

Oracle® Applications

Architecture

Release 11 for Windows NT

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Oracle Applications Architecture, Release 11 for Windows NT

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Release 11

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Preface

Oracle Applications Architecture provides basic information on how the Oracle Applications software and databases are configured, and how you can implement them in a network installation.

Audience

Oracle Applications Architecture explains the technology, concepts, and terminology used in *Oracle Applications Installation*. You should read *Architecture* along with *Installation* if you are responsible for installing or upgrading Oracle Applications. *Installation* provides instructions for installing Oracle Applications products and explains the utilities you use for installation and maintenance. These people typically use *Architecture* and *Installation*:

- Database Administrator
Installs and configures the Oracle database and maintains database access controls. The database administrator provides consultation on performance, monitors growth and fragmentation of the database, and performs database backup and recovery.
- System Administrator
Ensures that hardware is correctly configured, and installs and maintains system software. The system administrator ensures the system is backed up daily and maintains security, such as by establishing system accounts. The system administrator provides first-line support for problems.
- Technical Specialist
Responsible for designing, developing, unit testing, implementing, and maintaining the custom extensions for Oracle Applications. These extensions

include modules such as interfaces, automated data conversions, reports, forms, and enhancements.

Structure

Oracle Applications Architecture contains these chapters:

Chapter 1	Explains the new features of Oracle Applications Release 11, including Network Computing Architecture and Multiple Reporting Currencies.
Chapter 2	Discusses the components of Release 11, including the Release 11 product family, the Windows NT operating system, and the Oracle8 Server database.
Chapter 3	Covers the Oracle Applications data model, including the APPS schema and Multiple Organization architecture.
Chapter 4	Describes the Release 11 file system, including multiple product groups, the product directory structure, localizations, and setting up directories for log and output files.
Glossary	Defines terms used in both the <i>Architecture</i> and <i>Installation</i> manuals.
Index	An alphabetical listing of references to topics in this manual.

Related Documents

All the documentation related to Release 11 is included on the *Oracle Applications Documentation Library* CD, which is supplied with Release 11. You can purchase additional sets of printed and online documentation for Oracle software products

from the Oracle Documentation Sales department, located on the World Wide Web at <http://www.oracle.com/documentation/sales>.

Attention: With the new Release 11 architecture, you may choose to install Oracle Applications software on several machines running different operating systems. For example, the forms server may be a Windows NT machine, but the administration server or Release 11 database may be a UNIX machine. In this case, you would follow the instructions for installing and implementing the forms server from the Windows NT edition of the *Installation* manual, and the instructions for installing and implementing the Release 11 database server from the UNIX edition of the *Installation* manual.

Chapter 1 in this manual explains the different types of servers and their roles in Release 11, and possible ways to deploy this release in a mixed-platform, multi-tier topology.

In addition to *Architecture* and *Installation*, you should refer to these documents:

- *Oracle Applications Installation Release Notes*
The *Release Notes* provide up-to-date information on this release and its components, and may supersede the information in other manuals.
- *Oracle Applications Upgrade Manual*
A successful upgrade requires you to prepare your existing Oracle Applications products as described in the *Upgrade Manual*.
- *Oracle Applications Product Update Notes*
Provides a history of the changes to Oracle Applications since Release 10 SmartClient Production 1.
- Oracle Applications Technical Reference manuals
List information about database structures and help determine what changes you need to make to customizations after an upgrade.
- *Oracle Applications System Administrator's Guide*
Provides additional information you need to administer the Oracle Applications database server.

- *Oracle Applications User's Guide*

The *User's Guide* provides an overview of Oracle Applications, including basic concepts, terminology, and navigation.

- *Oracle Financials Country-Specific Installation Supplement*

Contains country-specific information about responsibilities and report security groups, and provides any additional post-install steps you may require.

Registry Variables

Although the examples in this manual assume a command prompt syntax, you cannot type registry variables (denoted by # delimiters) directly on the command line. If an example shows a registry variable, such as #<PROD>_TOP#, you have two options:

- Run adregenv.exe to copy all the #<PROD>_TOP# registry variables into a .cmd file that can be run from the command prompt.
- Use regedt32.exe to determine the full path of each #<PROD>_TOP# variable, and then type that path in the command prompt in place of #<PROD>_TOP#.

You can only run adregenv.exe after you create a valid Oracle Applications registry subkey. The adregenv.exe file is in the #AD_TOP#\bin directory. To generate the .cmd file, change directories to #AD_TOP#\bin and run the utility from the command prompt:

```
C:\> adregenv <APPL_CONFIG>
```

where <APPL_CONFIG> is the name of a valid Oracle Applications registry subkey. For example, if <APPL_CONFIG> is VD11, type:

```
C:\> adregenv VD11
```

In this example, adregenv.exe creates VD11.cmd in the APPL_TOP directory indicated in the subkey. After running the .cmd file created by adregenv.exe, you can type the environment variable %<PROD>_TOP% without the full path.

Additional Information: For an explanation of the way the # and % symbols are used in this manual, see Conventions in this Preface.

Getting Help

Oracle Consulting Services and Oracle Support Services are the main sources of help for installing Oracle Applications.

Oracle Consulting Services

Oracle Consulting Services can help:

- ❑ determine machine size and database size required by Oracle Applications
- ❑ install or upgrade Oracle Applications
- ❑ implement Oracle Applications products
- ❑ customize Oracle Applications products
- ❑ develop custom applications for use with Oracle Applications
- ❑ train users of Oracle Applications

Oracle Support Services

Have this information ready when you contact Oracle Support Services:

- ❑ your CSI number
- ❑ the operating system and versions of all Oracle Applications servers
- ❑ the release of Oracle Applications you are installing and the versions of the Oracle Server and Oracle tools you are using
- ❑ the release of Oracle Applications you are upgrading from
- ❑ a description of the problem as well as specific information about any error messages you received
- ❑ whether you have dial-in capability
- ❑ the number and status of the AutoInstall parallel workers

Additional Information: Monitoring AutoInstall, *Oracle Applications Installation*

- ❑ the output of the AD Configuration Utility, contained in the adutconf.lst file

Additional Information: The AD Configuration Utility, *Oracle Applications Installation*

Conventions

We use the following typographical conventions in this manual.

