | 150 MB                                 | 150 MB                             |
|                                                                        | (153600 kb)                    | (153600 kb)                            | (153600 kb)                        |

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|                                                                                                                                                                                                                    | <b>Java Developer Topology</b> | <b>Portal and Wireless Middle Tier</b> | <b>OracleAS Infrastructure 10g</b> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|----------------------------------------|------------------------------------|
| Swap space <sup>2</sup>                                                                                                                                                                                            | 1.5 GB                         | 1.5 GB                                 | 1.5 GB                             |
| To determine the amount of available swap space, use the <b>swap</b> command:                                                                                                                                      | (1572864 KB)                   | (1572864 KB)                           | (1572864 KB)                       |
| prompt> <b>swap -l</b>                                                                                                                                                                                             |                                |                                        |                                    |
| The value in the "free" column indicates the number of free blocks, where a block is 512 bytes. To convert blocks to KB, divide the number by 2. For example, 2,000,000 free blocks is equivalent to 1,000,000 KB. |                                |                                        |                                    |

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1. Replace **dir** with the Oracle Application Server destination directory or with the parent directory if the destination directory does not exist yet. For example, if you plan to install Oracle Application Server in `/opt/oracle/infra`, you can replace **dir** with `opt/oracle` or `/opt/oracle/infra`.
2. If you do not have enough swap space, perform the following tasks:
  - a. Log in as the root user, and create an empty swap file:

```
prompt> su
Password: root_user_password
prompt> mkfile size swap_file_name
```

Append an "m" to the size to specify the size in megabytes (example: 600m). The minimum size of this file must be greater than the difference between the currently available swap space and required swap space. For example, if you have 100 MB of free swap space, then this swap file must be at least 640 MB for a Java Developer topology consisting of a J2EE and Web Cache installation.

- b. Add the file to the swap space using the following command:

```
prompt> /usr/sbin/swap -a swap_file_name
```

- c. Add a line to the `/etc/vfstab` file. If you do not add this line, the new swap space will not persist when you reboot the computer.

```
/path/to/swap/file - - swap - no -
```

Replace `/path/to/swap/file` with the location of the swap file.

- d. Verify the new swap space size:

```
prompt> /usr/sbin/swap -s
```

**See Also:** *Oracle Application Server 10g Installation Guide* for additional system hardware requirements.

## 2.2 Check Solaris Operating System Patches

Check that your computer has the operating system patches (or later versions of these patches) listed in the following sections:

- Section 2.2.1, "Solaris 8"

- Section 2.2.2, "Solaris 9"

## 2.2.1 Solaris 8

- 108652-74 or higher: X11 6.4.1: Xsun patch
- 108921-17 or higher: CDE 1.4: dtwm patch
- 108940-57 or higher: Motif 1.2.7 and 2.1.1: Runtime library patch
- 112003-03 or higher: Unable to load fontset in 64-bit Solaris 8 iso-1 or iso-15
- 108773-18 or higher: IIM and X input and output method patch
- 111310-01 or higher: /usr/lib/libdhcpagent.so.1 patch
- 109147-26 or higher: Linker patch
- 111308-04 or higher: /usr/lib/libmtmalloc.so.1 patch
- 112438-02 or higher: /kernel/drv/random patch
- 108434-13 or higher: 32-bit shared library patch for C++
- 111111-03 or higher: /usr/bin/nawk patch
- 112396-02 or higher: /usr/bin/fgrep patch
- 110386-03 or higher: RBAC feature patch

- 111023-02 or higher: /kernel/fs/mntfs and /kernel/fs/sparcv9/mntfs patch
- 108987-13 or higher: Patch for patchadd and patchrm
- 108528-24 or higher: Kernel update patch
- 108989-02 or higher: /usr/kernel/sys/acctctl and /usr/kernel/sys/exaccts patch
- 108993-26 or higher: LDAP2 client, libc, libthread and libnsl libraries patch
- 112138-01 or higher: usr/bin/domainname patch

### 2.2.2 Solaris 9

- 113096-03 or higher: X11 6.6.1: OWconfig patch
- 112785-26 or higher: X11 6.6.1: Xsun patch

To get a list of patches installed on your computer:

1. Run the `showrev` command with the `-p` option. The following command saves the sorted output to a file called `patchList`.

```
prompt> showrev -p | sort > patchList
```

2. Open the file in a text editor, such as vi or emacs, and search for the patch numbers.

If you need patches, you can download them from:

<http://sunsolve.sun.com>

You can fulfil all the patch requirements by installing the J2SE patch cluster along with the domain name patch (112138-01 or greater).

### 2.3 Check Operating System Packages

Check that your computer has these required operating system packages:

|           |           |          |
|-----------|-----------|----------|
| SUNWarc   | SUNWlibms | SUNWtoo  |
| SUNWbtool | SUNWspot  | SUNWi1of |
| SUNWhea   | SUNWspox  | SUNWxwft |
| SUNWlibm  | SUNWi15cs | SUNWi1cs |

To check if an operating system package is installed on your computer, run the `pkginfo` command with the name of the package. The syntax for running `pkginfo` is:

```
pkginfo package_name1 package_name2 ...
```

For example, to check if all of the listed operating system packages are installed on your computer, run the following command:

```
prompt> pkginfo SUNWarc SUNWbtool SUNWhea SUNWlibm  
SUNWlibms SUNWsprot SUNWsprrox SUNWtoo SUNWi1of  
SUNWxwfont SUNWi1cs SUNWi15cs
```

If your computer is missing a package, contact your system administrator.

