Developer/2000™

Web Installation Guide for AIX-Based Systems

Release 1.6

February 1998
Part No. A59968-01

Topics Including:
   Features and Requirements
   Setting the Environment
   Installation Tasks
   Completing Developer/2000 Installation
   Administering Developer/2000 for the Web
   Creating User Exits
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Oracle Corporation welcomes your comments and suggestions on the quality and usefulness of this publication. Your input is an important part of the information used for revision.

- Did you find any errors?
- Is the information clearly presented?
- Do you need more information? If so, where?
- Are the examples correct? Do you need more examples?
- What features did you like most about this manual?

If you find any errors or have other suggestions for improvement, please indicate the chapter, section, and page number (if available). You can send comments to us in the following ways:

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- FAX - 1.650.506.7360  Attn.: Publications Manager, Oracle Technology Network
- postal service:
  Lynn Robinson
  Oracle Technology Network
  500 Oracle Parkway, Mailstop 1op3
  Redwood Shores, CA  94065
  USA

If you would like a reply, please give your name, address, and telephone number below.

The topics covered in this preface are:

- Audience
- Document Conventions
- Contacting Customer Support
- Documentation Sales and Client Relations

**Audience**

This document is for database administrators and others responsible for installing Oracle products on UNIX operating systems. While command examples are provided, this document does not attempt to teach Oracle or UNIX administration.

**Additional Reading**

For additional information on Developer/2000, see the product documentation for Oracle Book, Oracle Browser, Oracle Forms, Oracle Graphics, Oracle Procedure Builder, and Oracle Reports.

**Document Conventions**

Conventions used in this document differ somewhat from those used in other Oracle documentation. Because UNIX is case-sensitive, commands and filenames are shown in monospace type, rather than uppercase letters.
Type Conventions
Following are the type conventions:

monospace Monospace type indicates UNIX commands, directory names, pathnames, and filenames (for example, the prefs.ora file).

brackets [ ] Words enclosed in brackets indicate key names (for example, press [Return]).

italics Italic type indicates a variable and is used for emphasis. It also indicates variable portions of filenames (for example, sgdefx.dbf).

UPPERCASE Uppercase letters indicate Oracle commands, initialization parameters, and environment variables (for example, ORACLE_HOME).

Command Syntax
Commands appear in monospace font. Enter information exactly as it appears. Following are the syntax conventions for commands:

backslash \ A backslash indicates a command line that is too long to fit on the printed page. Either enter the line as printed (with a backslash) or enter it as a single line without a backslash.

\dd if=/dev/rdsk/c0t1d0s6 of=/dev/rst0 \ bs=10b count=10000

braces {} Braces indicate required items.

DEFINE {macro1}

brackets Brackets indicate optional items.

cvtcr numname [outfile]

ellipsis ... An ellipsis indicates an arbitrary number of similar items.

CHKVAL fieldname value1 value2 ... valueN

italics Italic type indicates a variable. Substitute a value for the variable.

library_name

vertical line | A vertical line indicates a choice within braces or brackets.

SIZE filesize [K|M]
Contacting Customer Support

Please copy this page and distribute it within your organization as necessary.

Oracle Worldwide Customer Support (WSCS) can be reached at the following numbers (the hours are specified in your support contract):

- In the United States, call: **1.650.506.1500**.
- In Europe, call: **+44.1344.860160**.
- In Asia, call: **+81.3.5717.1850**.

Please prepare the following information before you call:

- Your CSI number (if applicable) or complete contact details, including any special project information.
- The release levels of Developer/2000 and associated products (for example, Oracle7 Server release 7.3.3 and Oracle Forms release 4.5.6.3.2).
- Operating system name and release level, including patches and packages.
- Details of error codes, numbers, and descriptions associated with the problem.
- A full description of the issue, including:
  - What happened? For example, the command used and result obtained.
  - When did it happen? For example, time of day, or after a particular command, or after an operating system or Oracle upgrade.
  - Where did it happen? For example, on a particular system, or within a particular procedure or table.
  - What is the extent of the problem? For example, is your production system unavailable, or is the impact less severe? Is the problem getting worse? Keep in mind what did not happen, as well as what did happen.
- Copies of any trace files, core dumps, or log files recorded near the incident.

For installation-related problems, please have the following information available:

- Listings of the contents of the ORACLE_HOME directory, and any staging area, if applicable.
- Contents of the installation log files in the $ORACLE_HOME/orainst directory: install.log, sql.log, make.log, and os.log.

For more information, contact http://www.oracle.com/support.
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In the United States:

- To order hardcopy documentation, call Documentation Sales: **1.800.252.0303**.
- For shipping inquiries, product exchanges, or returns, call Client Relations: **1.650.506.1500**.

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- To order hardcopy documentation, call Oracle Direct Response: **+44 990 332200**.
- For shipping inquiries and upgrade requests, call Customer Relations: **+44 990 622300**.

Other European customers, please contact your local Oracle Support office for documentation or shipping inquiries.
This chapter provides an overview of features and installation requirements for Developer/2000 for the Web.

Completing a quick, successful installation depends on the local system satisfying the software dependencies and space requirements for Oracle software. This chapter describes the requirements for installing Developer/2000 Release 1.6 on Solaris 2.x. Verify that the system meets the requirements described in this chapter before starting the installation.

The following topics are covered in this chapter:

- Introduction
- System Requirements
- Disk Space and Memory Requirements
- Issues and Restrictions
Introduction

Developer/2000 is an integrated set of database tools supporting multiple platforms, user interfaces, and data sources. These tools are built on top of a layer called Oracle Toolkit, which provides a uniform programming interface to the underlying user interface. Oracle Toolkit makes it possible to create applications that run against multiple user interfaces, such as Motif or Windows, while retaining the full native look and feel of the interface.

Installing Developer/2000 involves the following steps:

1. **Satisfy Prerequisites:** Make sure the local system satisfies the hardware, software, memory, and disk space requirements for the products you want to install.

2. **Check the UNIX Environment:** Make sure the UNIX environment is properly set up for the products you want to install.

3. **Install:** Use the Oracle Installer to install the Oracle software.

4. **Create User Exits:** This is optional.


Developer/2000 tools are built using standard application programming interfaces (APIs), allowing organizations to supplement the Developer/2000 product set with tools from other vendors.

The following products are supported in Developer/2000 for the Web.

- **Oracle Forms**
  - **Release 4.5**
  - Use Forms to build interactive applications that access Oracle7 Server data.

- **Oracle Graphics**
  - **Release 2.5**
  - Use Graphics to create multimedia graphical displays dynamically linked to a database.

- **Oracle Reports**
  - **Release 2.5**
  - Use Reports to build and generate reports that access Oracle7 Server data.
Related Publications

**Oracle7 Server for UNIX Documentation**
The following documents provide additional information and are included on your CD-ROM in HTML format:

- *Oracle7 Installation Guide for AIX-Based Systems*
- *Oracle7 Administrator’s Reference for UNIX*
- *Oracle7 Administrator’s Reference for AIX-Based Systems*

**System Requirements**

This section describes the system requirements for installing Developer/2000 on AIX.

**Hardware Requirements**

Table 1–1 lists hardware requirements for installing and running Developer/2000 on AIX 4.1.5 or 4.2.1.

