Oracle9*i* Application Server

Release Notes

Release 1 (v1.0.2.2.2) for Solaris Operating System (SPARC)

Part No. A95823-02

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Oracle9*i* Application Server Release Notes, Release 1 (v1.0.2.2.2) for Solaris Operating System (SPARC)

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Preface

Oracle9*i* Application ServerRelease Notes contain important information that was not included in the documentation for this release.

Documentation Accessibility

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For more information, refer to these Oracle resources:

Oracle Application Server Documentation on the CD-ROM

Oracle Application Server Documentation Library 1.0.2.2.2

Printed documentation is available for sale in the Oracle Store at

http://oraclestore.oracle.com

To download free release notes, installation documentation, white papers, or other collateral, please visit the Oracle Technology Network (OTN). You must register online before using OTN; registration is free and can be done at

http://otn.oracle.com/membership

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

http://otn.oracle.com/docs

Conventions

The following conventions are also used in this manual:

Convention	Meaning
. . .	Vertical ellipsis points in an example mean that information not directly related to the example has been omitted.
. . .	Horizontal ellipsis points in statements or commands mean that parts of the statement or command not directly related to the example have been omitted
boldface text	Boldface type in text indicates a term defined in the text, the glossary, or in both locations.
< >	Angle brackets enclose user-supplied names.
[ ]	Brackets enclose optional clauses from which you can choose one or none.

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Summary of Changes and New Features

This document is accurate to the best of our knowledge at the time of publication. Information that is discovered subsequent to publication will be available through normal support channels.

You can access the latest information and additions to these Release Notes on the Oracle Technology Network at:

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

1.1 Purpose of this Document

This document notes differences between *Oracle9i Application Server* Release 1 (v1.0.2.2.2) for Solaris Operating System (SPARC) components and their documented functionality.

1.2 Product Naming

Oracle9*i* Application Server internet applications and their sub-components are listed below:

Oracle HTTP Server

- Apache JServ, mod_jserv
- Perl interpreter, mod_perl
- mod_plsql, mod_ssl
- Dynamic Monitoring Service (DMS)
- FastCGI, mod_mm

Oracle9*i*AS Containers for J2EE

- Oracle9*i*AS Servlet Container
- Oracle9*i*AS EJB Container
- Oracle9*i*AS JSP Container
- Oracle Business Components for Java
- Oracle9*i*AS Object Caching Services for Java

Oracle PL/SQL

- Oracle PL/SQL Server Pages (Oracle PSP)

Oracle9*i* Application Server Forms Services

Oracle9*i*AS Developer Kits

- Oracle Database Developer Kit
- Oracle XML Developer Kit

Oracle9*i*AS Portal

Oracle9*i*AS Wireless

Oracle9*i*AS Cache

- Oracle9*i*AS Web Cache
- Oracle9*i*AS Database Cache

Oracle9*i*AS Business Intelligence

- Oracle9*i*AS Reports Services
- Oracle9*i*AS Discoverer (includes Discoverer Viewer, Discoverer Plus)

Oracle Enterprise Manager

Oracle Advanced Security

- Oracle9*i*AS Single Sign-On

Oracle9*i*AS Integration

- Oracle Workflow
- Oracle9*i*AS InterConnect
- Oracle9*i*AS SOAP
- Oracle Gateways (licensed separately)
- Oracle9*i*AS Email
- Oracle9*i*AS Unified Messaging

Oracle Internet File System

1.3 Certification Information

You can access the most recent certification information at:

http://metalink.oracle.com

1.3.1 JDK/JRE Certification

Oracle has certified the use of both JDK / JRE 1.1.8 and JDK / JRE 1.2.x for building and deploying Java applications with mod_jserv. For this release, all Java class libraries (e.g., Oracle Business Components for Java, Oracle XML Developer's Kit) are shipped compiled with JDK 1.1.8_10. These compiled classes are certified to run under both supported versions of the Java JRE, and they must not be recompiled.

1.3.2 Oracle Enterprise Manager Certification

Oracle9iAS Release 1 (v1.0.2.2) includes Oracle Enterprise Manager 2.2, which is not certified against the Oracle9*i* database.

1.3.3 Oracle9iAS WIreless Data Server Support

Oracle9iAS Wireless only supports Oracle 8.1.6 and above.

1.4 New Features

This section describes new features. It contains the following topics:

1.4.1 Internet Applications New Features

This section describes the new Internet applications features. It includes the following topics:

1.4.1.1 Oracle HTTP Server

This section describe the Oracle HTTP Server. It includes the following topics:

1.4.1.1.1 Note About Apache JServ Processes

The maximum number of Apache JServ processes supported in an *Oracle9i Application Server* site has been increased from the Apache distribution default maximum of 25 to an *Oracle9i Application Server* maximum 128. This value is not runtime configurable.

1.4.1.1.2 Support for Third Party Components in *Oracle9iAS*

This section describes the support for third party components.

All Third Party Components Portions of *Oracle9i Application Server* are distributed by Oracle under license from third parties ("Third Party Components"), including the Apache Web Server, version 1.3.19, licensed by the Apache Software Foundation. Oracle is distributing these Third Party Components as part of the *Oracle9i Application Server* product and, except as specified herein, will provide standard product support for the Third Party Components, as such support is further defined in the Oracle technical support policies. Please note that Oracle will only support the version of the Third Party Component shipped with *Oracle9i Application Server* and that other versions which may be freely available on the Internet will not be supported by Oracle.

Oracle may, as a courtesy, refer enhancement requests regarding the Third Party Components to the party who licensed the Component to Oracle; however, Oracle shall have no obligation to do so. In addition, no technical assistance requests will be filed on the non-Third Party Components (the "Oracle Components") unless the problem can be reproduced in an environment consisting of only the Oracle Components.

Apache Modules Oracle may distribute certain extensions to the Apache Web Server ("Apache Modules") to enhance the functionality provided by the Apache Web Server as part of *Oracle9i Application Server*. Apache Modules distributed by Oracle are referred to in these Release Notes as Oracle Apache Modules.

Oracle supports the following Oracle Apache Modules in this release:

Apache Module	Description
http_core	Core Apache features.
mod_access	Host-based access control; provides access control based on client hostname or IP address.
mod_actions	Filetype/method-based script execution; provides for CGI scripts based on media type or request method.
mod_alias	Aliases and redirects; provides for mapping different parts of the host filesystem in the document tree, and for URL redirection.
mod_auth	User authentication using text files.
mod_auth_anon	Anonymous user authentication, FTP-style.
mod_autoindex	Automatic directory listings.
mod_cgi	Execution of CGI scripts; processes any file with mime type application/x-httpd-cgi.
mod_define	Configuration definitions.
mod_digest	MD5 authentication; provides for user authentication using MD5 Digest Authentication.
mod_dir	Basic directory handling; provides for "trailing slash" redirects and serving directory index files.
mod_env	Passing of environments to CGI scripts; provides for passing environment variables to CGI/SSI scripts.
mod_expires	Apply Expires: headers to resources; provides for the generation of Expires headers according to user-specified criteria.
mod_fastcgi	Routes requests to a pool of Fast CGI servers.
mod_headers	Add arbitrary HTTP headers to resources; headers can be merged, replaced or removed.
mod_include	Server-parsed documents; provides for server-parsed HTML documents.
mod_info	Server configuration information; provides a comprehensive overview of the server configuration including all installed modules and directives in the configuration files.
mod_jserv	Communication with servlet engine.
mod_log_config	User-configurable logging replacement for mod_log_common; provides for logging requests made to the server, using the Common Log Format or a user-specified format.

Apache Module	Description
mod_log_referer	Logging of document references; provides for logging the documents that reference documents on the server.
mod_mime	Determining document types using file extensions.
mod_mime_magic	Determining document types using "magic numbers"; can be used to determine the MIME type of a file by looking at a few bytes of its contents.
mod_negotiation	Content negotiation.
mod_ose	Delegates URLS to stateful Java and PL/SQL servlets in Oracle Servlet Engine (OSE).
mod_oprocmgr	Provides process management and death detection to the servlet engine.
mod_perl	Support for writing Apache modules in Perl.
mod_plsql	PL/SQL support.
libproxy (mod_proxy)	Caching proxy abilities; provides for an HTTP 1.0 caching proxy server.
mod_rewrite	Powerful URL-to-filename mapping using regular expressions; provides a rule-based rewriting engine to rewrite requested URLs on the fly.
mod_setenvif	Set environment variables based on client information; provides for the ability to set environment variables based upon attributes of the request.
mod_so	Support for loading modules at runtime; provides for loading of executable code and modules into the server at start-up or restart time.
mod_speling	Automatically correct minor typographical errors in URLs; attempts to correct misspellings of URLs that users enter, by ignoring capitalization and allowing up to one misspelling.
mod_ssl	SSL support.
mod_status	Server status display; allows a server administrator to find out how well the server is performing, presenting an HTML page that gives the current server statistics in an easily readable form.
mod_unique_id	Generate unique request identifier for every request; provides a magic token for each request that is guaranteed to be unique across "all" requests under very specific conditions.
mod_userdir	User home directories; provides for user-specific directories.
mod_usertrack	User tracking using cookies.

Apache Module	Description
mod_vhost_alias	Support for dynamically configured mass virtual hosting.

Any other Oracle Apache Modules that are included in *Oracle9i Application Server* are provided "as is" without warranty or support of any kind. Apache Modules from any source other than Oracle, including the Apache Software Foundation or a customer, will not be supported by Oracle.

Apache modules modify Apache event processing; therefore, Oracle may require that a problem be reproduced with an Apache configuration consisting only of supported modules in order provide support. Oracle will only provide bug fix support for those problems which can be reproduced in a configuration consisting only of supported modules.

Oracle supports the use of the included Perl interpreter within the supported Apache configuration only.

1.4.1.1.3 Building mod_perl DBI/DBD-Oracle and Apache::DBI

To build, install, and test mod_Perl DBI/DBD-Oracle and Apache::DBI for the Solaris platform, follow these steps:

1. Verify that the following software is available in your environment:

   Forte[tm] C 6 update 1 (formerly Sun WorkShop[tm] Professional C)

   GNU Make GNU Make version 3.77

   Perl Perl version 5.005_03

2. Verify that your PATH environment variable is set correctly to locate the required software.

3. Install Oracle9*i*AS from your product CD-ROM. This version has mod_perl 1.21 built in. However, this install does not include the following modules:

   Apache::DBI

   Perl DBI

   Perl DBD-Oracle

4. Set your PATH environment variable to pick up the correct Perl binaries. For example:

   ```
   prompt> setenv ORACLE_HOME /private1/iAS10
   prompt> setenv PATH ${ORACLE_HOME}/Apache/perl/bin:${PATH}
   ```

5. Set the environment variable PERL5LIB to the following:

   ```
   prompt> setenv PERL5LIB ${ORACLE_HOME}/Apache/perl/lib/5.00503:${ORACLE_
   HOME}/Apache/perl/lib/site_perl/5.005
   ```

6. Download the following modules from

   http://www.cpan.org/modules/by-module

   DBI version 1.14

   DBD::Oracle version 1.06

   Apache::DBI version 0.87

7. Unpack the DBI package and follow the README instructions carefully to build, test, and install the module.
8. The DBD-Oracle module expects enough Oracle software available (such as $ORACLE_HOME/lib, $ORACLE_HOME/rdbms/lib, etc.) to build the driver successfully. Make sure that the following information is available in your environment:
   a. Set the ORACLE_HOME environment variable to point to a valid *Oracle9iAS* install or an Oracle database install (for example, 8.1.6, 8.1.7, etc.).
   b. Set the ORACLE_SID environment variable to point to a valid Oracle SID.
   c. Verify that the LD_LIBRARY_PATH environment variable points to the libclntsh.so. This can be done by setting $ORACLE_HOME/lib in the LD_LIBRARY_PATH environment variable.
   d. If you are using National Language Support (NLS), make sure that you set the ORA_NLS and ORA_NLS33 environment variables to avoid ORA-01019 errors.
   e. Optionally set the ORACLE_USERID environment variable (the tests will use scott/tiger by default).
9. Unpack the DBD-Oracle package and follow the README instructions carefully to build, test, and install the module. The database must be up in order for the tests to pass properly.
10. Unpack the Apache:DBI package and follow the README instructions carefully to build and install the module. There are no tests available for this module yet. This step will install the Apache AuthDBI.pm and DBI.pm modules.
11. Edit $ORACLE_HOME/Apache/Apache/conf/httpd.conf as follows:
    a. Uncomment the following line (remove the pound sign that is prepended):

       ```
       PerlModule Apache::DBI
       ```

       This allows the use of Apache::DBI's persistent database connections. For more information, read the Apache::DBI README instructions, specifically the section on Examples.

       Note: `httpd.conf` is the main Apache server configuration file. Be sure to understand the instructions at the beginning of this file.

12. Now you are ready to test your persistent connection. As an example, perform the following to test the connection via your startup.pl:
    a. Add this line to your httpd.conf file:

       ```
       PerlRequire absolute path to ApacheDBI's startup.pl script
       ```

    b. Modify the startup.pl connect call, such as:

       ```
       Apache::DBI->connect_on_init('dbi:Oracle:',"scott/tiger", '');
       ```

    c. Restart your Oracle HTTP Server:

       ```
       prompt> $ORACLE_HOME/Apache/Apache/bin/apachectl start
       ```

    d. Check Oracle HTTP Server logs to verify that connections were obtained correctly.

If Oracle HTTP Server logs report that the ORACLE_HOME environment variable is not set, try adding this line to your httpd.conf file: PerlSetEnv ORACLE_HOME "<absolute path to Oracle Home>"

Another sample Perl script to test the connection is:

```
##### Perl script start ######
use DBI;
print "Content-type: text/plain\n\n";
$dbh = DBI->connect("dbi:Oracle:", "scott/tiger", "") || die $DBI::errstr;  $stmt
= $dbh->prepare("select * from emp order by empno")|| die $DBI::errstr;
$rc = $stmt->execute() || die $DBI::errstr;
while (($empno, $name) = $stmt->fetchrow()) { print "$empno $name\n"; }
warn $DBI::errstr if $DBI::err;
die "fetch error: " . $DBI::errstr if $DBI::err;
$stmt->finish() || die "can't close cursor";
$dbh->disconnect() || die "cant't log off Oracle";
##### Perl script End ######
```

1.4.1.2 Current OJSP Available

For a the most current OJSP and a related information, get OJSP version 1.1.3.1 or higher from

http://otn.oracle.com/tech/java/servlets/

1.4.2 Wireless New Features

This section describes the new Wireless features.

1.4.2.1 Oracle9iAS Wireless

This section describes Oracle9*i*AS Wireless. It includes the following topics:

- Oracle9iAS Wireless 1.1.1.1
- Adapters
- Transformers
- New Search / Sort Feature Introduced into Service Designer
- System Logger
- E-mail and Directory Applications
- Multiple VM Setup for Oracle9iAS Wireless

1.4.2.1.1 Oracle9iAS Wireless 1.1.1.1 Oracle 9*i* Application Server Wireless 1.1.1.1 is a patch for Oracle 9*i* Application Server Wireless Edition 1.1 (which was shipped with Oracle 9*i* Application Server 1.0.2.1.0). Oracle 9*i* Application Server Wireless 1.1.1.1 is a super-patch that includes the Oracle 9*i* Application Server Wireless 1.1.1 patch recently posted on Oracle Technology Network.

The patch fixes the following bugs:

1684463, 1644304, 1618453, 1561062, 1761993, 1684020, 1640550, 1618443, 1542848, 1745915,1646074, 1635012, 1605794, 1371832,1743977, 1644311, 1620174, 1576480, 1371822, 1743922, 1757409

1.4.2.1.2 Adapters

To address language-encoding issues, new optional input parameters have been added:

INPUT_ENCODING has been added to the URL adapter enabling it to specify the remote XML page's charset.

inputEncoding has been added to StripAdapter enabling it to specify the remote HTML page's charset.

1.4.2.1.3 Transformers

The HDML, TINY_HTML and WML1.1 transformers have been modified. By default, these modified transformers will NOT be loaded into the Repository.

If you HAVE NOT made changes to the transformers, simply upload up11-111.xml.

If you have modified the shipped version of these transformers:

1. Merge the differences.
2. Upload the new transformers using the LoadXML utility upload.sh with up11-111.xml, shipped with the patch release. You can find the LoadXML utility at:

   $ORACLE_HOME/panama/sample/upload.sh

   See the *Oracle9i Application Server Wireless Configuration Guide* for more information on the LoadXML utility.

1.4.2.1.4 New Search/Sort Feature Introduced into Service Designer

When you right click on the Master Services node or a folder node, you will find a Search/Sort command. You can search on service names (service names are case-insensitive); wild cards (such as '%') are accepted. Search results can be sorted by Name, LastUpdated Date, or Sequence Number. The new Search feature is more efficient when you are trying to load a large number of services.

The search results will be the new child nodes of the folder which will be automatically expanded. After you collapse the folder and re-expand it, all of its children will be loaded by default. In either case, if the result set is too large and surpasses the limit size specified in ptgsd.properties, you will receive a warning, and only part of the result set will be loaded. In this case, if your expected service is not displayed, you must fine tune your search criteria and resume the search.

1.4.2.1.5 System Logger

Previously, logging information for service requests and the session were logged in the repository as these events occurred. However, performance was degraded in high-load production environments.

In this patch, System Logger implementation has been improved. To avoid performance issues caused by queuing up the log information and logging to the database, changes were made to defer the database logging by first logging the data into files and having a separate process to read from the file and log to the database.

The Logger creates these directories:

- log—directory into which the file logger writes its file.
- process—directory from which DB Logger reads the records, based on their creation timestamps.
- archive—all processed files are moved to this directory for later use.

- status—processed files information and the records logged into the database are recorded in this directory (1 file per panama instance)

> **Note:** Log file reading and database logging can potentially run in separate JVMs without impacting the performance of the panama servlet. The default configuration will start the database logger along with the servlet (this can be configured differently in the **System.properties** file).

Additional Configuration Needed

The following parameters must be set for the current release. Most of the new configurable parameters have default values. Administrators should reset these values to suit local requirements.

SystemLog.loggerOutputDirectory=xxx
(default same as the value set for property **log.directory**)

The Root path for the log, process and archive directories. These are created under this root directory. By default the System Logger uses the directory specified in the property log.directory which is defaulted to /tmp. This parameter may be left blank.

SystemLog.maxLogFileSize=xxx

The maximum size of the file in the log directory. Once the log file reaches this file size, the logging process will close this file and move it to the process directory.

