

Oracle9i™ Application Server

Migrating from Oracle Internet Application Server 1.0.0

Release 1.0.2 for Sun SPARC Solaris

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Oracle9i Application Server Release 1.0.2, Migrating from Oracle Internet Application Server 1.0.0

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Preface

Audience

This guide is for system administrators and application developers who will be migrating their system from Oracle Internet Application Server Release 1.0.0 to Oracle9i Application Server Release 1.0.2.

Assumptions

Oracle assumes that the users performing the migration from Oracle Internet Application Server Release 1.0.0 to Oracle9i Application Server Release 1.0.2 are familiar with the configuration and operation of each component. We also assume that they are familiar with common UNIX system administration tasks like editing configuration files and performing tasks as the root user.

Conventions

This manual uses the following typographical conventions:

Convention	Example	Explanation
bold	tnsnames.ora runInstaller www.oracle.com	Identifies file names, utilities, processes, and URLs
italics	<i>file1</i>	Identifies a variable in text; replace this place holder with a specific value or string.
angle brackets	<filename>	Identifies a variable in code; replace this place holder with a specific value or string.

Convention	Example	Explanation
courier	echo \$ORACLE_HOME	Text to be entered exactly as it appears. Also used for functions.
square brackets	<code>[-c string]</code> <code>[on off]</code>	Identifies an optional item. Identifies a choice of optional items, each separated by a vertical bar (), any one option can be specified.
braces	<code>{yes no}</code>	Identifies a choice of mandatory items, each separated by a vertical bar ().
ellipses	n,...	Indicates that the preceding item can be repeated any number of times.

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Migrating to Oracle9i Application Server Release 1.0.2

This book explains the migration steps for each Oracle Internet Application Server component that existed in Release 1.0.0.

Contents

- [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 Oracle9i Application Server Release 1.0.2, you must perform some pre-installation tasks for Oracle Database Cache and Oracle Discoverer 3i. Refer to the pre-installation sections in the following chapters for specific pre-installation instructions:

- [Chapter 9, "Oracle Discoverer 3i Migration"](#)
- [Chapter 10, "Oracle Database Cache Migration"](#)

Installing Oracle9i Application Server Release 1.0.2

To successfully migrate your configuration, applications, and data from Oracle Internet Application Server 1.0.0 to Oracle9i 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 1.0.0 into **/disk1/ias100**, install Oracle9i Application Server 1.0.2 into **/disk1/ias102**.

Except where noted in the previous section, this guide is intended for users who have already installed Oracle9i Application Server Release 1.0.2.

Terminology In This Guide

This guide uses the terminology from [Table 1-1](#).

Table 1-1 Oracle9i Application Server Migration Terminology

Term	Definition
OLD_HOME	The value of ORACLE_HOME for Oracle Internet Application Server 1.0.0.
NEW_HOME	The value of ORACLE_HOME for Oracle9i Application Server 1.0.2.

Updated Components

Oracle9i 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.

Table 1–2 Updated Oracle9i Application Server Components

Component	iAS 1.0.0 Version	9i AS 1.0.2 Version	Requires Migration?
Oracle HTTP Server			
■ Apache HTTP Server	1.3.9	1.3.12	yes
■ mod_perl	1.21	1.22	yes
■ JDK	1.1.8	1.2.2	yes
■ mod_ssl	2.6.2	2.6.4	yes
PL/SQL Gateway (formerly mod_plsql)	2.6	3.0	yes
PL/SQL Server Pages	8.1.6.1	8.1.7	yes
Oracle BC4J	3.1.1.0	3.1.1.1	yes
OracleJSP	1.0	1.1	yes
Oracle8i JVM (also known as Oracle JServer)	8.1.6.1	8.1.7	yes
Oracle Form Services	6.0.8.8	6.0.8.11	yes
Oracle Report Services	6.0.8.8	6.0.8.11	no
Oracle Portal (formerly Oracle WebDB)	2.2	3.0	yes
Oracle Database Cache (formerly Oracle8i Cache)	1.0.0	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
Oracle Advanced Security	8.1.6.1	8.1.7	no
Oracle Enterprise Manager	2.1	2.2	yes