<table>
<thead>
<tr>
<th>Hardware Item</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>An AIX-based system</td>
</tr>
<tr>
<td>Memory</td>
<td>A minimum of 32 MB internal memory (RAM)</td>
</tr>
<tr>
<td>Swap Space</td>
<td>2-4 times physical RAM</td>
</tr>
<tr>
<td>Media Device</td>
<td>A CD-ROM drive that can read ISO 9660 standard format</td>
</tr>
<tr>
<td>Display Device for GUI</td>
<td>An X11 server</td>
</tr>
</tbody>
</table>
System Requirements

Operating System Requirements

Table 1–2 lists operating system requirements for installing and running Developer/2000 on AIX 4.1.

Table 1–2  Operating System Requirements

<table>
<thead>
<tr>
<th>Software Item</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System</td>
<td>AIX 4.1.5 or 4.2.1</td>
</tr>
<tr>
<td></td>
<td>If you are running AIX 4.1.5, please ensure that you install IBM PTF for SLHS U449507. This step is unnecessary if you are running AIX 4.2.1.</td>
</tr>
<tr>
<td></td>
<td>In addition, please ensure that the pthreads library has been installed on your system from your AIX distribution CD-ROM.</td>
</tr>
</tbody>
</table>

To determine your operating system and processor type, enter:

$ uname -a

User Interface Requirements

Table 1–3 lists user interface requirements for installing and running Developer/2000 products on AIX.

Table 1–3  User Interface Requirements

<table>
<thead>
<tr>
<th>Software Item</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Window Manager</td>
<td>Motif Window Manager mwm, delivered with AIX 4.1.5 or 4.2.1</td>
</tr>
<tr>
<td>X11 Server</td>
<td>X11R5 and Motif 1.2.3 delivered with AIX 4.1.5 or 4.2.1</td>
</tr>
</tbody>
</table>
System Requirements

Web Server Requirements for Developer/2000

Table 1–4 lists the Web server requirements when using Forms on the Web on AIX 4.1

Table 1–4  Forms Web Server Requirements

<table>
<thead>
<tr>
<th>Database Item</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web server</td>
<td>For non-cartridge implementations: Oracle WebServer 2.1.1 or above, or any Web server that supports the transfer of the Java applet. For cartridge implementations: Oracle WebServer 2.1.1 or above. For graphics cartridge: Oracle WebServer 2.1.1 or above.</td>
</tr>
</tbody>
</table>

Attention:  Developer/2000 and the Oracle WebServer should be installed in the same $ORACLE_HOME.

Relinking Requirements

The Developer/2000 distribution provides all necessary components for relinking the character mode Developer/2000 tools.

You do not need to relink unless you plan to link user exits or add network drivers.

Server Manager Installation under AIX 4

You will need to obtain PTF U437181 if the Oracle Installer fails in relinking Server Manager 2.1 Motif executables due to these undefined symbols:

_XmSetFocusFlag
_XmPopupSpringLoaded
_XmPopdown
Disk Space and Memory Requirements

Table 1–5 lists disk space, database space, and memory requirements for Developer/2000. These are minimal estimates, not precise calculations.

Calculating Space Requirements

Below are the steps necessary to calculate space requirements.

1. Calculate the distribution space by subtotaling the values for the selected products in the Total Distribution Space box at the bottom of the column.

2. Calculate the database space by subtotaling the values for the selected products in the Total Database Space box at the bottom of the column.

3. Add the total distribution space and total database space values and enter the amount in the Total Space Requirements box.
Calculating Total Disk Space Required

Add the Total Distribution Space columns from Distribution (MB) and DB Space MB0 to determine the total required disk space for your installation.

Table 1–5 Space Requirements

<table>
<thead>
<tr>
<th>Products and Options</th>
<th>Distribution (MB)</th>
<th>DB Space (MB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GUI Common Area</td>
<td>24.8</td>
<td>0.53</td>
</tr>
<tr>
<td>Oracle Forms</td>
<td>66.5</td>
<td>0.32</td>
</tr>
<tr>
<td>Forms Demonstrations</td>
<td>7.2</td>
<td>0</td>
</tr>
<tr>
<td>Forms Listener (Web)</td>
<td>0.01</td>
<td>0</td>
</tr>
<tr>
<td>Forms Application Server (Web)</td>
<td>18.2</td>
<td>0</td>
</tr>
<tr>
<td>Forms Cartridge</td>
<td>.01</td>
<td>0</td>
</tr>
<tr>
<td>Oracle Reports</td>
<td>74.9</td>
<td>0.39</td>
</tr>
<tr>
<td>Reports Demonstrations</td>
<td>26.5</td>
<td>0</td>
</tr>
<tr>
<td>Reports CGI Engine (Web)</td>
<td>2.2</td>
<td>0</td>
</tr>
<tr>
<td>Reports Queue Viewer (Web)</td>
<td>2.3</td>
<td>0</td>
</tr>
<tr>
<td>Reports Web Client (Web)</td>
<td>2.5</td>
<td>0</td>
</tr>
<tr>
<td>Reports Multi-threaded Server (Web)</td>
<td>2.4</td>
<td>0</td>
</tr>
<tr>
<td>Reports Web Cartridge</td>
<td>2.0</td>
<td>0</td>
</tr>
<tr>
<td>Oracle Graphics v2</td>
<td>32.7</td>
<td>0.12</td>
</tr>
<tr>
<td>Graphics Demonstrations</td>
<td>5.1</td>
<td>0</td>
</tr>
<tr>
<td>Graphics Web Cartridge</td>
<td>14.7</td>
<td>0</td>
</tr>
<tr>
<td>Oracle Installer</td>
<td>2.3</td>
<td>0</td>
</tr>
<tr>
<td>Oracle Common</td>
<td>7.1</td>
<td>0</td>
</tr>
</tbody>
</table>

Total Distribution Space =

Total Database Space =
Issues and Restrictions

Oracle WebServer Installation

If you are using the Developer/2000 cartridges, Developer/2000 for the Web will need to be installed in the same ORACLE_HOME as the Oracle WebServer.

National Language Support for Developer/2000

Message and resource files are available in the following languages for Developer/2000 for the Web:

- American English
- French
- German
- Italian
- Japanese
- Korean
- Spanish
- Traditional Chinese
This chapter describes the recommended tasks for setting your AIX environment for the Developer/2000 web installation.
Set Required Environment Variables

Oracle Corporation recommends that you set environment variables in the startup file of the user who will own the Developer/2000 installation. Log into the oracle account and set environment variables according to the instructions in this section. The startup file, normally located in your UNIX login home directory, will vary depending upon the shell used. Typically, .profile is used for the Bourne and Korn shells, and .cshrc is used for the C shell.

Note: You may also need to set environment variables in any CGI scripts using Developer/2000 for the Web.

Syntax of Environment Variables

The syntax for setting an environment variable for the Bourne shell is:

variable_name=value; export variable_name

The syntax for setting an environment variable for the C shell is:

setenv variable_name value

Set ORA_NLS33

Set ORA_NLS33 to $ORACLE_HOME/ocommon/nls/admin/datad2k.

Attention: Developer/2000 will not work unless ORA_NLS33 is set correctly.

Set ORACLE_HOME

ORACLE_HOME should be set to the directory where the Oracle software will be installed.