Convention	Meaning
Monospace text	Command line text. Type this text exactly as shown.
< >	Text enclosed in angle brackets represents a variable. Remove the angle brackets and substitute an appropriate value for the variable.
[]	Brackets enclose optional items. Do not type the brackets.
	A vertical bar represents an “or” option among several options. You must enter only one of the options. Do not type the vertical bar.
\directory	A backslash before a directory name indicates that it is a subdirectory.
C:\>	Represents the Windows NT command prompt (your prompt may differ).
\	In command examples, a backslash at the end of a line means you must type the entire command on one line. Do not type the backslash.
%<variable>% #<variable>#	%<variable>% refers to variables that may be set in the System applet in the Windows NT Control Panel, at a command prompt, or in the registry. #<variable># refers to variables that will be set in the Windows NT registry only. Variables set only in the registry are not accessible from the command prompt, but can be viewed with the Windows NT registry editor (regedt32.exe). You can also convert registry variables to environment variables with the adregenv.exe utility.

The following special notes alert you about particular information:

Additional Information:	Refers you to portions of this manual, another manual, or the online documentation.
Attention:	Alerts you to important information that will help you use the system.
Note:	Highlights helpful hints and practical tips that can save time and make installation or other procedures easier.
Warning:	Warns you about actions which, if not carried out properly, could be damaging or destructive to your operations.

Send Us Your Comments

Oracle Applications Architecture, Release 11 for Windows NT

Part No. A63472-01

We welcome your comments and suggestions on the quality and usefulness of this publication. Your input is an important part of the information used for revision.

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

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

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- postal service:
Oracle Corporation
Oracle Applications Release Group
500 Oracle Parkway, M/S 30p4
Redwood Shores, CA 94065 U.S.A.

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

Oracle Applications Release 11

This chapter describes the new architectural features in Oracle Applications. Refer to the *Product Update Notes* for information about each product's new features. This chapter includes these sections:

- Release 11 Overview
- Network Computing Architecture
- Network Traffic and Optimization
- New Functionality

Release 11 Overview

Oracle Applications Release 11 is Oracle's complete enterprise suite of Financial, Human Resources, Manufacturing, Supply Chain, and Sales Force Automation software, comprising more than 50 different applications. Because Release 11 uses a Java-based interface, corporations can implement enterprise applications that have all of the benefits of graphical client / server software without installing Oracle Applications client software on each user's desktop. Based on Network Computing Architecture (NCA) designed by Oracle, Oracle Applications can be deployed on any PC, network computer, or other Java-enabled desktop.

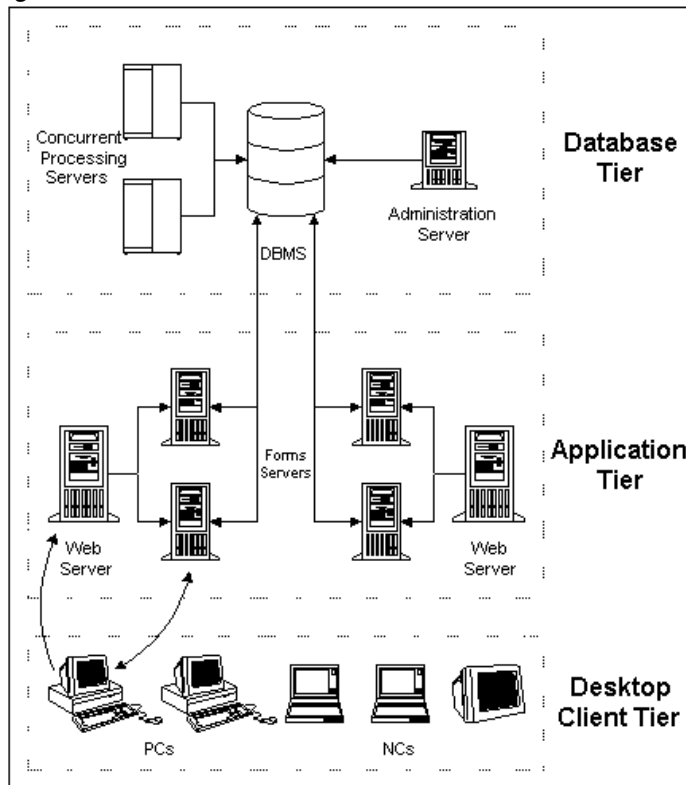
Network Computing Architecture

Network Computing Architecture updates the Release 10 SmartClient model, where application software was installed and maintained on the desktop as well as on servers. In Release 11, the client interface is provided through a Java applet. The client can download the applet on demand, or cache the applet locally and download only when the applet is updated. All updates are installed on the server

and are downloaded to the client automatically from the server. Shifting software administration from the desktop to the network in Release 11 provides you with both a graphical user interface and lower administration costs.

Network Computing Architecture provides Oracle Applications with a framework for *multi-tier*, distributed computing. In the multi-tier computing model, various functions of the Oracle Applications architecture are distributed among multiple levels, or *tiers*, of machines. Although many physical machines may be used in a configuration, scalability derives from processing capabilities on three separate tiers: the desktop client tier, the application tier, and the Release 11 database tier.

Figure 1-1 Overview of Multi-tier Architecture



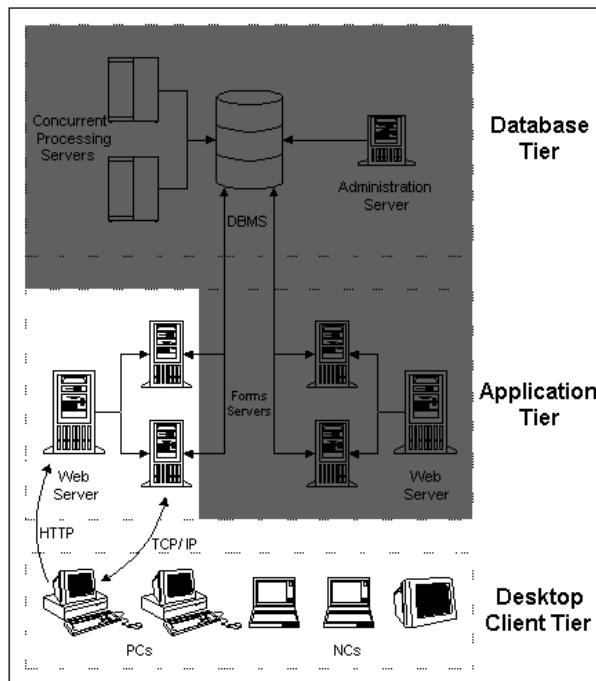
Desktop Client Tier

The *desktop client* runs a Java applet using a Java-enabled web browser or appletviewer. The applet sends user requests to the forms server and handles such

responses as screen updates, pop-up lists, graphical widgets, and cursor movement. The desktop client's Java applet is another component of Oracle's Developer / 2000 application development tool called the *Forms client applet*. It can display any Oracle Applications screen and supports field-level validation, multiple coordinated windows, and data entry aids like lists of values.