Unchanged Components

Some Oracle9i Application Server components use the same version as Oracle Internet Application Server Release 1.0.0. 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

Component	9i AS 1.0.2 Version	Requires Migration?
Oracle HTTP Server		
■ Perl Interpreter	5.005_03	no
Apache JServ	1.1	yes
Oracle Discoverer Viewer and User Editions	3.3.57	yes

New Components

With Oracle9i Application Server Release 1.0.2, you have a choice in deploying Java servlets. The Oracle Servlet Engine in Oracle8i 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 [Chapter 7, "Oracle8i JVM Migration"](#) for more information.

How To Use This Guide

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

- **Pre-migration:** 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 1.0.0 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. To migrate:

- Oracle HTTP Server, see [Chapter 2, "Oracle HTTP Server Migration"](#)
- Apache JServ, see [Chapter 2, "Oracle HTTP Server Migration"](#)
- PL/SQL Gateway, see [Chapter 3, "PL/SQL Gateway Migration"](#)
- PL/SQL Server Pages, see [Chapter 4, "PL/SQL Server Pages Migration"](#)
- Oracle BC4J, see [Chapter 5, "Oracle BC4J Migration"](#)
- OracleJSP, see [Chapter 6, "OracleJSP Migration"](#)
- Oracle8i JVM, see [Chapter 7, "Oracle8i JVM Migration"](#)
- Oracle Form Services, see [Chapter 8, "Oracle Form Services Migration"](#)
- Oracle Discoverer 3i Viewer and User Editions, see [Chapter 9, "Oracle Discoverer 3i Migration"](#)

- Oracle Portal has upgrade scripts that assist in migrating this component. The scripts and further migration instructions are available from **<http://otn.oracle.com/products/iportal>**.
- Oracle Database Cache, see [Chapter 10, "Oracle Database Cache Migration"](#)
- Oracle Enterprise Manager, see Appendix B, “Configuration Assistant Operations” in *Oracle Enterprise Manager Configuration Guide* in the documentation library. Specifically, 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 version 1.3.9 to version 1.3.12. Each section includes information for JDK migration, servlet migration, and mod_ssl migration, where applicable.

Contents

- [Pre-migration](#)
- [Environment](#)
- [Configuration](#)
- [Application Logic](#)
- [Tools](#)

Pre-migration

No pre-migration tasks are necessary.

Environment

No environment migration tasks are necessary.

Configuration

The following sections explain changes you must make to your configuration files so that the Oracle HTTP Server version 1.3.12 continues to work as it did with Oracle Internet Application Server Release 1.0.0.

The installation process creates backup copies of the configuration files, so if a configuration file is corrupted during the migration process, you can restore the original version by copying the default version over the corrupted version.

The files listed in [Table 2–1](#) may be affected by the migration from version 1.0.0 to version 1.0.2.

Table 2–1 Configuration Files Used by Oracle HTTP Server

Configuration File	Description
NEW_HOME/Apache/Apache/conf/httpd.conf	The main HTTP server configuration file.
NEW_HOME/Apache/Jserv/etc/jserv.conf	Java servlet engine configuration file.
NEW_HOME/Apache/Jserv/etc/jserv.properties	Java servlet engine configuration file.
NEW_HOME/Apache/Jserv/etc/zone.properties	Java servlet zone configuration file.
NEW_HOME/Apache/Apache/conf/oracle_apache.conf	Oracle configuration file.

HTTP Server, JDK, and servlets

The configuration files supplied with the Oracle9i Application Server Release 1.0.2 installation will support all of the applications deployed in version 1.0.0 without modification, unless you have changed the version 1.0.0 configuration files. In that case, you must apply those changes to the version 1.0.2 files.

Oracle has made a number of changes to these files in version 1.0.2. The changes are listed below. To migrate your files, use the **diff** command, ignoring the listed Oracle changes, and manually migrate any remaining changes into the configuration files.

httpd.conf

The Oracle changes to this file are listed below.