To determine if the ORACLE_HOME environment variable is set, enter:

$ echo $ORACLE_HOME
$ ls $ORACLE_HOME

The echo $ORACLE_HOME command displays the value of ORACLE_HOME. The ls $ORACLE_HOME command lists the directories in $ORACLE_HOME.
Set ORACLE_BASE
ORACLE_BASE is required for OFA-compliant installations. This variable defines the base of the directory structure for your Oracle installation. The oracle operating system user must have read, write, and execute privileges on this directory.

If ORACLE_BASE is undefined, then the Oracle Installer derives the value of ORACLE_BASE from the mount point you provide: mount_point/app/oracle. If you define it before starting the Installer session, then the Installer takes the value of ORACLE_BASE from the environment.

If you are upgrading, then the Installer checks if you have defined ORACLE_BASE in a prior installation, to determine if the upgrade should be performed in an OFA-compliant structure.

Set ORACLE_TERM
You can run the Installer in either Motif or character mode. If you want to run the Installer in character mode, then set the ORACLE_TERM environment variable to the correct terminal type before installing Developer/2000.

For example, to use a vt220 terminal type either:

```bash
$ORACLE_TERM=vt220; export ORACLE_TERM
```

or

```bash
% setenv ORACLE_TERM vt220
```

If ORACLE_TERM is not set, then the Installer uses the value of the UNIX environment variable TERM and searches for an equivalent ORACLE_TERM resource file.
Table 2–1 lists common ORACLE_TERM settings:

<table>
<thead>
<tr>
<th>To Run:</th>
<th>Set ORACLE_TERM to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSI terminal for SCO</td>
<td>ansi</td>
</tr>
<tr>
<td>AT386 console</td>
<td>386</td>
</tr>
<tr>
<td>AT386 xterm</td>
<td>386x</td>
</tr>
<tr>
<td>UnixWare Terminal</td>
<td>386u</td>
</tr>
<tr>
<td>Solaris Intel xterm</td>
<td>386s</td>
</tr>
<tr>
<td>Data General 200</td>
<td>dgd2</td>
</tr>
<tr>
<td>Data General 400</td>
<td>dgd4</td>
</tr>
<tr>
<td>IBM High Function Terminal and aixterm (monochrome)</td>
<td>hft</td>
</tr>
<tr>
<td>IBM High Function Terminal and aixterm (color)</td>
<td>hftc</td>
</tr>
<tr>
<td>hpterm terminal emulator and HP 700/9x terminal</td>
<td>hpterm</td>
</tr>
<tr>
<td>IBM 3151 terminal</td>
<td>3151 (for IBM)</td>
</tr>
<tr>
<td>NCD X Terminal with vt220 style keyboard</td>
<td>ncd220</td>
</tr>
<tr>
<td>Sun cmdtool/shelltool using a type 4 keyboard</td>
<td>sun</td>
</tr>
<tr>
<td>Sun cmdtool/shelltool using a type 5 keyboard</td>
<td>sun5</td>
</tr>
<tr>
<td>vt100 terminal</td>
<td>vt100</td>
</tr>
<tr>
<td>vt220 terminal</td>
<td>vt220</td>
</tr>
<tr>
<td>Wyse 50 or 60 terminal</td>
<td>wy50</td>
</tr>
<tr>
<td>Wyse 150 terminal</td>
<td>wy150</td>
</tr>
<tr>
<td>Sun xterm using a type 4 keyboard</td>
<td>xsun</td>
</tr>
<tr>
<td>Sun xterm using a type 5 keyboard</td>
<td>xsun5</td>
</tr>
</tbody>
</table>
This chapter describes the installation of Developer/2000, including:

- Using the Oracle Installer
- Respond to Installer Prompts
- Install Online Documentation
- Software Upgrade

**Attention:** Before beginning this chapter, complete the tasks described in Chapter 2, “Setting the Environment.”
Using the Oracle Installer

The following tasks are covered in this section:

- Mount the Product Installation CD-ROM
- Start the Installer
- Respond to Installer Prompts

Mount the Product Installation CD-ROM

To install Developer/2000, you must use the version of the Installer that is supplied on the Oracle Developer/2000 CD-ROM.

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

Mounting the CD-ROM

To mount your CD-ROM, perform the following steps:

1. Log in as root.
   
   $ su root
   
   passwd: password
   
   #

2. Create the mount point directory for mounting the CD-ROM by entering:
   
   # mkdir /cdrom
3. Mount the CD-ROM to the mount point by entering:
   
   ```bash
   # mount -p -r -v cdrvf /dev/cd0 /cdrom
   ```

   **Note:** You must have root privileges to mount or unmount the CD-ROM. Be sure to unmount the CD-ROM before removing the CD-ROM from the drive using the `umount` command.

4. Exit the root account by entering:
   
   ```bash
   # exit
   ```

**Start the Installer**

Perform the following steps to start the Oracle Installer:

1. Log in as oracle software owner.

   **WARNING:** Do not run the Installer as the root user.

2. Change to the `/cdrom/orainst` directory by entering the following:

   ```bash
   $ cd /cdrom/orainst
   ```

3. Execute the following command to invoke the Installer:

   In Motif mode, enter:
   
   ```bash
   $ ./orainst /m
   ```

   In character mode, enter:
   
   ```bash
   $ ./orainst /c
   ```

**Oracle Installation**

The Oracle installation installs Oracle executables (programs or software) on the system’s hard disk. Certain Oracle products also require database objects which are stored in the database itself. With the RDBMS product, for example, the database objects include those necessary to create a database, such as the system tables and views.
Respond to Installer Prompts

The following section describes the main Installer prompts you see when installing Developer/2000 tools and the options you select to perform a new installation. Depending on your installation, the prompts described in this section may not be an exact representation of what you see on the screen.

**Installation Activity Choice**
The Installer prompts you with three options:

- **Install, Upgrade, or De-Install Software**
  Select this option to install or upgrade Developer/2000 software. When you select this option, you have the choice to create or upgrade database objects during this session.

- **Create/Upgrade Database Objects**
- **Perform Administrative Tasks**

**Installation Options**

*Figure 3–1 Installation Activity Choice Screen*

For new server-based installations, select the *Install New Product* option; however, to upgrade server-based installations, select the *Add/Upgrade Software* option.

For client-only installations, select the *Add/Upgrade Software* option.
You also have the option to build a staging area for installation, install online documentation only, or de-install software. The Migrate from Oracle v6 to Oracle 7 option is not applicable to Developer/2000. For more information on these options, select Help from the Installation Options screen or see the Oracle 7 Installation Guide for AIX-Based Systems.

Select the Install New Product option to install Developer/2000 tools in a new ORACLE_HOME.

**Figure 3–2 Installation Options Screen**

Mount Point
Enter the mount point (device name) of your Oracle product directory structure. The Installer derives the value of ORACLE_BASE from your answer, assigning it the value `mount_point/app/oracle`.

This screen does not display if you set ORACLE_BASE before starting the Installer.

Home Locator
The Installer prompts you to complete the pathname of the ORACLE_HOME directory. The Installer provides you with `$ORACLE_BASE/product/`. If you set ORACLE_BASE before installation, then its value is used. If you did not set ORACLE_BASE before installation, then the value shown is the OFA-compliant value computed by the Installer. The OFA-compliant path is `$ORACLE_BASE/product/release_number`. Enter the release number of the distribution (for example, 1.6).
This screen does not display if you set ORACLE_BASE and ORACLE_HOME before running the Installer.