A *web browser* or *appletviewer* manages the downloading and storage of the Forms client applet on each user's desktop. They also supply the Java Virtual Machine (JVM) that runs the Forms client applet. The following figure illustrates the communication between the desktop client tier and the other tiers.

Figure 1–2 How the Desktop Client Tier Communicates



JAR Files and Security

The Forms client applet is a general-purpose applet that works with all Oracle Applications, including those with customizations and extensions. To achieve rapid startup and keep network traffic light, the Forms client is packaged as a few Java Archive (JAR) files that contain all the Java classes typically required. The JAR files are downloaded once, at the beginning of the client's first session. Afterwards, they

remain in the browser's local disk cache, ready for future sessions, until updated versions of the JAR files are released.

The JAR files for the Forms client applet use a *digital signature* to guarantee their authenticity to the desktop client. The digital signature is an encrypted message containing the identity of the JAR files' author—in this case, Oracle Applications.

To validate the digital signature, each desktop client holds a *certificate file*. The certificate contains the identity of a "trusted source", and a key that can be used to decrypt messages sent by that source, such as its digital signature. When a web browser or appletviewer submits a request to download the JAR files containing the Forms client applet, the JAR files present their credentials (the digital signature). The web browser or appletviewer decrypts the digital signature and compares the result with what was stored in the certificate. If they match, the signature is considered to be authentic, and the JAR files can be downloaded.

This form of security ensures that the forms server only accepts connections from "certified" Forms clients bearing the Oracle Applications signature. For additional security, all communication between the Forms client applet and forms server is encrypted using the RSA RC4 40-bit standard form of encryption.

Application Tier

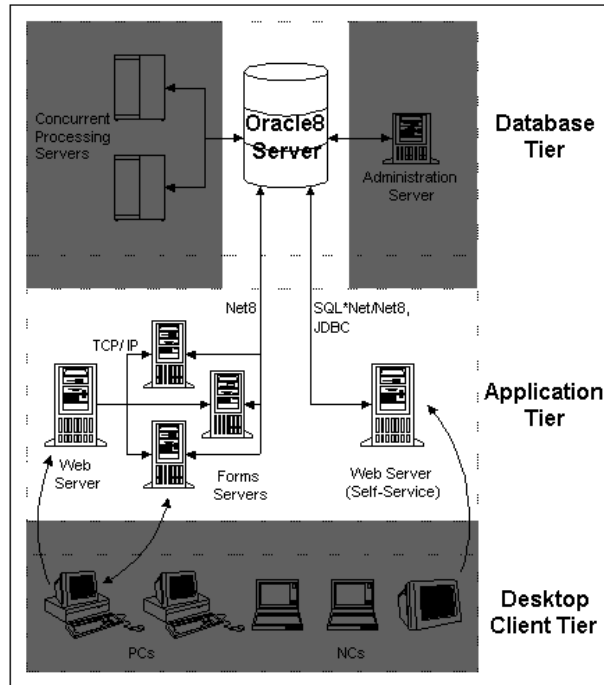
The *application servers* form the middle tier between the desktop clients and Release 11 database servers. They provide load balancing, business logic, and other functionality. In installations that use multiple application servers, only one needs to run the Oracle Application Server software.

Note: There are three terminology changes from earlier releases:

- Some earlier versions of the *Oracle Application Server* were called the *Oracle Web Application Server*.
 - *Application server* now refers to the machine or machines on the middle tier that run the Oracle Application Server and Oracle Forms Server software.
 - The Release 10 database server was often called the *Applications server*. To avoid confusion with the Oracle Application Server in Release 11, the database server is now always called the *Release 11 database server*.
-
-

The following figure illustrates the communication between the application tier and the other tiers.

Figure 1–3 How the Application Tier Communicates



Forms Server

The *forms server* is a specific type of application server that hosts the Oracle Forms Server engine. The Oracle Forms Server is a Developer / 2000 component that mediates between the desktop client and the Oracle8 Server, displaying client screens and causing changes in the database records based on user actions. Data is cached on the forms server and provided to the client as needed, such as when scrolling through multiple order lines. The forms server exchanges messages with the desktop client across a standard TCP/IP network connection.

Load Balancing Among Forms Servers Release 11 provides automatic load balancing among multiple application servers. In a load-balancing configuration, a single coordinator called the *Metrics Server* is on one application server. Metrics Clients located on the other application servers periodically send load information to the

Metrics Server so it can determine which has the lightest load. When a client issues a request to download the Forms client applet, the Metrics Server provides the name of the *least-loaded host* for the applet to connect to. This process is made possible through mediation by the web server and Oracle Application Server.

Automatic failover capabilities are inherent in this load-balancing system. If an application server becomes unavailable for any reason, the Metrics Server ceases to route requests to the server until it comes back online. While the application server is offline, requests are routed to one of the other application servers.

Additional Information: Setting up Load Balancing, *Oracle Developer/2000 Release 1.6.1: Deploying Applications on the Web*; Chapter 4, *Oracle Applications Installation*

Web Server

The *web server* is another type of application server, which runs an *HTTP listener*. The HTTP listener (also called a web listener) is a component of an HTTP server, such as Microsoft Internet Information Server, or Netscape Enterprise Server. This listener accepts incoming HTTP requests (or URLs) from desktop clients, via the web browser or appletviewer. These requests are either immediately processed—for example, by returning an HTML document—or are passed on to the Oracle Application Server, which also resides on this machine.

The Oracle Application Server handles these requests by redirecting them to a *cartridge*. You configure the Oracle Application Server to indicate what types of requests should go to various cartridges that are installed. For example, if you set up the Oracle Forms Load Balancing Cartridge, this cartridge examines the HTML file requested by the desktop client and provides information like the name of the least-loaded host and the username and password for connecting to the Applications database. The results are then delivered to the desktop client via the HTTP listener.

To access Oracle Applications, you start up a web browser or appletviewer and submit a request to the web server for the initial signon HTML page by entering the URL for the page. The page may be processed by the Load Balancing Cartridge, if it has been configured, then is returned to you, along with the Java applet used for accessing Oracle Applications forms. The Forms client applet is invoked with parameters that include the name of the forms server to which the client applet connects. The applet connects to this forms server using a standard TCP/IP connection, and from this point on, you are connected directly to the forms server until you choose to exit Oracle Applications.