- The **https.conf** file name is changed to **httpd.conf**.
- The **https** prefix is removed from all log files. For example, `https_error_log` is changed to `error_log`.
- The **https** file name prefix has been changed to **httpd**. For example, `https.pid` is changed to `httpd.pid`.
- `AddModule mod_jserv.c` is removed so `mod_jserv` now loads dynamically.
- A `Port 7777` directive is added.
- The `ExtendedStatus` directive is set to `on`.
- A `server-status` directive is added or uncommented.
- The `SSLLogLevel` directive is changed from `INFO` to `WARN`.
- A `perl-status` directive is added, but commented out.

jserv.conf

- The `LoadModule jserv_module` is added.
- The `IfModule` container for `mod_jserv.c` is removed.
- The `jserv-status` handler directives are commented out.

jserv.properties

- A `wrapper.classpath` directive is added for:
 - `tools.jar`
 - `aurora_client.jar`
 - `vbjorb.jar`
 - `vbjapp.jar`
- A `wrapper.env` directive is added for `$ORACLE_HOME/bin`.
- A `wrapper.classpath` directive is removed for `jbojdbcpatch.zip`

Additional appended lines or directives may have been added by other Oracle9i 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 this file. If you have changed it, you must apply the changes to this file in the new version installation.

zone.properties

Oracle made no changes to this file. If you have changed it, you must apply the changes to this file in the new version installation.

mod_ssl

Oracle Internet Application Server 1.0.0 uses open_ssl 0.9.4. Oracle9i Application Server 1.0.2 uses open_ssl 0.9.5.a. There are no known migration issues for Oracle9i Application Server associated with this version change.

To migrate the mod_ssl configuration, you must copy the configuration files listed in [Table 2-2](#) from the version 1.0.0 \$ORACLE_HOME directory to the version 1.0.2 \$ORACLE_HOME directory.

Table 2-2 Migration of mod_ssl configuration files

Copy all files from:	To:
OLD_HOME/Apache/Apache/conf/ssl.crl/	NEW_HOME/Apache/Apache/conf/ssl.crl/
OLD_HOME/Apache/Apache/conf/ssl.crt/	NEW_HOME/Apache/Apache/conf/ssl.crt/
OLD_HOME/Apache/Apache/conf/ssl.csr/	NEW_HOME/Apache/Apache/conf/ssl.csr/
OLD_HOME/Apache/Apache/conf/ssl.key/	NEW_HOME/Apache/Apache/conf/ssl.key/
OLD_HOME/Apache/Apache/conf/ssl.prm/	NEW_HOME/Apache/Apache/conf/ssl.prm/

Changing httpd.conf for mod_ssl migration

To migrate mod_ssl, you must replace the path of the version 1.0.0 Oracle home with the path of the version 1.0.2 Oracle home in the httpd.conf file, which is shown as *NEW_HOME* in the example below. You can safely replace the old file with the new file.

```
#SSLSessionCache shm:<NEW_HOME>/Apache/Apache/logs/httpd _ssl_scache(512000)
SSLSessionCache dbm:<NEW_HOME>/Apache/Apache/logs/httpd _ssl_scache

SSLMutex file:<NEW_HOME>/Apache/Apache/logs/httpd _ssl_mutex
SSLLog <NEW_HOME>/Apache/Apache/logs/httpd _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
#SSLCACertificatePath <NEW_HOME>/Apache/Apache/conf/ssl.crt
#SSLCACertificateFile <NEW_HOME>/Apache/Apache/conf/ssl.crt/ca-bundle.crt
#SSLCARevocationPath <NEW_HOME>/Apache/Apache/conf/ssl.crl
#SSLCARevocationFile <NEW_HOME>/Apache/Apache/conf/ssl.crl/ca-bundle.crl
#SSLOptions +FakeBasicAuth +ExportCertData +CompatEnvVars +StrictRequire
<Files ~ "\.(cgi|shtml)$">
    SSLOptions +StdEnvVars
</Files>
<Directory "<NEW_HOME>/Apache/Apache/cgi-bin">
    SSLOptions +StdEnvVars
</Directory>
CustomLog <NEW_HOME>/Apache/Apache/logs/httpd _ssl_request_log \
    "%t %h %{SSL_PROTOCOL}x %{SSL_CIPHER}x \"%r\" %b"
```

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 Oracle9i Application Server Release 1.0.2 that affect deployment of applications from Oracle Internet Application Server 1.0.0.