## 2.4 Create an Inventory Directory Group

To create a local operating system group, use the Solaris Management Console:

1. Set the DISPLAY environment variable to point to the monitor where you want the Solaris Management Console window to appear. The format of the DISPLAY environment variable is:  
*hostname:display\_number.screen\_number*

Example (C shell):

```
% setenv DISPLAY test.mydomain.com:0.0
```

Example (Bourne or Korn shell):

```
$ DISPLAY=test.mydomain.com:0.0; export DISPLAY
```

2. Start up the Solaris Management Console.  
prompt> `/usr/sadm/bin/smc`
3. In the left frame, expand **This Computer**, then expand **System Configuration**.
4. Click **Users**. This displays the Log In window.
5. In the Log In window, log in as the root user.
6. In the left frame, expand **Users** and select **Groups**.
7. Select Action > Add Group.
8. In **Group Name**, enter `oinstall` as the group name.
9. Click **OK**.

For more information about operating system users and groups, see your operating system documentation or contact your system administrator.

## 2.5 Create Database Groups

This section applies only if you are installing the Portal and Wireless Developer Topology.

Create two groups `dba` and `osoper` using the steps shown in Section 2.4.

## 2.6 Create an Operating System User

To create a local operating system user, use the Solaris Management Console:

1. Set the `DISPLAY` environment variable to point to the monitor where you want the Solaris Management Console window to appear. The format of the `DISPLAY` environment variable is:  
*hostname:display\_number.screen\_number*

Example (C shell):

```
% setenv DISPLAY test.mydomain.com:0.0
```

Example (Bourne or Korn shell):

```
$ DISPLAY=test.mydomain.com:0.0; export DISPLAY
```

2. Start up the Solaris Management Console.

```
prompt> /usr/sadm/bin/smc
```

3. In the left frame, expand **This Computer**, then expand **System Configuration**.
4. Click **Users**. This displays the Log In window.
5. In the Log In window, in **User Name**, enter `root`. In **Password**, enter the root password.
6. In the left frame, expand **Users** and select **User Accounts**.
7. Select **Action > Add User > With Wizard**.
8. In **User Name**, enter the name of the user (`oracle`). The **Full Name** and **Description** fields are optional. Click **Next**.
9. In **User ID Number**, accept the default value. Click **Next**.
10. Select **User Must Use This Password At First Login**, and enter a password for the user. Click **Next**.
11. In **Primary Group**, select the primary group for the user. This is the group you created earlier to own the inventory directory. Click **Next**.
12. In **Path**, enter a home directory for the user. Click **Next**.
13. Review the mail server information for the user and click **Next**.

**14.** Review the user information and click **Finish** to create the user.

To check which groups an operating system user belongs to, run the `groups` command with the name of the user. For example:

```
prompt> groups oracle
```

For more information about operating system users and groups, see your operating system documentation or contact your system administrator.

## 2.7 Check Environment Variables

Check the values of the environment variables shown in Table 2 when logged in as the `oracle` user.

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**Note:** If you set the environment variables as a different user, and then switch to the `oracle` user using the "`su - oracle`" command, the environment variables might not be passed to the `oracle` user. Always check the environment variables before you start the installer.

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**Table 2 Environment Variables**

| <b>Environment Variable</b> | <b>Description</b>                                                                                                                                                                                                                                                                                              |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DISPLAY                     | <p>Set to the current computer.</p> <p>Example (C shell):</p> <pre>% <b>setenv DISPLAY</b><br/><b>machine1.acme.com:0.0</b></pre> <p>Example (Bourne or Korn shell):</p> <pre>\$ <b>DISPLAY=machine1.acme.com:0.0;</b><br/><b>export DISPLAY</b></pre>                                                          |
| TMP                         | <p>If you want the installer to use a directory other than <code>/tmp</code>, set the TMP environment variable to the full path of an alternate directory.</p> <p>Example (C shell):</p> <pre>% <b>setenv TMP /tmp2</b></pre> <p>Example (Bourne or Korn shell):</p> <pre>\$ <b>TMP=/tmp2; export TMP</b></pre> |
| ORACLE_HOME and ORACLE_SID  | <p>The installer unsets these variables for you.</p>                                                                                                                                                                                                                                                            |

**Table 2 Environment Variables (Cont.)**

| <b>Environment Variable</b>          | <b>Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PATH, CLASSPATH, and LD_LIBRARY_PATH | <p>Check that these variables do not contain references to any Oracle home directories. To view the value of an environment variable, use the <code>echo</code> command:</p> <p>Example (C shell):</p> <pre>% <b>echo \$PATH</b></pre> <p>Example (Bourne or Korn shell):</p> <pre>\$ <b>echo \$PATH</b></pre> <p>If the PATH environment variable contains Oracle home directories, set the variable to contain the current directories except for the Oracle home directories.</p> |
| TNS_ADMIN                            | <p>Ensure this environment variable is not set.</p> <p>Example (C shell):</p> <pre>% <b>unsetenv TNS_ADMIN</b></pre> <p>Example (Bourne or Korn shell):</p> <pre>\$ <b>unset TNS_ADMIN</b></pre>                                                                                                                                                                                                                                                                                     |

## 2.8 Check Kernel Parameters

This section is applicable only if you are installing a Portal and Wireless Developer topology.