SystemLog.logFileNamePrefix=xxx (default ias_)

The user-defined log file name prefix. The default prefix will be iaswe. A typical file name will be **<SystemLog.logFileNamePrefix>_<ptginstancename_ <creationtimestamp>.log**

SystemLog.field.delimiter=xxx (default #%=%#)

Delimiter for the logged namevalue pairs. SystemLogger uses its default.

SystemLog.record.delimiter=xxx (default ~#$)

Delimiter for the logged records. SystemLogger uses its default.

SystemLog.maxLogFileSize=xxx

Maximum number of bytes per log file. This needs to be set to a suitably large number.

SystemLog.start.dbLogger=[true/false] (default is true)

Enable or Disable Database logging. If false, then the logged records will only remain in files. If true, the records are picked from files and logged onto the database (that is, the DB Logger thread is started). Values are True/False.

SystemLog.logger.wakeupFrequency=xxx (default is 1 min)

Number of minutes after which the DB Logger thread wakes up to check for any new log files in the process directory.

SystemLog.logger.maxSize=xxx (default 15)

Batch size for Database Logging.

SystemLog.driver=xxx
(default is taken as the value in the **db.driver** property, unless the user requires using a separate driver for the logger.)

Database JDBC driver <String> one of "THIN", "V7", "V8", "INTERNAL" and "CUSTOM"

SystemLog.driver.class=xxx (default is taken as Oracle's driver.)

Connect using a customized JDBC driver <class_name>. Not implemented in version 1. Must be set if SystemLog.driver=CUSTOM

The following are some existing configuration parameters in the **oracle/panama/core/admin/System.properties** file which will be retained:

SystemLog.enableServiceLogging=[true/ false]

Specifies whether or not the Service Logging is enabled.

SystemLog.enableSessionLogging=[true/ false]

Specifies whether or not the Session Logging is enabled.

The status of the last record logged into the database is stored in the status log files. The status log files assist administrators in crash recovery by enabling them to inspect the last processed file and record, and to ensure that the Database Logger does not attempt to log duplicate records.

How to Start DB Logger

The default configuration will start the DBLogger thread along with the panama servlet launch. However, you can turn this off by setting the property **SystemLog.start.dbLogger** to false.

You can launch DB Logger as a separate process:

- java -classpath <needed panama classes> oracle.panama.core.admin.DbLogger

If all software were installed under d:\ the startup command will look like this:

java -classpath d:\panama\lib\panama.zip;d:\panama\lib\panama_ core.zip;D:\jsdk2.0\lib\jsdk.jar;D:\panama\lib\classes12.zip;d:\panama\lib\jndi.jar; D:\panama\lib\xmlparserv2.jar oracle.panama.core.admin.DbLogger

Debugging

Sending the PAdebug=1 flag as part of a query string will not, by itself, enable the debugging capability. The login user for the current session must be either a Designer or an Administrator. See *Oracle9i Application Server Wireless Implementation Guide* for information on how to create a Designer or an Administrator.

Testing Wizard

You must have the Designer role in order to use the Test Wizard inside the Service Designer, otherwise only the device result will be displayed when a service is being tested.

1.4.2.1.6 E-mail and Directory Applications

FastForward Email and Directory applications enable you to provide your end users with access to their corporate email and directory lookup on any mobile device. Mobile email will drive productivity within your enterprise, allowing employees to stay in touch while away from the office. For more information, see *Oracle 9i Application Server Wireless Configuration Guide.*

1.4.2.1.7 Multiple VM Setup for Oracle9iAS Wireless

To take advantage of the new group-based load-balancing features, you must make the following changes in the jserv.conf file:

1. ApJServManual must be set to `auto` (as opposed to `on` or `off`) for the new feature directives to take effect.
2. With the new load-balancing architecture, multiple instances can be grouped together. A group is a set of instances across which the traffic is load-balanced. The member instances of a group can exist on one or more machines. A group is defined by the following directive:

   ApJServGroup groupname nprocs weight propfile

   where:

   groupname is the name of the group.

   nprocs is the number of processes to start for this group on the local machine.

   weight is the traffic distribution skew factor assigned to this group on this host.

   propfile the path to the jserv.properties file

   Example:

   ApJServGroup group1 2 1

   /private/ORACLE/10210PWE/Apache/Jserv/etc/jserv.properties

   ApJServGroup group1 1 1

   /private/ORACLE/10210PWE/Apache/Jserv/etc/jserv.properties

   ApJServGroup group2 1 1

   /private/ORACLE/10210PWE/Apache/Jserv/etc/jservSoap.properties
3. The following directive must be used in lieu of ApJServMount, to make allowance for the groups.

   ApJServGroupMount /mountpoint balance://groupname/zone

   where:

   mountpoint is the name of the URI path to mount jserv-url on

   groupname is one of the groups defined in the ApJServGroup directive

   zone is the zone this servlet is associated with

   Example:

   ApJServGroupMount /ptg balance://group1/root

   ApJServGroupMount /ptg balance://group1/root

   ApJServGroupMount /ptg balance://group1/root

1.4.3 Business Intelligence New Features

This section describes the new Business Intelligence features.

The *Oracle9i Application Server* documentation states that you must run Reports security scripts to enable the security features. This is no longer true, since in *Oracle9i Application Server* Release 1.0.2.2, the scripts are pre-loaded into the Portal and have been removed from the install media.

1.4.4 Management New Features

Oracle9i Application Server v. 1.0.2.2 includes Oracle Internet Directory 2.1.1. A more recent version of Oracle Internet Directory, 3.0.1, is available with Oracle9*i* Database. If you wish to use this latest version, order the Oracle9*i* CD Pack for your platform and install Oracle Internet Directory from that media kit. For information about Oracle Internet Directory and any available patchsets, please see

http://otn.oracle.com/products/oid/content.html

1.4.5 E-Business Integration New Features

This section describes the new E-Business integration features.

1.4.5.1 *Oracle9iAS* InterConnect

The new features and changes in OAI 4.1 from OAI 4.0 are listed below:

Throughput Measurement - Ability to monitor the throughput of Adapters through the EM Console.

Message Tracking - Ability to track any messages that flow through OAI. To use this feature, you must select at least one "Tracking Field" in iStudio. Then, you will be able to track messages by specifying values for any of these tracking fields in the EM Console.

Remote Management - EM Console provides features for remotely managing Adapters and Repository. Features include start/stop, view log files, edit ini file, etc.

Metadata Updates to running adapters - When you make changes to the metadata through iStudio, you now have an option to push this new metadata to any running adapter. (Use the "File -> Push Metadata" menu option in iStudio).

Notification on failure/shutdown - EM Console provides Email/Pager alerts, to notify you that Adapters or Repository have stopped.

Message Resubmission - The EM Console now lets you view, modify, and resubmit all "errored out" messages in the database.

Workflow Support - OAI works with Oracle Workflow for business process collaborations.

Enhanced AQ Support - The AQ Adapter has been enhanced to handle more than just XML payload. For XML, the payload can be in either a BLOB or CLOB. For non-XML, the payload can be any ADT; this ADT can be directly imported in iStudio.

SAP Adapter - SAP Adapter is available on the Solaris platform as well.

SAP ABAP Support - SAP Adapter supports ABAP function modules in addition to BAPIs and IDOCs.

Enhanced Array Mapping Support - iStudio provides graphical mapping of array attributes.

Password encryption - All passwords stored in configuration files can now be encrypted. Please refer to the Configuration Security section of the Installation Guide.

The changes from the previous release are listed below:

OID no longer necessary - All necessary configuration is stored directly in the HUB database. When creating a project in iStudio, you must provide the hub database connection information along with the repository information.

OMB no longer necessary - OAI uses Oracle JMS interface to Oracle AQ, so OMB is no longer needed.

Single .ini file - All OAI configuration parameters are all in one file, adapter.ini (as opposed to adapter.ini, Agent.ini, and service.ini).

Improved logging - To preserve log files from a previous run, log files are created in a different directory every time the adapter is started. The timestamp is used as the name of the directory to keep it unique across various runs. All logging is done to only one file "oailog.txt" (as opposed to AgentLog.txt, <Adapter>Log.txt, service.log). As before, when the size of this file exceeds 1MB, a new file "oailog-1.txt" is created (followed by "oailog-2.txt", ... and so on).

Persistence Files - To avoid cluttering up the adapter directory with files, all the persistence files (containing persisted messages, cached metadata, and other information to ensure Guaranteed & Exactly Once delivery) are stored in the .../persistence/... directory.

Database Adapter more performant - The database adapter performance has been enhanced. The database hosting the OAI Schema has support for Oracle Objects in order for the performance gain to be realized.

Cascading Deletion of integration objects in iStudio - When an object is deleted, all objects referred to by that object are also deleted (provided they are not referenced by other objects). For example, if a Customer object contains an Address object, and the Customer object is deleted, the Address object will also be deleted. But if a Purchase Order object contains the Address object, then Address will not be deleted. Also, the Address object cannot be deleted directly, since it is referenced by another object.

Importing data types - iStudio supports importing attributes of other iStudio data types.

1.5 Known Issues

This section describes known problems in this release.

Before using *Oracle9i Application Server*, read through each item in this section to gain an understanding of the restrictions and limitations in this release that may require additional steps. The items are categorized by solution area.

1.5.1 Installation Issues

This section describes installation issues.

1.5.1.1 Known Limitations with Running *Oracle9iAS* Against a 9*i* Database

Oracle9iAS v.1.0.2.2 is certified to run against a 9i Database Server v9.0.1.0.0 Solaris release with the following known limitations:

All 9iAS users who want to connect from *Oracle9iAS* v.1.0.2.2 to an Oracle9i database using JDBC thin drivers should apply patch ARU: 8.1.7.1 ARU 681288 (bug 1725012)

- *Oracle9iAS* Forms Services users should apply Oracle Forms Patch 5.
- *Oracle9iAS* Portal users need to:
  - **a.** Apply patch ARU: 9.0.1.0 ARU 800710 (which fixes bugs 1794996 and 1806057)
  - **b.** Define 07_DICTIONARY_ACCESSIBILITY =true in init.ora file (bug 1554423)
- *Oracle9iAS* Database Cache and Oracle Enterprise Manager functionality are NOT supported in this configuration.

1.5.1.2 Correction to Disk Usage Requirements for *Oracle9iAS* Enterprise Edition

Oracle9iAS 1.0.2.2 Enterprise install on Sun SPARC Solaris requires 5 GB of disk space, not 4.10 GB as stated in the release notes.

1.5.1.3 *Oracle9iAS* Portal Configuration Assistant Stops During Installation

Oracle9iAS Portal Configuration Assistant stops at 90% during the *Oracle9iAS* 1.0.2.2 installation.

In Oracle9iAS Release 1 (v1.0.2.2), Diagnostics was an added feature of the *Oracle9iAS* Portal Configuration Assistant. Diagnostics portion checks the validity of the JServ and Oracle HTTP Server URLs for the installed Portal repository. If the JServ and Oracle HTTP server are not properly configured or not running during the Portal installation, the diagnostics stop during this validation.

The Portal installation is complete, so you can safely cancel the Portal Configuration Assistant and resume the installation. However, because the Diagnostics detected a misconfiguration in JServ and/or the HTTP Server, you must resolve this before accessing the installed *Oracle9iAS* Portal.

1.5.1.4 *Oracle9iAS* Wireless Connection Refused: 8.1.7 Client to 9.0.1 Server

Oracle Universal Installer fails to load the Wireless repository (during a fresh installation or as part of an upgrade) if an Oracle9*i* database is being used.

To remedy this problem, after the installation is complete, you must:

1. Apply the JDBC patch (the patch is in the JDBC_Patch directory on the Oracle9i Application Server v1.0.2.2.0 Administrative and Development Client CD-ROM for Windows 95/98/NT).
2. Depending on your installation, run one of the following:

   Fresh installation: pa_java_inst.sh (to upload the bootstrap.xml)

   Upgrade: pa_java_inst_upgrade.sh (to upload the up11-111.xml)

1.5.1.5 JDBC Thin Driver Patch Required

The JDBC Thin Driver provided as part of *Oracle9iAS* Release 1 (v1.0.2.2), cannot be used to connect and run against an Oracle9*i* database.

You must download and install a patch in order to connect to a 9*i* database. The patch and associated information is at:

http://metalink.oracle.com/metalink/plsql/ml2_documents.showNOT?p_id=146267.1

The download contains instructions to install the patch. If you install jdbc 8171, or rdbms 8171, or rdbms 8171B, after installing the JDBC patch, you will need to re-install the JDBC Thin patch in order to connect to an Oracle9*i* database.

1.5.1.6 *Oracle9iAS* DIscoverer URLs Invalid after Installation

The *Oracle9iAS* Release 1 (v.1.0.2.2) installation changes the jserv.conf file so that any URLs (links, bookmarks, etc.) that include references to Discoverer4i\Viewer will no longer work. To fix this problem, change Discoverer4i\Viewer to discoverer4i\viewer (lower case) in the jserv.conf file.

1.5.1.7 Required Database Versions for *Oracle9iAS* Portal

In order to run *Oracle9iAS* Portal with a version 8.1.7 database, you must be using these versions:

- Solaris: 8.1.7.1
- Windows: 8.1.7.1

1.5.1.8 *Oracle9iAS* Portal Installation Error

There is a known issue with the *Oracle9iAS* Portal on 8.1.7 Standard Edition (SE). The Installer gives an error when installing *Oracle9iAS* Portal into 8.1.7 SE. The workaround is to execute the Oracle Portal Configuration Assistant (OPCA) from the command line and specify the "verbose" mode. In this mode, the errors are ignored and the installation runs to completion.

To run OPCA from the command line for *Oracle9iAS* Portal version 3.0.9:

1. Navigate to *ORACLE_HOME*/assistants/opca.
2. Open launch.bat file in a text editor.

   At approximately line 27 there is a long command line ending in:

   ```
   > install.log
   ```

3. Change the 3rd to last parameter from false to true. For example:

   ```
   ...change_on_install USERS TEMP USERS USERS TRUE FALSE FALSE TRUE > install.log
   ```

   changes to:

   ```
   ...change_on_install USERS TEMP USERS USERS TRUE TRUE FALSE TRUE > install.log
   ```

4. Save the change.
5. Execute launch.bat.

1.5.1.9 *Oracle9iAS* Portal Installation Requires Syntax Requirement for Shared Pool Size

When you install Portal, the configuration assistant may report that the shared pool size or java pool size is insufficient. This is because the assistant expects the pool size value to be in bytes. To fix this problem, change the shared pool size in init.ora to the integer value in bytes (not M, K or G notation). For example, if

SHARED_POOL_SIZE=100M

change it to:

SHARED_POOL_SIZE=100000000

and restart the database.

1.5.1.10 *Oracle9iAS* Database Cache Configuration Tool Appears Erroneously During Installation

In Enterprise Edition installations that were migrated from Release 1 (v.1.0.2.0) to (v.1.0.2.1), then to (v.1.0.2.2), the *Oracle9iAS* Database Cache configuration tool, though not selected, appears at the end of the installation, when no migration is required to (v.1.0.2.2). Select Cancel to exit the configuration tool; no other action is required.

1.5.1.11 Port Conflicts In Multiple Installations of *Oracle9iAS* on Solaris

Listener failures have been observed in multiple installs of *Oracle9iAS* Release 1 (v.1.0.2.2) for Solaris on the same machine. The listener fails due to port conflicts (the port numbers are not getting bumped). The first install functions correctly, but all subsequent installs fail. The error log contains messages similar to the following:

```
$ORACLE_HOME/Apache/Apache/logs/error_log
ApacheJServ/1.1.2: Failed to bind to port(s) specified in
/private/oracle/lizWorkarea/ias1022M6.2/Apache/Jserv/etc/jserv.properties. Please
check /private/oracle/lizWorkarea/ias1022M6.2/Apache/Jserv/etc/jserv.properties
and jserv.conf file, and make sure number of JServ process specified in jserv.conf
is less than number of ports specified in
/private/oracle/lizWorkarea/ias1022M6.2/Apache/Jserv/etc/jserv.properties.and the
ports are not used by other processes.
[Thu May 17 18:57:26 2001] [warn] OPM: EW process pdsun-qa17:0 (pid:14739) died,
restarting.
[Thu May 17 18:57:26 2001] [warn] OPM: ADM: process 14708 created server
process 14747 (group group1, module JServ), and inserted in proctable as entry 0

$ORACLE_HOME/Apache/Jserv/logs/jserv.log
ApacheJServ/1.1.2: Failed to bind to port(s) specified in
/private/oracle/lizWorkarea/ias1022M6. 2/Apache/Jserv/etc/jserv.properties.
Please check
/private/oracle/lizWorkarea/ias1022M6.2/Apache/Jserv/etc/jserv.properties and
jserv.conf file, and make sure number of JServ process specified in jserv.conf is
less than number of ports specified in /private/oracl
e/lizWorkarea/ias1022M6.2/Apache/Jserv/etc/jserv.properties. and the ports are not
used by other processes.
```

To resolve this issue, edit the configuration files to increment the port numbers.

1.5.1.12 Selecting a Locale

To select a locale for *Oracle9i Application Server* installation:

1. On Solaris 2.6 with Common Desktop Environment (CDE), close all open windows.
2. Log out (right-click your desktop, select **Logout**, and click **OK**).
3. Select the desired locale from the Options menu. For example, a German locale can be chosen as follows:
   Options --> Language --> C to es_BO --> de (German)
4. Log in (type user name and password).
5. Open a terminal emulator window.
6. Type the following command to verify the locale:

   ```
   env | grep LANG
   ```

   The output of this command must include the LANG environment variable, and it must have the value selected in Step 3.

   If the LANG environment variable is not shown or is set to a different value, check .profile, .login, .cshrc or other files where the LANG environment variable is set or unset. After fixing the problem, repeat these steps, beginning with Step 1.
7. Install *Oracle9i Application Server* on Solaris.

The translated files for the selected locale are installed. In addition, English files are always installed.

1.5.1.13 Manual Setting of Oracle9*i* Database Initialization Parameter Required

Some *Oracle9i Application Server* components may not function correctly when interacting with the Oracle9*i* database if the o7_dictionary_accessibility parameter is set to FALSE. In the Oracle9*i* database init.ora file, add the following line:

```
o7_dictionary_accessibility=TRUE
```

1.5.1.14 Oracle Universal Installer Shows Incorrect Installation Status

The Oracle Universal Installer may display 'in progress' status after a component installation is in fact complete. This was observed during installation of the Database Cache and Portal configuration tools, and resolved after canceling the first attempt. On the second attempt, the completed installation was properly reflected in the status display.