**Oracle Directories**
Confirm or change the directory pathnames shown for ORACLE_HOME and ORACLE_BASE.

The values shown are either the values you set before running the Installer or the OFA-compliant values computed by the Installer.

**Database Objects**
Specify whether to create a database or database objects for the products you are installing.

**Installation Log Files**
The Installer writes installation log information to the following content-specific files in the $ORACLE_HOME/orainst directory:

- install.log
- sql.log
- make.log
- os.log

If log files already exist in the default location, then the Installer asks whether to rename the existing files or to create logs with new names for the current session. Oracle Corporation recommends renaming the existing log files. Logging information from multiple installations in the same files hinders any subsequent debugging.

**README.FIRST File**
The Installer automatically displays last-minute product updates included in the README.FIRST file.

**Skip README File**
You can instruct the Installer to skip the README.FIRST in subsequent Installer sessions. The Installer will skip the README.FIRST file until it encounters a newer one; for example, when it is installing a patch.

**Oracle sid**
If you selected Yes when prompted to create or upgrade database objects, then the Installer prompts you to enter your Oracle system identifier (sid).
**Install Source**
Specify whether you are installing from CD-ROM or from a staging area.

When installing directly from the CD-ROM, you load and install the Oracle distribution in one session. Select this option if you are performing a single installation or if you have insufficient disk space to support a staging area.

If you install from a staging area, then you can load and install the distribution in distinct phases. You must choose between temporary and permanent staging areas.

With a temporary staging area, you load the software into a staging area and the Installer converts the contents into the installed distribution during the Installer session.

A permanent staging area is neither removed nor converted during installation. You can therefore use it to perform multiple installations.

**Attention:** Do not attempt to add files to an existing staging area. If it is necessary to recreate a staging area, then you must delete all existing files before using the Installer to create the new one. If you install a software patch from a staging area, then you must create a staging area for just the patch release.

**Note:** Installing from a permanent staging area requires approximately twice the disk space of installing from a temporary staging area or distribution medium. See Chapter 1, “Features and Requirements” for space requirements.

**National Language Support (NLS)**
Use the Installer to specify a language for screen messages from Oracle products with NLS support. Select either All Languages or a language from the displayed list. Installer prompts and messages are always displayed in American English.
Relink Executables
Relinking regenerates a program from its component parts. Even if you decline relinking, the Installer automatically relinks products that require relinking.

Specify relinking if you:
- install a new Oracle protocol adapter
- link Oracle products together
- install user exits
- install patches or bug fixes

Root Install Script File
If an earlier root.sh file exists, the Installer asks whether to append root-related activities to that file or save the old file as root.sh0 and overwrite root.sh.

Unless you want to run old root.sh activities with the present installation, rename the old file rather than appending the new one.

Install Online Documentation
You can choose to install any or all of:
- online help
- operating system-specific documentation
- product documentation (This documentation is the generic user documentation for Oracle products.)

Note: Online documentation installation is not completed by the Installer because the documentation resides on two CD-ROMs. You will complete the online documentation installation by running the startdoc.sh script after completing the Installer session.

See Also: Chapter 4, “Completing Developer/2000 Installation”
Software Asset Manager

Figure 3–3  Software Asset Manager Screen

The Software Asset Manager tracks the size of the distribution you selected and the space available in the destination directory (ORACLE_HOME).

**Note:** Because the Log Installer Action option (under *Options*) generates a lot of data, you should not select this option unless requested to do so by an Oracle Worldwide Customer Support analyst.

If you chose the *Install Documentation Only* option in the Installation Options screen, then select the products corresponding to the documentation you are installing. Only the documentation is installed; the products themselves *are not* installed.

**Demonstrations**

Decide whether to install the demonstrations for each Developer/2000 product. A separate screen appears for each Developer/2000 product you install.
Interface Choice
For Forms, Reports, and Graphics, you may choose to install the Web interface. A separate screen appears for each product.

Software Upgrade
This section describes upgrading from an earlier release of Developer/2000 Release 1 to Release 1.6. It is assumed that Developer/2000 Release 1.0 or 1.3 and Oracle7 Release 7.3.3 are installed in your ORACLE_HOME before you begin upgrading to Release 1.6.

Note: Upgrading Developer/2000 to Release 1.6 does not require a Database Object upgrade.

1. Start the Installer as described in “Start the Installer”.
2. At the Installation Activity Choice screen, select the Install, Upgrade, or De-Install Software option. Refer to “Installation Activity Choice”.
3. At the Installation Options screen, select the Add/Upgrade Software option. Refer to “Installation Options”.
4. Continue answering the Installer prompts.
5. At the Software Asset Manager screen, select the products you want to upgrade. For each product you are upgrading, the Installer will prompt you to confirm that you want to delete the old version.

Note: Because the Installer prompts you to delete old products, you do not need to de-install Developer/2000 Release 1.0 or 1.3 before upgrading to Release 1.6.
Completing Developer/2000 Installation

This chapter describes post-installation and configuration tasks for client-only and server-based installations.
- Completing the Online Documentation Installation
- Verifying Your Installation
- Setting Printer Configuration Files
- Setting Up the Developer/2000 Environment
- Setting Up the GUI Environment
- Enabling Use of Other Languages
Completing the Online Documentation Installation

During your Installer session, you chose the online documentation you wanted to install, if any. You must now exit the Installer and run a separate script that installs the online documentation.

It is important to remember that the online documents reside on two different CD-ROMs:

- The operating system-specific online documentation is on the Product Installation CD-ROM.
- The online documentation for Oracle products is on the Oracle Product Documentation Library CD-ROM.

UNIX-specific documentation is available in HTML and PDF formats and is installed automatically with Developer/2000 software under the $ORACLE_HOME/orainst/doc directory.

To view the UNIX-specific documentation, cd to the orainst directory on the Developer/2000 CD-ROM and run oraview. If your CD is mounted on /cdrom, cd to /cdrom/orainst.

To start oraview in Motif GUI mode, enter:

```
./oraview -m -d /cdrom/orainst/doc
```

In character mode, enter:

```
./oraview -c -d /cdrom/orainst/doc
```

Product documentation is provided in Oracle Book format.

The following tasks are covered in this section:

- Complete the Installation of Online Documentation
- Prepare Online Documentation for Viewing
- View Online Generic Product Documentation

**Note:** If you chose not to install any online documentation during your Installer session, but you want to view it from CD-ROM, go directly to "Viewing Documentation Directly from CD-ROM" later in this section.
Complete the Installation of Online Documentation

Perform the following steps to complete the installation of product documentation. In the following instructions, it is assumed that your CD-ROM mount point is /cdrom. If it is not, replace all occurrences of /cdrom with your mount point.

1. Install the Oracle UNIX Installer and Documentation Viewer if it is not already installed.

2. If the Installer is still running, select Exit.

3. Go to the $ORACLE_HOME/orainst directory.
   
   $ cd $ORACLE_HOME/orainst

4. Run the startdoc.sh script.
   
   $ ./startdoc.sh

   The script prompts you to mount the Product Documentation Library CD-ROM:

   Please mount the Product Documentation Library CD-ROM.
   --Press enter when done--

   If you chose to install only operating system-specific documentation, the script automatically exits, and you can now proceed to the next task, "Prepare Online Documentation for Viewing".