Check that the kernel parameters are set to the minimum values as shown in Table 3. You will be installing a database for the OracleAS Metadata Repository.

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**Notes:** If you update kernel parameter values, you need to reboot your computer for the new values to take effect.

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**Table 3** *Values for Kernel Parameters*

| Parameters | Minimum | Description                                                                                                                                                                                                                                                                                                           |
|------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SEMMNI     | 100     | Defines the maximum number of semaphore sets in the entire system.                                                                                                                                                                                                                                                    |
| SEMMNS     | 256     | Defines the maximum semaphores on the system. This setting is a minimum recommended value, for initial installation only.<br><br>The SEMMNS parameter should be set to the sum of the PROCESSES parameter for each Oracle database, adding the largest one twice, and then adding an additional 10 for each database. |

**Table 3 Values for Kernel Parameters(Cont.)**

| <b>Parameters</b> | <b>Minimum</b> | <b>Description</b>                                                                                                                    |
|-------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------|
| SEMMSL            | 256            | Defines the minimum recommended value, for initial installation only.                                                                 |
| SHMMAX            | 4294967295     | Defines the maximum allowable size of one shared memory segment (4 GB = 4294967295).                                                  |
| SHMMIN            | 1              | Defines the minimum allowable size of a single shared memory segment.                                                                 |
| SHMMNI            | 100            | Defines the maximum number of shared memory segments in the entire system.<br><b>Note:</b> This parameter is not used in Solaris 9.   |
| SHMSEG            | 10             | Defines the maximum number of shared memory segments one process can attach.<br><b>Note:</b> This parameter is not used in Solaris 9. |

To add or update kernel parameter values:

1. Become root user on the computer where you need to change the values.
2. Make a backup copy of the `/etc/system` file. For example, the following command makes a backup copy called `system.back`:

```
prompt> cp /etc/system /etc/system.back
```

3. Using a text editor such as `vi` or `emacs`, update the values or add new lines in the `/etc/system` file as necessary. For example, the following lines show sample values for the parameters:

```
set semsys:seminfo_semmni=300
set semsys:seminfo_semmns=800
set semsys:seminfo_semmsl=256
set shmsys:shminfo_shmmax=4294967295
set shmsys:shminfo_shmmin=1
set shmsys:shminfo_shmmni=512
set shmsys:shminfo_shmseg=150
```

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---

**Note:** The comment character for the `/etc/system` file is the asterisk (\*), not #.

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4. Restart the computer for the new values to take effect

## 2.9 Check Port Use

This section is applicable only if you are installing a Portal and Wireless Developer topology.

If you have other applications listening on port 1521, you may need to configure them so that they listen on a different port.

Verify if port 1521 is in use by an application on your computer with the following command:

```
prompt> netstat -an | grep 1521
```

Review the output to verify if port 1521 is in use.

If port 1521 is in use by your OracleAS Metadata Repository, then you may share the port with your installation of Portal and Wireless. Refer to the *Oracle Application Server 10g Installation Guide* for documentation on sharing ports.

If port 1521 is in use by a third-party application, you need to configure the application to use a different port. Refer to the *Oracle Application Server 10g Installation Guide* or third-party documentation for information on sharing ports.

## 2.10 Mounting Your CD-ROM or DVD

Oracle CD-ROMs are in ISO 9660 format with Rockridge extensions. The DVD is in DVD-ROM format.

When you use volume management software, the CD-ROM or DVD mounts automatically when you insert the disk into the drive. If your CD-ROM or DVD does not automount, read this section for manual mounting instructions.

On UNIX systems, mounting or unmounting the CD-ROM or DVD manually requires `root` privileges. Unmount the CD-ROM or DVD before removing it from the drive, using the `umount` command.

In the following instructions, the CD-ROM or DVD mount point is referred to as `cdrom`. If your mount point is different, substitute the correct mount point name for all references to `cdrom`.

Follow these steps to mount the CD-ROM or DVD manually:

1. Place the CD-ROM or DVD in the CD-ROM or DVD drive.

2. Log in as the `root` user and create a CD-ROM or DVD mount point directory accessible by all users:

```
% su  
Password:  
# mkdir /cdrom  
# chmod 777 /cdrom
```

3. Mount the CD-ROM or DVD drive on the mount point directory and then exit the root account:

```
# mount options device_name /cdrom  
# exit
```

---

---

**Note:** On Solaris (Sun SPARC), if you are using Volume Manager, the CD-ROM mounts automatically. The mount point is usually `/cdrom`.