The applet parameters also contain information about the Applications database to which the forms server should connect. This makes it easy to set up access to multiple Oracle Applications environments, and to connect to these environments simultaneously. For example, you can create two instances of the Load Balancing Cartridge, and configure one to connect you to a production database, while another connects you to a test database. The Oracle Application Server examines the URL to determine which cartridge instance should process the request. The cartridge then provides the information on which database instance to connect to, and this data is relayed by the HTTP listener back to the desktop client.

Web Server and HTML-based Applications Functionality

Some aspects of Applications are unique in using HTML-generated screens for their interface instead of Oracle Forms. The Oracle Self-Service Web Applications and Workflow Monitor are among this functionality. These products, or portions of products, are designed in pure HTML and JavaScript, and operate by direct connection to an HTTP listener running Oracle Application Server. Logic is controlled through stored procedures that execute through the Oracle Application Server's PL/SQL Cartridge, and Java *servlets*—Java programs executed by the Oracle Application Server—that communicate with the database using JDBC.

The web server used for the Self-Service Web Applications or the Workflow Monitor can be the same as the one used for accessing other Oracle Applications products through Oracle Forms. However, all HTML-based Applications functionality performs load balancing using features in Oracle Application Server, and do not use the Oracle Forms Load Balancing Cartridge.

Web Server and Thin Client Framework

Oracle Applications uses an infrastructure component called Thin Client Framework (TCF) to support a variety of Java-based features which complement the main Forms-based user interface. TCF is a foundation for building multi-tier Java applications by providing an efficient network communications protocol and generic services. The first features to use TCF are the Object Navigators used by AK, MRP, and WIP. Object Navigators are used to display hierarchical data in a visual layout analogous to the Windows Explorer.

Features using TCF rely on the presence of a listener process, called the TCF SocketServer, on an application server. This process can run on any server machine. However, because the Java software it requires — Java Runtime Environment and

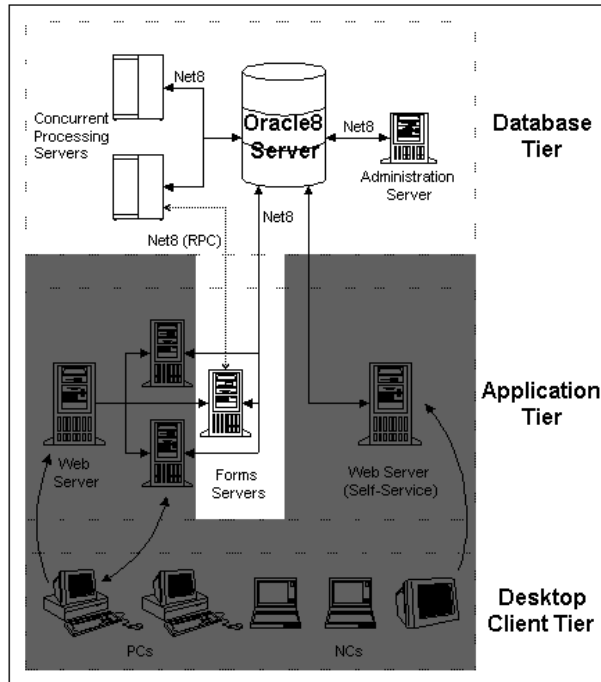
JDBC — are already installed on any standard Applications web server, we recommend that the process run on an Applications web server.

Attention: Thin Client Framework and Object Navigator functionality are available in the 11.0.1 FND patch set. Instructions on configuring the TCF SocketServer process are in the on-line Documentation Updates for the *System Administrator's Guide*.

Release 11 Database Tier

The database tier holds all data and data-intensive programs, and processes all SQL requests for data. The database tier includes the Release 11 Server, the administration server, and the concurrent processing server. By definition, machines in this tier do not communicate directly with Applications users, but rather with machines on the application tier that mediate these communications, or with other servers on the Release 11 database tier.

The following figure illustrates the communication between the Release 11 database tier and the other tiers.

Figure 1–4 How the Database Tier Communicates

Release 11 Database Server

The Release 11 database server contains the data associated with Oracle Applications. This machine does not contain any Oracle Applications *files*, only the Oracle8 Server files, and a database instance that stores the tables, indexes, and other database objects used by Oracle Applications.

The installation process for Oracle Applications begins here, by installing and creating a database and configuring Net8 to accept connections from other servers. Once you have created your database, you administer the Applications data from the administration server.

Administration Server

The administration server is the machine from which you maintain the data in your Applications database. There are three types of operations you will carry out here, each using a different program:

- installing and upgrading the database

This process is only done when you are installing a new release, or are upgrading to a new minor or major release. You use the AutoInstall program to do this.

- applying Applications database updates

Most bug fixes will consist of new files and scripts that update database objects. You use the AutoPatch program, `adpatch.exe`, to apply the updates to the database objects from the administration server. (AutoPatch is also used on other servers to update the file systems on those machines.)

- maintaining the Applications data

Some features, such as MultiLingual Support and Multiple Reporting Currencies, require regular maintenance to ensure updates are propagated to the additional schemas used by these features. The AD Administration program (`adadmin.exe`) allows you to do this. (You can also administer files on other tiers using this program.)

These administration tasks can only be performed when users are not accessing the system, and none of the operations listed above provides interaction with Applications users. This means that the administration server is the most infrequently used, compared to other servers in the Applications multi-tier environment, and has the smallest computing requirements. You therefore should not need to have more than one administration server for your installation.

Additional Information: Chapter 5, *Oracle Applications Installation*

Concurrent Processing Server

Most interaction with Applications data is done through Applications forms. There are also reporting programs, however, that periodically need to be run. These programs may contain a very large number of computations, so to ensure that they do not interfere with interactive operations, they can be configured to run on a separate machine called the *concurrent processing server*.

Concurrent Processing

Processes that run on the concurrent processing server are called *concurrent programs*, and operate in the background while you and other users continue to work on other tasks. These programs are typically executables written in C or reports written using Oracle Reports. You submit a request to run concurrent programs through Applications forms, which insert the request into a database table. When the table is read by a monitoring process, the request is assigned to one

of several *concurrent managers* (also referred to as *workers*) running on the concurrent processing server. The concurrent manager processes the request (which may involve calling another program, for example, or running Oracle Reports), and generates log and output files, which are stored on the concurrent processing server. The *Internal concurrent manager* process monitors the database table for new requests, controls the other concurrent managers, and determines when a request should be processed and which concurrent manager should carry it out.