5. Open a new terminal window.

6. Remove the Product Installation CD-ROM from the CD-ROM drive and replace it with the Product Documentation CD-ROM.

7. Go back to the Press enter when done prompt, and press [Return].

8. Answer the following prompt:

   Enter the CD-ROM mount point: /cdrom

   The startdoc.sh script automatically installs the online product documentation you chose during your Installer session.
Prepare Online Documentation for Viewing

Perform the following steps to prepare your online documentation for viewing:

1. Set your ORACLE_HOME environment variable, if it is not already set.

2. Change to the $ORACLE_HOME/orainst directory.
   
   $ cd $ORACLE_HOME/orainst

3. Run the fixshelf.sh script.

   $ ./fixshelf.sh -d oracle_doc_dir -m operating_system

Where:

- **oracle_doc_dir** is the directory you specified as $ORACLE_DOC in your Installer session.
- **operating_system** is your operating system.

The following is an example of a valid entry to run the fixshelf.sh script, where the **oracle_doc_dir** is /oradoc and where the **operating_system** is AIX:

   $ ./fixshelf.sh -d /oradoc -m aix

View Online Generic Product Documentation

Online documentation can be installed or viewed from CD-ROM.

Viewing Installed Online Documentation

1. Change to the $ORACLE_HOME/orainst directory.

   $ cd $ORACLE_HOME/orainst

2. Run the Oracle Documentation Viewer.

   Motif

Before running the Oracle Documentation Viewer under Motif or OpenWindows, set the DISPLAY environment variable.

To run the Oracle Documentation Viewer under Motif or OpenWindows, enter:

   $ ./oradocm

When you run the Oracle Documentation Viewer, the **CD Contents Directory** will be opened listing the titles of Oracle online documents.
Character Mode

If you are using the Oracle Documentation Viewer in character mode, set your ORACLE_TERM environment variable, if necessary, to support your terminal and keyboard type.

Set the ORACLE_TERM environment variable according to Table 4–1. This determines the key you use to access the Oracle Documentation Viewer menu.

Table 4–1 Setting the ORACLE_TERM Environment Variable

<table>
<thead>
<tr>
<th>Terminal/Keyboard</th>
<th>ORACLE_TERM Value</th>
<th>Access Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>An xterm using an hft keyboard</td>
<td>xhft</td>
<td>[F8] or Keypad 0</td>
</tr>
<tr>
<td>An xterm</td>
<td>hft</td>
<td>[F8] or Keypad 0</td>
</tr>
</tbody>
</table>

To run the Oracle Documentation Viewer in character mode, enter:

$ ./oradoc

When you run the Oracle Documentation Viewer, the CD Contents Directory will be opened listing the titles of Oracle online documents.

3. Select and open the documents you want to view.

**Motif:** Double-click Select on the document title.

**Character Mode:** Use the arrow keys to move the cursor to the document title. Press Keypad 0 to access the menu. Press N to bring down the Navigate menu. Press F to issue the Follow link command.

When viewing documents, links exist to other available online documents. These links are always specified by the document title in bold italic font. A document title that is italic but not bold is only text, not a link to another document.

Viewing Documentation Directly from CD-ROM

If you have not installed online documentation, you can still access it in the following ways:

- Using an HTML browser, you can view your operating system-specific product installation guides, including this document, the Oracle7 Installation Guide for AIX, the Oracle7 Administrator’s Reference for UNIX, and the Oracle7 Reference Addendum for AIX. Instructions for viewing operating system-specific documentation are provided in previous sections of this chapter.
You can view the product documentation on the Product Documentation Library CD-ROM via the CD Contents Directory, using the installed Oracle UNIX Installer and Documentation Viewer. To do this, complete the following steps.

1. Set your ORACLE_HOME environment variable.
2. Install the Oracle UNIX Installer and Documentation Viewer from the Product Installation CD-ROM, if it is not already installed.

See Also: See the instructions earlier in this chapter for more information about installing Oracle products.

3. Mount the Product Documentation Library CD-ROM.
4. Change to the CD-ROM directory where the prefs.ora file is located:

   $ cd /cdrom/oracle/unix

5. Customize your prefs.ora file by running the setprefs.sh script:

   $ORACLE_HOME/orainst/setprefs.sh -m /cdrom

   WARNING: The setprefs.sh script will add a new prefs.ora file to your HOME directory. Any existing prefs.ora file in this directory will be copied to prefs.oraO. You may want to save the existing prefs.ora file in your HOME directory before running the setprefs.sh script. It is possible to permanently lose an existing prefs.ora file if you run the setprefs.sh script more than once without saving the original file.

6. Make the prefs.ora file writable.
7. Change to the $ORACLE_HOME/orainst directory.

   $ cd $ORACLE_HOME/orainst

8. Run the Oracle Documentation Viewer. See the "Viewing Installed Online Documentation" section for instructions.

   If you attempt to open an operating system-specific document, you receive the following error message:

   OBV-1081: The file for document Document-ID is not on any bookshelf. Please add this document to a bookshelf and try again.
The Product Documentation Library CD-ROM only contains documentation for Oracle products, not operating system-specific installation documentation. Select OK and choose a product document. For information about viewing operating system-specific online documentation from CD-ROM, see your Product Installation CD-ROM Insert.

**Verifying Your Installation**

If you have startup problems, use DEBUG_SLFIND to direct error messages to a file of your choice. To do this, set DEBUG_SLFIND to `stdout`, `stderr`, or another filename.

Re-run the tool. Check for error messages in the file that indicate a necessary resource file may be missing.
Setting Printer Configuration Files

After running the Oracle Installer, you must set your printer configuration files to prepare your system for printing. To do this, perform the following tasks:

- Locate and Install PPD and AFM Files for Your Printers
- Set Up the Default Printers
- Set Printer Commands (Optional)
- Specify a Default Printer

Locate and Install PPD and AFM Files for Your Printers

This task provides instructions for choosing an appropriate PostScript Printer Definition (PPD) file for your printer.

Oracle Toolkit uses the PPD files to determine which fonts are available on a specific PostScript printer, since UNIX does not allow the Toolkit to obtain this information from the printer directly. Each PPD file provides paper sizes, available fonts, and default resolution for a particular printer. If this file lists a PostScript font, a corresponding Adobe Font Metrics (AFM) file must exist in the $ORACLE_HOME/guicommon2/tk23/admin/AFM directory since that file is used by the Toolkit to calculate font metrics.

An AFM file specifies font metric information for type 1 font programs. Each AFM file lists the following information about one font: font attributes such as style, weight, width, and character set; whether the font is fixed pitch or proportional; and the size of each character.

Oracle provides PPD and AFM files for some common printers and fonts. If you cannot find the appropriate file for your printer, you can obtain PPD and AFM files from your printer vendor or from Adobe. You can also use the default printer definition file, "default.ppd".

1. To find the PPD file for your printer, enter:
   
   $ cd $ORACLE_HOME/guicommon2/tk23/admin/PPD
   $ ls *.ppd | more

   This will list all of the ppd files which are included with the Oracle distribution.

2. To determine the fonts that are listed in the PPD file, enter:
   
   $ grep Font PPD_filename | more
3. To check whether all the necessary fonts are in the
   $ORACLE_HOME/guicommon2/tk23/admin/AFM directory, enter:

   $ cd $ORACLE_HOME/guicommon2/tk23/admin/AFM
   $ ls | more

   See Also: Your printer documentation to determine the fonts you
   need for your printer.