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## 2.11 Starting up the Installer

1. If your computer does not mount CD-ROMs or DVDs automatically, you need to set the mount point manually. See Section 2.10, "Mounting Your CD-ROM or DVD" for details.
2. Log in as the `oracle` user. If you switched to the `oracle` user using the "`su -oracle`" command, check the values of the environment variables again because the variables might not be passed to the `oracle` user.
3. CD-ROM users: Insert Oracle Application Server Disk 1 into the CD-ROM drive.  
  
DVD users: Insert the Oracle Application Server DVD into the DVD drive.
4. Run the following commands (shown after the notes) to start up the Oracle Universal Installer from the CD-ROM or DVD.

---

---

**Notes:**

- Be sure you are not logged in as the root user when you start the Oracle Universal Installer. If you are, then only the root user will have permissions to manage Oracle Application Server.
  - Do not start the installation inside the `mount_point` directory. If you do, then you may not be able to eject the installation disk. The `cd` command, shown below, changes the current directory to your home directory.
- 
- 

**CD-ROM:**

```
prompt> cd
prompt> mount_point/904disk1/runInstaller
```

**DVD:**

```
prompt> cd
prompt> mount_point/application_server/runInstaller
```

## 3 Installation

This section describes how to install these two Oracle Application Server topologies:

- **Java Developer topology:** Install this topology if you need a simple container for deploying and testing J2EE applications.
- **Portal and Wireless Developer topology:** Install this topology if you plan to develop applications that use OracleAS Portal, Oracle Application Server Wireless, or Identity Management services, such as Oracle Internet Directory and OracleAS Single Sign-On. You must install OracleAS Infrastructure 10g to install this topology.

These topologies are intended for development environments. See the *Oracle Application Server 10g Installation Guide* for additional topologies, including deployment topologies. Oracle recommends reviewing the *Oracle Application Server 10g Installation Guide* to verify coexistence of Oracle Application Server components for your deployment topology.

### 3.1 Installing a Java Developer Topology

A Java Developer topology consists of a J2EE and Web Cache instance, on which you can deploy and run J2EE applications.

Perform the following procedure to install a J2EE and Web Cache instance:

1. Start up the installer. See Section 2.11, "Starting up the Installer" for details.
2. Welcome screen: Click **Next**.
3. If this is the first Oracle product to be installed on this computer, you have to set up the "inventory" directory, as prompted by these screens:
  - a. Specify Inventory Directory screen

**Enter the full destination path for the inventory directory:**

Enter the full destination path for the directory where you want the installer to store its files. Enter a directory that is different from the Oracle home directory.

Example: `/opt/oracle/oraInventory`

Click **OK**.

**b. UNIX Group Name screen**

Enter the name of the operating system group to have write permission for the inventory directory.

Example: oinstall

Click **Next**.

- c. Run oraInstRoot.sh:** Run the oraInstRoot.sh script in a different shell as the root user. The script is located in the oraInventory directory.

Click **OK**.

**4. Specify File Locations screen:**

**Name:** Enter a name to identify this Oracle home.

Example: OH\_J2EE\_904

**Destination Path:** Enter the full path to the destination directory. This is the Oracle home directory.

Example: /opt/oracle/OraJ2EE\_904

If the destination directory does not exist, Oracle Universal Installer creates it.

If you want to create the destination directory beforehand, create it as the `oracle` user; do not create it as the `root` user.

Click **Next**.

5. Specify Hardware Cluster Installation Mode screen: This screen appears only on a computer that is part of a hardware cluster. This instance cannot be automatically installed on all computers of a cluster. Select **Single Node Installation** and click **Next**.
6. Select a Product to Install screen: Select Oracle Application Server and click **Next**.
7. Select Installation Type screen: Select **J2EE and Web Cache** and click **Next**.
8. Preview of Steps for Middle Tier Installation screen: Click **Next**.
9. Confirm Pre-Installation Requirements screen: Verify that your computer meets all the requirements, and click **Next**.

**10. Select Configuration Options screen:**

Select OracleAS Web Cache if you want to use caching capabilities with this Oracle Application Server instance.

Do not select **Identity Management Access**.

Do not select **OracleAS Database-Based Cluster**.

Do not select **OracleAS File-Based Cluster**.

Click **Next**.

**11. Specify OracleAS Instance Name and ias\_admin Password screen:**

**Instance Name:** Enter a name for this instance. If you have more than one Oracle Application Server instance on a computer, the instance names must be unique.

Example: J2EE\_904

**ias\_admin Password** and **Confirm Password:** Enter and confirm the password for the ias\_admin user. This is the administrative user for this instance.

Passwords must consist of at least five characters, and one of the characters must be a number.

Click **Next**.

## 12. Summary screen

Verify your selections and click **Install**.

Oracle Universal Installer is now installing the files and configuring Oracle Application Server components. This may take a while.

## 13. Run root.sh dialog

---

---

**Note:** Do not run `root.sh` until prompted. Oracle Universal Installer will display a screen prompting you to run `root.sh`.

---

---

In a different window, login as the root user and run the `root.sh` script. The script is located in this instance's Oracle home directory.

The Configuration Assistants screen display shows the progress of the configuration assistants. The Configuration Assistants configure Oracle Application Server components.

## 14. End of Installation screen

Click **Exit** to quit the installer.