Additional Information: Overview of Concurrent Processing,
Oracle Applications Systems Administrator's Guide

Interaction with Forms Servers

Most of the time, the concurrent processing servers only communicate directly with the Release 11 database server. For example, all concurrent requests are entered and controlled through Applications forms, which update information in database tables. These tables are then polled on a regular basis by the Internal concurrent manager process.

Occasionally, however, the forms servers may need to communicate directly with the concurrent processing servers. This may be necessary to retrieve reports for on-line viewing, or to run a program that returns its results to the Applications user interactively, rather than in the background. The forms server achieves this by using Net8 to issue a Remote Procedure Call (RPC) to the concurrent processing server. The concurrent processing server runs a Net8 Listener, which responds to the request by invoking an Oracle Applications executable, then returning the results to the forms server via Net8.

Although these connections with the forms server are much less frequent than communications with the Release 11 database server, network latency between the concurrent processing server and forms server may result in Applications data being returned more slowly to Applications users. This may, therefore, have an impact on how you decide to distribute and configure the servers on your database tier with respect to those on the application tier.

Additional Information: Set Up the Report Review Agent, *Oracle Applications Installation*

Network Traffic and Optimization

Oracle Applications Release 11 operates efficiently over a Wide Area Network (WAN) or dial-up connection. Only one network round-trip is needed between the

forms server and desktop client for field navigation, and only a few round-trips are needed to change forms.

Forms Server and Forms Client Applet

The Forms client applet handles all screen and local data management directly, without contacting the forms server. Such operations as scrolling through records, moving between windows, or typing characters in a field produce no network traffic at all. In contrast to block-mode clients, the Forms client applet also knows what user interface operations can benefit from immediate contact with the forms server—for example, entering data in a validated field.

When an end user tabs out of a validated field or performs some other action that requires an immediate response, the Forms client applet sends a single message to the forms server that describes the event in shorthand form—for example, "John Proctor entered in Name field" or "list of values button clicked." The forms server replies with a single message that conveys all of the changes that need to be made in the user interface to convey a full and complete response to this event, again in shorthand form. Depending on the situation, the response might consist of changing values in other fields displayed on screen, popping up a dialog box that presents a choice of valid entries for the field, making new UI elements appear and old ones disappear, or relaying an error message (or other advice) that requires immediate attention. This approach minimizes the number of network round trips and reduces bandwidth consumption.

Performance Considerations

There are several ways you can improve the performance of the Oracle Applications, depending on your networking environment and server distribution.

- Minimize network latency between the forms servers and Release 11 database server.

The majority of network exchange occurs between the application tier and the database tier. We strongly recommend that these components of your network topology have the lowest-possible latency and highest-possible bandwidth between them. For example, all forms servers and the Release 11 database server should be installed on the same subnet, and should communicate with one another using a high-speed network connection.

- Minimize network latency between concurrent processing servers and Release 11 database server.

Concurrent programs are typically very data-intensive, and can generate heavy network traffic to and from the Release 11 database server. Because these jobs are intended to run as background tasks, this traffic is not optimized for operation over wide-area networks. However, depending on the volume and frequency of requests you handle in your environment, you may be able to cope with minor amounts of network latency here, as it will not be perceived by Applications users as an interruption or delay in their interactive operation. This does not apply to traffic between the forms server and Release 11 database server, as indicated previously.

- Use load balancing to evenly distribute connections among multiple forms servers.

Developer/2000 provides a load balancing feature that allows you to dynamically balance load among multiple forms servers running Oracle Forms Server.

Additional Information: Setting Up Load Balancing, *Oracle Developer/2000 Release 1.6.1: Deploying Applications on the Web*

- Download Java archive files from a local file server when connecting over slow or wide-area networks.

Network traffic requirements between desktop clients and the forms servers are considerably smaller, since only changes in the graphical user interface are transmitted once the Forms Java applet is downloaded at startup. This initial startup time can be improved when connecting over slow or wide-area networks by having the desktop clients download the Java archive files from a local file server rather than the application server. This avoids having each user download the applet over the WAN when a new version is released. See Modify the Initial HTML Signon File in Chapter 4 of *Oracle Applications Installation* for details on how to configure this.

Additional Information: Chapter 4, *Oracle Applications Installation*

- Pin stored packages in your Oracle8 System Global Area.

This prevents your SGA from becoming fragmented and affecting performance.

Additional Information: Chapter 4, *Oracle Applications Installation*

New Functionality

Although the underlying architecture differs, Release 11 includes all the functionality of Release 10 SmartClient. This section highlights some features that are new in Release 11 or that operate differently than in Release 10 and Release 10SC. Refer to the *Product Update Notes* for specific information about each product's new features.

Multiple Reporting Currencies

The Multiple Reporting Currencies (MRC) feature allows you to create, maintain, and report on accounting records at the transaction level in more than one functional currency. You do this by defining one or more reporting sets of books, in addition to your primary set of books. In your reporting sets of books, you maintain records in a functional currency other than your primary functional currency. You can set up as many as eight reporting sets of books for each primary set of books.

Typically, you should use MRC if:

- you operate in a country with an unstable currency and you need to concurrently report your business in a hard currency.
- your company is multinational, and you need to report financial information in a common functional currency other than that of the transaction or your primary functional currency.
- you operate in a country that is part of the European Monetary Union (EMU), and you want to concurrently report in euro in preparation for the single European currency.

Additional Information: Multiple Reporting Currencies in Chapter 3 of this manual

Attachments

In Release 11, you can attach files of nearly any kind—word processing, spreadsheet, image, audio, and video—to records for subsequent viewing or retrieval. You can attach a scanned image to illustrate a product record, for example, or a Microsoft Word file with an embedded Microsoft Excel spreadsheet to justify a purchase order. When opened, attached files are sent to the desktop clients web browser, which displays them using the helper application for that MIME type. Attachments can either be files accessible from the web, which are attached using their URL, or files on the local file system, which Oracle Applications uploads and stores on the Release 11 database server.

Spreadsheet Export

You can export the contents of customizable, auto-querying folders and other multi-record regions directly to a spreadsheet program. When opening the spreadsheet, the web browser uses the spreadsheet program set up as the helper application for this mime type.

Additional Information: Document Update section, *Oracle Applications User's Guide* (HTML version only)

Context-sensitive Help

Release 11 help text is in HTML format. The help text is displayed in the desktop client's web browser as context-sensitive help when you click the help button (represented as a question mark) on any Oracle Applications screen. Or, you can use the Oracle Information Navigator (OIN) where indicated to perform Full-Text Search on the documentation library.

