## Oracle9i Application Server

Migrating from Oracle Internet Application Server 1.0.1

Release 1.0.2 for Windows NT

November 2000 Part No. A87391-01



Oracle9*i* Application Server, Release 1.0.2 for Windows NT, Migrating from Oracle Internet Application Server 1.0.1

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## Oracle9*i* Application Server Release 1.0.2, Migrating from Oracle Internet Application Server 1.0.1

#### Part No. A87391-01

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.

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## Preface

This guide describes the process of migrating your system from Oracle Internet Application Server, Release 1.0.1 to Oracle9*i* Application Server, Release 1.0.2.

This preface contains these topics:

- Audience
- Organization
- Related Documentation
- Conventions

### Audience

This guide is for system administrators and application developers who will be migrating their system from Oracle Internet Application Server, Release 1.0.1.

To use this document, you need to be familiar with the configuration and operation of each component and other system administration tasks.

## Organization

This document contains:

#### Chapter 1, "Migrating to Oracle9i Application Server, Release 1.0.2"

This chapter provides an introduction to migrating from Oracle Internet Application Server, Release 1.0.1 to Oracle9*i* Application Server, Release 1.0.2.

#### Chapter 2, "Oracle HTTP Server Migration"

This chapter discusses the migration path for Oracle HTTP Server.

#### Chapter 3, "PL/SQL Gateway Migration"

This chapter discusses the migration path for PL/SQL Gateway.

Chapter 4, "PL/SQL Server Pages Migration"

This chapter discusses the migration path for PL/SQL Server Pages.

Chapter 5, "Oracle Business Components for Java Migration"

This chapter discusses the migration path for Oracle Business Components for Java.

#### Chapter 6, "OracleJSP Migration"

This chapter discusses the migration path for OracleJSP.

Chapter 7, "Oracle8i JVM Migration"

This chapter discusses the migration path for Oracle8*i* JVM.

Chapter 8, "Oracle Forms Services Migration"

This chapter discusses the migration path for Oracle Forms Services.

Chapter 9, "Oracle Discoverer 3i Migration"

This chapter discusses the migration path for Oracle Discoverer 3i.

Chapter 10, "Oracle Database Cache Migration"

This chapter discusses the migration path for Oracle Database Cache.

## **Related Documentation**

For more information, see these Oracle resources:

- Oracle9*i* Application Server Documentation Library CD-ROM
- Oracle9*i* Application Server Platform Specific Documentation on Oracle9*i* Application Server Disk 1

In North America, printed documentation is available for sale in the Oracle Store at

http://oraclestore.oracle.com/

Customers in Europe, the Middle East, and Africa (EMEA) can purchase documentation from

http://www.oraclebookshop.com/

Other customers can contact their 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://technet.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://technet.oracle.com/docs/index.htm

### Conventions

This section describes the conventions used in the text and code examples of the this documentation set. It describes:

- Conventions in Text
- Conventions in Code Examples

#### **Conventions in Text**

We use various conventions in text to help you more quickly identify special terms. The following table describes those conventions and provides examples of their use.

Convention	Meaning	Example
Bold	Bold typeface indicates terms that are defined in the text or terms that appear in a glossary, or both.	The C datatypes such as <b>ub4</b> , <b>sword</b> , or <b>OCINumber</b> are valid.
		When you specify this clause, you create an <b>index-organized table</b> .
Italics	ts Italic typeface indicates book titles, emphasis, syntax clauses, or placeholders.	Oracle8i Concepts
		You can specify the <i>parallel_clause</i> .
		Run Uold_release.SQL where old_release refers to the release you installed prior to upgrading.

Convention	Meaning	Example
UPPERCASE monospace	Uppercase monospace typeface indicates elements supplied by the system. Such	You can specify this clause only for a NUMBER column.
(fixed-width font)	elements include parameters, privileges, datatypes, RMAN keywords, SQL keywords, SQL*Plus or utility commands, packages and methods, as well as system-supplied column names, database objects and structures, user names, and roles.	You can back up the database using the BACKUP command.
		Query the TABLE_NAME column in the USER_TABLES data dictionary view.
		Specify the ROLLBACK_SEGMENTS parameter.
		Use the DBMS_STATS.GENERATE_STATS procedure.
	Lowercase monospace typeface indicates	Enter sqlplus to open SQL*Plus.
monospace (fixed-width font)	computer and database names, net service names, and connect identifiers, as well as user-supplied database objects and structures, column names, packages	The department_id, department_name, and location_id columns are in the hr.departments table.
		Set the QUERY_REWRITE_ENABLED initialization parameter to true.
	and classes, user names and roles, program units, and parameter values.	Connect as oe user.

#### **Conventions in Code Examples**

Code examples illustrate SQL, PL/SQL, SQL\*Plus, or other command-line statements. They are displayed in a monospace (fixed-width) font and separated from normal text as shown in this example:

```
SELECT username FROM dba_users WHERE username = 'MIGRATE';
```

The following table describes typographic conventions used in code examples and provides examples of their use.

Convention	Meaning	Example
[]	Brackets enclose one or more optional items. Do not enter the brackets.	DECIMAL (digits [ , precision ])
{}	Braces enclose two or more items, one of which is required. Do not enter the braces.	{ENABLE   DISABLE}
I	A vertical bar represents a choice of two or more options within brackets or braces. Enter one of the options. Do not enter the vertical bar.	{ENABLE   DISABLE} [COMPRESS   NOCOMPRESS]

Convention	Meaning	Example
	Horizontal ellipsis points indicate either:	
	<ul> <li>That we have omitted parts of the code that are not directly related to the example</li> </ul>	CREATE TABLE AS subquery;
	• That you can repeat a portion of the code	<pre>SELECT col1, col2, , coln FROM employees;</pre>
	Vertical ellipsis points indicate that we have omitted several lines of code not directly related to the example.	
Other notation	You must enter symbols other than brackets, braces, vertical bars, and ellipsis points as it is shown.	acctbal NUMBER(11,2);
		acct CONSTANT NUMBER(4) := 3;
Italics	Italicized text indicates variables for which you must supply particular values.	CONNECT SYSTEM/system_password
UPPERCASE Uppercase typeface indicates elements supplied by the system. We show these terms in uppercase in order to distinguish them from terms you define. Unless terms appear in brackets, enter them in the order and with the spelling shown. However, because these terms are not case sensitive, you can enter them in lowercase.	supplied by the system. We show these terms in uppercase in order to distinguish	<pre>SELECT last_name, employee_id FROM employees;</pre>
		SELECT * FROM USER_TABLES;
	DROP TABLE hr.employees;	
lowercase	Lowercase typeface indicates programmatic elements that you supply. For example, lowercase indicates names of tables, columns, or files.	<pre>SELECT last_name, employee_id FROM employees;</pre>
		sqlplus hr/hr