## 3.2 Installing a Portal and Wireless Developer Topology

In this topology, you install a Portal and Wireless middle tier, which enables you to deploy applications that use components such as OracleAS Portal and OracleAS Wireless. The Portal and Wireless middle tier requires an OracleAS Infrastructure 10g, which you will install before installing the Portal and Wireless middle tier.

### 3.2.1 Installing an OracleAS Infrastructure 10g

This procedure installs an infrastructure with a new database and a new Oracle Internet Directory.

1. Start up the installer. See Section 2.11, "Starting up the Installer" for details.
2. Welcome screen: Click **Next**.

3. If this is the first Oracle product to be installed on this computer, you have to set up the "inventory" directory, as prompted by these screens:

- a. Specify Inventory Directory screen

**Enter the full destination path for the inventory directory:**

Enter the full destination path to the directory where you want the installer to store its files. Enter a directory that is different from the Oracle home directory.

Example: `/opt/oracle/oraInventory`

Click **OK**.

- b. UNIX Group Name screen

Enter the name of the operating system group to have write permission for the inventory directory.

Example: `oinstall`

Click **Next**.

- c. Run orainstRoot.sh: Run the `orainstRoot.sh` script in a different shell as the root user. The script is located in the `oraInventory` directory.

Click **OK**.

4. Specify File Locations screen:

**Name:** Enter a name to identify this Oracle home.

Example: OH\_INFRA\_904

**Destination Path:** Enter the full destination path to the Oracle home directory.

Example: /opt/oracle/OraInfra\_904

If the destination directory does not exist, Oracle Universal Installer creates it.

If you want to create the destination directory beforehand, create it as the `oracle` user; do not create it as the `root` user.

Click **Next**.

5. Specify Hardware Cluster Installation Mode screen: This screen appears *only* on a computer that is part of a hardware cluster.

If you want to install a High Availability environment refer to the *Oracle Application Server 10g Installation Guide* and the *Oracle Application Server 10g High Availability Guide*.

Select **Single Node Installation** and click **Next**.

6. Select a Product to Install screen: Select **OracleAS Infrastructure 10g** and click **Next**.
7. Select Installation Type screen: Select **Identity Management and OracleAS Metadata Repository** and click **Next**.
8. Preview of Steps for Infrastructure Installation screen: Click **Next**.
9. Confirm Pre-Installation Requirements screen: Verify that your computer meets all the requirements, and click **Next**.

Refer to Section 2.9, "Check Port Use" to verify availability of port 1521.

10. Select Configuration Options screen:

Select **Oracle Internet Directory**.

Select **OracleAS Single Sign-On**.

Select **Delegated Administration Service**.

Select **Oracle Directory Integration and Provisioning**.

Do not select **OracleAS Certificate Authority**.

Do not select **High Availability Addressing**.

Click **Next**.

11. Specify Namespace in Internet Directory screen: Select **Suggested Namespace** and click **Next**.

12. Enter information to create the OracleAS Metadata Repository database:

a. Specify Privileged Operating System Groups screen

This screen appears if you are running the installer as a user who is not in the `dba` operating system groups.

**Database Administrator (OSDBA) Group**: Enter the name of an operating system group that you belong to.

Example: `dbadmin`

**Database Operator (OSOPER) Group**: Enter the name of an operating system group that you belong to.

Example: `dbadmin`

Click **Next**.

b. Specify Database Identification screen

**Global Database Name**: Enter a name for the OracleAS Metadata Repository database, and append the domain name of your computer to the database name.

Example: `asdb.acme.com`

**SID:** Enter the system identifier for the OracleAS Metadata Repository database. Typically this is the unique global database name, but without the domain name. The SID must be unique across all databases.

Example: `asdb`

Click **Next**.

- c. Specify and confirm the Passwords for the SYS and SYSTEM Users screen: Set the passwords for these database users, which are privileged accounts used for database administration.

Click **Next**.

- d. Specify Database File Location screen:

**Enter or select a directory for database files:** Enter the directory where you want the installer to create data files for the OracleAS Metadata Repository database.

Example: `/data_partition/ias_dbfiles/`

Click **Next**.

- e. Specify Database Character Set screen: Select **Use the default character set**.

Click **Next**.

13. Specify OracleAS Instance Name and ias\_admin Password screen:

**Instance Name**: Enter a name for this instance. If you have more than one Oracle Application Server instance on a computer, the instance names must be unique.

Example: INFRA\_904

**ias\_admin Password** and **Confirm Password**: Enter and confirm the password for the ias\_admin user. This is the administrative user for this instance.

Passwords must consist of at least five characters, and one of the characters must be a number.

Click **Next**.

14. Summary screen

Verify your selections and click **Install**.

Oracle Universal Installer is now installing the files and configuring Oracle Application Server components. This may take a while.

## 15. Run root.sh screen

---

---

**Note:** Do not run `root.sh` until prompted. Oracle Universal Installer will display a screen prompting you to run `root.sh`.

---

---

In a different window, login as the root user and run the `root.sh` script. The script is located in this instance's Oracle home directory.

## 16. End of Installation screen

Click **Exit** to quit the installer.

**3.2.2 Installing a Portal and Wireless Instance** This procedure installs a Portal and Wireless instance and configures it to use the infrastructure installed in Section 3.2.1, "Installing an OracleAS Infrastructure 10g".