Additional Information: *Oracle Applications User's Guide*

Report Review

Oracle Applications uses a tool called the Report Review Agent to view concurrent processing files online. This utility is on the concurrent processing server and uses Net8 to transfer files from the concurrent processing server to the forms server. It then transmits the file contents—one page at a time or in its entirety—to the desktop client. The forms server sends reports to the client web browser for online viewing in either unformatted text, HTML, Adobe Acrobat format, or PostScript format.

Additional Information: Chapter 4, *Oracle Applications Installation*

Oracle Payroll

Full installations of Oracle Payroll were not supported in earlier Oracle Applications releases. Oracle Payroll can be fully installed in Release 11.

System Components

This chapter explains the basic Oracle Applications software components. You can find information on the following topics:

- Release 11 Products and Product Families
- Underlying System Components

Release 11 Products and Product Families

The following table lists the names, abbreviations, and TOP environment variables of products included in Release 11.

Note: In Release 11, all Oracle Applications products are at release level 11.0.28.

Table 2–1 *Release 11 Products*

Oracle Applications Product	Abbreviation	Environment Setting
DateTrack	dt	DT_TOP
FastFormula	ff	FF_TOP
Global Accounting Engine	ax	AX_TOP
Oracle Alert	alr	ALR_TOP
Oracle Applications Implementation Wizard	az	AZ_TOP
Oracle Application Object Library	fnd	FND_TOP
Oracle Applications DBA	ad	AD_TOP

Table 2–1 Release 11 Products

Oracle Applications Product	Abbreviation	Environment Setting
Oracle Applications Utilities	au	AU_TOP
Oracle Assets	fa	FA_TOP
Oracle Automotive	veh	VEH_TOP
Oracle Bills of Material	bom	BOM_TOP
Oracle Capacity	crp	CRP_TOP
Oracle Cash Management	ce	CE_TOP
Oracle Common Modules	ak	AK_TOP
Oracle Cost Management	cst	BOM_TOP
Oracle EDI Gateway	ec	EC_TOP
Oracle Engineering	eng	ENG_TOP
Oracle Financials for Asia / Pacific	ja	JA_TOP
Oracle Financials for Europe	je	JE_TOP
Oracle Financials for Latin America	jl	JL_TOP
Oracle Flow Manufacturing	flm	FLM_TOP
Oracle General Ledger	gl	GL_TOP
Oracle Human Resources	per	PER_TOP
Oracle Inventory	inv	INV_TOP
Oracle Master Scheduling / MRP	mrp	MRP_TOP
Oracle Order Entry / Shipping	oe	OE_TOP
Oracle Payables	ap	AP_TOP
Oracle Payroll	pay	PAY_TOP
Oracle Product Configurator	cz	BOM_TOP
Oracle Projects	pa	PA_TOP
Oracle Project Manufacturing	pjm	PJM_TOP
Oracle Public Sector General Ledger	gl	GL_TOP
Oracle Public Sector Payables	ap	AP_TOP
Oracle Public Sector Purchasing	po	PO_TOP

Table 2–1 Release 11 Products

Oracle Applications Product	Abbreviation	Environment Setting
Oracle Public Sector Receivables	ar	AR_TOP
Oracle Purchasing	po	PO_TOP
Oracle Quality	qa	QA_TOP
Oracle Receivables	ar	AR_TOP
Oracle Release Management	rla	RLA_TOP
Oracle Application Report Generator	rg	RG_TOP
Oracle Sales and Marketing	as	AS_TOP
Oracle Sales Compensation	cn	CN_TOP
Oracle Self-Service Web Applications	icx	ICX_TOP
Oracle Service	cs	CS_TOP
Oracle SSP / SMP	ssp	SSP_TOP
Oracle Supplier Scheduling	chv	PO_TOP
Oracle Supply Chain Planning	msc	MSC_TOP
Oracle Time Management	hxt	HXT_TOP
Oracle Training	ota	OTA_TOP
Oracle U.S. Federal Human Resources	ghr	GHR_TOP
Oracle Work in Process	wip	WIP_TOP
Regional Localizations	jg	JG_TOP

Product Families

Oracle Applications are grouped into several families of products. These families work together, rely on common underlying components, or have similar industry uses.

Figure 2–1 Oracle Applications Product Families and Products



Oracle Alert

Oracle Alert is installed automatically under the Oracle Application Object Library ORACLE database schema. Oracle Alert notification and expense processes are both supported. You can use Oracle Alert on NT with Microsoft Exchange or another MAPI-compliant mail system. Please refer to the *Release Notes* for a list of supported MAPI-compliant mail systems.

Additional Information: *Oracle Alert User's Guide*

Oracle Human Resource Management Systems

FastFormula and DateTrack are available as dependent products only. These products must be installed in the same ORACLE schema as Oracle Human Resources and Oracle Payroll. The default user ID for this product family is HR/HR. You can, however, install other HRMS products in their own ORACLE database schemas.

Oracle Manufacturing

Oracle Manufacturing refers to the product family listed in Figure 2–1. Oracle Inventory provides the basic Oracle Cost Management functionality. Oracle Bills of Material and Oracle Work in Process provide the remaining functionality. Oracle Cost Management, therefore, does not show up on the AutoInstall screens as a separate product that you can install.

Oracle Projects

Oracle Projects consists of either Oracle Project Billing or Oracle Project Costing. When you choose to install Oracle Projects, AutoInstall prompts you to choose the Billing or the Costing product. When you install Oracle Project Billing, you automatically get Oracle Project Costing as well.

System Issues

This section discusses installation issues and restrictions for Oracle Applications systems in general.

Required Products

Each Oracle Applications installation requires the following products:

- Oracle Application Object Library
 - Provides the common functions for Oracle Applications products.

- Oracle Alert
Provides shared messaging and alert functionality. It is installed automatically as a shared product. To use the functionality of Oracle Alert, you must select it to be fully installed.
- Oracle Applications DBA
Provides programs that let you install, upgrade, administer, and maintain an Oracle Applications system. It is installed automatically as a shared product only.
- Oracle Applications Utilities
Includes shared PL/SQL resources (including PL/SQL libraries, graphics, and forms) used by all Oracle Applications products. AutoInstall copies these shared resources automatically from other product directories.

When you estimate required system resources, be sure that you have enough disk space for these products as well as for all other Oracle Applications products you have licensed.

Full Product Installations Required

In addition, some Oracle Applications products require full installations of other products. AutoInstall automatically sets the required products to install as necessary. For example, Table 2–2 shows that you must install Oracle Inventory fully in order to install Oracle Bills of Material fully. When you choose to install Oracle Bills of Material fully, AutoInstall sets Oracle Inventory to install fully.