1

## Migrating to Oracle9*i* Application Server, Release 1.0.2

This chapter provides an overview of the migration process. The topics are:

- Before Installing Oracle9i Application Server, Release 1.0.2
- Installing Oracle9i Application Server, Release 1.0.2
- Terminology In This Guide
- Updated Components
- Unchanged Components
- New Components
- How To Use This Guide
- Component Migration

## Before Installing Oracle9i Application Server, Release 1.0.2

Prior to installing Oracle9*i* Application Server, Release 1.0.2, you must perform some preinstallation tasks for Oracle Forms Services, Oracle Reports Services, Oracle Discoverer 3*i*, and Oracle Database Cache.

Oracle Forms Services, Oracle Reports Services, and Oracle Discoverer 3*i* use Oracle 8.0.6 database libraries. To avoid any potential conflicts during installation of Oracle9*i* Application Server, Release 1.0.2, you must deinstall the current copies of these components from your system.

You must also deinstall Oracle8*i* Cache from your Oracle Internet Application Server, Release 1.0.1 Oracle home. Refer to "Preinstallation" on page 10-2 for deinstallation instructions.

#### **Deinstalling Components Using 8.0.6 Libraries**

The following steps guide you through the process of deinstalling these components.

- 1. Back up any custom data and application files you have stored in OLD\_HOME.
- 2. Back up OLD\_HOME\6iServer\discwb33\util\pref.txt.
- **3.** If you customized the XSL of Discoverer Viewer, back up any XSL or XML files you changed or added.
- **4.** From the Windows NT Control Panel, open Services. Stop the following services:
  - Oracle Forms Server [Forms60Server]
  - Oracle Reports Server [REP60\_hostname]
  - Oracle\_Load\_balancer\_60\_Client
  - Oracle\_Load\_balancer\_60\_Server
  - OracleDiscoverer3i
- **5.** From the Windows NT Start Menu, point to Programs, then Oracle for Windows NT, and click Oracle Installer.

**Note:** Do not click on Universal Installer. You cannot use Oracle Universal Installer to deinstall these components.

- **6.** When Oracle Installer launches, the Software Asset Manager appears. Select all of the components in the rightmost window and click the Remove button.
- 7. Click the Yes button to confirm that you want to delete these components.
- **8.** After deinstallation, click the Exit button to quit the installer.

You have successfully deinstalled Oracle Forms Services, Oracle Reports Services, and Oracle Discoverer 3*i* Viewer Edition.

## Installing Oracle9i Application Server, Release 1.0.2

To successfully migrate your configuration, applications, and data from Oracle Internet Application Server 1.0.1 to Oracle9*i* Application Server 1.0.2, you must start by installing Release 1.0.2 into a new Oracle home.

For example, if you installed Oracle Internet Application Server 1.0.1 into d:\ias100, install Oracle9*i* Application Server 1.0.2 into d:\ias102.

Except where noted in the previous section, this guide is intended for users who have already installed Oracle9*i* Application Server Release 1.0.2.

## **Terminology In This Guide**

This guide uses the terminology in Table 1–1.

Term	Definition	
OLD_HOME	The Oracle home for Oracle Internet Application Server 8i, Release 1.0.1.	
NEW_HOME	The Oracle home for Oracle9 <i>i</i> Application Server, Release 1.0.2	

Table 1–1 Oracle9i Application Server Migration Terminology

**Note:** Some Oracle9*i* Application Server components use the Oracle 8.0.6 library files and install into a different Oracle home. The value of *NEW\_HOME* for these components is *install\_drive*:\Oracle\806.

The following components use the 8.0.6 libraries:

- Oracle Forms Services
- Oracle Reports Services
- Oracle Discoverer 3i

## **Updated Components**

Oracle9*i* Application Server uses a new version of the following components. Components with a new version may require changes to application logic to reflect new and deprecated features.

Component	<i>i</i> AS 1.0.1 Version	9 <i>i</i> AS 1.0.2 Version	Requires Migration?
PL/SQL Gateway (formerly mod_plsql)	2.6	3.0	yes
PL/SQL Server Pages	8.1.6.1	8.1.7	yes
Oracle Business Components for Java	3.1	3.2	yes
Oracle8 <i>i</i> JVM (also known as Oracle JServer)	8.1.6.1	8.1.7	yes
Oracle Forms Services	6.0.8.9	6.0.8.11	yes
Oracle Reports Services	6.0.8.9	6.0.8.11	no
Oracle Portal (formerly Oracle WebDB)	2.2	3.0	yes
Oracle Database Cache (formerly Oracle8i Cache)	1.0.1	1.0.2	yes
Oracle LDAP Developer's Kit	2.0.6	2.1.1	no
Oracle XML Developer's Kit	1.0.2	1.0.2	no
Oracle Database Client Developer's Kit	8.1.6.1	8.1.7	no

Table 1–2 Updated Oracle9i Application Server Components

Component	<i>i</i> AS 1.0.1 Version	9 <i>i</i> AS 1.0.2 Version	Requires Migration?
Oracle Advanced Security	8.1.6.1	8.1.7	no
Oracle Enterprise Manager	2.1	2.2	yes

 Table 1–2
 Updated Oracle9i Application Server Components (Cont.)

## **Unchanged Components**

Some Oracle9*i* Application Server components use the same version as Oracle Internet Application Server Release 1.0.1. Any existing applications will work with this release, however configuration and environment information may need updating because of the new Oracle home.