1. Start up the installer. See Section 2.11, "Starting up the Installer" for details.
2. Welcome screen: Click **Next**.

3. Specify File Locations screen:

**Name:** Enter a name to identify this Oracle home.

Example: OH\_PORTAL\_904

**Destination Path:** Enter the full destination path to the Oracle home directory.

Example: /opt/oracle/OraPortal\_904

If the destination directory does not exist, Oracle Universal Installer creates it.

If you want to create the destination directory beforehand, create it as the `oracle` user; do not create it as the `root` user.

Click **Next**.

4. Specify Hardware Cluster Installation Mode screen: This screen appears only if you are installing on a computer that is part of a hardware cluster. Select **Single Node Installation** and click **Next**.

If you want to install a High Availability environment refer to the *Oracle Application Server 10g Installation Guide* and the *Oracle Application Server 10g High Availability Guide*.

5. Select a Product to Install screen: Select **Oracle Application Server** and click **Next**.

6. Select Installation Type screen: Select **Portal and Wireless** click **Next**.
7. Preview of Steps for Middle Tier Installation screen: Click **Next**.
8. Confirm Pre-Installation Requirements screen: Verify that your computer meets all the requirements, and click **Next**.
9. Select Configuration Options screen:  
Select **OracleAS Portal**.  
Select **OracleAS Wireless**.  
Click **Next**

10. Enter connect information for Oracle Internet Directory:

a. Register with Oracle Internet Directory screen

**Hostname:** Enter the name of the computer where Oracle Internet Directory is running.

**Port:** Enter the port number at which Oracle Internet Directory is listening. To determine Oracle Internet Directory's port number, look in the `portlist.ini` file located in the `ORACLE_HOME/install` directory of the infrastructure.

If you select **Use only SSL connections with this Oracle Internet Directory**, then you must obtain the port number from Oracle Internet Directory (SSL) parameter in the `portlist.ini` file.

Click **Next**.

b. Specify Login for Oracle Internet Directory screen

**Username:** Enter `orcladmin`. This is the name of the Oracle Internet Directory administrator.

**Password:** The password for `orcladmin` is the same as the password for the `ias_admin` user in the infrastructure. You entered this password when you installed the infrastructure

(see step 13 in Section 3.2.1, "Installing an OracleAS Infrastructure 10g").

Click **Next**.

**11. Select Metadata Repository screen**

**Repository:** Select the OracleAS Metadata Repository that you want to use for this middle tier instance and click **Next**.

**12. Specify OracleAS Instance Name and ias\_admin Password screen:**

**Instance Name:** Enter a name for this instance. If you have more than one Oracle Application Server instance on a computer, the instance names must be unique.

Example: PORTAL\_904

**ias\_admin Password and Confirm Password:** Enter and confirm the password for the ias\_admin user. This is the administrative user for this instance.

Passwords must consist of at least five characters, and one of the characters must be a number.

Click **Next**.

**13. Summary screen**

Verify your selections and click **Install**.

Oracle Universal Installer is now installing the files and configuring Oracle Application Server components. This may take a while.

**14. Run root.sh screen**

---

---

**Note:** Do not run `root.sh` until prompted. Oracle Universal Installer will display a screen prompting you to run `root.sh`.

---

---

In a different window, login as the root user and run the `root.sh` script. The script is located in this instance's Oracle home directory.

Click **OK**.

**15. End of Installation screen:**

Click **Exit** to quit the installer.

### 3.3 Accessing the Welcome Page

After installation, access the Oracle Application Server Welcome page to verify that the installation was successful. The URL for the Welcome page is:

```
http://hostname.domainname:http_port
```

Determine the *http\_port* by looking in the `portlist.ini` file, located in the `ORACLE_HOME/install` directory. The *http\_port* is listed on the "Oracle HTTP Server listen port" line.

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**Note:** If you have multiple instances of Oracle Application Server installed on a computer, each instance has its own set of port numbers. Check the `portlist.ini` file to be sure you are using the correct port numbers.

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The Welcome page provides links to these useful pages:

- What is new in Oracle Application Server 10g (9.0.4)
- Oracle Enterprise Manager Application Server Control (Application Server Control), which is a browser-based administrative tool.
- Release Notes
- Demos

## 4 Install OracleAS Metadata Repository in an Existing Oracle Database

If you want to install the OracleAS Metadata Repository in an existing Oracle database, you can run a tool called the Oracle Application Server Repository Creation Assistant (OracleAS RepCA). This tool loads the OracleAS Metadata Repository data into an existing database.

You can find the OracleAS RepCA and associated documentation in the *Installing the Oracle Application Server Metadata Repository into an Existing Database* document on the "OracleAS RepCA and Utilities" CD-ROM.

## 5 Upgrade

This section describes how to upgrade the J2EE and Web Cache installation type, and the OracleAS Portal component of the Portal and Wireless installation type from Release 2 (9.0.2) or Release 2 (9.0.3) to 10g (9.0.4).

This section does not explain how to upgrade the OracleAS Portal schema in the Infrastructure.