Changing the Default PPD File
You can also specify a PPD file by creating a default.ppd that is a copy of
another PPD file to better reflect the local default printer. When an invalid PPD file
is specified for the current printer, for example when an incorrect file is specified or
no file is specified, the Oracle Toolkit uses default.ppd.

   $ mv default.ppd default.ppd.old
   $ cp another_PPD_file default.ppd

Modifying the PPD Files
Do not modify the PPD files unless you want to add fonts to the printer and you
want these changes reflected in Oracle applications.

If you add fonts to your printer, you should also add entries for these fonts to the
printer’s PPD file.

The format for a font entry is as follows:

*Font font_name: encoding "version" charset

Where:

font_name specifies the Adobe font name as specified in PostScript
encoding specifies the PostScript encoding name
version specifies the font’s version number
charset specifies the Adobe character set name
**Set Up the Default Printers**

To set up default printers for Developer/2000 products, you need to update the $ORACLE_HOME/guicommon2/tk23/admin/uiprint.txt file with entries for each of your printers. Using this file enables you to obtain correct paper sizes and correct printer resolution. Toolkit application users can now set their print jobs to use various paper sizes available on the selected printer.

Oracle Toolkit uses the uiprint.txt file, located in the $ORACLE_HOME/guicommon2/tk23/admin directory, to display the list of printers available on your system. Each printer is defined by a line in the uiprint.txt file containing five fields separated by colons.

For each of your printers, enter the following line into the uiprint.txt file:

```
printer:printer_driver:Toolkit_driver:printer_descr:printer_desc_file:
```

Where:

- `printer` contains the name of the printer, as used with `lpr` or `lp` commands. This parameter also specifies the default printer if both the ORACLE_PRINTER and PRINTER environment variables are not set on your UNIX system.

- `printer_driver` specifies the type of print driver used for the printer. The Toolkit currently supports the PostScript, ASCII, and PCL selections for the printer driver.

- `Toolkit_driver` specifies the version of the printer driver that should be used by the Toolkit. Currently, the Toolkit supports 1 for ASCII or Level 1 PostScript, 2 for Level 2 PostScript printers, and 5 for HP PCL printers.

- `printer_descr` contains a free-format description of the printer. It can show, for example, the location and speed of the printer to make the user’s choice easier.

- `printer_desc_file` specifies the printer definition file to be used with the printer. The format of this file is dependent on the driver specified for the printer. At present, the Toolkit supports the Adobe PPD and the HP HPD file formats. See the “Locate and Install PPD and AFM Files for Your Printers” section for complete instructions.

**Attention:** The first non-commented line (line without a number in column one) must define a valid printer. Printing services and saving output to file may not work properly unless the uiprint.txt file is configured properly.
Set Printer Commands (Optional)

You can set TK2_PRINT to store the print command and TK2_PRINT_STATUS to store the printer status command. The print string is similar to printf() in the C programming language, because you can embed the following strings:

Where:

- \%n is the name of the printer
- \%c is the number of copies (printed as a decimal number)

If you do not set TK2_PRINT, the value defaults to:

```
lp -s -d '%n' -n%c
```

If you do not set TK2_PRINT_STATUS, the value defaults to:

```
/usr/bin/lpstat -p '%n'
```

To set TK2_PRINT and TK2_PRINT_STATUS for the Bourne shell, enter:

```
$ TK2_PRINT= "your_print_string" ; export TK2_PRINT
$ TK2_PRINT_STATUS="your_print_string" ; export TK2_PRINT_STATUS
```

For the C shell, enter:

```
% setenv TK2_PRINT "your_print_string"
% setenv TK2_PRINT_STATUS "your_print_string"
```

Specify a Default Printer

Developer/2000 determines your default printer by searching for values of the following variables in the given order:

- TK2_PRINTER
- ORACLE_PRINTER
- PRINTER
- the first entry in your uiprint.txt file

To specify a default printer, set TK2_PRINTER to the applicable printer.

---

**Note:** The default printer must be specified in one of the ways listed above; otherwise, printing services and saving output to file may be disabled.
Setting Up the Developer/2000 Environment

This section describes how to set up the generic user environment for Developer/2000. The environment variables below are required to run Developer/2000, regardless of the chosen user interface (character mode, Motif, or Web).

Set LIBPATH for Each User
If you plan to use the ORA-FFi functionality, please ensure that LIBPATH is set to the directory that contains your shared library.

Set ORA_NLS33 and ORA_NLS32
With Developer/2000 Release 1.6, you are required to set the ORA_NLS33 environment variable to be $ORACLE_HOME/ocommon/nls/admin/datad2k. This is the directory where the NLS33 data files are installed during the installation of Developer/2000.
Example of ORA_NLS33 setting

For the Bourne shell, enter:

% ORA_NLS33=$ORACLE_HOME/ocommon/nls/admin/datad2k
% export ORA_NLS33

For the C shell, enter:

% setenv ORA_NLS33 $ORACLE_HOME/ocommon/nls/admin/datad2k

By default, the NLS32 data files are installed under the $ORACLE_HOME/ocommon/nls/admin/data directory. If you have not moved these files from their default directory, you will not be required to set the ORA_NLS32 environment variable. If you have moved them, you will need to set ORA_NLS32 to the new location of the NLS32 data files.

Example of ORA_NLS32 setting

Assume the NLS data files have been moved from their default location to $ORACLE_HOME/ocommon/nls/admin/new_data.

For the Bourne shell, enter:

% ORA_NLS32=$ORACLE_HOME/ocommon/nls/admin/new_data
% export ORA_NLS32

For the C shell, enter:

% setenv ORA_NLS32 $ORACLE_HOME/ocommon/nls/admin/new_data
Setting Up the GUI Environment

This section explains how to prepare the GUI environment for Developer/2000:

- Relocate Key Definition File
- Set Up the X Window System and Motif Environments

Getting Help with X and OSF/Motif

In this section, it is assumed you have a working knowledge of X Window and OSF/Motif setup and administration, including an understanding of the client/server architecture of the X Window System and Motif.

Note: Oracle customers can contact Oracle Technical Support regarding any problems with Oracle products. However, Oracle Corporation does not offer technical support for the X Window System or Motif provided by your operating system vendor. Refer your questions about the X Window System or Motif to your on-site expert, or to your operating system vendor or Motif vendor.

Note: Oracle does not support PC Xserver emulators. If you are having a problem with an emulator on a PC, see if you can duplicate the problem on your server's console.

Relocate Key Definition File

When installation is complete, the X11 key symbol file XKeysymDB is in the $ORACLE_HOME/guicommon2/tk23/admin directory. You must move the XKeysymDB file to the /usr/openwin/lib/X11 directory on every machine on which Developer/2000 is running. To move the file, perform the following steps:

1. As the root user, change to the $ORACLE_HOME/guicommon2/tk23/admin directory.
   
   # cd $ORACLE_HOME/guicommon2/tk23/admin

2. Set up the XKeysymDB file of your choice.

   If you already have this file, decide whether to use the new file as is or merge it with the old file. If you decide to use the new file, you may want to rename the old file to preserve it.
If the directory `/usr/openwin/lib/X11` does not exist, create it by entering:

```
# mkdir /usr/openwin/lib/X11
```

- To preserve the original file, enter:
  
  ```
  # cd /usr/openwin/lib/X11
  # mv XKeysymDB XKeysymDB.OLD
  # cd $ORACLE_HOME/guicommon2/tk23/admin
  ```

- To install only the new file, enter:
  
  ```
  # cp XKeysymDB /usr/openwin/lib/X11
  ```

- To merge the new file with the existing file, add the old material you want to keep into the new file using your system editor.