Table 2–2 Full Product Installation Requirements

A full installation of this product...	Requires full installations of these products...
Oracle Bills of Material	Oracle Inventory
Oracle Capacity	Oracle Bills of Material, Oracle Inventory, Oracle Master Scheduling / MRP
Oracle Engineering	Oracle Bills of Material, Oracle Inventory
Oracle Flow Manufacturing	Oracle Bills of Material, Oracle Inventory
Oracle General Ledger	Oracle Report Generator
Oracle Master Scheduling / MRP	Oracle Bills of Material, Oracle Inventory
Oracle Order Entry / Shipping	Oracle Inventory, Oracle Receivables
Oracle Payroll	Oracle Human Resources

Table 2–2 Full Product Installation Requirements

A full installation of this product...	Requires full installations of these products...
Oracle Product Configurator	Oracle Bills of Material, Oracle Inventory, Oracle Order Entry / Shipping, Oracle Receivables
Oracle Report Generator	Oracle General Ledger
Oracle Quality	Oracle Inventory
Oracle Release Management	Oracle EDI Gateway, Oracle Inventory, Oracle Master Scheduling / MRP, Oracle Order Entry / Shipping, Oracle Receivables
Oracle Sales Compensation	Oracle General Ledger
Oracle Service	Oracle Order Entry / Shipping
Oracle SSP / SMP	Oracle Human Resources
Oracle Supplier Scheduling	Oracle Purchasing
Oracle Supply Chain Planning	Oracle Bills of Material, Oracle Inventory, Oracle Master Scheduling / MRP
Oracle Time Management	Oracle Human Resources, Oracle Payroll
Oracle U.S. Federal Human Resources	Oracle Human Resources
Oracle Work in Process	Oracle Bills of Material, Oracle Inventory

Dependent Products

AutoInstall installs all objects and seed data for all Oracle Applications products (except JA, JE, and JL) in your database, regardless of whether you have licensed the product.

In addition, the Oracle Applications products you license for full installation may require product file components from *dependent* (also called *shared*) products. For example, Oracle Purchasing uses product file components of Oracle Payables. This makes Oracle Payables a dependent product of Oracle Purchasing. If you fully install Oracle Purchasing but not Oracle Payables, Oracle Payables is installed automatically as a dependent product.

A dependent product installation includes only the product files needed by your combination of fully installed products. In the example in the previous paragraph, the Oracle Payables dependent product installation includes only the files needed by Oracle Purchasing.

Before you install an Oracle Applications system, you need to verify that you have enough database space for all database objects for all Oracle Applications. Also verify that you have enough product file disk space for dependent products as well as for fully installed products. *Oracle Applications Installation* lists the disk space required for dependent products.

Localizations

Localizations are modules that extend Oracle Applications to meet the unique business requirements of one or more geographic regions. Localizations are different from customizations, which are created to meet the unique requirements of a specific site.

Release 11 has four localization module sets:

- Asia/Pacific
- Europe
- Latin America
- Regional

Each localization module contains forms, reports, seed data, and database objects for use with Oracle Applications in that region. By default AutoInstall does not select localizations for installation. You select the localization modules to install.

Additional Information: Localization Directories in Chapter 4 of this manual

Oracle Applications Language Translations

Oracle Applications is available in several languages. When you license Oracle Applications in a language other than American English, you receive an additional CD that contains translated forms, reports, seed data, help text, and messages. *Oracle Applications NLS Installation Guide* includes information on how to install Oracle Applications in any of the supported languages.

Additional Information: Language Directory Structure in Chapter 4 of this manual

Underlying System Components

This section explains what you need to know about the operating system, the Oracle8 Server, and the Oracle tools to install or upgrade Oracle Applications.

Windows NT Operating System

Running the AutoInstall program requires a minimum knowledge of the Windows NT operating system. Preparing for and finishing an installation or upgrade requires a more extensive knowledge of the operating system, however. At a minimum, you should know how to do the following:

- start Windows NT and NT Services
- create Windows NT user accounts
- navigate and run commands at the command prompt
- create directories
- edit a file with a text editor
- determine the amount of available real memory and file system disk space

Oracle8 Server

Oracle Applications Release 11 uses Oracle8 Enterprise Edition Release 8.0.4 (or later versions that are certified for compatibility) to store and update Oracle Applications data. Your site needs a database administrator who has access to the ORACLE SYS and SYSTEM accounts. The database administrator must be able to do the following:

- create a database
- create a control file
- set database initialization parameters
- shut down and restart a database
- create and size tablespaces and rollback segments
- export and import a database

The Oracle8 Server documentation explains how to set up and administer a database.

Additional Information: *Oracle8 Concepts* and *Oracle8 Administrator's Guide*

Oracle Tools

Users of Oracle Applications do not use the Oracle tools directly. The tools form the technology stack upon which Oracle Applications runs, and specific versions of

these tools are certified for use with Release 11. The tools must be installed and running before you install Oracle Applications. As the tools are interrelated, only certain combinations of versions are supported.

WARNING: Review the Release Notes, check MetaLink, or contact Oracle Support Services to find out which other combinations of tool versions are certified with Oracle Applications.

Data Model

This chapter describes the Oracle Applications data model. It includes a discussion of the following topics:

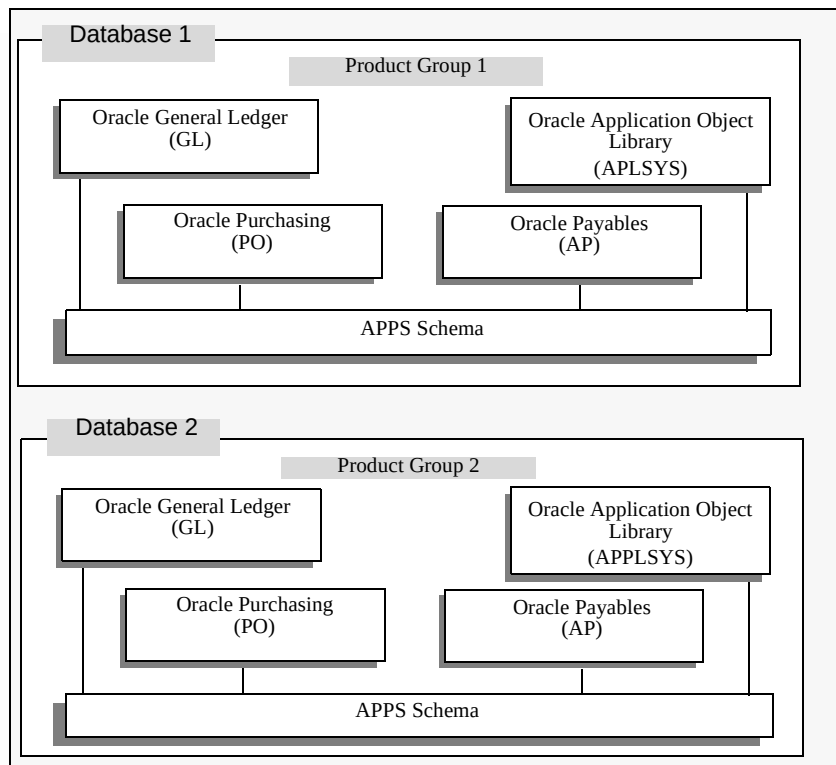
- Basic Data Model
- Multiple Organization (Multi-Org) Architecture
- Multiple Reporting Currencies
- Multiple Sets of Books
- Oracle8 Server Organization and Requirements