JDK

Java applications compiled in JDK 1.1.8 and deployed in Oracle Internet Application Server 1.0.0 should function in the same manner when deployed in Oracle9i Application Server 1.0.2 with the 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 1.0.0 and Oracle9i Application Server Release 1.0.2. Servlets written to the JServ version 2.0 API and deployed in Oracle Internet Application Server 1.0.0 should function in the same manner when deployed in Oracle9i Application Server 1.0.2.

mod_ssl

Copy all certificates, requests, and files to the locations shown in "[Changing httpd.conf for mod_ssl migration](#)" on page 2-5 and restart Oracle9i Application Server.

mod_perl

Modify the Perl path (typically, the first line of the Perl script) to reflect the location of the Oracle9i 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 Oracle9i Application Server version 1.0.2 installation.

Tools

No tools migration tasks are necessary for the 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 Oracle9i Application Server.

Contents

- [Pre-migration](#)
- [Environment](#)
- [Configuration](#)
- [Application Logic](#)
- [Tools](#)

Pre-migration

The following sections explain pre-migration 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 files 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 Oracle9i Application Server, Release 1.0.2. These are available in *NEW_HOME/Apache/modplsql/owa*. For installation information, refer to Chapter 2 of *Using the PL/SQL Gateway* in the Oracle9i Application Server Documentation Library.

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 1.0.0.

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
<i>NEW_HOME</i> /Apache/modplsql/cfg/wdbsvr.app	Configuration information for the PL/SQL Gateway.

app.cfg

You can safely replace the application configuration file in *NEW_HOME* with your old application configuration file. Execute the following command to replace the file:

```
prompt> cp OLD_HOME/Apache/modplsql/cfg/wdbsvr.app  
NEW_HOME/Apache/modplsql/cfg/wdbsvr.app
```

Configuration Page

The PL/SQL Gateway configuration page has been simplified in this release. 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.

Please refer to “Chapter 3: Configuring the PL/SQL Gateway” of *Using the PL/SQL Gateway* in your Oracle9i 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.
- 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.

For more details on these features, refer to *Using the PL/SQL Gateway* in the Oracle9i Application Server Documentation Library.

Tools

No tools migration tasks are necessary.

PL/SQL Server Pages Migration

This chapter explains the process of migrating from PL/SQL Server Pages version 8.1.6.1 to 8.1.7 in Oracle9i 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.

Contents

- [Pre-migration](#)
- [Environment](#)
- [Configuration](#)
- [Application Logic](#)
- [Tools](#)

Pre-migration

No pre-migration 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 “Loading the PL/SQL Server Page into the Database as a Stored Procedure” in Chapter 15, “Developing Web Applications with PL/SQL” of *Oracle8i Application Developer's Guide - Fundamentals*. This book is available 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.

There are new PL/SQL Gateway features that are available for all PL/SQL Server Pages. See *Using the PL/SQL Gateway* in the Oracle9i Application Server Documentation Library for more information about these features.

Tools

No tools migration tasks are necessary.

Oracle BC4J Migration

This chapter explains the process of migrating Oracle BC4J (Business Components for Java) applications from Oracle BC4J version 3.1 to 3.2 in Oracle9i Application Server 1.0.2.

Oracle Internet Application Server Releases 1.0.0 and 1.0.1 are compatible with Oracle BC4J 3.1 while Oracle9i Application Server 1.0.2 is compatible with Oracle BC4J 3.2.1. Also note that Oracle BC4J 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 **jserv.properties** 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.

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- [Environment](#)
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Pre-migration

No pre-migration tasks are necessary.

Environment

No environment migration tasks are necessary.

Configuration

No migration steps are necessary for Oracle BC4J applications that are deployed to the local Apache JServ CLASSPATH.

To configure servlets or JSPs to work with Oracle BC4J applications deployed in the Oracle8i JVM, you must change your configuration files as explained in the following sections.