**Note:** The application code reads the `XKeysymDB` file at startup time. If the application code cannot find the file, or if it does not contain all of the relevant OSF `keysym` values, some function keys may not function properly. In this case you may receive warning messages similar to the following:

```
Warning: translation table syntax error: Unknown keysym name: osfUp
Warning: ...found while parsing ' <Key>osfUp: ManagerGadgetTraverseUp ()'
```

3. Exit the root user account.

Oracle Motif applications running in an X11R4 environment do not have the capability of locating National Language Support (NLS) data files. Except for this limitation, Oracle Motif applications running in an X11R4 environment have the same capability as applications running in an X11R5 environment.
Set Up the X Window System and Motif Environments

This section describes the following topics:

- Set the DISPLAY Environment Variable
- Control Display Access with the xhost Utility

Set the DISPLAY Environment Variable

If you run Developer/2000 on a machine that is not your local workstation, set the DISPLAY environment variable on the remote machine to the name of your X Windows screen. This tells the application which machine, server, and screen to display its windows.

The format for the name of the X Windows screen is:

```
machine_name : server.screen
```

Where:

- `machine_name` specifies the name of the machine you will be using
- `server` specifies the sequential code number for the server
- `screen` specifies the sequential code number for the screen (optional)

For example, your workstation is named `bambi`, and you want to run Motif Forms from a larger machine named `godzilla`. From `godzilla`:

For the Bourne shell, enter:

```
$ DISPLAY=bambi:0.0; export DISPLAY
```

For the C shell, enter:

```
% setenv DISPLAY bambi:0.0
```

The first zero in this example refers to the first server running on `bambi`. The second zero refers to the first screen managed by that server. Typically, there is just one server and one screen per workstation or X terminal. In such cases you can omit the screen specification.

Control Display Access with the xhost Utility

Most X servers prevent users on other machines from displaying windows on your screen, unless you explicitly give them permission. This is done by means of an access file `/etc/Xn.hosts`, where `n` is the number of the display. The xhost utility allows you to interactively grant or deny systems access to the server.
To grant access to a remote system, run `xhost` and specify the name with an optional leading plus sign (+). To deny access, use a leading minus sign (-). A plus sign without a host name gives access to all available systems, whether they are listed in `/etc/Xn.hosts` or not. A minus sign without a host name restricts access to systems listed in the `/etc/Xn.hosts` file.

Running `xhost` without arguments prints the list of hosts in the `/etc/Xn.hosts` file, and tells you whether they have current access to your display.

For example, your workstation is named `bambi` and you want to grant access to `godzilla`, a remote machine. On `bambi`, enter:

```
$ xhost +godzilla
```

To allow unlimited, unspecified access, enter:

```
$ xhost +
```

**Attention:** When you grant another machine access, all users of that machine have access to your machine’s X server. For example, if you grant machine `godzilla` access to `bambi`, all users of `godzilla` have access to the `bambi` X server.
Setting Up Developer/2000 for the Web

The Forms, Reports, and Graphics servers allow you to deploy new and existing applications on the World Wide Web via a JDK 1.1 compatible browser.

To successfully deploy applications using Developer/2000 for the Web in a Web browser, the browser must incorporate the correct version of the Java Virtual Machine. The Java Virtual Machine is the software that allows the browser to execute the Java applet component of Developer/2000 Web Cartridge. The Java Virtual Machine is part of the Java Developer’s Kit (JDK).

Release 1.6 of Developer/2000 for the Web requires a browser that contains the Java Virtual Machine from release 1.1.4 of the JDK. Contact Oracle World Wide Support or your Oracle representative to determine the latest versions of the Web browsers which are certified against Developer/2000 for the Web.

Included with Developer/2000 for the Web Release 1.6 is an appletviewer for Windows. This appletviewer for Windows can be installed on a Windows platform and used as a client to the Developer/2000 Web servers.

See Also: The Release Notes have instructions on installing and running the appletviewer on Windows. Release Notes are located in ORACLE_HOME/guicommon2/doc.

Note: To install and run the Developer/2000 demos for the Web, consult the webread1.htm file under the ORACLE_HOME/forms45/demos/webdemos directory.

Enabling Use of Other Languages

This section explains how to set up your environment so that you can run the tools using various languages.

Perform the following tasks to enable Developer/2000 to run in languages other than the default language (English):

- Set NLS_LANG
Set Tk2Motif*fontMapCs

Note: Forms and Graphics runtime files may need to be regenerated if they were previously generated with a different NLS_LANG setting.

Set NLS_LANG

Developer/2000 products use the NLS_LANG environment variable to determine which language territory and terminal character set to use. To set NLS_LANG, use the following procedure.

For the Bourne shell, enter:

$ NLS_LANG=language_territory.character_set
$ export NLS_LANG

For the C shell, enter:

% setenv NLS_LANG language_territory.character_set

Where:

language is a supported language
territory is a supported territory
character_set is a character set supported by the user’s terminal

Note: If NLS_LANG is not set, the default setting is us7ascii.
Table 4–2 provides values supported by Developer/2000 products for NLS_LANG:

<table>
<thead>
<tr>
<th>Language Name</th>
<th>language Value</th>
<th>Territory Name</th>
<th>territory Value</th>
<th>character_set Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>American</td>
<td>american</td>
<td>United States</td>
<td>america</td>
<td>us7ascii</td>
</tr>
<tr>
<td>Dutch</td>
<td>dutch</td>
<td>The Netherlands</td>
<td>“the netherlands”</td>
<td>we8dec</td>
</tr>
<tr>
<td>French</td>
<td>french</td>
<td>France</td>
<td>france</td>
<td>we8dec</td>
</tr>
<tr>
<td>German</td>
<td>german</td>
<td>Germany</td>
<td>germany</td>
<td>we8dec</td>
</tr>
<tr>
<td>Italian</td>
<td>italian</td>
<td>Italy</td>
<td>italy</td>
<td>we8dec</td>
</tr>
<tr>
<td>Japanese</td>
<td>japanese</td>
<td>Japan</td>
<td>japan</td>
<td>ja16euc</td>
</tr>
<tr>
<td>Korean</td>
<td>korean</td>
<td>Korea</td>
<td>korea</td>
<td>ko16ksc5601</td>
</tr>
<tr>
<td>Spanish</td>
<td>spanish</td>
<td>Spain</td>
<td>spain</td>
<td>we8dec</td>
</tr>
<tr>
<td>Traditional Chinese</td>
<td>“traditional chinese”</td>
<td>China</td>
<td>zhp</td>
<td>zht32euc</td>
</tr>
</tbody>
</table>

Set Tk2Motif*fontMapCs

This section explains how to add an entry to the Tk2Motif file so that the Toolkit can match Oracle character sets with X character sets. The setting is called Tk2Motif*fontMapCs. Add the following line to the file to set Tk2Motif*fontMapCs:

Tk2Motif*fontMapCs: xset=character_set

Where:
- xset is the name of an X character set
- character_set is the name of an Oracle character set

To get a list of all character sets available on your X Server, enter:

$ xlsfonts | awk -F- '{print $14 "-" $15}' | sort -u

The Oracle character set is the last item in the NLS_LANG setting. For example, for the Swedish language, the Oracle character set name is we8dec.