 Table 1–3
 Unchanged Oracle9i Application Server Components

9 <i>i</i> AS 1.0.2	
Version	<b>Requires Migration?</b>
1.3.12	yes
1.22	no
5.005_03	no
2.6.4	yes
1.1	no
1.2.2	yes
1.1	yes
3.3.57	yes
	Version 1.3.12 1.22 5.005_03 2.6.4 1.1 1.2.2 1.1

### **New Components**

With Oracle9*i* Application Server Release 1.0.2, you have a choice in deploying Java servlets. The Oracle Servlet Engine in Oracle8*i* JVM supports the Sun Microsystems Java Servlet Specification version 2.2 whereas Apache JServ supports the version 2.0 specification.

Customers who want to make use of new servlet features introduced by the version 2.2 specification can migrate their existing servlets to Oracle Servlet Engine applications.

See Also: Chapter 7, "Oracle8i JVM Migration"

## How To Use This Guide

Each of the following chapters will address the following migration issues:

- **Premigration:** These are instructions for what you need to do before migrating the component. These steps will help prevent conflicts in configuration files.
- **Environment:** These are changes to environment variables used by the component between the two versions. These steps will ensure that your applications refer to the proper executables, libraries, and configuration parameters.
- **Configuration:** These are changes to configuration files. These steps will update the new configuration files so your customizations in release 1.0.1 will still work in release 1.0.2.
- **Application Logic:** These are changes you must make to your applications to either use new functionality or remove deprecated functionality.
- **Tools:** These are changes in the command line and GUI tools for the components.

## **Component Migration**

Refer to the following chapters and resources for detailed migration information for each component.

- For Oracle HTTP Server migration, refer to Chapter 2, "Oracle HTTP Server Migration".
- For PL/SQL Gateway migration, refer to Chapter 3, "PL/SQL Gateway Migration".
- For PL/SQL Server Pages migration, refer to Chapter 4, "PL/SQL Server Pages Migration".
- For Oracle Business Components for Java migration, refer to Chapter 5, "Oracle Business Components for Java Migration".
- For OracleJSP migration, refer to Chapter 6, "OracleJSP Migration".

- For Oracle8*i* JVM migration, refer to Chapter 7, "Oracle8*i* JVM Migration".
- For Oracle Forms Services migration, refer to Chapter 8, "Oracle Forms Services Migration".
- For Oracle Discoverer 3*i* migration, refer to Chapter 9, "Oracle Discoverer 3*i* Migration".
- Oracle Portal uses an upgrade script for migration. The script and further migration instructions are available at

http://otn.oracle.com/products/iportal

- For Oracle Database Cache migration, refer to Chapter 10, "Oracle Database Cache Migration".
- For Oracle Enterprise Manager migration, refer to Appendix B, "Configuration Assistant Operations" in Oracle Enterprise Manager Configuration Guide in the Oracle9i Application Server Documentation Library. Follow the tasks under "Upgrade a Release 2.0 or 2.1 Repository to a Release 2.2 Repository."

## **Oracle HTTP Server Migration**

This chapter explains the process of migrating the Oracle HTTP Server. Each section includes information for JDK migration, servlet migration, and mod\_ssl migration, where applicable.

The migration topics for this component are:

- Premigration
- Environment
- Configuration
- Application Logic
- Tools

## Premigration

Make backup copies of the following default installation files before doing any migration tasks:

- NEW\_HOME\Apache\Apache\conf\httpd.conf
- NEW\_HOME\Apache\Jserv\conf\jserv.conf
- NEW\_HOME\Apache\Jserv\conf\jserv.properties
- NEW\_HOME\Apache\Jserv\servlets\zone.properties
- NEW\_HOME\Apache\Apache\conf\oracle\_apache.conf

## Environment

No environment migration tasks are necessary.

## Configuration

The following sections explain changes you must make to your configuration files so that Oracle HTTP Server continues to work as it did in Oracle Internet Application Server Release 1.0.1.

Table 2–1 lists the files that may be affected by the migration from release 1.0.1 to release 1.0.2.

Table 2–1 Configuration Files Used by Oracle HTTP Server

Configuration File	Description
	The main HTTP server configuration file.
	Java servlet engine configuration file.
	Java servlet engine configuration file.
	Java servlet zone configuration file.
	Oracle configuration file.

#### HTTP Server, JDK, and servlets

The configuration files supplied with the Oracle9*i* Application Server Release 1.0.2 installation will support all of the applications deployed in release 1.0.1 without modification, unless you have changed the release 1.0.1 configuration files. In that case, you must apply those changes to the release 1.0.2 files.

Oracle has made a number of changes to these files in release 1.0.2. The changes are listed below. To migrate your files, compare your configuration files in *OLD\_HOME* with those in *NEW\_HOME*. In a text editor, make any changes necessary to the configuration file in *NEW\_HOME* to match the file in *OLD\_HOME*.

The following sections list changes made to the new configuration files by Oracle. You should not overwrite these changes when restoring your *OLD\_HOME* configuration settings.

#### httpd.conf

The Oracle changes to httpd.conf are listed below.

- The LoadModule directive is uncommented for:
  - ApacheModuleAuthAnon.dll
  - ApacheModuleCERNMeta.dll
  - ApacheModuleDigest.dll
  - ApacheModuleHeaders.dll
  - ApacheModuleRewrite.dll
  - ApacheModuleSpeling.dll
  - ApacheModuleUserTrack.dll
- The AddModule directive is added for:
  - mod\_rewrite.c
  - mod\_speling.c
  - mod\_auth\_anon.c
  - mod\_cern\_meta.c
  - mod\_digest.c
  - mod\_headers.c
  - mod\_usertrack.c

• In the server-status section, Allow from localhost is changed to Allow from localhost *hostname*.

#### jserv.conf

Oracle made no changes to jserv.conf. If you have changed it, you must apply the changes to this file in *NEW\_HOME*.

#### jserv.properties

The Oracle changes to jserv.properties are listed below.

- A wrapper.classpath directive is added for:
  - aurora\_client.jar
  - vbjorb.jar
  - vbjapp.jar

Additional appended lines or directives may have been added by other Oracle9*i* Application Server components and are contained within comment fields identifying the component. See the chapter for a given component to determine the necessary migration tasks.