Setting the CLASSPATH

Set the Oracle9i Application Server CLASSPATH to connect to remotely deployed Oracle BC4J components:

1. Open `<NEW_HOME>/Apache/Jserv/etc/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/ordim817.zip
wrapper.classpath=<NEW_HOME>/Apache/BC4J/lib/ordhttp.zip
wrapper.classpath=<NEW_HOME>/Apache/BC4J/lib/jboreremote.zip
wrapper.classpath=<NEW_HOME>/Apache/BC4J/lib/oraclexmlsql.jar
wrapper.classpath=<NEW_HOME>/Apache/BC4J/lib/jboorasql.zip
wrapper.classpath=<NEW_HOME>/Apache/BC4J/lib/jndi.jar
wrapper.classpath=<NEW_HOME>/Apache/BC4J/lib/jbomt.zip
wrapper.classpath=<NEW_HOME>/Apache/BC4J/lib/javax_ejb.zip
wrapper.classpath=<NEW_HOME>/Apache/BC4J/lib/jdev-rt.zip
wrapper.classpath=<NEW_HOME>/Apache/BC4J/lib/jbodomorcl.zip
wrapper.classpath=<NEW_HOME>/Apache/BC4J/lib/jboimdomains.zip
wrapper.classpath=<NEW_HOME>/Apache/BC4J/lib/jbohtml.zip
```



```

wrapper.classpath=<NEW_HOME>/Apache/Apache/htdocs/OnlineOrders_html
wrapper.classpath=<NEW_HOME>/Apache/Apache/htdocs/OnlineOrders_html/
OnlineOrders.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/jboremoteejb.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/<projectName>client.jar
- wrapper.classpath=<NEW_HOME>/Apache/BC4J/lib/<projectName>common.jar

to the end of the **jserv.properties** file, where <projectName>**client.jar** is the business components client archive for the project and <projectName>**common.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 the file **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.

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 Oracle9i 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 OracleJSP version 1.0 (1.0.0.6.1) to 1.1 in Oracle9i Application Server 1.0.2.

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- [Differences between OracleJSP 1.0 and 1.1](#)
- [Pre-migration](#)
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Differences between OracleJSP 1.0 and 1.1

The following sections provide an overview of the differences between OracleJSP version 1.0 and version 1.1.

Functionality Differences

OracleJSP 1.1 is a Sun Microsystems JavaServer Pages 1.1 compliant implementation. It is different from OracleJSP 1.0 in the following ways:

- It runs on servlet 2.0, 2.1, and 2.2 engines, while OracleJSP 1.0 runs only on servlet 2.0 and 2.1 engines.

Note: For Oracle9i Application Server 1.0.2, the **servlet.jar** used in *NEW_HOME/Apache/Jserv/etc/jserv.properties* is a servlet 2.2 API jar. This jar is used by OracleJSP internally. However, please note that when you use Apache JServ to run your JSP application, you are still using a servlet 2.0 implementation.

- It supports tag extensions in JSP 1.1 standard style.
- It supports `<jsp:param>` in `<jsp:include>` and `<jsp:forward>`.
- It supports the precompile option, as specified in the JSP 1.1 specification.
- It supports `<jsp:include>` and `<jsp:forward>` tags on Apache JServ so you can include and forward to a static HTML file, not just to a JSP file.

Enhancements in OracleJSP 1.1 are backward compatible. You can migrate your JSP applications from OracleJSP 1.0 to OracleJSP 1.1 without any code changes.

Note: There has been a change in the default value of a configuration parameter. In OracleJSP 1.0, `alias_translation` is by default true. In OracleJSP 1.1, `alias_translation` is by default false.

The Oracle9i Application Server 1.0.2 installation turns on the `alias_translation` parameter explicitly in *NEW_HOME/Apache/JServ/etc/zone.properties* with the following line:

```
servlet.oracle.jsp.JspServlet.initArgs=alias_translation=true
```

If you put your JSP files under an aliased directory, please remember to retain this option.

For details of OracleJSP functionality, please refer to *Oracle JavaServer Pages Developer's Guide and Reference* in the Oracle9i Application Server Documentation Library.