1.5.1.15 Install Failure

Before installing *Oracle9i Application Server* on UNIX platforms, be sure that the environment variables PATH, ORACLE_HOME, and LD_LIBRARY_PATH are not set in any command shell initialization files, such as .cshrc for csh, .bashrc for bash, or $ENV for ksh.

Setting one of these variables in an initialization file could cause the installation of *Oracle9i Application Server* to fail. Setting one of these environment variables in a login initialization file, such as .profile for sh, .login for csh, .kshrc for ksh, or .bash_login for bash will not affect the installation of *Oracle9i Application Server*.

1.5.1.16 Errors Opening redo Logs after Installation

After installing the *Oracle9i Application Server* seed database, you may see the following errors in the user dump location:

```
ORA-00313: open failed for members of log group 1 of thread 1
ORA-00312: online log 1 thread 1: '<redo log file_name>'
ORA-27037: unable to obtain file status
```

These are not serious errors. The redo logs are created in a future step of the seed database creation.

1.5.1.17 Standard Edition Character Set

The starter database provided as part of the *Oracle9i Application Server* Standard Edition (SE) installation uses the US7ASCII character set. To change the database character set after installation, connect to the database using sqlplus and issue the statement:

```
SQL> alter database character set <character set>
```

For more information, see the *Oracle8i National Language Support Guide*.

1.5.1.18 Root User Login for Installation

When installing *Oracle9i Application Server*, do not use this command to log in as root user:

```
$ su
```

The `su` command does not set the environment properly, and because of this the installation may fail. Instead, log in as root in a separate session, or use this command:

```
$ su -root
```

1.5.1.19 Configuration Guide for Response Files for Silent Install

There are three Oracle Universal Installer response files, one for each installation option, included on the *Oracle9iAS* Release 1 (v1.0.2.2) CD-ROM. You will need to edit the response file to suit your installation option.

To use a response file, copy the response file from the Oracle9i Application Server CD-ROM to a drive mounted on your system. They are located on Disk#1 in the /stage/Response directory.

Minimal Edition: oracle.iappserver.iapptop.Minimal.rsp

Standard Edition: oracle.iappserver.iapptop.Standard.rsp

Enterprise Edition: oracle.iappserver.iapptop.Enterprise.rsp

Edit the response file you want to use with any text editor to include information specific to your system. Each file contains instructions for properly configuring the response file.

This document may be used as a reference for editing the response file. It contains relevant sections from the above response files with sample values to proceed with a silent install. These sections are described below:

- All Install Types (Minimal, SE & EE)
- Minimal & SE Only
- SE Install Type Only
- EE Install Type Only
- Portal Config. Asst. Only
- Other Config tools
- root.sh execution

Total changes needed:

EE installation: 12 parameters plus 7 portal configuration assistant-specific entries

SE installation: 13 parameters plus 7 portal config assistant-specific entries

Minimal: 10 parameters plus 7 portal config assistant-specific entries

---

Notes: The parameter UNIX_GROUP_NAME is "Unix group to be set for the inventory directory." You do not have to enter anything for this value if you specify the inventory location with the installer command line to a local directory.

The parameter FROM_LOCATION_CD_LABEL should only be used in multi-CD installations. Its value is "Oracle9i Application Server 1.0.2.2.0"

All Install Types (Minimal, SE & EE) - Total: 9

```
[SESSION]

#Parameter: UNIX_GROUP_NAME
#Type: String
#Description: Unix group to be set for the inventory directory. Valid only in Unix
```

```
platforms.
#Example : UNIX_GROUP_NAME = "install"
UNIX_GROUP_NAME=<Value Unspecified>

#Parameter: FROM_LOCATION
#Type: String
#Description: Complete path of the products.jar.
#Example : FROM_LOCATION =
"/net/tools-nfs/inst_ias/solaris/ias10220/production/Disk1/stage/products.jar"
FROM_LOCATION="/net/tools-nfs/inst_
ias/solaris/ias10220/production/Disk1/stage/products.jar"

#Parameter: FROM_LOCATION_CD_LABEL
#Type: String
#Description: This variable should only be used in multi-CD installations. It
includes the label of
the Compact Disk where the file "products.jar" exists. The label can be found in
the file
"disk.label" in the same directory as products.jar.
#Example : FROM_LOCATION_CD_LABEL = "CD Label"
FROM_LOCATION_CD_LABEL=<Value Unspecified>

#Parameter: ORACLE_HOME
#Type: String
#Description: Complete Location of the Oracle Home.
#Example : ORACLE_HOME = "C:\OHOME1"
ORACLE_HOME="/private2/oracle/iasse2"

[oracle.webdb.apache_3.0.9.8.0]

#Parameter: user_input2
#Type: StringList
#Description: This variable holds the input from dialog2.
user_input2={"portal30", "portal30", "t816.world"}

#Parameter: user_input1
#Type: StringList
#Description: This variable takes the input from the first dialog.
user_input1={"portal30_sso", "portal30_sso", "t816.world"}

[portaltogo.server_1.1.1.0.0]

#Parameter: SYSTEM_PASSWORD
#Type: String
#Description: This will hold the panama SYSTEM user password
SYSTEM_PASSWORD="manager"

#Parameter: SRV_USER
#Type: StringList
#Description: This will hold the Portal-to-Go User and Password
SRV_USER={"scott", "tiger"}

#Parameter: SRV_HOST
#Type: StringList
#Description: This will hold the Portal-to-Go host variables
SRV_HOST={"london.us.oracle.com", "2021", "l816"}
```

Minimal & SE Install Types Only - Total: 1

```
[oracle.iappserver.iapptop_1.0.2.2.0]
```

```
#Parameter: startupProcesses
#Type: StringList
#Description: StringList of processes to configure and start automatically in iAS
Installation.  This
variable is used only in Enterprise Edition installs (in other install types, all
processes are
automatically started).  Possible values that can be included in the StringList
are the strings
 "Oracle HTTP Server in Non-SSL mode" , "Oracle9iAS Portal".  If the StringList is
empty, no
processes are started.  For example, the
#StringList {""Oracle HTTP Server in Non-SSL mode"",  "Oracle9iAS Portal"} would
configure
and start up those products.
startupProcesses={"Oracle HTTP Server in Non-SSL mode" , "Oracle9iAS Portal}
```

SE Install Type Only - Total: 3

```
[oracle.assistants.dbca_8.1.7.0.0]

#Parameter: s_globalDBName
#Type: String
#Description: Global Database Name
s_globalDBName="m10ee2.world"

#Parameter: s_mountPoint
#Type: String
#Description: Database file location:  directory for datafiles, control files,
redo logs.
s_mountPoint="/private2/oracle/iasee2/dbs"

#Parameter: s_dbSid
#Type: String
#Description: Value that $ORACLE_SID will be set to.
s_dbSid="m10ee2"
```

EE Install Type Only - Total:3

```
[oracle.iappserver.iapptop_1.0.2.2.0]

#Parameter: startupProcesses
#Type: StringList
#Description: StringList of processes to configure and start automatically in iAS
Installation.  This
variable is used only in Enterprise Edition installs (in other install types, all
processes are
automatically started).  Possible values that can be included in the StringList
are the strings
 "Oracle9iAS Database Cache" , "Oracle9iAS Forms and Reports Services" , "Oracle
HTTP
Server in Non-SSL mode" , "Oracle9iAS Web Cache", "Oracle9iAS Portal", "Oracle9iAS
Discoverer", "Oracle Management Server".  If the StringList is empty, no processes
are started.
For example, the
#StringList {"Oracle9iAS Database Cache" , "Oracle9iAS Forms and Reports Services"
,
"Oracle HTTP Server in Non-SSL mode" , "Oracle9iAS Web Cache", "Oracle9iAS
Portal",
```

```
"Oracle9iAS Discoverer", "Oracle Management Server" }

[oracle.icache.icacheca_1.0.2.2.0]

#Parameter: sl_dbaReturn
#Type: StringList
#Description: Name and Password of SYSDBA user on origin DB.
sl_dbaReturn={"sys", "change_on_install"}

#Parameter: sl_connectStringReturn
#Type: StringList
#Description: Fields are: Name of origin DB machine, Port number of listener on
origin (often
1521), Service name of origin DB.
sl_connectStringReturn={"london.us.oracle.com", "2021", "l816.world"}
```

For Portal Config Asst. Only (With All Install Types) - Total: 7

Note: OPCA takes default values for 4 tablespace name parameters, if not specified with the response file. Following are their names and default values. If the defaults are acceptable, you need not specify them with your response files.

temporary_tablespace="TEMP"

logging_tablespace="USERS"

document_tablespace="USERS"

default_tablespace="USERS"

```
[oracle.webdb_3.0.9.8.0]

#Parameter: silent
#Type: Boolean
#Description: This variable is true if silent mode is on.  It is passed to the wwv
component.
silent=true

[oracle.webdb.apache_3.0.9.8.0]

#Parameter: opca_tnsconnect
#Type: String
#Description: tns connect string which is required by Oracle Portal Config
Assistant.  This should
be in <machine name>:<port>:<sid> format.
opca_tnsconnect="london.us.oracle.com:2021:l816"

[oracle.webdb.wwv_3.0.8.9.8]

#Parameter: sys_password
#Type: String
#Description: System Password for Portal's OPCA
sys_password="change_on_install"

#Parameter: temporary_tablespace
#Type: String
#Description: Temporary Tablespace for Portal's OPCA
temporary_tablespace="TEMP"
```

```
#Parameter: logging_tablespace
#Type: String
#Description: Logging tablespace for Portal's OPCA
logging_tablespace="USERS"

#Parameter: document_tablespace
#Type: String
#Description: Document Tablespace for Portal's OPCA
document_tablespace="USERS"

#Parameter: default_tablespace
#Type: String
#Description: Default Tablespace for Portal's OCPA
default_tablespace="USERS"
```

Other Confutation tools

DBCA & NetCA

These tools are run in typical mode while running 9iAS silently, so no response files are required.

Oracle9*i*AS Database Cache Configuration Assistant

This tool's user input is specified with EE response file - 2 parameters sl_dbaReturn & sl_connectStringReturn, as mentioned above with component [oracle.icache.icacheca_1.0.2.2.0]

Oracle Internet File System Configuration Tool

Use the file template IfsConfig.properties provided with the shiphome. This is a post-installation task. This configuration tool is not run with 9iAS installation.

Oracle Management Server

Silent mode is NOT supported with *Oracle9iAS* 1.0.2 release. Scheduled for *Oracle9iAS* 2.0

root.sh Execution

You may set the parameter show_rootsh_confirmation=false and run the root.sh after the installation. You must make sure that /var/opt/oracle/oratab be writable by the owner of the installer process so that the Database configuration Assistant (DBCA) and iCache Configuration Assistant (icacheca) can update the oratab file. Otherwise, DBCA and icacheca will fail during the configuration tool launch phase.

Enterprise Edition Response File Sections and Parameters

```
[SESSION]

#Parameter: UNIX_GROUP_NAME
#Type: String
#Description: Unix group to be set for the inventory directory. Valid only in Unix
platforms.
#Example : UNIX_GROUP_NAME = "install"
UNIX_GROUP_NAME=<Value Unspecified>

#Parameter: FROM_LOCATION
#Type: String
#Description: Complete path of the products.jar.
#Example : FROM_LOCATION = "../stage/products.jar"
FROM_LOCATION="/private1/balbert/dve/production/Disk1/stage/products.jar"

#Parameter: FROM_LOCATION_CD_LABEL
```

```
#Type: String
#Description: This variable should only be used in multi-CD installations. It
includes the label of
the Compact Disk where the file "products.jar" exists. The label can be found in
the file
"disk.label" in the same directory as products.jar.
#Example : FROM_LOCATION_CD_LABEL = "CD Label"
FROM_LOCATION_CD_LABEL="9iAppServer"

#Parameter: ORACLE_HOME
#Type: String
#Description: Complete Location of the Oracle Home.
#Example : ORACLE_HOME = "C:\OHOME1"
ORACLE_HOME="/private1/oracle/iasee1"

#Parameter: TOPLEVEL_COMPONENT
#Type: StringList
#Description: The Toplevel component that has to be installed in the current
session.
#The following choices are available. The value should contain only one of these
choices.
#The choices are of the form Internal Name, Version : External name. Please use
the internal
name and version while specifying the value.
# oracle.iappserver.iapptop, 1.0.2.0.1 : Oracle9i Application Server 1.0.2.0.1
#Example : TOPLEVEL_COMPONENT = {"oracle.iappserver.iapptop","1.0.2.0.0"}
TOPLEVEL_COMPONENT={"oracle.iappserver.iapptop","1.0.2.0.1"}

[oracle.iappserver.iapptop_1.0.2.0.1]

#Parameter: startupProcesses
#Type: StringList
#Description: StringList of processes to configure and start automatically in iAS
Installation. This
variable is used only in Enterprise Edition installs (in other install types, all
processes are
automatically started). Possible values that can be included in the StringList are
the strings:
"Oracle Database Cache" , "Forms and Reports Server" , "Oracle HTTP Server (on
port 7777)" ,
"Oracle Web Cache", "Oracle Discoverer 3i Viewer", "Oracle Portal", "Oracle
Management
Server". If the StringList is empty, no processes are started. For example, the
#StringList {"Oracle Database Cache","Forms and Reports Server"} would configure
and start
up those products.
#Possible Values are { "Oracle Database Cache" , "Forms and Reports Server" ,
"Oracle HTTP
Server (on port 7777)" , "Oracle Web Cache" , "Oracle Discoverer 3i Viewer" ,
"Oracle Portal",
"Oracle Management Server" }
#But Following 4 config tools doesn't support silent modes:
#1. "Oracle Web Cache" , 2. "Oracle Portal", 3. "Oracle Database Cache" , 4.
"Oracle
Management Server"

startupProcesses={"Forms and Reports Server" , "Oracle HTTP Server (on port 7777)"
, "Oracle
Discoverer 3i Viewer" }
```

```
[oracle.webdb.apache_1.3.12.0.0a]

#Parameter: user_input2
#Type: StringList
#Description: This variable holds the input from dialog2.
user_input2={"portal30", "portal30", "t816.world"}

#Parameter: user_input1
#Type: StringList
#Description: This variable takes the input from the first dialog.
user_input1={"portal30_sso", "portal30_sso", "t816.world"}

[portaltogo.server_1.0.2.2.0]

#Parameter: SYSTEM_PASSWORD
#Type: String
#Description: This will hold the panama SYSTEM user password
SYSTEM_PASSWORD="manager"

#Parameter: SRV_USER
#Type: StringList
#Description: This will hold the Portal-to-Go User and Password
SRV_USER={"scott", "tiger"}

#Parameter: SRV_HOST
#Type: StringList
#Description: This will hold the Portal-to-Go host variables
SRV_HOST={"toronto.us.oracle.com", "2021", "t816"}

[oracle.icache.icacheca_1.0.2.0.0]

#Parameter: sl_.shdbaReturn
#Type: StringList
#Description: Name and Password of SYSDBA user on origin DB.
sl_dbaReturn={"sys", "change_on_install"}

#Parameter: sl_connectStringReturn
#Type: StringList
#Description: Fields are: Name of origin DB machine, Port number of listener on
origin (often
1521), Service name of origin DB.
sl_connectStringReturn={"toronto.us.oracle.com", "2021", "t816.world"}
```

1.5.1.20 OracleJSP Error

In HTTP Server and Standard Edition installations, the following OracleJSP error occurs when accessing Accessories from Browse Categories:

Error:

```
Request URI:/onlineorders_html/srch_results.jsp
```

Exception:

```
oracle.jsp.parse.JspParseException: Line # 7, Error: Unable to find
class for bean: parms defined by tag with class:
jspclient.processParms
```

To resolve the error, rename the JspClient directory to jspclient (all lower case). The directory is located in

$ORACLE_HOME/Apache/Apache/htdocs/onlineorders_html/

1.5.1.21 *Oracle9iAS* Database Cache Installation Errors

If the listener for the origin database is not properly configured, the following errors may occur when you attempt to install *Oracle9iAS* Database Cache:

```
Adding users to the cache failed.
Reason: WTE-03501 Error updating list of users: Export failed on origin database
OCI error - ORA-28575: unable to open RPC connection to external procedure agent
```

Refer to the *Oracle9i Application Server Installation Guide* for detailed instructions to configure the listener for the origin database.

1.5.1.22 *Oracle9iAS* Database Cache Configuration

When you install *Oracle9i Application Server* Enterprise Edition, you can choose whether to configure *Oracle9iAS* Database Cache during the installation or at a later time. If you choose to configure *Oracle9iAS* Database Cache during the installation, the installation procedure uses default values for the following *Oracle9iAS* Database Cache attributes:

- The *Oracle9iAS* Database Cache host (by default, the host name qualified by the domain name).
- The *Oracle9iAS* Database Cache name (by default <*cache_nodename*-cache>).
- The port number for the listener for *Oracle9iAS* Database Cache (by default, 51719).
- The memory allocated to *Oracle9iAS* Database Cache (by default, 25 MB).
- The disk space allocated to *Oracle9iAS* Database Cache (by default, 32 MB).
- The location of the file that holds the disk space (by default, $ORACLE_HOME/dbs directory).

If you want to specify values other than the default values, you can choose not to configure *Oracle9iAS* Database Cache during the installation. Then, after the installation completes successfully, invoke the *Oracle9iAS* Database Cache Configuration Assistant using the following command:

```
prompt> $ORACLE_HOME/bin/wtacca -create -custom
```

For more details, refer to the Configuration Assistant online help.

1.5.1.23 Preserving Changes to Oracle HTTP Server Configuration on Re-installation in Same Oracle Home

Be sure to save copies of `httpd.conf`, `jserv.conf`, `zone.properties`, and any Oracle HTTP Server configuration files that you have changed. When you re-install Oracle9*i*AS into the same Oracle home, existing configuration files are overwritten with the newly installed files.