#### oracle\_apache.conf

Oracle made no changes to oracle\_apache.conf. If you have changed it, you must apply the changes to this file in *NEW\_HOME*.

#### zone.properties

Oracle made no changes to zone.properties. If you have changed it, you must apply the changes to this file in *NEW\_HOME*.

#### mod\_ssl

Both Oracle Internet Application Server 1.0.1 and Oracle9*i* Application Server 1.0.2 use open\_ssl 0.9.5a. To migrate the mod\_ssl configuration, you must copy the configuration files listed in Table 2–2 from the version *OLD\_HOME* to *NEW\_HOME*.

То:
NEW_HOME\Apache\Apache\conf\ssl.crl\
NEW_HOME\Apache\Apache\conf\ssl.crt\
NEW_HOME\Apache\Apache\conf\ssl.csr\
NEW_HOME\Apache\Apache\conf\ssl.key\
NEW_HOME\Apache\Apache\conf\ssl.prm\
-

Table 2–2 Migration of mod\_ssl configuration files

#### Changing httpd.conf for mod\_ssl migration

To migrate mod\_ssl, you must replace the path of the version 1.0.1 Oracle home with the path of the version 1.0.2 Oracle home in httpd.conf, which is shown as *NEW\_HOME* in the example below. You can safely replace the files in *NEW\_HOME* with the files from *OLD\_HOME*.

#SSLSessionCache shm:*NEW\_HOME*/Apache/Apache/logs/ssl\_scache(512000) SSLSessionCache dbm:*NEW\_HOME*/Apache/Apache/logs/ssl\_scache

SSLLog NEW\_HOME/Apache/Apache/logs/ssl\_engine\_log SSLCertificateFile NEW\_HOME/Apache/Apache/conf/ssl.crt/server.crt SSLCertificateKeyFile NEW\_HOME/Apache/Apache/conf/ssl.key/server.key #SSLCertificateChainFile NEW\_HOME/Apache/Apache/conf/ssl.crt/ca.crt #SSLCACertificateFile NEW\_HOME/Apache/Apache/conf/ssl.crt #SSLCACertificateFile NEW\_HOME/Apache/Apache/conf/ssl.crt/ca-bundle.crt #SSLCARevocationFile NEW\_HOME/Apache/Apache/conf/ssl.crl #SSLCARevocationFile NEW\_HOME/Apache/Apache/conf/ssl.crl

## **Application Logic**

This section describes the migration tasks related to application logic when migrating the HTTP Server and its components.

#### **HTTP Server**

There are no differences in the Oracle HTTP Server shipped with Oracle9*i* Application Server release 1.0.2 that affect deployment of applications from Oracle Internet Application Server release 1.0.1.

### JDK

	Java applications compiled in JDK version 1.1.8 and deployed in Oracle Internet Application Server 1.0.1 should function in the same manner when deployed in Oracle9 <i>i</i> Application Server 1.0.2 with JDK version 1.2.2.
	However, be aware that the use of any Java feature that was deprecated in version 1.2.2 might require code changes and recompilation. Become familiar with JDK version 1.2.2, and review all code written for JDK 1.1.8, if necessary.
Servlets	
	The Apache JServ version is unchanged between Oracle Internet Application Server release 1.0.1 and Oracle9 <i>i</i> Application Server release 1.0.2. Servlets written to the JServ version 2.0 API and deployed in Oracle Internet Application Server 1.0.1 should function in the same manner when deployed in Oracle9 <i>i</i> Application Server 1.0.2.
mod_ssl	
	Copy all certificate, request, key, crl, and prm files to the new locations shown in "Changing httpd.conf for mod_ssl migration" on page 2-5 and restart Oracle9 <i>i</i> Application Server.
mod_perl	
	Modify the Perl path (typically, the first line of the Perl script) to reflect the location of the Oracle9 <i>i</i> Application Server version 1.0.2 installation.
	If any new third-party modules have been added to Perl, they need to be added to the Oracle9 <i>i</i> Application Server version 1.0.2 installation.

## Tools

No tools migration tasks are necessary for HTTP Server, JDK, servlets, or mod\_ssl.

## **PL/SQL Gateway Migration**

This chapter explains the process of migrating from PL/SQL Gateway version 2.6 (formerly mod\_plsql) to 3.0 in Oracle9*i* Application Server.

The migration topics for this component are:

- Premigration
- Environment
- Configuration
- Application Logic
- Tools

## Premigration

The following sections explain premigration steps. These instructions must be followed before beginning any migration work. Users must perform the Oracle HTTP Server migration tasks before starting to migrate PL/SQL Gateway.

### **Backing Up Configuration Files**

Make copies of the following file before performing any migration tasks:

OLD\_HOME/Apache/modplsql/cfg/wdbsvr.app

#### Installing the new PL/SQL Web Toolkit packages

Install the latest PL/SQL Web Toolkit packages being shipped with Oracle9*i* Application Server, Release 1.0.2. These are available in NEW\_HOME\Apache\modplsql\owa.

**See Also:** Chapter 2 of *Using the PL/SQL Gateway* in the Oracle9*i* Application Server Documentation Library for installation information.

## Environment

No environment migration tasks are necessary.

## Configuration

The following sections explain changes you must make to your configuration files for the PL/SQL Gateway to continue to work as it did with Oracle Internet Application Server, Release 1.0.1.

You will need to make changes to the configuration files in Table 3–1.

Table 3–1 Configuration Files Used by PL/SQL Gateway

Configuration File	Description	
NEW_HOME\Apache\modplsql\cfg\wdbsvr.app	Configuration information for the PL/SQL Gateway.	

#### wdbsvr.app

You can safely replace the application configuration file in *NEW\_HOME* with your old application configuration file.

#### **Configuration Page**

PL/SQL Gateway provides a Web page for configuring Database Access Descriptors (DADs). A DAD is a set of values that specify how the PL/SQL Gateway connects to a database server to fulfill an HTTP Server. The PL/SQL Gateway configuration page has been simplified in this release.

**See Also:** Chapter 3, "Configuring the PL/SQL Gateway" of *Using the PL/SQL Gateway* in the Oracle9*i* Application Server Documentation Library.