Installation and Configuration Differences

In Oracle Internet Application Server 1.0.0, all OracleJSP files are installed under the directory:

- `<OLD_HOME>/Apache/Ojsp`

In Oracle9i Application Server 1.0.2, most of the OracleJSP files are installed under the directory:

- `<NEW_HOME>/jsp`

while the file **ojsp.conf** is under the `NEW_HOME/Apache/jsp/conf` directory.

Also, Oracle9i Application Server 1.0.2 uses JDK 1.2. Therefore, the **tools.jar** from JDK is now included in the CLASSPATH for JSP **javac** compilation. Additionally, the JDBC and SQLJ related zip files used in **jserv.properties** are also updated to the versions that correspond to JDK 1.2.

Pre-migration

The following sections explain pre-migration steps. These instructions must be followed before beginning any migration work. Pre-migration 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 Oracle9i 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 select a sample to test.

Most of the samples should work without extra configuration changes or deployment steps, except for the CORBA and EJB samples. These two samples require you to first deploy the corresponding CORBA and EJB components.

The OracleJSP samples which work without extra configuration changes include:

- basic
- custom tags
- XML
- sql
- OracleJSP extensions

Some samples require that you have a database up and running.

After you have verified 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 your new installation 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 Oracle9i Application Server 1.0.2:

- <NEW_HOME>/Apache/Apache/conf/httpd.conf
- <NEW_HOME>/Apache/Jserv/etc/jserv.conf
- <NEW_HOME>/Apache/JServ/etc/jserv.properties
- <NEW_HOME>/Apache/JServ/etc/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/etc/jserv.conf*, if the files have not been moved.

Note: The default location of **ojsp.conf** in the old installation is slightly different. It is under the directory: *OLD_HOME/Apache/Ojsp/conf/*.

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 Oracle9i 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](#):

Table 6-1 *Environment Variables and Settings for OracleJSP 1.1*

Variable	Setting
PATH	specified in wrapper.env in jserv.properties
CLASSPATH	specified in wrapper.classpath entries in jserv.properties
LD_LIBRARY_PATH	specified in 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

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 using a tool like the **diff** command. Check the differences line-by-line to determine whether the difference is due to the new Oracle9i 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 Oracle9i Application Server 1.0.2 installation include (but are not limited to):

- the JDK has been switched from 1.1 to 1.2
- **tools.jar** has been added for **javac** compilation

- the version of **servlet.jar** has been changed from 2.1 to 2.2
- the version of **ojsp.jar** has been changed from 1.0 to 1.1
- **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 batch-by-batch. 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 Oracle9i 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.

For general troubleshooting, see the *Oracle JavaServer Pages Developer's Guide and Reference* and other Oracle reference manuals in the Oracle9i Application Server Documentation Library.

Application Logic

OracleJSP 1.1 provides a very good backward compatibility with 1.0. Therefore, you do not need to change your JSP source code to run it on OracleJSP 1.1.

However, the new version of OracleJSP uses Java 1.2. Since your existing applications use Java 1.1.8, you will need to recompile all JSP pages to fully utilize the benefits of Java 1.2.

OracleJSP 1.1 supports a JSP 1.1 standard runtime tag extension mechanism. If you are using JML tags from OracleJSP 1.0, then we suggest that you migrate tags in your JSP files from the OracleJSP 1.0 compile time mechanism to the new runtime version.

For more information, see the *Oracle JavaServer Pages Developer's Guide and Reference* in the Oracle9i Application Server Documentation Library.

Tools

OracleJSP 1.1 has an updated **ojspc**, the OracleJSP translator command line tool found in **ORACLE_HOME/bin**. It allows you to compile JSP files in the file system without a web server. In OracleJSP 1.1, this tool has a few new options, and the name of the option **-includePath** has been changed to **-appRoot**.

For more information, see the *Oracle JavaServer Pages Developer's Guide and Reference* in the Oracle9i Application Server Documentation Library.