1.5.1.24 Oracle HTTP Server Configuration Error Upon Installation

When installing *Oracle9i Application Server* Enterprise Edition, and you have installed the Oracle HTTP Server previously in the same ORACLE_HOME, the HTTP Server configuration fails with the following error:

```
Syntax Error on line 14 of
<ORACLE_HOME>/Apache/Apache/conf/mod__ose.conf
Aurora Service - directive already effect for this server
<ORACLE_HOME>/Apache/Apache/bin/httpdsctl start: httpd could not be
```

```
started
```

To work around this error:

1. Remove the double entry of mod__ose.conf in the file $ORACLE_HOME/Apache/Apache/conf/oracle_apache.conf.
2. Restart your Oracle HTTP Server:

```
prompt>$ORACLE_HOME/Apache/Apache/bin/apachectl start
```

1.5.1.25 Automatic Class Reloading of JSPs Error

The *Oracle9i Application Server* installation adds the following extra entry to the $ORACLE_HOME/Apache/Jserv/etc/jserv.properties file:

```
wrapper.classpath=$ORACLE_HOME/Apache/Apache/htdocs/_pages
```

After installation, you need to delete this line and restart Oracle HTTP Server. Otherwise, automatic class reloading of JavaServer Pages (JSPs) will not work correctly.

1.5.1.26 Configuration Assistant Failure with Standard Edition Default Large Pool Size

During *Oracle9i Application Server* Standard Edition install, if you choose to install the *Oracle9iAS* Portal database objects into the newly created 8.1.7 Standard Edition database, the install fails because the default large_pool_size is not big enough. The workaround is to increase this size before running the *Oracle9iAS* Portal Configuration Assistant, as follows:

1. Shut down the database.
2. Double the size of the large_pool_size parameter in the init.ora file.
3. Restart the database.
4. Run the *Oracle9iAS* Portal Configuration Assistant.

If you do not perform these steps during an install, you can fix the problem as follows:

1. Drop the old *Oracle9iAS* Portal user.
2. Shut down the database.
3. Double the size of the large_pool_size parameter in the init.ora file.
4. Restart the database.
5. Run the *Oracle9iAS* Portal Configuration assistant from the ORACLE_HOME located at $ORACLE_HOME/assistants/opca/launch.sh.

> **Note:** This problem does not occur if you install to a remote 8.1.6 database and has only been observed in a Standard Edition install.

1.5.1.27 Web Cache Configuration Assistant Appears When Not Selected

The Web Cache Configuration Assistant starts after installation even if it is not selected in the configuration window.

1.5.1.28 Silent Installation of *Oracle9iAS* Wireless Not Supported

Silent installation for *Oracle9iAS* Wireless is not supported; it requires entry of information specific to Wireless and manual editing of configuration files.

1.5.1.29 JServ.conf Addition

If you are upgrading from the previous release of *Oracle9iAS* Wireless, you must make the following changes to the `jserv.conf` file, located at:

```
$ORACLE_HOME/Apache/Jserv/etc/jserv.conf
```

1. Comment out `ApJServMount /ptg /root`
2. Insert:

```
# PTG 1.1.1 Begin
ApJServGroupMount /ptg balance://group1/root
# PTG 1.1.1 End
```

If you are doing a new installation of *Oracle9iAS* Wireless:

1. Insert:

```
# PTG 1.1.1 Begin
ApJServGroupMount /ptg balance://group1/root
# PTG 1.1.1 End
```

1.5.1.30 JDBC Driver Patch Required to use Oracle9i Database

If you want to use the Oracle9*i* database with components such as *Oracle9iAS* Portal, you must patch the JDBC driver. The patch is at the top level JDBC patch directory of the *Oracle9iAS* Release 1, v1.0.2.2 Administrative and Development Client CD for Windows 95/98/NT (available with the release across all operating systems platforms).

1. Copy the patch to $ORACLE_HOME/jdbc/lib, unzip it, then execute the patch file.
2. Test the patch by running a demo such as Employee.java in $ORACLE_HOME/jdbc/demo/.

1.5.1.31 RDBMS Patch Install Dialog Appears

When you install *Oracle9iAS* Enterprise Edition, the following RDBMS patch installation dialog may appear:

"You have enabled the ORATAB_FAIL feature by setting the environment variable ORATAB_FAIL to TRUE. This will allow you to continue installation even though there is no write permission on ORATAB (/var/opt/oracle/oratab) file.

Currently ORATAB file does not exist, or is not writable by the user. You can run the orainst/oratab.sh script as the root user to create the file or modify its permissions. In that case select [Shell] to invoke a new window from which to run the oratab.sh script, or exit the installer and restart it after oratab.sh has been run.

If you decide to continue without changing the ORATAB permissions, select OK. But this installation session will not update ORATAB file and OCSM functionalities may not work properly. However running root.sh in the end will update the ORATAB file."

Select OK to continue with the installation. You do not need to start a shell or run any scripts, as suggested in the dialog.

- You do not need to select [Shell] to invoke a new window from which to run the oratab.sh script, or exit the installer and restart it after oratab.sh has been run (as directed by this screen).
- If you select Shell by mistake, type exit and press enter to close the shell and return to the ORATAB window.

This dialog appears at 68% of installation phase 1 of *Oracle9iAS* Release 1 (v1.0.2.2) during the Oracle database software-only installation of 8.0.6.0.1 once and 8.0.6.3.0 (second time.

The workaround to prevent this error is:

1. Create a empty file - /var/opt/oracle/oratab
2. Make this file writable by installing 9iAS 1022.

1.5.1.32 Oracle Forms, Reports and Discoverer Patch Installation

When installing a patch, use <*IAS_HOME*>/6iserver as your ORACLE_HOME for Forms, Reports and Discoverer products, where <*IAS_HOME*> is the ORACLE_HOME used for *Oracle9iAS*.

1.5.1.33 *Oracle9iAS Wireless*: No Option to Skip Loading Repository for Rapid Install

During rapid installation, *Oracle9iAS Wireless* has no option to skip loading the repository, causing the installation to take too long.

As a workaround, set the variable `b_loadrepository` to false in the response file. This will skip loading, or upgrading the repository.

Perform the following steps during postinstallation to load the repository:

1. For a new installation, run the following after installation completes:

`create_aq.sh` from *`ORACLE_HOME`*`/panama/sql`.

Then run the following:

`pa_java_inst.sh` from *`ORACLE_HOME`*`/panama/setupconf`.

1. For an upgrade installation, run the following:

`upgrade_inst.sh` from *`ORACLE_HOME`*`/panama/sql`.

Then run the following:

`pa_java_inst_upgrade.sh` from *`ORACLE_HOME`*`/panama/setupconf`

1.5.1.34 SUNSKI Package Requirement

Generating SSL private key with *Oracle9i Application Server* returns warning and "openssl genrsa..." terminates. You might the following warning:

```
warning, not much extra random data, consider using the -rand option
Generating RSA private key, 1024 bit long modulus 23973:error:24064064:random
number generator:SSLEAY_RAND_BYTES:PRNG not seeded:md_rand.c:538:
23973:error:04069003:rsa routines:RSA_generate_key:BN lib:rsa_gen.c:182:
```

On some UNIX platforms /dev/random is required to generate random characters as required by `openssl`. On Solaris this package is created by SUNWski package. If this package is not installed, you might the above warnings. Go to `http://www.sunsolve.sun.com` for more information, including installation information.

1.5.1.35 Poor Error Handling When Wrong Port Entered

System will hang at 100% if it is not able to connect to the database using the port number specified.

As a solution, make sure that you can connect to the database before installation and supply the correct port number to *Oracle9i Application Server* installation.

1.5.2 Oracle9*i*AS Portal Deinstallation Instructions

You can deinstall Oracle9iAS Portal and SSO users and schemas by launching the Oracle9iAS Portal Configuration Assistant using the following command:

```
prompt> ORACLE_HOME/assistants/opca launch.sh
```

Select the deinstall button and navigate through the screens to successfully deinstall Oracle9iAS Portal.

1.5.3 Deinstallation and Migration Issues

This section describes deinstallation and migration issues. It contains the following topics:

- Corrections to Terminology in Oracle9iAS Installation Guides
- Deinstalling Oracle9iAS Database Cache with Oracle Universal Installer Removes Dependent Components
- OraInventory Directory Requires Backup Before Migration
- Error When Starting Oracle HTTP Server
- Upgrading Oracle9iAS Wireless
- Reinstallation of Oracle9i Wireless
- Oracle9i AS Wireless 1.1.1.1.1 Requires Oracle9i Database Migration
- SOAP Release Notes and Documentation Link Inactive
- nmxw.ora Instantiation Required After Migration
- Known Issues for Upgrading Core Edition to Minimal, Standard, or Enterprise Edition.

1.5.3.1 Corrections to Terminology in *Oracle9iAS* Installation Guides

The *Oracle9iAS* Installation Guide contains terminology errors on the following page numbers:

3-17, 4-22, 5-20

On these pages, "Upgrading Installation Detected" should read, "Migration Installation Detected". All occurrences of "upgrading" should be changed to "migrating".

1.5.3.2 Deinstalling *Oracle9iAS* Database Cache with Oracle Universal Installer Removes Dependent Components

If you use Oracle Universal Installer to deinstall *Oracle9iAS* Database Cache, all services are also deinstalled. To deinstall Oracle Database cache, use the command shown below:

1. Ensure that the cache is started. If necessary, start it with the Cache Manager or the `cachstrt` script in the $ORACLE_HOME/bin directory.

2. Run the Database Cache Configuration Assistant, specifying the -deinstall option:

```
prompt>wtacca -deinstall
```

1.5.3.3 OraInventory Directory Requires Backup Before Migration

Before running the migration process in the Oracle Universal Installer, you must back up the OraInventory directory.

If migration fails or is cancelled in progress, subsequent attempts might also fail because of changes the installer made to the OraInventory directory. After any incomplete migration process, restore the OraInventory directory from your pre-migration backup before attempting migration again.

1.5.3.4 Error When Starting Oracle HTTP Server

The following error may occur when you start the HTTP Server after de-installation and re-installation of *Oracle9i Application Server* into the same Oracle home:

```
Syntax error on line 14 of <ORACLE_HOME>Apache/Apache/conf/mod_ose.conf:
AuroraService - directive already in effect for this server
```

To resolve this error:

1. Open the <ORACLE_HOME>Apache/Apache/conf/oracle_apache.conf file.
2. Remove the duplicate of the following line:

```
include "<ORACLE_HOME>Apache/Apache/conf/mod_ose.conf:"
```

3. Re-start the HTTP Server.

1.5.3.5 Upgrading *Oracle9iAS* Wireless

You can only upgrade to Oracle 9*i* Application Server Wireless 1.1.1.1 (on Oracle 9*i* Application Server Release 1 (v1.0.2.2.0) from Oracle 9*i* Application Server Wireless 1.1 (on Oracle 9*i* Application Server Release 1 (v1.0.2.1.0)).

If you are migrating from earlier releases, you must first upgrade to Oracle 9*i* Application Server Wireless 1.1 (on Oracle 9*i* Application Server Release 1 (v1.0.2.1.0)), then up to this current release.

1.5.3.6 Reinstallation of Oracle9*i* Wireless

During Oracle 9*i* Application Server Wireless installation, a Wireless repository is created.

Deinstallation of Oracle 9*i* Application Server Wireless DOES NOT automatically remove the database schema. Therefore, if you reinstall Oracle 9*i* Application Server Wireless (using the same database user name as you did in the previous installation) after deinstalling the software, you must MANUALLY remove the database schema. Before you remove the database schema, backup the data under the database schema appropriately. One way to remove the database schema is to delete the Wireless database user.

For example: if during installation, you have specified *panama* as the Wireless repository owner, then:

1. Launch sqlplus connected as System user (or other user with DBA privileges)
2. Issue the commands:

```
sqlplus>drop user panama cascade
```

```
sqlplus>commit

sqlplus>exit
```

1.5.3.7 Oracle9*i* AS Wireless 1.1.1.1.1 Requires Oracle9i Database Migration

If you upgrade from Oracle8i database to Oracle9i database AFTER this maintenance release is installed, run:

migrate_8i_to_9i.sql

against the database containing your Wireless repository, connecting with proper user name, password and schema name.

1.5.3.8 SOAP Release Notes and Documentation Link Inactive

After upgrading or migrating from Release 1 (v1.0.2) or Release 1 (v1.0.2.1) to Release 1 (v1.0.2.2), the link on the index.html page titled "SOAP Release Notes and Documentation" will not work.

To resolve this problem:

1. Add the following directive to the ORACLE_HOME/Apache/Apache/conf/httpd.conf file:

```
Alias /soapdocs/ "ORACLE_HOME/soap/"
```

(where ORACLE_HOME is the full path to your Oracle home directory).

1. Restart the server.

1.5.3.9 nmxw.ora Instantiation Required After Migration

After you have migrated from *Oracle9iAS* Release 1 (v1.0.2.0.1) or Release 1 (v1.0.2.1) to Release 1 (v1.0.2.2), you must manually instantiate the nmxw.ora file to populate the values for the web server directives ServerRoot, ConfigFile, and ApacheVersion. If these are not populated, the Enterprise Manager Console cannot detect the HTTP Server.

The file path is ORACLE_HOME/network/agent/config/.

1.5.3.10 Known Issues for Upgrading Core Edition to Minimal, Standard, or Enterprise Edition.

1. If you want to install Minimal, Standard or Enterprise Edition into the same Oracle home where Core Edition was previously installed, you need to stop the core HTTP server first. Otherwise, when you click the "next" button on the "Apache Listener Configuration for Oracle9iAS Portal-- Database Access Descriptor (DAD) for the Login Server" screen, there will be an error message stating "The following processes are running cannot continue installation. Please shut them down and continue. *ORACLE_HOME*/Apache/Apache/bin/httpd."
2. If you want to install Minimal, Standard, and Enterprise Editions in the same Oracle home where Core Edition was previously installed (after stopping the Core HTTP server), the installation process will have no error messages. However, one manual step needs to be implemented to make portal accessible from a browser. The file *ORACLE_HOME*/Apache/modplsql/cfg/wdbsvr.app needs to be updated with the portal's connection information, <*machinename*>:<*port*>:<*sid*>.

1.5.4 Internet Applications Solution Area Issues

This section describes Internet application solution area issues. It includes the following topics:

- Oracle9iAS Containers for J2EE
- Oracle HTTP Server

1.5.4.1 *Oracle9iAS* Containers for J2EE

When you try to start *Oracle9iAS Containers for J2EE* with command "`java -jar $j2ee_home/orion.jar <options>`" as detailed in the "Starting OC4J" of the "*Oracle9iAS Containers for J2EE* Quick Reference Card", you get an error and *Oracle9iAS Containers for J2EE* does not start. Following is the error message:

Fatal Error: Transaction Log File

ORACLE_HOME`/J2EE_containers/j2ee/home/persistence/transactions.state` does not exist and was not possible to create, the most common reason for this is an invalid path or Orion lacking security to write to that path: *ORACLE_HOME*`/J2EE_containers/j2ee/home/persistence/transactions.state` (No such file or directory).

The workaround for this is as follows:

Create a directory by name "persistence" in *ORACLE_HOME*`/J2EE_containers/j2ee/home` before starting *Oracle9iAS Containers for J2EE* .

1.5.4.2 Oracle HTTP Server

This section describes the Oracle HTTP Server solution area issues. It includes the following topics:

- JServ Processes Startup Fails With JDK Version 1.1.8
- Recommended Access Restrictions for HTTP Server mod_oprocmgr
- FastCGI Restarts Scripts Containing Errors
- Global Server IDs for Oracle HTTP Server
- Oracle Demo Certificates Replacement
- Errors Starting Oracle HTTP Server with "APCHECTL -START" When Using Virtual Hosts
- Increasing Memory for Apache JServ Applications
- mod_plsql Requirement
- Problems with mod_plsql Under Moderate Load
- mod_plsql Caching Error
- Restoring Oracle Application Server OWA Packages
- Manual Installation of OWA Packages Causes Error
- Executing the owaload.sql script
- mod_plsql Document Upload Fails if cursor_sharing parameter set to "similar"
- Known Issue in Upgrading from 8.1.7.0 to 8.1.7.1
- mod_rewrite Security Vulnerability

1.5.4.2.1 JServ Processes Startup Fails With JDK Version 1.1.8

If you use JDK version 1.1.8 instead of the JDK (version 1.2) shipped with *Oracle9iAS*, JServ processes will fail to start. Messages similar to the following are found in the error_log:

```
ORACLE_HOME/Apache/jdk/bin/java[15]: dirname:  not found
ORACLE_HOME/Apache/jdk/bin/java[15]: dirname:  not found
ORACLE_HOME/Apache/jdk/bin/java[16]: basename:  not found
ORACLE_HOME/Apache/jdk/bin/java[16]: basename:  not found
ORACLE_HOME/Apache/jdk/bin/java[65]: test: argument expected
ORACLE_HOME/Apache/jdk/bin/java[65]: test: argument expected
 was not found in
ORACLE_HOME/Apache/jdk/bin/../bin/sparc/native_threads/
 was not found in
ORACLE_HOME/Apache/jdk/bin/../bin/sparc/native_threads/
```

To resolve this error, add the following line to the jserv.properties and jservSoap.properties files:

```
wrapper.env=PATH=/usr/bin
```

After adding this line, perform a graceful restart of the server. The JServ processes will start.

1.5.4.2.2 Recommended Access Restrictions for HTTP Server mod_oprocmgr

Sites should be configured to restrict access to the locations to valid users of mod_oprocmgr. Valid users of mod_oprocmgr include external processes (JServ processes), administrators sending requests to /oprocmgr-status, and administrators using DMS to monitor HTTP Server external processes.

The httpd.conf file should be modified as shown in the following example (additions are shown in bold text):

```
<IfModule mod_oprocmgr.c>
 ProcNode iashost.company.com 7777
  <IfDefine SSL>
    ProcNode iashost.company.com 80
  </IfDefine>
  <Location /oprocmgr-service>
    SetHandler oprocmgr-service
    order deny,allow
    deny from all
    allow from iashost.company.com
  </Location>
```

```
  <Location /oprocmgr-status>
    SetHandler oprocmgr-status
    order deny,allow
    deny from all
    allow from iashost.company.com
  </Location>
</IfModule>
```

Another way that the system administrator may want to modify httpd.conf is to permit access by all nodes within the same domain using something similar to "allow from .company.com". Where possible, this strategy is preferable because it permits administration from multiple locations without having to explicitly list each administrative host. Hostname-based access control should be sufficient for most environments. The performance issue with performing DNS lookups during hostname-based access control is not critical in this case, because access to mod_ oprocmgr occurs infrequently.

1.5.4.2.3 FastCGI Restarts Scripts Containing Errors

FastCGI programs are restarted continuously even if there are errors in the program or configuration. When you start the HTTP Server, ensure that all the FastCGI scripts can be started correctly (by looking at the messages in the log file).