## **Application Logic**

Installation of the new PL/SQL Web Toolkit packages invalidates all PL/SQL applications which are dependent on it. It is recommended that you recompile all the invalidated packages. If you choose not to recompile, then the invalid packages will automatically get recompiled when they are accessed for the first time.

The new PL/SQL Gateway makes available the following new features to all PL/SQL applications:

- Integration with Oracle's Single Sign-On solution.
- The new owa\_cache package can be used to cache PL/SQL results or documents in the middle-tier. Users can set the caching mechanism to either "Expires model" or "Validation model."
- Path aliasing.

**See Also:** Using the PL/SQL Gateway in the Oracle9*i* Application Server Documentation Library for more information on these features.

## Tools

No tools migration tasks are necessary.

4

## **PL/SQL Server Pages Migration**

This chapter explains the process of migrating from PL/SQL Server Pages in Oracle9*i* Application Server. Since PL/SQL Gateway serves PL/SQL Server Pages, you must complete the PL/SQL Gateway migration steps in Chapter 3, "PL/SQL Gateway Migration" before continuing with this chapter.

The migration topics for this component are:

- Premigration
- Environment
- Configuration
- Application Logic
- Tools

## Premigration

No premigration tasks are necessary.

## Environment

No environment migration tasks are necessary.

## Configuration

No configuration migration tasks are necessary.

## **Application Logic**

Installing the new OWA packages during the PL/SQL Gateway migration invalidates all of the PL/SQL stored procedures generated for your PL/SQL Server Pages. You must reload your PL/SQL Server Pages to the database.

**See Also:** "Loading the PL/SQL Server Page into the Database as a Stored Procedure" in *Oracle8i Application Developer's Guide - Fundamentals* in the Oracle Database Documentation Library

If you do not reload your PL/SQL Server Pages to the database, they will be automatically reloaded during the next request.

**See Also:** Using the PL/SQL Gateway in the Oracle9*i* Application Server Documentation Library for more information on new features available for PL/SQL Server Pages.

## Tools

No tools migration tasks are necessary.

# 5

## Oracle Business Components for Java Migration

This chapter explains the process of migrating Oracle Business Components for Java (BC4J) applications from Oracle Business Components for Java version 3.1 to 3.2 in Oracle9*i* Application Server 1.0.2. Also note that Oracle Business Components for Java version 3.2 is backward compatible with the 3.1 version.

For local applications, JSPs, and servlets, no migration is necessary. You only need to add your application jar files to the <code>jserv.properties</code> file and ensure that they are in the CLASSPATH.

For remote applications, JSPs, and servlets you must perform the migration tasks described in this chapter.

The migration topics for this component are:

- Premigration
- Environment
- Configuration
- Application Logic
- Tools

## Premigration

No premigration tasks are necessary.

## Environment

No environment migration tasks are necessary.

## Configuration

No migration steps are necessary for Oracle Business Components for Java applications that are deployed to the local Apache JServ CLASSPATH.

To configure servlets or JSPs to work with Oracle Business Components for Java applications deployed in the Oracle8*i* JVM, you must change your configuration files as explained in the following sections.

#### Setting the CLASSPATH

Set the Oracle9*i* Application Server CLASSPATH to connect to remotely deployed Oracle Business Components for Java components:

- 1. Open NEW\_HOME\Apache\Jserv\conf\jserv.properties in a text editor.
- 2. Locate the block that begins with the comment:

# Oracle Portal

**3.** In this block, locate the CLASSPATH settings for the BC4J. The following is the base set of CLASSPATH settings for BC4J that you will find in the file:

wrapper.classpath=NEW\_HOME\Apache\BC4J\lib\ordvir817.zip wrapper.classpath=NEW\_HOME\Apache\BC4J\lib\ordin817.zip wrapper.classpath=NEW\_HOME\Apache\BC4J\lib\jboremote.zip wrapper.classpath=NEW\_HOME\Apache\BC4J\lib\jboremote.zip wrapper.classpath=NEW\_HOME\Apache\BC4J\lib\jborasql.zip wrapper.classpath=NEW\_HOME\Apache\BC4J\lib\jborasql.zip wrapper.classpath=NEW\_HOME\Apache\BC4J\lib\jbort.zip wrapper.classpath=NEW\_HOME\Apache\Apache\htdocs\OnlineOrders\_html\OnlineOrde
rs.jar
wrapper.classpath=NEW\_HOME\Apache\BC4J\lib\connectionmanager.zip
wrapper.classpath=NEW\_HOME\Apache\BC4J\lib\jbodatum12.zip
#wrapper.classpath=NEW\_HOME\Apache\BC4J\lib\jbodatum111.zip
wrapper.classpath=NEW\_HOME\Apache\BC4J\lib\oracle\ora81\sqlj\lob\runtime.zip

**4.** Depending on your business components deployment platform, add the following CLASSPATH lines. Remember to maintain the directory structure.

CORBA Server Object to Oracle8i

- wrapper.classpath=NEW\_HOME\Apache\BC4J\lib\jbo8iclient
   .zip
- wrapper.classpath=NEW\_HOME\Apache\BC4J\lib\jboo8i.zip

EJB to Oracle8i

wrapper.classpath=NEW\_HOME\Apache\BC4J\lib\jboremoteej
 b.zip

In addition, if you have business components client archives and common archives for your project, add the following lines:

- wrapper.classpath=NEW\_HOME\Apache\BC4J\lib\project\_nam
   eclient.jar
- wrapper.classpath=NEW\_HOME\Apache\BC4J\lib\project\_nam ecommon.jar

to the end of jserv.properties, where *project\_nameclient.jar* is the business components client archive for the project and

project\_namecommon.jar is the business components common archive for the project.