**Forms**

**Forms Executables**

Table 5–1 contains the Forms executable names. The executables also appear in the $ORACLE_HOME/bin directory.

<table>
<thead>
<tr>
<th>Component</th>
<th>Web Executable Name on UNIX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designer</td>
<td>n/a</td>
</tr>
<tr>
<td>Generator</td>
<td>n/a</td>
</tr>
<tr>
<td>Runform</td>
<td>n/a</td>
</tr>
<tr>
<td>Runform with debugger</td>
<td>n/a</td>
</tr>
<tr>
<td>Forms listener</td>
<td>f45webm</td>
</tr>
<tr>
<td>Forms server</td>
<td>f45srvm</td>
</tr>
</tbody>
</table>
Reports

Reports Executables

The Reports executables, listed in the following table, initially appear in the $ORACLE_HOME/bin subdirectory.

<table>
<thead>
<tr>
<th>Component</th>
<th>Executable Name on UNIX</th>
<th>Platform-Independent Executable Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reports CGI Executable</td>
<td>r25cgim (Motif)</td>
<td>cgirep25m (Motif)</td>
</tr>
<tr>
<td>Multi-tier server</td>
<td>r25mtsm</td>
<td>r25mtsm</td>
</tr>
<tr>
<td>Queue Viewer</td>
<td>r25rqv</td>
<td>r25rqv</td>
</tr>
<tr>
<td>Reports Client</td>
<td>r25clim</td>
<td>r25clim</td>
</tr>
<tr>
<td>Reports Web Cartridge</td>
<td>r25owsm.so</td>
<td>r25owsm.so</td>
</tr>
</tbody>
</table>

Reports Server, Web Cartridge, and Web CGI Information Files

In Release 1.6, Reports 2.5 contains a Reports Server, Web Cartridge, and Web CGI, which enable you to run reports remotely through the Web and other clients (for example, r25clim command line).

Reports Multi-tier Server Information File

In Developer/2000 Release 1.6, you may deploy your reports on the Web with the Oracle Web Application Server in conjunction with the Reports Web Cartridge and Reports Multi-tier Server. Use your Web browser to view $ORACLE_HOME/reports25/doc/r25mtsus.htm for more information and installation instructions.

Reports Web Cartridge Information File

In Developer/2000 Release 1.6, you may deploy reports through the Web using either the Reports Web Cartridge or the Reports CGI executable in conjunction with the Reports Multi-tiered Server. For more information on configuring and installing the Reports Web Cartridge, use your Web browser to view $ORACLE_HOME/reports25/doc/r25ows.htm.
Reports Web CGI Information File

In Developer/2000 Release 1.6, you may deploy your reports on the Web with any Web server in conjunction with the Reports Web CGI and Reports Multi-tier Server. For more information on the Reports Web CGI Interface, use your Web browser to view $ORACLE_HOME/reports25/doc/r25cgi.htm.

Relinking Reports

In Release 1.6, Graphics is linked into the Reports executables automatically. There is no longer an option to relink Reports without Graphics.

For Web Reports:

$ make -f ins_reports25w.mk winstall

Graphics

Graphics Executables

The Graphics executables listed in Table 5–3 are installed in the $ORACLE_HOME/bin subdirectory.

Table 5–3  Graphics Executables and Libraries

<table>
<thead>
<tr>
<th>Component</th>
<th>Name on UNIX</th>
<th>Platform-Independent Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphics Web Cartridge</td>
<td>libgw25.so</td>
<td>libgw25.so</td>
</tr>
</tbody>
</table>

Deploying Graphics on the Web

Refer to $ORACLE_HOME/graphics25/doc/ogwebchp.htm for additional detailed information on Graphics for the Web.
Graphics
User exits are subroutines that contain embedded SQL commands. You can create user exits by modifying the sample source file.

**User Exits**

The sample files, iapxtb.c and ue_xtb.c, each declare a user exit array called iapxtb[]. Following are the files that describe which file is used to define exit tables:

- Forms uses $ORACLE_HOME/forms45/demos/sample/ue_xtb.c.
- Reports uses $ORACLE_HOME/reports25/demo/ue/*
- Graphics uses $ORACLE_HOME/graphics25/demos/sample/iapxtb.c.

To create user exits:

1. Add entries to the sample source file for each user exit. Following is a sample source file:

```c
/* Define the user exit table */
extern extrit iapxtb[] = { /* Holds exit routine pointers */
    "UE_OK",        ue_ok, XITCC,
    "UE_ERR",      ue_err, XITCC,
    "UE_MB",        ue_mb, XITCC,
    "UE_EMP_PLAN", ue_emp_plan, XITCC,
    (char *) 0, 0, 0 /* zero entry marks the end */};
/* end iapxtb */
```
The first item in the entry is the name (inside double quotes) used by the tool to reference the user exit. The second item is the actual name of the user exit routine. Names of user exits cannot be more than 30 alphanumeric characters in length, and must begin with a letter. The last item (XITCC) indicates that the user exit is called using C calling conventions. For other languages, you would use one of the following:

- XITCOB /* COBOL */
- XITFOR /* FORTRAN */
- XITPLI /* PL/I */
- XITPAS /* PASCAL */
- XITAda /* ADA */

2. After modifying the source file, compile it along with your user exit program. Next, link the resulting IAPXTB object file with the product executable(s).

**Forms**

To link the user exit sample file for Forms, enter the following.

For Motif:

```bash
$ cd $ORACLE_HOME/forms45/lib
$ make -f ins_forms45w.mk f45runmx
```

For character mode:

```bash
$ cd $ORACLE_HOME/forms45/lib
$ make -f ins_forms45w.mk f45runx
```

After that, add the following for Web mode:

```bash
$ cd $ORACLE_HOME/forms45/lib
$ make -f ins_forms45w.mk f45webmx
```
Reports

To link the user exit sample for Reports, enter the following.

For Motif:

```bash
$ cd $ORACLE_HOME/reports25/lib
$ make -f ins_reports25w.mk r25runmx
```

For character mode:

```bash
$ cd $ORACLE_HOME/reports25/lib
$ make -f ins_reports25w.mk r25runx
```

After that, add the following for Web mode:

```bash
$ cd $ORACLE_HOME/reports25/lib
$ make -f ins_reports25w.mk r25runx
```

Graphics

To link the user exit sample for Graphics, enter the following.

```bash
$ cd $ORACLE_HOME/graphics25/lib
$ make -f ins_graphics25w.mk g25runmx
```

After that, add the following for Web mode:

```bash
$ cd $ORACLE_HOME/graphics25/lib
$ make -f ins_graphics25w.mk g25runmx
```

Linking in Your User Exits

To link in your own user exits, override the EXITS make file macro on the command line with the user exit table file and user exits you created. For example:

```bash
$ make -f ins_reports25w.mk \nEXITS="my_iapxtb.o userexit1.o userexit2.o ..." r25runmx
```
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