1.5.4.2.4 Global Server IDs for Oracle HTTP Server

You can use Global Server IDs to legally upgrade an export-level browser to use high grade encryption (128 bit) if the Apache server contains an appropriate GS-ID certificate and the browser has been patched to accept a GS-ID certificate. While all browsers are shipped with high encryption, it is disabled for export products. Note that with the recent change in US export laws, using GS-ID will not be necessary in the future; for now, however, if you have an export grade browser and require a high level of encryption, follow the steps below to obtain a GS-ID certificate and enable your browser:

1. Buy a GS-ID Certificate.

   Obtain a GS-ID certificate from an appropriate vendor. Oracle has tested the GS-ID certificate from Verisign at

   http://www.verisign.com/server/prd/g/index.html

   Follow the instructions for downloading and saving the certificate on your server. After obtaining the certificate, the Oracle HTTP Server administrator must update the httpd.conf file. The lines to update are:

   ```
   SSLCertificateFile <pathname>
   /
   gsid.crt
   SSLCertificateKeyFile <pathname>
   /
   gsid.key
   SSLCertificateChainFile <pathname>
   /
   gsidintermediate.crt
   ```

   where pathname is the fully qualified path to the installed Verisign file(s).

2. Buy the Browser Patch.

   Obtain a patch that will allow your browser to upgrade the encryption method. Sources include Apache (www.apache.org) and Fortify

(www.fortify.net/intro.html). Oracle has tested the patch from Fortify. It is straightforward to download and apply to your browser.

1.5.4.2.5 Oracle Demo Certificates Replacement

Oracle Demo certificates (that is, dummy certificates) are included with the Oracle HTTP Server build so that the server may be tested in a non-production mode. Before going to production mode, you MUST replace the Oracle Demo certificate with a real certificate.

1.5.4.2.6 Errors Starting Oracle HTTP Server with "APCHECTL -START" When Using Virtual Hosts

If the port number directive and the NameVirtualHost directive ports do not match, this error will occur. To resolve this issue, make sure that both the port and NameVirtualHost are set to the same port. This can also be resolved by not specifying a port number in the NameVirtualHost directive.

Note that this problem will only occur when starting without SSL.

1.5.4.2.7 Increasing Memory for Apache JServ Applications

If the Apache JServ log or the browser report an "Out Of Memory" condition, the cause is most likely to be that the JVM ran out of memory. This normally happens when data handled by the JVM exceeds its memory allocation pool.

To increase the maximum size of the memory allocation pool for a JVM, use the following steps:

1. Add this line to $ORACLE_HOME/Apache/Jserv/conf/jserv.properties:

   ```
   wrapper.bin.parameters=-mx<size>m
   ```

   where <size> is the size, in megabytes, of the memory allocation pool. The default value is 1 megabyte of memory. Oracle recommends that you use a size of 128 megabytes. To set the value to 128 megabytes, add the following line:

   ```
   wrapper.bin.parameters=-mx128m
   ```

2. Restart the Web server after this change so that it can take effect.

1.5.4.2.8 mod_plsql Requirement

To use the mod_plsql module against a given back-end database, you need to manually install the Oracle PL/SQL Web ToolKit (OWA PL/SQL packages) on the back-end database. The OWA PL/SQL packages should be installed into the SYS database schema; make sure that you have only one installation of the OWA PL/SQL packages. Note that existing Oracle Application Server (OAS) customers upgrading to the *Oracle9i Application Server* have an older version of these packages that must be replaced.

For more information, see *Using the PL/SQL Gateway* in the *Oracle9i Application Server* Documentation Library. Or, you can access the online documentation available at http://*hostname.domain*:*port*/pls/admin_/title.htm.

1.5.4.2.9 Problems with mod_plsql Under Moderate Load

On NT, mod_plsql crashes under moderate load. This issue is explained in Bug No. 1432961 and requires backports for Bug No. 1179779 and Bug No. 1405498 on the Oracle Client and Server side. These fixes should be applied to the 8.1.7 Oracle Client

libraries in your Oracle home, and the corresponding server side fix should be applied to the Oracle Database Server.

Internal testing could not reproduce the issue on Solaris, although the bug does exist on all platforms. If you have these problems on your system, please apply the required patches (8.1.7.1.1 for the Oracle Client and Server side, and 8.1.6.3.2 for the Oracle Server side.) to your platform as well. These patches are complete SQL*Net patches, and information on applying them is released with them. They contain fixes other than the mod_plsql fix described here.

1.5.4.2.10 mod_plsql Caching Error

If mod_plsql caching is not working properly, remove the final slash from the two cache_dir entries in
$ORACLE_HOME/Apache/modplsql/cfg/cache.cfg.

1.5.4.2.11 Restoring Oracle Application Server OWA Packages

When you install the new mod_plsql OWA packages, it places them in the SYS database schema. This can create problems with Oracle Application Server applications using the PL/SQL cartridge. If you experience these problems and want to continue to use your Oracle Application Server PL/SQL cartridge applications, you must recreate the synonyms that reference the Oracle Application Server OWA packages.

To create these synonyms on the origin database machine:

1. Connect to the origin database as the SYS user in SQL*Plus.
2. Run the following commands in SQL*Plus. This drops all of the OWA public synonyms created during the *Oracle9i Application Server* installation process.

```
drop public synonym OWA_CUSTOM;
drop public synonym OWA_GLOBAL;
drop public synonym OWA;
drop public synonym HTF;
drop public synonym HTP;
drop public synonym OWA_COOKIE;
drop public synonym OWA_IMAGE;
drop public synonym OWA_OPT_LOCK;
drop public synonym OWA_PATTERN;
drop public synonym OWA_SEC;
drop public synonym OWA_TEXT;
drop public synonym OWA_UTIL;
drop public synonym OWA_INIT;
drop public synonym OWA_CACHE;
drop public synonym WPG_DOCLOAD;
```

3. Connect to the "`oas_public`" OWA package installation schema.
4. Ensure that the user schema has "`CREATE PUBLIC SYNONYM`" privileges. If it does not, then grant these privileges to the user schema before continuing with the next step.
5. Run the following commands in SQL*Plus. This recreates the OWA public synonyms so that they reference the Oracle Application Server OWA packages.

```
create public synonym OWA_CUSTOM for OWA_CUSTOM;
create public synonym OWA_GLOBAL for OWA_CUSTOM;
create public synonym OWA for OWA;
create public synonym HTF for HTF;
create public synonym HTP for HTP;
```

```
create public synonym OWA_COOKIE for OWA_COOKIE;
create public synonym OWA_IMAGE for OWA_IMAGE;
create public synonym OWA_OPT_LOCK for OWA_OPT_LOCK;
create public synonym OWA_PATTERN for OWA_PATTERN;
create public synonym OWA_SEC for OWA_SEC;
create public synonym OWA_TEXT for OWA_TEXT;
create public synonym OWA_UTIL for OWA_UTIL;
create public synonym OWA_INIT for OWA_CUSTOM;
create public synonym OWA_CACHE for OWA_CACHE;
create public synonym WPG_DOCLOAD for WPG_DOCLOAD;
```

1.5.4.2.12 Manual Installation of OWA Packages Causes Error

If the OWA packages are installed manually in <$ORACLE_HOME>Apache/modplsql/owa, a "File not found" error occurs.

To resolve the error:

1. Open the file <$ORACLE_HOME>Apache/modplsql/owa/owacomm.sql.
2. Change the line

   ```
   spool ..\..\portal30\admin\plsql\owa\owaldscr.sql
   ```

   to

   ```
   spool owaldscr.sql
   ```

1.5.4.2.13 Executing the owaload.sql script

To make the owaload.sql script run correctly, you must always execute it in <ORACLE_HOME>/assistants/opca/. An error occurs if you execute it in <ORACLE_HOME>/Apache/modplsql/owa/.

1.5.4.2.14 mod_plsql Document Upload Fails if cursor_sharing parameter set to "similar"

When running mod_plsql against a 9.0.1 database, you will not be able to upload files if the cursor_sharing parameter in the database initialization file initorcl.ora is set to "similar". In this case, an ORA-3106 error occurs.

This problem will be corrected in the next patch release of 9.0.1. Until then, the workaround is to not use "similar" for the cursor_sharing parameter.

1.5.4.2.15 Known Issue in Upgrading from 8.1.7.0 to 8.1.7.1

If you are running *Oracle9i Application Server*-based mod_plsql applications (such as Oracle Portal), please note that the upgrade to 8.1.7.1 will reinstall the default OWA packages provided with the database. These packages are older than those provided with*Oracle9i Application Server* / Oracle Portal and will cause issues while running some components of Oracle Portal (see bug no. 1745320 for more details). To get around this problem, you will need to reinstall the OWA packages from the *Oracle9i Application Server* shiphome at the end of the upgrade.

If you have not yet upgraded to 8.1.7.1, there is another workaround. Edit the file $ORACLE_HOME/rdbms/admin/catproc.sql and comment out the "@@owacomm.sql"

line which loads OWA packages so that the upgrade script will not reload the OWA packages provided by the database. Instead, the OWA packages already loaded in the database from *Oracle9i Application Server* will be preserved.

Note: If you reinstall the OWA packages, you should recompile all dependent objects that are invalidated.

1.5.4.2.16 mod_rewrite Security Vulnerability

A security vulnerability is present in mod_rewrite that allows certain rules to offer access to any file on the Web server. To avoid these problems, rewrite rules should always map to a full URL rather than mapping directly to a file.

For example, if you have a Web server where DocumentRoot is set to /webroot, do not use:

```
RewriteRule /foobar/(.*)  /webroot/myfiles/$1
```

which directly maps the request to a filesystem location. Rather, use a rule such as:

```
RewriteRule /foobar/(.*) http://myserver.mydomain.com/myfiles/$1
```

which restricts access to files that are accessible by the Apache instance (that is, files under the DirectoryRoot directory tree).

1.5.4.2.17 No Support for CA Facilities of OpenSSL The Certifying Authorities (CA) facilities of OpenSSL are not supported and should not be used. *Oracle9i Application Server* has moved to the Certicom SSL stack, which does not include the CA features of SSL. You should use the openssl command only for generating certificate requests. Other functionality such as examining certificates, signing certificates, and so on, are not supported by Oracle.

1.5.4.2.18 mod_ssl Limitations

In this release, the symmetric encryption algorithms RC2, RC5, IDEA are not supported.

1.5.4.2.19 mod_oprocmgr Documentation Incorrect

The document *Using mod_oprocmgr with mod_jserv* in the *Oracle9i Application Server* Documentation Library (Part No. A90282-01) refers to a status handler that is not completely functional. The items below enclosed in quotation marks should be deleted from the document in order for it to reflect the current functionality of mod_oprocmgr:

Page 2, System Administration section:

"mod_oprocmgr provides a status handler which displays process information stored in shared memory."

Page 3, Changes to httpd.conf section:

"<Location /oprocmgr-status>

SetHandler oprocmgr-status

</Location> "

Page 4, Changes to jserv.properties section:

"or

port=8007 9000-9010 8010 "

Page 7, Checking JServ Process Status section:

"The directive shown in "Changes to httpd.conf" includes a status handler that enables you to monitor JServ processes managed by mod_oprocmgr. You can access the status handler at http://myhost:port/oprocmgr-status, and display a page similar to that shown below."

(The screen capture should also be removed because it shows buttons that are not functional.)

"If there are zeroes instead of port numbers in the Process Port column, it could be that the JServ processes have not yet registered with the process manager. If you refresh the browser window and the port numbers still do not appear, then the JServ processes were unable to start (possibly because the specified ports were unavailable). Ensure that the specified ports are free, and that you have allotted enough port numbers for the JServ processes. To determine the cause of errors, see jserv.log and mod_jserv.log."

1.5.4.2.20 HTTP Server Infrastructure Watcher May Suspend JVM

The infrastructure contains a watcher component that monitors the automatically started JServ processes. If a JServ process stops responding, the watcher terminates it and starts another process to replace it. If the JVM is heavily loaded or performing garbage collection, the JVM will also be suspended. To prevent the JVM from terminating, increase its timeout value (ApJServVMTimeout) in the jserv.conf file, or decrease the JVM heap size to reduce garbage collection time.

1.5.4.2.21 Valid Servlet Requests Fail on Second Request Using Same URL

If a valid servlet is requested once, and then requested again a second time using the URL-encoded version of the servlet's URL, then the second request may fail with an error logged in the Apache error_log.

For example, the second URL in the example below may cause an HTTP error:

```
http://mysite/demo/basic/hellouser/hellouser.jsp
http://mysite/demo/basic/hellouser/hellouser%2ejsp
```

The server will continue to run, and the unencoded version of the URL continue to function properly.

The workaround is to always use the encoded version of each URL or always use the unencoded version of each URL. If it is necessary to mix them, always use the encoded version before using the unencoded version (for each run of the server).

1.5.4.2.22 DMS Clients Require Configuration Change

DMS clients, including flexmon, oasomo, ohsTree, and EMD require a small configuration change to soap.properties in order to operate properly. The SOAP server (and every process group with its own JServ properties file) must contain a zone called "root". DMS clients use this zone to retrieve performance metrics.

To add the "root" zone to the soap.properties file, you must change one line in soap.properties and add one new line to soap.properties.

To make these changes:

1. Open the %ORACLE_HOME%/Apache/Jserv/etc/ jservSoap.properties file and change the line that looks like this:

   ```
   zones=soap
   ```

   to this:

   ```
   zones=soap,root
   ```

Following the line that looks like this

```
soap.properties=%ORACLE_HOME%/soap/webapps/soap/WEB-INF/config/soap.properties
```

Add this line:

```
root.properties=%ORACLE_HOME%/Apache/Jserv/etc/zone.properties
```

(replace %ORACLE_HOME% with your expanded ORACLE_HOME environment variable)

1. Restart the server.
2. To test, use this URL (replace mysite with the hostname:port of your site):

   ```
   @  http://mysite/dms/AggreSpy
   ```

   The first access to the URL may indicate that some metrics are not available, but subsequent accesses should return valid metric values. If the server is not configured correctly, then the URL will cause long timeout delays, errors in the Apache error_log file, and error responses to the HTTP request.

1.5.4.2.23 LANG Environment Variable in JServ

The LANG environment variable specifies the default locale for application programs. To make servlets and JSPs work properly in non-English locales, you must perform the following steps after installing *Oracle9iAS*, and before starting the Oracle HTTP Server:

1. Open $ORACLE_HOME/Apache/Jserv/etc/jserv.properties file so that the default locale of the Java VM running the Servlets and JSPs can be initialized corresponding to the LANG environment variable.

   ```
   #wrapper.env.copy=LANG
   ```

1.5.4.2.24 HTTP Server Timeouts Under Heavy Load

When the Oracle HTTP Server is under heavy load, requests may time out, resulting in incomplete transmission of large (over 10 MB) static files. To remedy this, increase the value of TimeOut directive in httpd.conf.

1.5.4.2.25 Security Implications of "Auto-deploying" SOAP Service Manager In the default SOAP configuration file, `soapConfig.xml`, the services `urn:soap-service-manager` and `urn:soap-provider-manager`, which allows you to deploy additional services and providers is disabled. To enable these services, set the value of the attributes `autoDeploy`, of the element `serviceManager`, in the configuration file, to 'true'. When this attribute is set to 'true' (or not specified), *Oracle9iAS SOAP* deploys the following two services automatically:

- `urn:soap-service-manager`
- `urn:soap-provider-manager`

These two services allow you to deploy/undeploy other SOAP services and SOAP providers, respectively. *Oracle9iAS SOAP*, which is based on Apache SOAP, comes with a Java Provider, which is always deployed. This provider allows you to deploy Java classes as SOAP services. To deploy a Java class as a SOAP service, there are three restrictions:

- The Java class that is used as a service class has to be available to the soap servlet. It should be part of the JServ classpath or the servlet zone repository.

- The Java class that is used as a service class has to have a public no args constructor.
- The method in the service class that can be used by remote clients must have all the arguments de-serializable and the return value serializable. *Oracle9iAS SOAP* contains serializers / deserializers for the following Java types: Java inbuilt types / wrapper classes, Java Beans, Hastable, Vector, `org.w3c.dom.Element`, `base64binary`, Parameter, QName, and arrays of supported types. For any other type, serializer / deserializers has to be custom written and deployed.

There are security implications of having the `urn:soap-service-manager` deployed. A client having access to the URL that hosts the service `urn:soap-service-manager` can deploy / undeploy other SOAP services. A client having access to the URL that hosts the service `urn:soap-service-manager` can deploy / undeploy other SOAP providers. It is therefore essential to 'adequately' protect these services, where the meaning of 'adequately' depends on the environment and security requirements. It is important to note that the same SOAP servlet can host multiple services, as in a n-to-1 mapping between the SOAP service and the SOAP servlet. This means that Apache access control will provide an all-or-nothing protection as the service is identified in the XML payload, which Apache does not understand.

Consider an *Oracle9iAS SOAP*servlet with the sample 'addressbook' (`urn:AddressFetcher`) service deployed along with the `urn:soap-service-manager`. The default SOAP URL is `/soap/servlet/soaprouter`. This means, to access `urn:AddressFetcher` as well as to access `urn:soap-service-manager` which deploys / undeploys new services, a client has to use the relative URL`/soap/servlet/soaprouter`. This means that if a client can access `urn:AddressFetcher`, it can also access `urn:soap-service-manager`.

With the exception of development and testing situations, such all-or-nothing access is rarely the right choice. In addition to custom solutions, such as deploying one servlet per service or having a front end to the SOAP servlet, *Oracle9iAS SOAP* provides the following features to protect `urn:soap-service-manager` and `urn:soap-provider-manager` services, which you might consider when deploying SOAP in production:

1. *Oracle9iAS SOAP* configuration allows one to specify the URLs that must be used to access `urn:soap-service-manager` and `urn:soap-provider-manager`. If those URLs are not used then the servlet will reject the request. Using Apache, one can configure two or more URLs to point to the same servlet. With A and B, A can have a one level of protection and can be specified in the soap configuration to be used for the service manager. B can have another level of protection, as in if the client can access A, it can deploy / undeploy services and can also access other services. A client that can access B but not A cannot deploy / undeploy services, but can access other services. To configure the required URL for `urn:soap-service-manager` under the `serviceManager` element in *`ORACLE_HOME`*`/soap/webapps/soap/WEB-INF/config/soapConfig.xml`, add the following element: `<osc:option name="requiredRequestURL" value="relative-url"/>`. To configure the required URL for `urn:soap-provider-manager` under the `providerManager` element, add the following element: `<osc:option name="requiredRequestURL" value="relative-url"/>`. For example, the URL `/soap/servlet/soaprouter` can be used to access custom soap services, such as `urn:AddressFetcher`. Apache and JServ directives can be used to configure URLs `/soap/admin/servicemanager` and `/soap/admin/providermanager` to point to the same servlet which hosts `urn:AddressFetcher`. Standard Apache and JServ authentication / authorization / access control facilities can be set to

protect /soap/servlet/soaprouter, /soap/admin/servicemanager and /soap/admin/servicemanager, such as allowing only local host to access /soap/admin/servicemanager and /soap/admin/providermanager or requiring SSL with client authentications.