VisiBroker Bind Mode

- wrapper.classpath=NEW\_HOME\Apache\BC4J\lib\jbovbclient
   .zip
- wrapper.classpath=NEW\_HOME\lib\vbjorb.jar
- wrapper.classpath=NEW\_HOME\lib\vbjapp.jar

VisiBroker with Naming Service

- wrapper.classpath=NEW\_HOME\Apache\BC4J\lib\jbovbclient
   .zip
- wrapper.classpath=NEW\_HOME\lib\vbjorb.jar
- wrapper.classpath=NEW\_HOME\lib\vbjapp.jar
- wrapper.classpath=NEW\_HOME\lib\vbjcosnm.jar

**Note:** If you want to use the VisiBroker naming service, you'll need to copy vbjcosnm.jar from your *JDeveloper\_HOME*\lib directory to your *NEW\_HOME*\lib directory.

#### VisiBroker Colocate Mode

- wrapper.classpath=NEW\_HOME\Apache\BC4J\lib\jbovbclient.
   zip
- wrapper.classpath=NEW\_HOME\lib\vbjorb.jar
- wrapper.classpath=NEW\_HOME\lib\vbjapp.jar
- wrapper.classpath=NEW\_HOME\lib\vbjcosnm.jar

# **Application Logic**

No application logic migration tasks are necessary.

# Tools

No tools migration tasks are necessary.

6

# **OracleJSP Migration**

OracleJSP and Apache JServ are application platforms. They allow developers to customize the configuration to suit their applications. Unlike some tools included with Oracle9*i* Application Server, migration of JSP and servlet applications can be more complicated. It requires working knowledge of JavaServer Pages, the servlet API, Apache Web Server configuration, HTTP, and the applications that are being migrated.

This chapter explains the process of migrating JSP applications from Oracle Internet Application Server release 1.0.1 to Oracle9*i* Application Server release 1.0.2.

- Premigration
- Environment
- Configuration
- Application Logic
- Tools

# Premigration

The following sections explain premigration steps. These instructions must be followed before beginning any migration work. Premigration consists of two steps:

- Verifying the New Installation
- Backing Up Configuration Files

### Verifying the New Installation

Before you start any migration, you should first verify whether your new Oracle9*i* Application Server 1.0.2 installation is working correctly. To verify that OracleJSP 1.1 has been installed correctly, perform these steps:

- 1. Navigate to the default home page of your new installation. There you see a list of links for the different components.
- **2.** Click the OracleJSP samples link to see a list of OracleJSP samples, and run the basic sample.

After verifying that OracleJSP has been installed correctly, you are ready to back up your configuration files.

### **Backing Up Configuration Files**

Before making any changes to the configuration files, you should back up all the configuration files in *NEW\_HOME* that you are going to change. Then, if you make a mistake during migration, you can restore the old configuration files and perform the migration steps again.

Typically, the following files are changed when you migrate your JSP and servlet applications after installing Oracle9*i* Application Server 1.0.2:

- NEW\_HOME\Apache\Apache\conf\httpd.conf
- NEW\_HOME\Apache\Jserv\conf\jserv.conf
- NEW\_HOME\Apache\JServ\conf\jserv.properties
- NEW\_HOME\Apache\JServ\servlets\zone.properties
- NEW\_HOME\Apache\jsp\conf\ojsp.conf

Most of these configuration files of the old installation should be just under the directory with the same path under *OLD\_HOME*. For example, jserv.conf

should be in OLD\_HOME\Apache\JServ\conf\jserv.conf, if the files have not been moved.

**Note:** The default location of ojsp.conf in *OLD\_HOME* is slightly different. It is in the *OLD\_HOME*\Apache\ojsp\conf\ directory.

### Environment

No environment migration tasks are necessary.

## Configuration

Anyone performing the OracleJSP 1.1 migration should have working knowledge of the applications and the JSP/servlet environment. First, you must identify what environment settings are made by the Oracle9*i* Application Server 1.0.2 installation and what environment settings are used for your applications.

### **JSP Environment**

The environment settings typically used include (but are not limited to) those listed in Table 6–1:

Variable	Setting
РАТН	Specified by wrapper.env in jserv.properties.
CLASSPATH	Specified by wrapper.classpath entries in jserv.properties.
LD_LIBRARY_PATH	Specified by wrapper.env entry in jserv. properties.
Any alias directories settings.	Specified in your httpd.conf.
Any web resource protection settings.	Specified in your httpd.conf.

Table 6–1 Environment Variables and Settings for OracleJSP 1.1

### Oracle9i Application Server 1.0.2 Installation Configuration Changes

After backing up the configuration files, we recommend that you compare the old with the new configuration files. Check the differences line-by-line to determine whether the difference is due to the new Oracle9*i* Application Server 1.0.2

installation or it is due to prior configuration customizations. If the difference in configuration settings is required for an application, then apply the changes to the new configuration.

Examples of changes in the new Oracle9*i* Application Server 1.0.2 installation include (but are not limited to):

- tools.jar has been added for javac compilation
- the version of servlet.jar has been changed from 2.1 to 2.2
- ojsputil.jar has been added for supporting JavaBeans and custom tag libraries
- the version of zip files for SQLJ and JDBC drivers has been changed from 8.1.6 to 8.1.7 and from JDK 1.1 to JDK 1.2, respectively

Keep these changes in your new configuration because they provide faster performance and a richer set of functionality for your JSP applications.

### **General Guideline**

Follow these steps as a general guideline for applying changes to the new configuration files:

- 1. Add changes in small batches. If you make a small number of changes and check your work before making further changes, then it is easier to locate errors.
- **2.** Restart your Oracle9*i* Application Server machine after you have made a batch of changes.
- **3.** Verify whether your changes work in the new installation by checking that you can run the OracleJSP samples.
- **4.** If everything works correctly after you apply a batch of changes, then continue to apply your next batch of changes.

**Note:** In most cases, you do not need to remove or comment out any lines in the new configuration files. If you need to, then remove configuration lines after you have made your additions and have verified the new configuration.

**5.** After you have applied all the necessary changes, copy your JSP files and class files to the right locations. Then you can test whether your application runs on the new server.

**See Also:** Oracle JavaServer Pages Developer's Guide and Reference and Apache JServ documentation in the Oracle9*i* Application Server Documentation Library

# **Application Logic**

No application logic migration tasks are necessary.

# Tools

No tools migration tasks are necessary.

# Oracle8*i* JVM Migration

This chapter explains the process of migrating from Oracle8*i* JVM version 8.1.6.1 to 8.1.7 in Oracle9*i* Application Server.