This section also includes instructions for using the Oracle Application Server Upgrade Assistant (OracleAS Upgrade Assistant), a tool that automates much of the upgrade process.

**See Also:** *Oracle Application Server 10g  
Upgrading to 10g (9.0.4)*

This section features the following topics:

- Section 5.1, "Conventions"
- Section 5.2, "Performing Pre-Upgrade Tasks"
- Section 5.3, "Performing a J2EE and Web Cache Upgrade"
- Section 5.4, "Performing a Portal and Wireless Upgrade"

## 5.1 Conventions

In Section 5, references to Oracle homes use the following conventions:

- The Release 2 (9.0.2) or Release 2 (9.0.3) Oracle Application Server instance is designated in path names as `<source_MT_OH>`.
- The 10g (9.0.4) instance is designated in path names as `<desination_MT_OH>`.

## 5.2 Performing Pre-Upgrade Tasks

Before upgrading, perform the tasks in the following sections:

- Section 5.2.1, "Install Oracle Application Server 10g (9.0.4)"
- Refer to the *Oracle Application Server 10g Upgrading to 10g (9.0.4)* for component specific pre-upgrade tasks.

### 5.2.1 Install Oracle Application Server 10g (9.0.4)

Before upgrading, you must install Oracle Application Server 10g (9.0.4). Select the J2EE and Web Cache or Portal and Wireless installation type during Oracle Application Server 10g (9.0.4) installation. The upgrade cannot take place unless there is a destination Oracle Application Server instance. (Do not install a new infrastructure.)

The installation type of the source instance must match the installation type of the destination instance. The source and destination Oracle Application Server instance must exist on the same computer. If the source instance uses an infrastructure, the destination instance must use the same Oracle Internet Directory and Metadata Repository. (Do not install a new infrastructure.)

---

---

**Caution:** It is critical that all pre-installation requirements are met and all associated manual steps are performed. If they are not, the 10g (9.0.4) installation will not function with a Release 2 (9.0.2) Infrastructure. Specifically, the OracleAS Single Sign-on configuration will fail.

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---

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**Note:** During installation, the OracleAS Wireless schema in the OracleAS Metadata Repository is upgraded.

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**See Also:**

- Section 3.1, "Installing a Java Developer Topology"
- Section 3.2, "Installing a Portal and Wireless Developer Topology"

### 5.3 Performing a J2EE and Web Cache Upgrade

This procedure enables you to upgrade a J2EE and Web Cache instance:

1. Stop the Application Server Control with the following commands:

```
<source_MT_OH>/bin/emctl stop  
<destination_MT_OH>/bin/emctl stop iasconsole
```

2. In the J2EE and Web Cache instance, stop OPMN and the Oracle Application Server processes managed by it with the following command:

```
<source_MT_OH>/opmn/bin/opmnctl stopall  
<destination_MT_OH>/opmn/bin/opmnctl stopall
```

3. Start the OracleAS Upgrade Assistant with the following command:

```
<destination_MT_OH>/upgrade/iasua.sh
```

4. Welcome screen: Click **Next**.

5. Oracle Homes screen:

Select the source J2EE and Web Cache Oracle home from the drop-down list and click **Next**.

6. Examining Components dialog screen:

Click **OK**.

7. Requirements screen:

Ensure that all the requirements are met, and check all checkboxes and click **Next**.

8. Summary screen:

Click **Finish** to start the upgrade processing.

9. Upgrade Succeeded dialog screen:

Click **OK**.

**See Also:** *Oracle Application Server 10g Upgrading to 10g (9.0.4)*, section titled “Manual Upgrade Tasks You May Need to Perform” if the J2EE and Web Cache configuration you upgraded from has any of these conditions:

- Files in non-default locations
- Configuration files that reference custom files and directories
- Static documents and directories in the default document root directory that you want to use in 10g (9.0.4)
- Web Cache configured as the first listener

## 5.4 Performing a Portal and Wireless Upgrade

Follow the steps below to upgrade the Portal and Wireless middle tier.

1. Stop the Application Server Control with the following commands:

```
<source_MT_OH>/bin/emctl stop  
<destination_MT_OH>/bin/emctl stop iasconsole
```

2. In the Portal and Wireless instance, stop OPMN and the Oracle Application Server processes managed by it with the following command:

```
<source_MT_OH>/opmn/bin/opmnctl stopall  
<destination_MT_OH>/opmn/bin/opmnctl stopall
```

3. Start the OracleAS Upgrade Assistant with the following command:

```
<destination_MT_OH>/upgrade/iasua.sh
```

4. Welcome screen:

Click **Next**.

5. Oracle Homes screen:

Select the Portal and Wireless source Oracle home from the drop-down list and click **Next**.

6. Examining Components dialog screen:

Click **OK**.

7. Requirements screen:

Ensure that all the requirements are met, and check all checkboxes. Click **Next**.

8. Summary screen:

Click **Finish** to start the upgrade processing.

9. Upgrade Succeeded dialog screen:

Click **OK**.

**See Also:** *Oracle Application Server 10g Upgrading to 10g (9.0.4)*, section titled “Completing the OracleAS Portal Upgrade” if the Parallel Page Engine or the Portal Development Kit Services for Java were customized. These customizations must be copied from the files in *<source\_MT\_OH>* to the corresponding files in *<destination\_MT\_OH>*.