2. *Oracle9iAS SOAP* also has the concept of pre-deployed services and providers. This means that all the services and providers are deployed and no new services and providers are to be deployed, and deployed services and providers are not undeployed. This is done by adding the following element under the serviceManager element in the soap configuration file, *ORACLE_HOME*/soap/webapps/soap/WEB-INF/config/soapConfig.xml: <osc:option name="autoDeploy" value="false"/>. This undeployed the urn:soap-provider-manager services. When the autoDeploy is set to 'true' or not set at all, services can be deployed / undeployed. This means that any client having access to /soap/servlet/soaprouter can deploy / undeploy services. Such a client can deploy classes, which have no args constructors, available in the JServ classpath, as in classes in packages java.lang.*, java.util.*, etc., and the servlet zone. To invoke the method in such a deployed class requires that the appropriate serializer / deserializer also be made available as noted above.

It is strongly recommended that either:

1. Where SOAP is not used, it is disabled
2. The deployed / undeployed feature be disabled
3. Access to the SOAP deploy / undeploy facility be restricted to administrative or test personnel in the manner detailed above.

If *Oracle9iAS SOAP* is not being used, it can be disabled by editing the file *ORACLE_HOME*/Apache/Jserv/etc/jserv.conf and commenting out the following lines.

```
ApJServGroup group2 1 1 $ORACLE_HOME/Apache/Jserv/etc/jservSoap.properties
ApJServMount /soap/servlet ajpv12://localhost:8200/soap
ApJServMount /dms2 ajpv12://localhost:8200/soap
ApJServGroupMount /soap/servlet balance://group2/soap
```

Note: Unlike the four lines above, jserv.conf in an Apache install will have ORACLE_HOME expanded and the ajp port may not be 8200.

1.5.5 *Oracle9iAS* Forms Services Issues

If the OWA packages are installed manually in <$ORACLE_HOME>Apache/modplsql/owa, a "File not found" error occurs.

To resolve the error:

1. Open the file <$ORACLE_HOME>Apache/modplsql/owa/owacomm.sql.
2. Change the line

   ```
   spool ..\..\portal30\admin\plsql\owa\owaldscr.sql
   ```

   to

   ```
   spool owaldscr.sql
   ```

1.5.6 Static IP or Hostname with Registered DNS Required

When Oracle9i Application Server 1.0.2.2.x is installed, the host must have a static IP address or a hostname registered in DNS. Another requirement is that if a backend database is needed (not required for Core install), then the machine which hosts the backend database also needs static IP or a registered hostname.

1.5.7 Oracle Installer Does Not Start If Correct Permissions are Not Granted

During deinstallation, Oracle Installer will not start if you do not have the correct permissions to execute orainst.motif or orainst.

Oracle9i Application Server Supports Oracle9i Database 9.0.1 JDBC Driver

10222 NT/Solaris release notes addendum as per bug 2384672.

Oracle9i Application Server 1.0.2.2.x supports Oracle9i Database 9.0.1 JDBC Driver.

1.5.8 OC4J/JMS Should Not Be Used

OC4J contains a default Java Message Service (JMS) provider called OC4J/JMS (sometimes referred to as OrionJMS). Because OC4J/JMS is not fully JMS 1.02-compliant and was not used to achieve J2EE 1.3 compatibility, we recommend using the Oracle JMS (OJMS) implementation, which is provided. This JMS provider leverages Advanced Queueing (AQ) from the Oracle9i Database and is integrated into Oracle9iAS by means of a resource provider interface.

1.6 Portals Solution Area Issues

The *Oracle9iAS* Portal online help does not get installed during the *Oracle9iAS* install process. Follow these steps to install the help:

From the <ORACLE_HOME>/assistants/opca directory:

1. Run the command below, replacing the variables as applicable:

   ```
   runimp.csh ../../bin/imp <portal_schema>/<portal_password> <database_hostname>
   <database_port> <database_sid> PORTAL_HELP <portal_schema>
   ../../portal30/doc/site/hlp30ca.dmp hlp30ca.dmp.log
   ```

2. Go to the <ORACLE_HOME>/portal30/admin/plsql/wwu directory.
3. Log into the database as the Portal schema owner. Run the following command from the SQL prompt:

   ```
   @utlsbmrg.sql reuse database_user 0
   ```

1.6.1 Wireless Solution Area Issues

This section describes Wireless solutions area issues. It contains the following topics:

- Adapters
- Transformers
- New Search/Sort Feature Introduced into Service Designer
- Debugging
- Testing Wizard
- JDBC Driver

- Supported Devices and Gateways
- Third Party Location Service Providers
- Database Connections
- Notifications
- Bootstrap Repository Provisioning Service
- SQL Adapter Master Services
- Bookmarks in the Personalization Portal
- Service Designer Folder Contents Display
- Multibyte Character Set Support
- Multibyte Character Set Support on Client
- Images in the Personalization Portal
- Web Integration Components and JDK
- Failed to Load Large XML File from Service Designer in Oracle9iAS Wireless
- Personalization Portal

1.6.1.1 Adapters

To address language-encoding issues, new optional input parameters have been added:

- **INPUT_ENCODING** has been added to the URL adapter enabling it to specify the remote XML page's charset.
- **inputEncoding** has been added to StripAdapter enabling it to specify the remote HTML page's charset.

1.6.1.2 Transformers

The HDML, TINY_HTML and WML1.1 transformers have been modified. By default, these modified transformers will NOT be loaded into the Repository.

If you HAVE NOT made changes to the Transformers, simply upload **up11-111.xml**.

If you have modified the shipped version of these transformers: 1.) merge the differences, then 2.) upload the new transformers using the LoadXML utility (you can use **upload.bat**/or **upload.sh**, depending on your hardware platform, with **up11-111.xml** shipped with the patch release). You can find the **upload.bat**/or **upload.sh** script file in panama/sample under ORACLE_HOME. See *Oracle9i Application Server Wireless Edition Configuration Guide* for more information on the LoadXML utility.

1.6.1.3 New Search/Sort Feature Introduced into Service Designer

When you right click on the Master Services node or a folder node, you will find a Search/Sort command. You can search on service names (service names are case-insensitive); wild cards (such as '%') are accepted. Search results can be sorted by Name, LastUpdated Date, or Sequence Number.

The new Search feature is more efficient when you are trying to load a large number of services.

The search results will be the new child nodes of the folder which will be automatically expanded. After you collapse the folder and re-expand it, all of its

children will be loaded by default. In either case, if the result set is too large and surpasses the limit size specified in ptgsd.properties, you will receive a warning, and only part of the result set will be loaded. In this case, if your expected service is not displayed, you must fine tune your search criteria and reaccomplish the search.

1.6.1.4 Debugging

Sending the PAdebug=1 flag as part of a query string will not, by itself, enable the debugging capability. The login user for the current session must be either a Designer or an Administrator. See *Oracle9i Application Server Wireless Edition Implementation Guide* for information on how to create a Designer or an Administrator.

1.6.1.5 Testing Wizard

You must have the Designer role in order to use the Test Wizard inside the Service Designer, otherwise only the device result will be displayed when a service is being tested.

1.6.1.6 JDBC Driver

This release of Wireless Edition only supports the classes12.zip JDBC driver. classes111.zip is no longer supported.

1.6.1.7 Supported Devices and Gateways

For a list of certified devices and gateways supported by Wireless Edition, see the OTN web site at:

`http://otn.oracle.com/products/iaswe`

1.6.1.8 Third Party Location Service Providers

To obtain third party files for using location services in Wireless Edition, see the OTN web site at:

`http://otn.oracle.com/products/iaswe`

1.6.1.9 Database Connections

The default database created by the Oracle8i installation may not be tuned properly for your installation. The "ORA-00020: maximum number of processes exceeded errors" message may appear.

To prevent this, ensure that the `max_processes` database parameter is set high enough, and that the Oracle Net8 dead process detection is configured in your system. See the Oracle8i documentation for more detailed database configuration and performance information.

1.6.1.10 Notifications

When using *Oracle9iAS* Wireless Edition notifications (the AQ Daemon process), note that if a job terminates with an error, it is removed from the job queue. To continue to use the job, correct the error and reschedule the job.

1.6.1.11 Bootstrap Repository Provisioning Service

To use the Provisioning Service in the bootstrap repository, you must first set the input parameters of the master service to be User Customizable.

1.6.1.12 SQL Adapter Master Services

Numeric input parameter names are not allowed in the master service PL/SQL code.

Also, JDBC connect strings that specify a user name and password are not allowed, for example:

```
jdbc:oracle:thin:user/password@hostname:port:sid
```

The connect string information must be of the form:

```
jdbc:oracle:thin:@hostname:port:sid
```

The user name and password must be specified in the User Name and Password fields in the Service Designer.

1.6.1.13 Bookmarks in the Personalization Portal

When creating a bookmark in the Personalization Portal, the http:// prefix must be included in the URL, for example:

```
http://domain_name.com
```

1.6.1.14 Service Designer Folder Contents Display

This release of *Oracle9iAS* Wireless allows you to limit the number of objects displayed in the Service Designer navigational tree. To enable this feature, set the number of objects you want to display by editing the `ptgsd.properties` file.

1.6.1.15 Multibyte Character Set Support

To support multibyte character sets in *Oracle9iAS* Wireless, apply the following configuration changes to your server. (The Java Virtual Machine (JVM) bundled with Web Integration Developer and Web Integration Server does not contain the `i18n.jar` and `font.properties` files and therefore does not support multibyte character sets.)

On the application server:

1. Download the internationalized (or localized) version of the Java Runtime Environment (JRE) from the JavaSoft Web site.
2. Replace the `font.properties` file of the JVM with font.properties.<locale>.

   The JVM path for the server is:

   ```
   %ORACLE_HOME%/panama/WebIntegration/Server/jvm/lib
   ```

3. Edit the `server.sh` file to add the following as a Java command line option:

   ```
   -Dfile.encoding=< encoding>
   ```

   The path for the server script is:

   ```
   %ORACLE_HOME%/panama/WebIntegration/Server/bin/server.sh
   ```

   For example:

   ```
   %JDKDIR%/bin/java -Dfile.encoding=SJIS -ms64M -mx256M classpath %CLASSPATH%
   watt.app.server.Main %1 %2 %3 %4  %5 %6 %7 %8 %9
   ```

1.6.1.16 Multibyte Character Set Support on Client

To support multibyte character sets in *Oracle9iAS* Wireless, apply the following configuration changes to your client installations. (The Java Virtual Machine (JVM) bundled with Web Integration Developer and Web Integration Server does not contain the `i18n.jar` or `font.properties` files and therefore does not support multibyte character sets.)

On the *Oracle9iAS* Wireless client:

1. Download the internationalized (or localized) version of the Java Runtime Environment (JRE) from the JavaSoft Web site at:

   http://java.sun.com/products/jdk/1.2/jre

2. Install the Java Runtime Environment (JRE) from JavaSoft.

3. Replace the `font.properties` file of the JVM with `font.properties.<locale>`. The JVM path for the client is:

   ```
   %JREDIR%\lib
   ```

   For example:

```
SET JDKDIR=jre1.2\lib
```

1. Extract the `developer.zip` file. The path for the file is:

   ```
   %ORACLE_HOME%\panama\WebIntegration\Developer\lib\developer.zip
   ```

   Extract the file's content to:

```
%ORACLE_HOME%\panama\WebIntegration\Developer\lib\developer\
```

1. Edit the `developer.bat` file. The path for the file is:

   ```
   %ORACLE_HOME%\panama\WebIntegration\Developer\bin\developer.bat
   ```

   a. Comment out (REM) the following line:

      ```
      SET JDKDIR=C:\OraHome1\panama\WebIntegration\Developer\jvm
      ```

   b. Point JDKDIR to the new JRE directory where JRE1.2 is installed, for example:

      ```
      REM SET JDKDIR=C:\OraHome1\panama\WebIntegration\Developer\jvm
      SET JDKDIR=jre1.2
      ```

   c. Comment out (REM) the following line:

      ```
      SET CLASSPATH="%JDKDIR%\LIB\RT.JAR;%DEVDIR%\LIB\DEVELOPER.ZIP;
      %DEVDIR%\packages\wmroot\code\classes"
      ```

   d. Change DEVELOPER.ZIP to DEVELOPER in the CLASSPATH. For example:

      ```
      SET CLASSPATH="%JDKDIR%\LIB\RT.JAR;%DEVDIR%\LIB\DEVELOPER;
      %DEVDIR%\packages\wmroot\code\classes"
      ```

   e. Comment out (REM) the following line:

      ```
      "%JDKDIR%\bin\jre" -ms16M -mx32M -classpath %CLASSPATH%
      watt.app.watt.Main -config "%DEVDIR%\config\developer.cnf"
      -home "%DEVDIR%" %1 %2 %3 %4 %5 %6 %7 %8 %9
      ```

   f. Add the following line:

      ```
      -Dfile.encoding=<encoding>
      ```

Add the line as a Java command line option, such as:

```
"%JDKDIR%\bin\java" -Dfile.encoding=<encoding> -ms16M
-mx32M -classpath %CLASSPATH% watt.app.watt.Main -config
"%DEVDIR%\config\developer.cnf" -home "%DEVDIR%"
%1 %2 %3 %4 %5 %6 %7 %8 %9
```

For example:

```
"%JDKDIR%\bin\java" -Dfile.encoding=SJIS -ms16M -mx32M
-classpath %CLASSPATH% watt.app.watt.Main -config
"%DEVDIR%\config\developer.cnf" -home "%DEVDIR%"
%1 %2 %3 %4 %5 %6 %7 %8 %9
```

1.6.1.17 Images in the Personalization Portal

To display the images from the Personalization Portal properly, the DISPLAY environment variable in the `jserv.properties` file must be set properly to configure access to the host on which the server runs.

If the X server runs on the same machine as the *Oracle9iAS* Wireless server, the DISPLAY environment variable in the `jserv.properties` file is set by the installation as follows:

```
wrapper.env=DISPLAY=localhost:0.0
```

From the X server host machine (x_server_host_name in the following example) run the following command:

```
prompt>xhost + <x_server_host_name>
```

If the X server runs on a different machine (x_server_host_name in the following example) than the *Oracle9iAS* Wireless server, set the DISPLAY environment variable in the `jserv.properties` file as follows:

```
wrapper.env=DISPLAY=<x_server_host_name>:0.0
```

From the X server host machine, run the following command using the *Oracle9iAS* Wireless host (wireless_edition_host_name in the following example):

```
prompt>xhost + <wireless_edition_host_name>
```

For both cases, remain logged into the console while the xhost commands are executed. Otherwise, properties set through the xhost command may be lost and images may not be displayed properly in the Personalization Portal.

1.6.1.18 Web Integration Components and JDK

Web Integration Server requires JDK 1.1. If you experience problems with this component, check the Java settings in the following startup file: %ORACLE_HOME%\panama\WebIntegration\Server\bin\server.bat. In some cases, Oracle 8.1.6 on Windows NT modifies a machine's Java environment. As a result, *Oracle9iAS* Wireless Web Integration Developer may generate error messages or fail to start. To fix the problem, either restore your original Java environment by reinstalling Java, or verify that the Web Integration Developer starts with the JVM from the 8.1.6 installation. To do this, modify the following file:

```
%ORACLE_HOME%\panama\WebIntegration\Developer\bin\developer.bat
```

Change the line:

```
SET JDKDIR=%ORACLE_HOME%\panama\WebIntegration\Developer\jvm
```

to:

```
SET JDKDIR=%ORACLE_HOME%\jre\1.1.7
```

1.6.1.19 Failed to Load Large XML File from Service Designer in *Oracle9iAS* Wireless

A problem has been discovered concerning corruption of some XML stylesheets (especially in large files) when they are loaded from ServiceDesigner. It is caused by the XML Parser. A patch has posted at:

`tcpatch:/u01/patch/xdkpatches/bug1736840`

This directory contains three files: **README**, **changed_classes.zip** and a new **xmlparserv2.jar**. The readme file inside the patch directory contains more detailed information about the nature of the problem.

To apply the patch, copy **xmlparserv2.jar** to `$<ORACLE_HOME>/lib`.

1.6.1.20 Personalization Portal

The PAPz-based personalization portal released before *Oracle9iAS* Wireless Edition 1.1 is being officially deprecated in the *Oracle9iAS* Release 1 (v1.0.2.2.0) release, and will be totally de-supported in the next (2.0) production release. The portal-based personalization portal will be the preferred personalization portal and will be the only supported personalization portal in the next production release.

1.6.2 Caching Solution Area Issues

This section describes caching solution area issues. It contains the following topics:

1.6.2.1 Oracle9iAS Database Cache

This section describes database cache issues. It contains the following topics:

1.6.2.1.1 Using *Oracle9iAS* Database Cache with Servlets

To access data cached in the middle tier using servlets, you must enable *Oracle9iAS* Database Cache by setting the ORA_OCI_CACHE environment variable in the servlet environment. Add the following line to the jserv.properties file in the $ORACLE_HOME/Apache/Jserv/etc directory:

```
wrapper.env=ORA_OCI_CACHE=1
```

In addition, the TNS_ADMIN environment variable must be set to the location of the local network configuration. By default, the value is $ORACLE_HOME/network/admin. Add the following additional line to jserv.properties:

```
wrapper.env=TNS_ADMIN=<absolute path to Oracle Home>/network/admin
```

1.6.2.1.2 loadjava Limitation in *Oracle9iAS* Database Cache Environment

Because of known issues with LOB support in the *Oracle9iAS* Database Cache environment (when ORA_OCI_CACHE is set to 1), the loadjava utility will not work.