- Premigration
- Environment
- Configuration
- Application Logic
- Tools

# Premigration

You should not need to modify the configuration files that are installed as part of Oracle9*i* Application Server 1.0.2. However, if you modified the 1.0.1 configuration files to better support Java in some way, such as expanding shared\_pool\_size, then you should re-examine what you modified and why, and consider whether similar modifications would be appropriate in 1.0.2.

## Environment

No environment migration tasks are necessary.

# Configuration

If you modified the Oracle Internet Application Server 1.0.1 configuration files, then you should examine what you modified and consider whether similar modifications would be appropriate in 1.0.2.

# **Application Logic**

Oracle9*i* Application Server 1.0.2 includes new features to support servlets and JavaServer Pages. If you used servlets or JavaServer Pages in Oracle Internet Application Server 1.0.1 through Apache JServ, then you can deploy them to run on Oracle8*i* JVM.

In addition, this release supports version 1.1 of the Enterprise JavaBeans (EJBs) specification. If you used EJB 1.0 features in Oracle Internet Application Server 1.0.1, then you now have the option in Oracle9*i* Application Server 1.0.2 to use the new EJB 1.1 features, such as Entity Beans. However, no automated migration tools are available to redeploy servlets, JSPs, EJBs, or CORBA components on Oracle8*i* JVM in Oracle9*i* Application Server 1.0.2. You must manually redeploy this Java code to Oracle9*i* Application Server 1.0.2.

**See Also:** Oracle8*i* JVM documentation in the Oracle9*i* Application Server Documentation Library

# Tools

The tools for Java application deployment, which includes stored procedures, EJBs, CORBA, servlets, and JSPs, are documented in *Oracle8i Java Tools Reference* in the Oracle9*i* Application Server Documentation Library. Use these tools to redeploy any

existing Oracle Internet Application Server 1.0.1 Java code to Oracle9*i* Application Server 1.0.2 as needed.

No changes have been made to the existing tools. However, ncomp has been added. JServer Accelerator, implemented within the ncomp tool, natively compiles all classes within the specified JAR, ZIP, or list of classes, and places them into shared libraries according to their package. Note that these classes must first be loaded into the database.

**See Also:** Oracle8i Java Tools Reference in the Oracle9i Application Server Documentation Library

# **Oracle Forms Services Migration**

This chapter explains the process of migrating from Oracle Forms Services version 6.0.8.8 to 6.0.8.11 in Oracle9*i* Application Server release 1.0.2.

**Note:** The value of *NEW\_HOME* for this component is *install\_drive*:\Oracle\806. See "Terminology In This Guide" on page 1-3 for an explanation of *NEW\_HOME*.

- Preinstallation
- Premigration
- Environment
- Configuration
- Application Logic
- Tools

# Preinstallation

Before installing Oracle9*i* Application Server release 1.0.2, deinstall Oracle Forms Services using the instructions in "Deinstalling Components Using 8.0.6 Libraries" on page 1-2.

# Premigration

Make backup copies of the following default installation files before doing any migration tasks:

- NEW\_HOME\conf\6iserver.conf
- NEW\_HOME\forms60\server\formsweb.cfg
- NEW\_HOME\forms60\server\base.htm
- NEW\_HOME\forms60\server\basejini.htm

# Environment

If you have modified or added any environment variables or registry entries relating to Oracle Forms Services for *OLD\_HOME*, make the same changes for *NEW\_HOME*.

# Configuration

The following sections explain changes you must make to your configuration files for Oracle Forms Services to continue to work as it did with Oracle Internet Application Server release 1.0.1.

You will need to make changes to the configuration files in Table 8-1.

Configuration File	Description
NEW_HOME\conf\6iserver.conf	Contains information for web server configuration.
NEW_HOME\forms60\server\formsweb.cfg	Contains information for Oracle Forms Services configuration.
NEW_HOME\forms60\server\base*.htm	Contains the first HTML files read by Oracle Forms Services when a user starts a Forms application.

Table 8–1 Configuration Files Used by Oracle Forms Services

### 6iserver.conf

Many of the paths in the old <code>6iserver.conf</code> file reference the old Oracle home, so do not copy the old <code>6iserver.conf</code> file from *OLD\_HOME* to *NEW\_HOME*. You should instead apply any changes made in the old file to the new version.

### formsweb.cfg

You can safely replace this configuration file with your old file. If you choose to make this replacement, you should also manually add lines from the new file to your existing configuration file as follows:

- 1. Copy the lines beginning with archive\_ie= and archive\_jini= from formsweb.cfg in *NEW\_HOME*.
- 2. Add the lines to the new version of the file.

### base\*.htm

You can safely replace the base HTML files in *NEW\_HOME* with your old base HTML files. Simply copy any base HTML files you have to *NEW\_HOME*.

# **Application Logic**

You will need to manually restore any Forms applications deployed using Oracle Internet Application Server release 1.0.1 to *NEW\_HOME*. This process will vary from application to application. Approach this requirement as if you are deploying your application to a completely new installation. If you are migrating from Oracle Internet Application Server release 1.0.1, then you are not required to regenerate any portion of your Forms applications with this release.

# Tools

No tools migration tasks are necessary.

# **Oracle Discoverer 3***i* Migration

This chapter explains the migration process for Oracle Discoverer 3*i* Viewer from Oracle Internet Application Server, Release 1.0.1 to Oracle9*i* Application Server, Release 1.0.2.

**Note:** The value of *NEW\_HOME* for this component is *install\_drive*:\Oracle\806. See "Terminology In This Guide" on page 1-3 for an explanation of *NEW\_HOME*.

- Preinstallation
- Premigration
- Environment
- Configuration
- Application Logic
- Tools

# Preinstallation

Before installing Oracle9*i* Application Server release 1.0.2, deinstall Oracle Discoverer 3*i* using the instructions in "Deinstalling Components Using 8.0.6 Libraries" on page 1-2.

# Premigration

No premigration tasks are necessary.

## Environment

No environment migration tasks are necessary

# Configuration

The following sections explain changes you must make to your configuration files for Oracle Discoverer 3*i* Viewer to continue to work as it did with Oracle Internet Application Server 1.0.1.