Oracle8*i* JVM Migration

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

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- [Pre-migration](#)
- [Environment](#)
- [Configuration](#)
- [Application Logic](#)
- [Tools](#)

Pre-migration

You should not need to modify the configuration files that are installed as part of Oracle9i Application Server 1.0.2. However, if you modified the 1.0.0 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 1.0.0 configuration files, then you should examine what you modified and consider whether similar modifications would be appropriate in 1.0.2.

Application Logic

Oracle9i 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 1.0.0 through Apache JServ, then you can deploy them to run on Oracle8i JVM.

In addition, this release moves to version 1.1 of the Enterprise JavaBeans (EJBs) specification. If you used EJB 1.0 features in Oracle Internet Application Server 1.0.0, then you now have the option in Oracle9i 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 Oracle8i JVM in Oracle9i Application Server 1.0.2. You must manually redeploy this Java code to Oracle9i Application Server 1.0.2.

For more information, refer to the Oracle8i JVM documentation in the Oracle9i 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 Oracle9i Application Server Documentation Library. Use these tools to redeploy any existing Oracle Internet Application Server 1.0.0 Java code to Oracle9i 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. The **ncomp** tool is fully documented in the *Oracle8i Java Tools Reference* guide, which is included in the Oracle9i Application Server Documentation Library.

Oracle Form Services Migration

This chapter explains the process of migrating from Oracle Form Services version 6.0.8.8 to 6.0.8.11 in Oracle9i Application Server.

Contents

- [Pre-migration](#)
- [Environment](#)
- [Configuration](#)
- [Application Logic](#)
- [Tools](#)

Pre-migration

The following sections explain pre-migration steps. These instructions must be followed before beginning any migration work.

Shutting Down Oracle Form Services

Before installing Oracle9i Application Server, Release 1.0.2, shut down any Oracle Form Services running in the *OLD_HOME*. If you are using the default Oracle Internet Application Server configuration, this can be done by running the following command:

```
prompt> <OLD_HOME>/6iserver/forms60server stop
```

If you have started any Oracle Form Services manually or are using Enterprise Manager, you should shut them down using the above mentioned command.

Backing Up Configuration Files

Make backup copies of the following files and directories before doing any migration tasks:

- <NEW_HOME>/6iserver/conf/6iserver.conf
- <NEW_HOME>/6iserver/forms60/server/formsweb.cfg
- <NEW_HOME>/6iserver/forms60/server/base.htm
- <NEW_HOME>/6iserver/forms60/server/basejini.htm
- <NEW_HOME>/6iserver/forms60.csh
- <NEW_HOME>/6iserver/forms60.sh
- <NEW_HOME>/6iserver/forms60server

Environment

The **forms60server** script is provided to properly setup the environment necessary to start and stop Oracle Form Services. If you have modified this script in *OLD_HOME/6iserver*, then you should make the same changes to the new version of the script in *NEW_HOME/6iserver*.

There are two additional scripts provided to enable the Forms executables to run from the command line in a shell executable:

- **forms60.csh** for the C Shell
- **forms60.sh** for the default UNIX shell, sh

Again, if you have made changes to these scripts in *OLD_HOME/6iserver*, then the same changes should be made to these scripts in *NEW_HOME/6iserver*.

Configuration

The following sections explain changes you must make to your configuration files for Oracle Form Services to continue to work as it did with Oracle Internet Application Server, Release 1.0.0.

You will need to make changes to the configuration files in [Table 8-1](#).

Table 8-1 Configuration Files Used by Oracle Form Services

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

6iserver.conf

Many of the paths in the old **6iserver.conf** file reference the old Oracle home, so do not copy the old **6iserver.conf** 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 copy any Forms applications deployed using Oracle Internet Application Server, Release 1.0.0 in *OLD_HOME* 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 1.0.0, then you are not required to re-generate any portion of your Forms applications with this release.

Tools

No tools migration tasks are necessary.

Oracle Discoverer 3i Migration

Oracle Discoverer 3i Viewer was provided with Oracle Internet Application Server 1.0.0 on a separate CD-ROM. If you did not install it with your Oracle Internet Application Server 1.0.0 installation, then no migration is necessary. If you did install it, then this chapter explains the process of migrating to Oracle Discoverer 3i version 3.3.57 in Oracle9i Application Server 1.0.2.