1.6.2.1.3 Changes to tnsnames.ora and init.ora Requirement

To use the *Oracle9iAS* Database Cache PL/SQL API, you must connect using a Net8 net service name that is constructed using the service name, not the SID. As a result, the tnsnames.ora and init.ora file shipped with this release of *Oracle9i Application Server* need to be changed. See the *Oracle9iAS* Database Cache README file for information about the necessary changes.

1.6.2.1.4 Oracle9iAS Database Cache Configuration Assistant Failure

The Oracle9*i*AS Database Cache Configuration Assistant fails when 'Updating User List' is 96% complete. The following error appears:

```
Updating User List
        Adding users to the cache
        Adding users to the cache failed.
        Reason: WTE-03501 Error updating list of users:
                Export failed on origin database.
        OCI error - ORA-06520: PL/SQL: Error loading external library
        ORA-06522: dlopen: cannot load /lib/libc.so
        ORA-06512: at "SYS.WTCSYS", line 11
        ORA-06512: at "SYS.WTCSYS", line 66
        ORA-06512: at line 1
        Processing failed.
```

A patch for all *Oracle9iAS* Release 1 (v1.0.2) releases is available to fix this problem. The patch is not specific to NT as reported, but fixes the problem on all Oracle9*i*AS Database Cache platforms that have an Oracle origin database running on the following UNIX operating systems:

- HP-UX
- Compaq Tru64
- IBM AIX

Follow these steps to apply the patch:

1. Complete the *Oracle9i Application Server* installation after the error described above occurs.
2. Copy `wtcsini.plb` to the following directory:

   WIndows NT: <ORACLE_HOME>\icache\admin

   UNIX: <ORACLE_HOME>/icache/admin

Rerun the Oracle9*i*AS Database Cache Configuration Assistant from the bin directory.

Windows NT:

```
cd <ORACLE_HOME>\bin
wtacca -create -typical "username=sys" "password=your_password"
```

Unix:

```
cd <ORACLE_HOME>/bin
```

```
wtacca -create -typical "username=sys" "password=your_password"
```

The Oracle9*i*AS Database Cache Configuration Assistant completes without errors.

1.6.2.1.5 *Oracle9iAS Cache* Stops Responding When Caching a Table That Contains a Context Index

Using the `dbms_icache.add_table` procedure to cache a table that contains a context index will cause *Oracle9iAS Cache* to stop responding, or "hang." This will also generate an ORA-600 error in the back-end database. Currently, there is no fix available to resolve this issue.

1.6.2.1.6 Cache Environment Variable Setting

A problem with the ORA_OCI_CACHE system environment variable causes mod_plsql to suspend or stop under moderate load. Ensure that this variable is not set when the Oracle HTTP Server is started.

1.6.2.2 Oracle9*i*AS Portal Configuration Assistant Cannot Connect to Oracle9*i* Database

While installing *Oracle9i Application Server* on Solaris 2.8 against an Oracle9*i* database running on Windows NT SP 6a, *Oracle9iAS Portal* Configuration Assistant requests the password for the sysdba account, and the database connection information. When specified, the following error is generated:

Oracle9iAS Portal Configuration Assistant could not connect to the specified database.

You can connect to the same database using SQL*Plus on the same Solaris machine.

The workaround for this is as follows:

- Install the JDBC patch, which is part of the 8.1.7.2 patchset, over the *Oracle9i Application Server* installation.
- Set '`07_DICTIONARY_ACCESSIBILITY=TRUE`' in the database.

After this, *Oracle9iAS Portal* Configuration Assistant should connect to Oracle9*i* database.

1.6.2.3 Applying RDBMS Patchset 8.1.7.2+ and Preserving *Oracle9iAS Database Cache*

To preserve *Oracle9iAS Database Cache* functionality and apply RDBMS patch set into *Oracle9i Application Server* Oracle Home, take the following steps:

1. Save the `libwtc8` bundled in *Oracle9i Application Server*.
2. Apply the RDBMS 8.1.7.2 patch set.
3. Restore the saved `libwtc8` and relink if needed.

1.6.2.3.1 Configuration Assumes Incorrect Listener Port The default configuration of *Oracle9iAS* Web Cache assumes that the primary Web listener is listening on port 7777. Oracle HTTP Server chooses the port number to listen on dynamically when installed.

If the HTTP Server chooses a port other than 7777, *Oracle9iAS* Web Cache will return an error when trying to access its own port of 1100 because it is unable to connect to port 7777 of the web server.

To correct this problem, change the port number in the "Application Web Servers" screen of the Web Cache Manager to the port on which the HTTP Server is listening.

1.6.2.3.2 Oracle9iAS Web Cache Core Dumps if Capacity Parameter Too Low If the number of requests processed is much larger than the capacity parameter setting, and most of the requests are made to non-cacheable pages, then the web cache may core dump.

To remedy this, set the capacity parameter to a number close to the number of requests expected. A core dump did not occur in a test with 400 clients requesting a non-cacheable page, with the capacity parameter set to 400. In the same test, with the parameter set to 30 (the default), a core dump occurred.

The capacity parameter setting is located in the Application Web Server section.

1.6.3 Business Intelligence Solution Area Issues

This section describes Business Intelligence solution area issues. It contains the following topics:

- Oracle9iAS Reports Services
- Oracle9iAS Discoverer

1.6.3.1 Oracle9*i*AS Reports Services

This section describes Oracle9*i*AS Report Services issues. It contains the following sections:

- Reports Service Fails to Start
- Oracle9iAS Reports Services Hangs Upon Authentication

1.6.3.1.1 Reports Service Fails to Start If you have set the TNS_ADMIN environment variable or registry key to an alternate value, *Oracle9iAS* Reports Service may fail to start with an error 186 or REP-0186. In such a case, you can start *Oracle9iAS* Reports Service from an MS-DOS command prompt as follows:

```
prompt> setenv TNS_ADMIN <IAS_HOME>/6iserver/network/admin
prompt> <IAS_HOME>/6iserver/reports60_server start
```

replacing <*IAS_HOME*> with the directory where you installed *Oracle9i Application Server*. This will force *Oracle9iAS* Reports Service to use the tnsnames.ora file at <*IAS_HOME*>/6iserver/network/admin.

1.6.3.1.2 *Oracle9iAS* Reports Services Hangs Upon Authentication *Oracle9iAS* Reports Services hangs when users authenticate.

To make Reports Portal integration work seamlessly, apply tcpatch 6_0_8_11_3.

1.6.3.2 Oracle9*i*AS Discoverer

This section describes Oracle9*i*AS Discoverer issues. It contains the following topics:

- Oracle9iAS Discoverer Viewer Does Not Display Graphs
- xhost Command Required for Oracle9i Application Server Enterprise Edition for Discoverer
- Using Oracle Internet Server (Discoverer3i) and Oracle9iAS Discoverer (Discoverer 4i) Simultaneously
- Setting up the VNC Server to replace DISPLAY requirement in Oracle Discoverer, Portal, and Reports
- Discoverer 3i Viewer Server Fails on Non-Pseudocolor X11

1.6.3.2.1 *Oracle9iAS* Discoverer Viewer Does Not Display Graphs Graph support for *Oracle9iAS* Discoverer Viewer is disabled by default on UNIX platforms. Reference to this was incorrectly omitted from the *Oracle9iAS* Discoverer Viewer Release Notes. To enable graph support, edit the file:

$ORACLE_HOME/Apache/Apache/htdocs/disco4iv/html/disco4iv.xml

to change the following line from:

<application show_graphs="false"/>

to:

<application show_graphs="true"/>

This also requires that the Window configuration steps noted in the Oracle9i Application Server 1.0.2.2 Release Notes have been completed. (see 1.5.7.1.4 xhost Command Required for Oracle9i Application Server Enterprise Edition for Discoverer).

1.6.3.2.2 xhost Command Required for *Oracle9i Application Server* Enterprise Edition for Discoverer An XWindow display must be available to the Oracle Discoverer servlet for its graphing and charting functions. After you install the Enterprise Edition, you must grant XWindow permissions to the host named in the DISPLAY environment variable in:

```
$ORACLE_HOME/.../Apache/JServ/etc/jserv.properties
```

By default, the DISPLAY variable is the hostname of the machine running *Oracle9i Application Server*. In order for Apache JServ to function properly, you must log in to the console of the host named in the DISPLAY environment variable and issue the xhost command.

For example, if 9iAS is installed on the host london, the DISPLAY environment variable setting in jserv.properties will be:

```
wrapper.env=DISPLAY=london:0.0
```

You must log in to the console of the host london and issue the following command:

```
prompt>/usr/openwin/bin/xhost +london
```

If you change the value of DISPLAY in `jserv.properties` to a different host, you must log in to the console of that host and grant it the XWindow permissions.

For example, suppose 9*i*AS is installed on the host called london, but the DISPLAY variable in `jserv.properties` is changed to the host berlin, as shown below:

wrapper.env=DISPLAY=berlin:0.0

Before using Apache JServ, you must log into the console of berlin and execute the following command to grant london permission to use berlin as a display:

```
prompt>/usr/openwin/bin/xhost +london
```

Note: Each time the DISPLAY host system is restarted, you must issue the xhost command.

1.6.3.2.3 Using Oracle Internet Server (Discoverer3i) and *Oracle9iAS* Discoverer (Discoverer 4i) Simultaneously Oracle Internet Server (Discoverer3i) and *Oracle9iAS* Discoverer (Discoverer4i) share several common components. To run Discoverer3i and *Oracle9iAS*

Discoverer (Discoverer4i) on the same machine, you must execute the following scripts in the order shown below:

1. <iAS_HOME> / 6iserver / discwb4 / util / stopall.sh
2. <iAS_HOME> / 6iserver / discwb33 / util / startoad.sh
3. <iAS_HOME> / 6iserver / discwb33 / util / startosagent.sh
4. <iAS_HOME> / 6iserver / discwb33 / util / startlocator.sh
5. <iAS_HOME> / 6iserver / discwb4 / util / startlocator.sh

1.6.3.2.4 Setting up the VNC Server to replace DISPLAY requirement in Oracle Discoverer, Portal, and Reports The following instructions explain how to install and configure the VNC X-Windows server software to be in conjunction with an *Oracle9i Application Server* Release 1 (v1.0.2.2) installation on Sun Solaris. This is used as a substitute for the requirement of the 'xhost +machinename' command when running Discoverer 4i and Oracle Portal, and allows the software to be run in a more secure mode. This software removes the requirement for the user to execute the 'xhost' command and also eliminates the need to remain logged into the Sun machine. This is because the 'xhost' setting is session dependent, and is therefore lost when the user logs out of the machine on which the command was issued.

Using this VNC software to mange the X-windows sessions in the background, the *Oracle9i Application Server* software is run using this as the VNC Xwindows server, without needing to access the standard X-windows system. The steps to implement this are as follows:

1. Download the VNC software. You can download pre-built binaries from

   http://www.uk.research.att.com/vnc/

   or download the source and build it.

2. Install the VNC Server.

   a. Unzip the install files into a directory of your choice.

   b. Ensure that this directory location is included in the PATH environment variable. The safest option is to create a directory and then add this location to you PATH environment variable (e.g. / private / userhome / VNC).

3. Start the VNC server with the following command:

   ```
   prompt>vncserver :13 -pn -localhost
   ```

   The server starts on display number 13. You can use any display number, as long as it is available and unused by any other software. The default display value is 1.

   A password prompt appears (if this is the first time you are starting VNC after installing it).

4. Set a password. Be sure to remember it for future reference.

5. Start the VNC server again:

   ```
   prompt>vncserver :13 -pn -localhost
   ```

   The following message appears (where 'oracle-sun' is the machine name):

   ```
   New 'X' desktop is oracle-sun:13

   Starting applications specified in /private1/oracle/.vnc/xstartup
   Log file is /private1/oracle/.vnc/oracle-sun:13.log
   ```

6. Verify the VNC server started up correctly by entering:

```
prompt>cat /private1/oracle/.vnc/oracle-sun:13.log
```

A listing similar to that below appears:

```
20/02/01 15:37:59 Xvnc version 3.3.3r2
20/02/01 15:37:59 Copyright (C) AT&T Laboratories Cambridge.
20/02/01 15:37:59 All Rights Reserved.
20/02/01 15:37:59 See http://www.uk.research.att.com/vnc for information on VNC
20/02/01 15:37:59 Desktop name 'X' (oracle-sun:1)
20/02/01 15:37:59 Protocol version supported 3.3
20/02/01 15:37:59 Listening for VNC connections on TCP port 5903
20/02/01 15:37:59 Listening for HTTP connections on TCP port 5803
20/02/01 15:37:59 URL http://oracle-sun:7777
Can't find include file /private1/oracle/.Xresources
```

7. Edit the following lines in the `jserv.properties` file located in:

/$ORACLE_HOME$/Apache/jserv/etc/

```
#Oracle Portal
wrapper.env=DISPLAY=oracle-sun:13.0

#RV adding lines for disco4iv
wrapper.env=DISPLAY=oracle-sun:13.0
```

Ensure that the entries for both Discoverer and Oracle Portal are the same, so that both values point to the VNC Server. The key is the value chosen as part of the install (in this example, the display number 13).

8. Set the DISPLAY environment variable for JServ with the following command:

```
setenv DISPLAY oracle-sun:13.0
```

> **Note:** This is always required before starting the HTTP Server. You must also execute the next step each time you start the server.

9. Set the DISPLAY environment variable for Oracle Reports by performing the following steps:

   a. Edit the Reports configuration file:

```
/$ORACLE_HOME/6iserver/reports60_server
```

   a. Change the line

```
DISPLAY=:0.0
```

   to

```
DISPLAY=oracle-sun:13.0
```

10. Set the xhost value for starting the HTTP Server and JServ with the following command:

```
xhost +oracle-sun
```

where oracle-sun is the machine name. You cannot use 'localhost' to refer to the machine name. JServ will not work without the specific machine name.

Note: You need only run this command before starting the Oracle HTTP Server. However, if the HTTP Server is stopped, you must re-execute this command before the HTTP Server is started again. The same is true of the DISPLAY setting.

11. Start the Oracle HTTP Server.

    The virtual X display starts. You can log off of the console, and the VNC Server will continue to start X Windows sessions for the Discoverer software when required.

12. (Optional) To stop the VNC server, enter this command:

    ```
    vncserver -kill :13
    ```

    The server stops.

13. (Optional) To restart the server, perform step 3, then steps 5 through 9 (step 4 is excluded because you will not need to set a password). You must perform these steps each time the VNC server, Discoverer, or Portal is re-started.

14. (Optional) If you want to run VNC in a more secure mode, see http://www.uk.research.att.com/vnc/sshvnc.html about using VNC with ssh.

1.6.3.2.5 Discoverer 3i Viewer Server Fails on Non-Pseudocolor X11 There is an known issue with ORCA installer running on the X emulator. It happens in the *Oracle9i Application Server* Enterprise Edition install which launches the ORCA/orainst installer to install Discoverer. The orainst installer has a bug that prevents it from running against some types of X emulators. As a result, orainst does not launch and Discoverer scripts are not installed.

Exceed for Win32 X Server and Reflection X Server for Win32 will work, if you set the visual to PsuedoColor:

1. Start the Xconfig program and select "Screen Definition".
2. Set the "Visual" to PsuedoColor.
3. Reset the server.

1.6.4 Management Solution Area Issues

This section describes management solution area issues for Oracle Enterprise Manager. It contains the following topics:

1.6.4.1 Error Returned When Accessing Oracle Enterprise Manager Through a Browser

When you try to access Oracle Enterprise Manager with a browser, an error is returned because your system cannot find the `oem.conf` file. The Oracle Enterprise Manager entry in the `oracle_apache.conf` file contains both back slashes and forward slashes. This is incorrect.

Edit the entry as shown below to resolve this issue.

The incorrect entry is

```
D:\Oracle\M6/oem_webstage/oem.conf
```

The correct entry is

```
D:\Oracle\M6\oem_webstage\oem.conf
```

1.6.4.2 Error Occurs When Expanding JServer Node in Enterprise Manager Navigator Window

If JServer is installed at a port number other than 2481, the following error occurs when you try to expand the JServer node in the Navigator window:

```
org.omg.CORBA INTERNAL (completed=MAYBE)
```

To work around this error, enter the correct JServer port number in the dialog box that appears with the error message.

1.6.4.3 HTTP Server Port Number Not Shown in the Enterprise Manager Navigator Window

The port number associated with the Oracle HTTP Server does not appear in the Navigator window.

To correct this problem, edit httpd.conf to remove any spaces or tabs at the beginning of comment lines. The comment symbol # must appear in the first column of the line, or the Oracle HTTP Server will not strip out comment lines correctly.

1.6.4.4 Java Exception Occurs When Editing HTTP Server from Enterprise Manager

A Java exception occurs if you try to edit the Oracle HTTP Server from the Enterprise Manager console, due to a logic error in parsing the httpd.conf file.

To correct this problem, edit httpd.conf to remove any spaces or tabs at the beginning of comment lines. The comment symbol # must appear in the first column of the line, or the Oracle HTTP Server will not strip out comment lines correctly.

1.6.4.5 Direct Connect Not Supported for Web Servers

The Direct Connect feature of Performance Manager is not supported for web servers. An error occurs if you attempt to use the Direct Connect feature with the web server. There is no workaround.

1.6.4.6 Known Issues for Browser-based EM 2.2

Browser-based EM, Release 2.2 has the following known issues:

- You cannot run browser-based Oracle Enterprise Manager from a Web browser on a Windows machine that has the Pentium 4 processor.
- You cannot run browser-based Oracle Enterprise Manager from a Web browser on a Windows 2000 machine, including Windows 2000 machine with the Xeon processor.
- You cannot enable tracing of browser-based Oracle Enterprise Manager from a Web browser on any Windows platforms.
- You cannot launch browser-based Oracle Enterprise Manager from a Web browser on any Windows platforms by connecting to a Management Server that is using a non-default port number.

To resolve the above issues, you can apply the patch `EM_2.2_2119073` that is available from Oracle*Metalink*. For more details on the patch, refer to the readme included in the patch.

1.6.4.7 EM Patch 2.2 Needs to be Applied During Post Installation

After installing Enterprise Edition, Release 1.0.2.2.2, install patch `EM_2.2_2119073` that is available from Oracle*Metalink*. This will eliminate the JInitiator compatibility issue on Pentium 4 client machines.

1.7 E-Business Integration Solution Area Issues

This section describes E-Business integration solution area issues. It contains the following sections:

1.7.1 Oracle Workflow

This section describes Oracle Workflow solution area issues.