After installing Oracle9*i* Application Server, Release 1.0.2, follow these steps to complete the configuration migration tasks:

- 1. Backup NEW\_HOME\discwb33\util\pref.txt.
- Copy OLD\_HOME\discwb33\util\pref.txt to NEW\_HOME\6iserver\discwb33\util\pref.txt.
- **3.** Apply your preferences. From the Start menu, point to Programs and then Oracle Discoverer Server 3i Setup, and click Apply Preferences.

**Note:** The Oracle9*i* Application Server 1.0.2 installation uses the machine name for the Discoverer Services instance name.

# **Application Logic**

No application logic migration tasks are necessary.

# Tools

No tools migration tasks are necessary.

# 10

# **Oracle Database Cache Migration**

This chapter explains the process of migrating from Oracle Database Cache version 1.0.1 (formerly Oracle8*i* Cache) to 1.0.2 in Oracle9*i* Application Server.

- Preinstallation
- Premigration
- Environment
- Configuration
- Application Logic
- Tools

# Preinstallation

Before migrating to Oracle9*i* Application Server, Release 1.0.2, you must first deinstall Oracle8*i* Cache.

The recommended method of deinstalling Oracle8*i* Cache consists of the following steps:

- **1.** Confirm that the cache and management engine are running. If they are not, start them using the following steps:
  - a. From the Windows Control Panel, open Services.
  - **b.** Select OracleServiceicache, and click Start.
  - c. Select OracleWTCiCache, and click Start.
- 2. Run the Oracle8*i* Cache Configuration Assistant, from a command prompt, specifying the -deinstall argument:

prompt> wtacca -deinstall

**3.** Invoke Oracle Universal Installer and click Deinstall Products on the Welcome screen. Select Oracle8*i* Cache.

You can now install Oracle Database Cache version 1.0.1 by installing Oracle9*i* Application Server, Enterprise Edition.

See Also: Oracle9i Application Server Installation Guide

## Premigration

No premigration tasks are necessary.

## Environment

The following sections explain any environment variable changes you must make for Oracle Database Cache to access the proper executables, libraries, and configuration parameters. You must make the changes for the process in which you will run applications that access the cache.

You will need to make changes to the environment variables described in Table 10–1.

Variable	Description
РАТН	Defines the search order for executables.
CLASSPATH	Defines the search order for Java classes.
ORA_OCI_CACHE	Enables routing of queries to the cache.

 Table 10–1
 Environment Variables Used by Oracle Database Cache

### PATH

Update any PATH entries that refer to *OLD\_HOME* so they point to *NEW\_HOME*\lib.

### CLASSPATH

If you use the CLASSPATH environment variable, set it to NEW\_HOME.

### ORA\_OCI\_CACHE

Set the ORA\_OCI\_CACHE environment variable to 1 so that all applications started from the process will use the cache. Alternatively, you use parameters within OCI applications to control which applications or statements use the cache.

**See Also:** Oracle Database Cache Concepts and Administration Guide in the Oracle9*i* Application Server Documentation Library

### TNS\_ADMIN

If you use the TNS\_ADMIN registry parameter, make sure that it is set to the *NEW\_HOME*\network\admin directory. The parameter is stored in the following registry location:

HKEY\_LOCAL\_MACHINE\SOFTWARE\ORACLE\HOMEid\_number

# Configuration

After you install Oracle Database Cache, you use Cache Manager to set up your cache. If you have Oracle Database Cache on more than one node and you have the same tables cached on all nodes, you can install the new version on one middle-tier node, then use Cache Manager to copy tables to the newly installed cache.

After you have installed the new version on one middle-tier node, take the following steps:

- 1. Invoke DBA Studio and connect to the origin database.
- **2.** If you need to increase disk space for the cached tables, you can add data files or increase the size of an existing file.

**See Also:** Oracle Database Cache Concepts and Administration Guide in the Oracle9*i* Application Server Documentation Library

- **3.** Select a cache from the previous release which you want to duplicate. Right-click and choose Copy Cached Tables. In the Available Caches list, select the caches to which you want to copy the setup and click the right arrow (>) to move the caches to the Selected Caches list.
- 4. Click OK.

# **Application Logic**

Because of new and changed features in this release, you must take the following action:

• If your applications use static OCI libraries, you must relink those applications with the OCI library in the *NEW\_HOME*.

This release of Oracle Database Cache includes the following new or changed features:

- PL/SQL packages that allow you to manage caches using a utility such as SQL\*Plus
- Views that allow you to query the cache to obtain information about the state of the cache, statistics, and objects in the cache.
- Support for caching PL/SQL packages, procedures, and functions

You can cache PL/SQL packages, procedures, and functions. To cache the PL/SQL objects, use the supplied PL/SQL procedure DBMS\_ICACHE.ADD\_PLSQL\_OBJECT.

 Support for routing PL/SQL subprograms (procedures and functions) and anonymous blocks

Now, Oracle Database Cache routes PL/SQL subprograms and anonymous blocks to the cache. To enable or disable this routing, use the supplied PL/SQL

procedure  ${\tt DBMS\_ICACHE}$  . Set\_flag with the parameter  ${\tt PLSQL\_ROUTING\_ENABLED}.$ 

The ability to enable or disable statistics gathering

You can enable or disable the gathering of statistics by using the supplied PL/SQL procedure  ${\tt DBMS\_ICACHE.SET\_FLAG}$  with the parameter <code>STATS\_REPORTING\_ENABLED</code>.

**See Also:** Oracle Database Cache Concepts and Administration Guide in the Oracle9*i* Application Server Documentation Library for more information on these features.

# Tools

This release of Oracle Database Cache provides PL/SQL packages that allow you to manage caches using a utility such as SQL\*Plus. These packages provide the same functionality as that provided by Cache Manager. In addition, they allow you to:

- Cache PL/SQL procedures, functions, and packages
- Enable and disable routing of PL/SQL subprograms (procedures and functions) and anonymous blocks

**See Also:** Oracle Database Cache Concepts and Administration Guide in the Oracle9*i* Application Server Documentation Library

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