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Pre-Installation

Before you install Oracle9i Application Server 1.0.2, you must back up the configuration file. Follow these steps to back up the configuration file:

1. Shut down all Oracle Discoverer 3i processes by killing any **dis33ws** and **dis33pr** processes that may be running. Then execute the script:

```
prompt> <OLD_HOME>/discwb33/util/stopall.sh
```

where *OLD_HOME* is the directory in which you installed Oracle Discoverer 3i.

2. Copy *OLD_HOME/discwb33/util/pref.txt* to **pref.mine.txt**.
3. Remove Oracle Discoverer 3i Viewer using the separate CD-ROM provided with Oracle Internet Application Server 1.0.0.

Pre-migration

No pre-migration 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 3i Viewer to continue to work as it did with Oracle Internet Application Server 1.0.0.

After running the installation from the Oracle9i Application Server 1.0.2 CD-ROM, follow these steps to complete the configuration migration tasks:

1. Copy *NEW_HOME/6iserver/discwb33/util/pref.txt* to **pref.default.txt**, where *NEW_HOME* is the directory that Oracle9i Application Server 1.0.2 installs Oracle Discoverer 3i Viewer.
2. Copy *OLD_HOME/discwb33/util/pref.mine.txt* to *NEW_HOME/6iserver/discwb33/util/pref.txt*.
3. Run the script, *NEW_HOME/discwb33/util/applypreferences.sh*.

Note: The Oracle9i 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.

Oracle Database Cache Migration

This chapter explains the process of migrating from Oracle Database Cache version 1.0.0 (formerly known as Oracle8i Cache) to 1.0.2 in Oracle9i Application Server.

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- [Pre-installation](#)
- [Pre-migration](#)
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Pre-installation

Before migrating to Oracle9i Application Server, Release 1.0.2, you must first deinstall Oracle Database Cache.

The recommended method of deinstalling Oracle Database Cache consists of the following steps:

1. Make sure the cache is started. If it is not, start the cache, using Cache Manager or the *OLD_HOME/bin/cachstrt* script.
2. Run the Configuration Assistant, specifying the -deinstall option:

```
prompt> wtacca -deinstall
```
3. Invoke Oracle Universal Installer and click **Deinstall Products** on the Welcome screen. Select Oracle8i Cache.
4. You can ignore the error message generated by the Configuration Assistant. Oracle Universal Installer will continue with the deinstallation.

Then, install Oracle Database Cache by installing Oracle9i Application Server, Enterprise Edition. Follow the instructions in the *Oracle9i Application Server Installation Guide, Release 1.0.2 for Sun SPARC Solaris*.

Pre-migration

No pre-migration 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](#).

Table 10-1 *Environment Variables Used by Oracle Database Cache*

Variable	Description
PATH	Defines the search order for executables.
LD_LIBRARY_PATH	Defines the search order for libraries.
ORA_OCI_CACHE	Enables routing of queries to the cache.

PATH

Update any PATH entries that refer to *OLD_HOME* so they point to *NEW_HOME*.

LD_LIBRARY_PATH

Set LD_LIBRARY_PATH so that the Oracle Database Cache library directory (*NEW_HOME/lib*) precedes library directories from other Oracle homes.

ORA_OCI_CACHE

Set ORA_OCI_CACHE 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. For more information, see the *Oracle Database Cache Concepts and Administration Guide* in the Oracle9i Application Server Documentation Library.)

TNS_ADMIN

If you use the environment variable TNS_ADMIN, make sure that it is set to the *NEW_HOME/network/admin* directory.

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. For more information, see the *Oracle Database Cache Concepts and Administration Guide* in the Oracle9i 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 `DBMS_ICACHE.SET_FLAG` with the parameter `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 `DBMS_ICACHE.SET_FLAG` with the parameter `STATS_REPORTING_ENABLED`.

For more information about these features, see the *Oracle Database Cache Concepts and Administration Guide* in the Oracle9i Application Server Documentation Library.

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

For more information see the *Oracle Database Cache Concepts and Administration Guide* in the Oracle9i Application Server Documentation Library.

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