1.7.1.1 Connect String Needed for Oracle Workflow

To install Oracle Workflow Release 2.6, you must include the connect string for your database in $ORACLE_HOME/network/admin/tnsnames.ora. The Workflow installation process requires this information in order to connect to the database.

1.7.1.2 Oracle Workflow Notification Mailer Script Modification Required

Under high load (in testing with 500 clients), a Portal page causes a core dump in the database. The remedy is to increase the database shared pool size.

1.7.2 Oracle Internet File System

This section describes Oracle Internet File System solution area issues.

1.7.2.1 Post-configuration Steps Required for Oracle Internet File System

There are port conflicts between mod_oprocmgr and the Oracle9*i* File System. The jserv.properties file by default has JServ listening only on port 8007. As part of setting up the Group Mount (ApJServGroupMount), Oracle9*i* File System uses the jserv.properties file. This, however, causes a conflict with mod_oprocmgr, which is also using 8007. The solution is to use a different properties file for the ifs group, and use a different port number.

Please note that the automated Oracle9*i* File System servlet configuration does not cater to the revised configuration mechanism in the High Availability feature. These steps are detailed out in the Oracle9*i* File System release notes, and the following steps are in addition to the release notes.

The Oracle9*i* File System release notes contain information on the steps that you must perform to be able to configure the Oracle9*i* File System Servlet with the Oracle HTTP Server for *Oracle9iAS* Release 1 (v1.0.2.2).

You must perform the following steps in addition to the steps mentioned in the Oracle9*i* File System release notes.

1. Stop the Oracle HTTP Server with the following command:

   $ORACLE_HOME/Apache/Apache/bin apachectl stop

2. Go to $ORACLE_HOME/Apache/Jserv/etc.
3. Copy jserv.properties to ifsprops.properties.
4. Edit ifsprops.properties to change the port from 8007 to 13138.
5. Edit jserv.conf to change the properties file for the ifs1110 group to be ifsprops.properties instead of jserv.properties
6. Restart the Oracle HTTP Server with the following command:

   $ORACLE_HOME/Apache/Apache/bin apachectl start

1.7.2.2 Configuring Oracle9i File System and *Oracle9iAS* Email to run on the same machine

The Oracle9*i* File System e-mail component and the Oracle eMail server both use Sendmail for mail transfer. Oracle9*i* File System requires Sendmail version 8.9.3 or later and eMail Server requires versions of Sendmail later than 8. Oracle9*i* File System ships an open source version of Sendmail 8.9.3 for Solaris and other UNIX ports. Windows NT and Windows 2000 installations require purchasing Sendmail version 3.0 or 3.0.2 (respectively) for both e-mail components.

To run the Oracle eMail server and Oracle9*i* File System on the same machine, you must configure them by following the steps below in the order shown:

1. Use the Oracle9*i* File System post-installation scripts to set up the Sendmail 8.9.3 executable and generate the `sendmail.cf` file. (For more information, see the post installation steps in the Oracle9*i* File System Installation Guide).
2. Incorporate the changes required for Oracle eMail server into `sendmail.cf`. (For more information, see Chapter 3, Post installation, in the *Oracle9iAS* Email Installation Guide.)

Note: If you incorporate the eMail server configuration changes into `sendmail.cf` and then run the scripts, the scripts will overwrite the changes (that is, generate `sendmail.cf` anew).

If the IMAP servers provided by Oracle9*i* File System and *Oracle9iAS* Email are to be run on the same machine, you must configure them to listen on different ports. (Use the Oracle9i File System configuration utility and the *Oracle9iAS* Email Administration tool to specify the port for the component.)

For example, you can configure the *Oracle9iAS* Email to listen on the default port 143, and configure the Oracle9*i* File System IMAP server to listen on some other port, as required by the installation.

The clients accessing the IMAP servers must have accounts mapped to these specific ports. To access both servers at the same time, you must use clients that allow you to set the IMAP port number. Alternatively, you can run the two IMAP4 servers on two different *Oracle9iAS* installations.

1.7.3 Incorrect Oracle Internet File System File Name

In the Installation Guide, you are asked to run a script during the last screen of the Oracle Internet File System Configuration Assistant.

You are prompted to run the `ifssetup` script. These scripts will configure your system for Oracle Internet File System email, if this option was selected.

Currently, the Installation Guide states that you have to run `ifssetup`.

1.7.4 Correction to Oracle Internet File System Configuration Steps in Installation Guide

In the installation guide, for Oracle Internet File System Configuration Assistant, Steps 11 and 12:

"A dialog box appears noting that the configuration was successfully completed. Run the ifssetup script as a root user.

The script is located in the ORACLE_HOME\ifs1.1•in directory. This script will configure your system for Oracle Internet File System email, if this option was selected.

Perform the following steps to configure Oracle HTTP Server:

Stop Oracle HTTP Server from Services in the Control Panel.

Run the following script:

```
prompt> ORACLE_HOME\ifs1.1•in\ifsapachesetup
```

Be sure to run this script as the user who owns the Oracle software.

Restart Oracle HTTP Server from Services in the Control Panel.

Start the Oracle Internet File System as root using the ifsstart script. "

should be changed to:

"A dialog box appears indicating that the configuration is complete. To complete the installation, restart the computer."

It is not necessary to run ifsapachesetup.

1.7.5 Oracle9*i*AS InterConnect Recommended init.ora value

The recommended minimum database init.ora parameter values to run all Interconnect adapters are as follows:

db_block_buffers=3200

shared_pool_size=314572800

large_pool_size=61440000

java_pool_size=60971520

1.8 Examples and Demos

Demos and examples for most *Oracle9i Application Server* components can be found at http://<*hostname:port*> where *hostname* is the name of your machine and *port* is your Oracle HTTP Server listener port. For more information on this port, refer to the Apache documentation.

In addition, examples and demos of *Oracle9i Application Server* components are provided on your product CD-ROM and installed in the component directories.

1.8.1 Demo Limitations

This section describes demo limitations. It contains the following topics:

- OracleJSP Demos
- Oracle Business Components for Java Demo Failure

1.8.1.1 OracleJSP Demos

This section describes OracleJSP Demo issues.

1.8.1.1.1 OracleJSP Demos Not Included on Client Side After installation, you must overwrite the demo.zip file in $ORACLE_HOME/.../htdocs file with the zip file $ORACLE_HOME/jsp/demo.

1.8.1.1.2 OracleJSP Demos Intended to Run on Client SIde The OracleJSP demos included with this distribution are not intended to run on the server in Oracle Servlet Engine (OSE)/JVM. Please use the following instructions (which replace instructions in earlier versions of the demo REAMDE), to install the JSP demos in your *Oracle9iAS* environment:

1. Copy the WEB-INF and demo directories to the document root or application root of the web server. Restart the web server.
2. Make sure all the related .jar files are in your web server's classpath. These include:
   - ojsp.jar, ojsputil.jar, and the JDBC (classes111.zip or classes12.zip)
   - SQLJ libraries (runtime and translator zip files)
   - Oracle XML SQL (xsu111.jar or xsu12.jar) and XML parser (xmlparsrev2.jar) if you are doing SQL, SQLJ or XML operations, which many of the demos do. A few samples also need the jndi.jar.
3. For the JESI demos you will need to set up the Oracle Web Cache server.
4. For the Programmable Web Cache demos, you will need Oracle's Caching Service for Java's cache jar.

5. For EJB and CORBA samples, follow the instructions below:

   To run the CallEJB.jsp sample:

   1. Deploy the EJB object in Oracle8*i*. On a UNIX system, commands like the following are required:

      ```
      prompt> cd $ORACLE_HOME/javavm/demo/examples/ejb/basic/sqljimpl
      prompt> make
      ```

   To run the CallCORBA.jsp sample on OSE:

   1. Deploy the CORBA object in Oracle8*i*. On a UNIX system, commands like the following are required:

      ```
      prompt> cd $ORACLE_HOME/javavm/demo/examples/corba/basic/helloworld
      prompt> make
      ```

   2. Put the resulting jar files in the web server's classpath.

6. For the send mail examples, put mail.jar and activation.jar in the web server's classpath.

Note: When you view demo source links with Internet Explorer, some of the source files are rendered as html because they contain <html> tags. For these files, such as the CallEJB.jsp and simple Welcome.jsp, check the source using the Source option on the View menu.

1.8.1.2 Oracle Business Components for Java Demo Failure

If the Business Components for Java demo does not work, your system may not be set up for it. Click on the link for the Business Components for Java on the HTTP Server home page, and follow the instructions in the Sample Application Setup link.

1. $ORACLE_HOME/Apache/Apache/htdocs/OnlineOrders_html/submit_login.jsp

   ```
   session.putValue("CSSURL","/webapp/cabo/images/cabo_styles.css");
   session.putValue("ImageBase", "/webapp/jsimages");
   ```

1.9 National Language Support (NLS) Issues

This section describes NLS issues. It contains the following topics:

- NLS_LANG Environment Variable
- NLS Parameters in the initicache.ora File
- NLS Limitations
- Configuration Assistant Language Limitation

1.9.1 NLS_LANG Environment Variable

mod_plsql When configuring mod_plsql, the NLS_LANG environment variable is configured on a per Web server instance level and not at the DAD level.

Ensure that you have the correct NLS_LANG setting before starting your *Oracle9i Application Server* instance.

Oracle PSP For Oracle PSP, the NLS_LANG environment variable must be set before loading PL/SQL Server Pages (PSPs) into the database using the `loadpsp` command.

Using the JDBC OCI8 driver with JServ and OracleJSP If connecting to Oracle via the JDBC OCI8 driver, the appropriate NLS_LANG setting is required in jserv.properties. For example:

```
wrapper.env=NLS_LANG=AMERICAN_AMERICA.UTF8
```

For information on the NLS_LANG environment variable, refer to the *Oracle8i National Language Support Guide*.

1.9.2 NLS Parameters in the initicache.ora File

The *Oracle9iAS* Database Cache installation creates a cache using the same database character set as the origin database. However, it does not set other National Language Support (NLS) features, such as date format or currency symbols.

If the initialization file (initSID.ora) of your origin database specifies NLS parameters, you must copy those parameters to the initialization file (initicache.ora) of the cache (NLS parameters begin with "NLS_").

For example, if the initialization file of your origin database contains the following parameters, copy them to initicache.ora:

```
NLS_LANGUAGE = JAPANESE
NLS_CALENDAR = "Japanese Imperial"
NLS_DATE_FORMAT = "E YY-MM-DD"
```

The initicache.ora file is located in the $ORACLE_HOME/admin/icache/pfile directory.

1.9.3 NLS Limitations

The following are known NLS bugs in this release:

- Some of the user interface and messages for the Simplified Chinese version of Developer 6*i* Release 2 will appear in English. There is no workaround.
- In the Reports Availability Calendar feature of Reports Server Security using translated versions of *Oracle9iAS* Portal 3.0, some of the calendar headings are truncated. You may choose to use the English-language interface instead.
- In the Japanese version of Developer 6*i* Release 2, the on-line manual *Deploying Applications* will be the same as the manual used for the 6*i* initial release, instead of the manual for 6*i* Release 2. If you require the 6*i* Release 2 version of the manual and it is not part of your printed manual set, please contact your Oracle Support representative.
- In the Traditional Chinese version of Developer 6*i* Release 2 Report Builder, the menu item "File->Generate to file->Delimited", the word "Delimited" should be translated but appears garbled. There is no known workaround.

For the language...	Replace <lang> with...
Brazilian	ptb
French	f
German	d
Iberian Spanish	e

For the language...	Replace <lang> with...
Italian	i
Japanese	ja
Latin American Spanish	esa
Russian	ru

1.9.4 Configuration Assistant Language Limitation

In this release, *Oracle9iAS* Portal Configuration Assistant is certified for use in English only.

1.10 Understanding Port Tunneling

Port tunneling allows all communication between Oracle HTTP Server and JServ to happen on a single, or a small number of ports. Previously, the firewall configuration had to include port information for several ports to handle communication between Oracle HTTP Server and multiple JServ instances. Using port tunneling, a daemon called `iaspt` routes requests to the appropriate JServ instance. Only one, or a small number of ports have to be opened through the firewall regardless of the number of JServ instances involved, thereby offering a higher degree of security for the communication between Oracle HTTP Server and JServ.

To enable this, a de-militarized zone environment is provided where a firewall exists typically between the client and the Oracle HTTP Server, and another that exists between Oracle HTTP Server and JServ. In this configuration, Oracle HTTP Server exists in the DMZ bracketed by the two firewalls. JServ, and other business logic components, exist behind both firewalls in the intranet. To ensure the highest degree of security, all communication transmitted between machines is encrypted using SSL. Port tunneling provides the framework to support this level of security in a flexible, manageable manner, which enhances performance.

The `iaspt` daemon, a stand-alone component, acts as a communication concentrator for connections between Oracle HTTP Server and the Java Virtual Machine (JVM), which contains JServ. Oracle HTTP Server does not connect directly to JServ. Instead, it connects to the `iaspt` daemon which then dispatches communication on to JServ. By doing this concentration of connections, only one port is opened per port tunneling process on the internal firewall, instead of one port per JServ instance.

The communication between Oracle HTTP Server and the `iaspt` daemon is encrypted using SSL. Authentication is enabled when these connections are established using SSL Client Certificates. These connections are persistent, and are maintained for a reasonable time depending on connection resources. The AJP 1.3 protocol, modified to include routing information that indicates which servlet engine a request is to be routed to, is used.

Port tunneling supports connections between Oracle HTTP Server and JServ, using `mod_jserv` module.

There must be at least one `iaspt` daemon per machine. More than one `iaspt` daemon can be run for higher availability. Oracle HTTP Server supports round robin partitioning of requests across `iaspt` daemons, and support application partitioning. Oracle HTTP Server also supports automatic failover of requests which cannot be sent to a given `iaspt` daemon.

1.10.1 Configuring Port Tunneling

The sections below contain instructions for configuring port tunneling on your machine. Topics discussed are:

- Configuration Files
- Configuring iaspt.conf
- Configuring mod_jserv

1.10.1.1 Configuration Files

Port tunneling impacts several configuration files. The following configuration files require modification:

- iaspt.conf
- mod_jserv.conf

1.10.1.1.1 iaspt.conf Configures the port tunneling process.

It is located at:

- UNIX: *ORACLE_HOME*/iaspt/conf
- Windows: *ORACLE_HOME*\iaspt\conf

It specifies the following information:

- wallet file and password that should be used.
- log file location and log level.
- port that `iaspt` daemon should listen on (optionally). This port can either be specified in `iaspt.conf`. By doing so, more than one port tunneling process can use the same `iaspt.conf` file.

1.10.1.1.2 mod_jserv.conf Configures `mod_jserv` within Oracle HTTP Server.

For port tunneling, you need to add the directives that:

- specify whether port tunneling is active.
- configure port tunneling processes.
- specify the location of SSL certificates to be used in establishing connections with the `iaspt` daemon processes.

1.10.1.2 Configuring iaspt.conf

The `iaspt.conf` file is a set of name value pairs. The names of the parameters accepted are described below:

- wallet-file
- wallet-password
- log-file
- log-level
- iaspt-port

1.10.1.2.1 wallet-file Specifies the location of an Oracle Wallet file that contains SSL certificates that are used for SSL communication with peers.

Category	Value
Parameter Name	`wallet-file`
Parameter Type	string
Valid Values	Path to a wallet file that contains the SSL certificate to be used when establishing SSL connections to other processes.
Default Value	N / A
Syntax	Valid filename For example: `/foo/bar/`*`myfilename`*

1.10.1.2.2 wallet-password Specifies the value of the obfuscated password used for authentication when opening the wallet file. This value is obtained using the utility provided with Oracle Wallet Manager.

Category	Value
Parameter Name	`wallet-password`
Parameter Type	string
Valid Values	Obfuscated password used for authentication when opening the wallet file specified by wallet-file
Default Value	N / A

1.10.1.2.3 log-file Specifies the path to a log file where `iaspt` daemon logging messages are written to.

Category	Value
Parameter Name	`log-file`
Parameter Type	string
Valid Values	Path to a log file where `iaspt` daemon logging messages are written to.
Default Value	N / A
Syntax	Valid filename For example: `/foo/bar/`*`myfilename`*

1.10.1.2.4 log-level Specifies the logging level where 9 is the highest and 0 implies no logging.

Category	Value
Parameter Name	`log-level`
Parameter Type	integer
Valid Values	Integer from 0 to 9
Default Value	3

1.10.1.2.5 iaspt-port Specifies the port value that the `iaspt` daemon should accept connections on. This is optional.

Category	Value
Parameter Name	`iaspt-port`
Parameter Type	integer
Valid Values	Valid TCP/IP port value
Syntax	Integer For example: 9898
Default Value	N/A

1.10.1.3 Configuring mod_jserv

Perform the following steps to configure `mod_jserv` to use port tunneling:

- ApJiASPTActive
- ApJiASPTProcess
- ApJiASPTWalletFile
- ApJiASPTWalletPassword

1.10.1.3.1 ApJiASPTActive Indicates whether `mod_jserv` needs to use the port tunneling processes when routing requests.

Category	Value
Parameter Name	`ApJiASPTActive`
Parameter Type	string
Valid Values	On/Off
Default Value	Off

1.10.1.3.2 ApJiASPTProcess Describes the location of an port tunneling processes. There could be multiple such lines within a `mod_jserv.conf` file.

Category	Value
Parameter Name	`ApJiASPTProcess`
Parameter Type	string
Valid Values	*`host:port`* values of the available port tunneling processes.
Default Value	N/A
Syntax	`host:port` For example: *`myhost`*`.us.oracle.com:6667`

1.10.1.3.3 ApJiASPTWalletFile Specifies the location of an Oracle Wallet file that contains SSL certificates used for SSL communication with the port tunneling processes.

Category	Value
Parameter Name	`ApJiASPTWalletFile`
Parameter Type	string

Category	Value
Valid Values	Path to a wallet file that contains the SSL certificate to be used when establishing SSL connections to the port tunneling process.
Default Value	N / A
Syntax	Valid filename For example: `/foo/bar/myfilename`

1.10.1.3.4 ApJiASPTWalletPassword This is the value of the obfuscated password used for authentication when opening the wallet file. This value is obtained using the utility provided with the Oracle Wallet Manager.

Category	Value
Parameter Name	`ApJiASPTWalletPassword`
Parameter Type	string
Valid Values	Obfuscated password used for authentication when opening the wallet file specified by ApJiASPTWalletFile.
Default Value	N / A