## 6 Additional Resources

For more information, see these Oracle resources:

- Oracle Application Server Documentation Library CD-ROM
- Oracle Application Server platform-specific documentation on Oracle Application Server Disk 1

Printed documentation is available for sale in the Oracle Store at:

<http://oraclestore.oracle.com/>

You can also contact your Oracle representative to purchase printed documentation.

To download free release notes, installation documentation, white papers, or other collateral, please visit the Oracle Technology Network

(OTN). You must register online before using OTN; registration is free and can be done at

<http://otn.oracle.com/membership/index.htm>

If you already have a username and password for OTN, then you can go directly to the documentation section of the OTN Web site at

<http://otn.oracle.com/docs/index.htm>

## **6.1 Oracle Support Services**

If you purchased Oracle Product Support, you can call Oracle Support Services for assistance. Oracle Support Services include phone assistance, version updates and access to our service offerings. You have access to phone support 24 hours a day, 7 days a week. In the U.S.A., you can call Product Support at **1-800-223-1711**.

Make sure you have your CSI (CPU Support Identifier) number ready when you call. (Keep the CSI number for your records, because it is your key to Oracle Support Services.) The Oracle Store sends the CSI number to you in an e-mail alert when it processes your order. If you do not have your CSI number and you are in the U.S.A., you can look up your CSI number by accessing our online Order Tracker which provides detailed order information. Go to the Oracle Store and click on Order Tracker located above the top navigation bar.

For Oracle Support Services locations outside the U.S.A., call your local support center for information on how to access support. To find the local support center in your country, visit the Support Web Center at:

**<http://www.oracle.com/support>**.

At the Support Web Center you will find information on Oracle Support Services, such as:

- contact information
- instructions on how to access electronic services
- helpful Web sites
- Support Resources
- Oracle Support Portfolio
- Oracle Support Services news

With Oracle Product Support, you have round-the-clock access to MetaLink, Oracle Support Services premier Web support offering. MetaLink offers you access to installation assistance, product documentation, and a technical solution knowledge base.

It has technical forums, where you can post questions about your Oracle products and receive answers from Oracle Technical Support Analysts and other Oracle users. The questions and answers remain posted for the benefit of all users.

MetaLink options include:

- Technical Assistance Request (TAR) access
- patch downloads
- bug database query access
- product life-cycle information

You can access MetaLink at:

**<http://metalink.oracle.com/>**.

## **6.2 Version Updates**

If you do not have a currently supported license, you can purchase the most recent version of an Oracle product from the Oracle Store (**<http://oraclestore.oracle.com>**).

If you do have a currently supported license, you can place non-urgent requests for version update shipments through the iTAR feature on

MetaLink. You will need to log the iTAR type as a U.S. Client Relations/Non-Technical Request.

You can also request Version Update shipments in the U.S.A. by calling Client Relations. When requesting a Version Update, please provide the following information to the Client Relations Analyst:

- CSI number
- contact information
- platform
- product name
- shipping address
- version number of the product

Outside the U.S.A., please call your local Oracle Support Center.

### **6.3 Premium Services**

For information on our Premium Services, including onsite support, Oracle*GOLD*, remote services, and upgrade packages, visit the Support Web Center at <http://www.oracle.com/support> or call your Support Sales Representative in the U.S.A at **1-800-833-3536**.

## 6.4 Quick Reference

| <b>Resource</b>                                                                                   | <b>Contact Information/ Web Site</b>                                                              |
|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Purchase additional products, full-use licenses, version updates, and documentation in the U.S.A. | <a href="http://oraclestore.oracle.com">http://oraclestore.oracle.com</a>                         |
| Access technical resources for developers                                                         | <a href="http://otn.oracle.com">http://otn.oracle.com</a>                                         |
| Access installation documentation                                                                 | <a href="http://otn.oracle.com">http://otn.oracle.com</a>                                         |
| Access information about technical support                                                        | <a href="http://www.oracle.com/support">http://www.oracle.com/support</a>                         |
| Locate local Oracle Support Centers outside the U.S.A.                                            | <a href="http://www.oracle.com/support">http://www.oracle.com/support</a>                         |
|                                                                                                   | select <b>Contact Support Services</b>                                                            |
| Locate local Oracle offices outside the U.S.A.                                                    | <a href="http://www.oracle.com/international/html/">http://www.oracle.com/international/html/</a> |
| Call Client Relations in the U.S.A.                                                               | 1-800-223-1711                                                                                    |
| Speak with your sales representative in the U.S.A.                                                | 1-800-ORACLE-1                                                                                    |

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**Resource****Contact Information/ Web Site**

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TTY Access to technical support in the U.S.A. 1-800-446-2398

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## 7 Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible, with good usability, to the disabled community. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Standards will continue to evolve over time, and Oracle Corporation is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For additional information, visit the Oracle Accessibility Program Web site at:

<http://www.oracle.com/accessibility/>

## 7.1 Accessibility of Code Examples in Documentation

JAWS, a Windows screen reader, may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, JAWS may not always read a line of text that consists solely of a bracket or brace.

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