Basic Data Model

Each installation of Oracle Applications product schemas, along with a single Oracle Application Object Library schema, defines a product group. Each product group can contain any number of Oracle Applications products in addition to Oracle Application Object Library.

Product Groups

In Release 11, you can have only one product group in each database. Figure 3–1 illustrates two identical product groups installed in separate databases. Because the products reside in separate databases, they can use the same ORACLE schema names. The schema names are shown here as the default names GL, PO, AP, and APPLSYS. The products installed in each database do not have access to the data of products installed in another database. For example, PO installed in Database 1 cannot access the data from AP installed in Database 2.

Figure 3–1 Multiple Product Groups in Separate Databases

ORACLE User IDs

Each Oracle Applications product has a default ORACLE user ID that uses the product abbreviation as both the schema name and password. For example, The default ORACLE user ID for Oracle General Ledger is GL / GL.

Attention: We recommend you do not change the default username during installation, but you should change the password.

A product's schema determines the ownership of the product's data objects, such as sequences, tables, and indexes. If two products are installed under the same schema, that schema owns the data objects for both products.

Since a product's data objects are created in their own schema (such as the GL schema) and the user accesses all data objects through the APPS schema, AutoInstall creates the necessary grants and synonyms between the schemas.

A product's data objects can be installed in any tablespace regardless of whether it shares a schema with another product.

APPS Schema

The APPS schema is an ORACLE schema that has access to the complete Oracle Applications data model. It is analogous to the SYSTEM schema, which has access to the entire database. The APPS schema dramatically simplifies and reduces the time of the installation process and the stability of upgrades.

Oracle Applications responsibilities connect to an APPS schema. AutoInstall automatically sets the FNDNAM environment setting to the name of the APPS schema.

APPS and Base Product Schemas

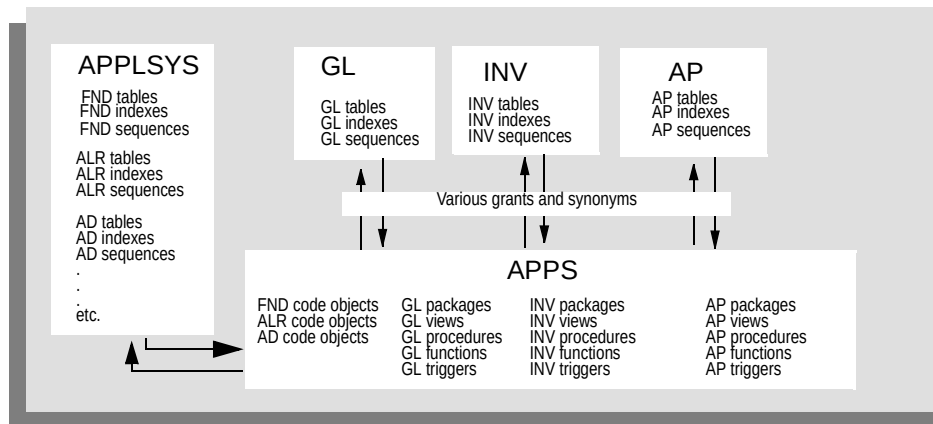
AutoInstall creates one schema for each product—a base product schema—which owns the data objects, and one schema—APPS—which owns the code objects and has access to all data objects. There is one APPS schema for every product installation group. The following code objects are installed in each APPS schema:

- Views
- Packages
- Procedures
- Functions
- Triggers

The following objects are installed in the base product schemas:

- Tables
- Sequences
- Indexes
- Constraints

In addition, there are grants from the tables and sequences to the APPS schema, as well as synonyms from the APPS schema to those objects.

Figure 3–2 APPS Schema and Base Product Schemas

APPS Schema Benefits

The APPS schema reduces the time needed for and improves the reliability of installation, upgrade, and patching by eliminating the need for cross-product grants and synonyms.

In Release 10.5 (and earlier), you used an Oracle Applications product through the base product schema. All Oracle Inventory responsibilities, for example, connected to the Oracle Inventory schema (like INV). In order to use functionality in another product, such as purchase orders in Oracle Purchasing, the current schema needed access to the shared product's objects. This access was accomplished by grants and synonyms.

For example, the PO schema granted access on PO_HEADERS to the INV schema and the INV schema created a synonym called PO_HEADERS to PO.PO_HEADERS. The synonym allowed object reference without the necessity of qualifying it by schema. So, by using the INV schema, you could execute all functions necessary to use Oracle Inventory, including those that used components outside the INV schema. Similarly, you would connect to the Oracle Payables or Oracle General Ledger product schemas when using those products' responsibilities.

This architecture, however, required a complex and extensive set of grants from and synonyms to objects in other products' schemas. Utilizing one schema that has access to all objects eliminates these cross-product dependencies and creates a hub-and-spokes model rather than a spider web.

How AutoInstall Creates APPS Schemas

AutoInstall performs these steps to create and maintain the APPS schemas:

1. Creates the APPS schema or schemas.

AutoInstall creates one APPS schema per product installation group using the following naming conventions:

- If the FND schema is named APPLSYS, the first APPS schema will be named APPS. Subsequent APPS schemas will be named APPS<install group number>, like APPS2, APPS3, and so on.
- If the FND schema is not named APPLSYS, the first APPS schema will be named APPS_<FND schema name>. Subsequent APPS schemas will be named APPS<install group number>_<FND schema name>. For example, if the FND schema is named APPLMGR, then the first, second and third APPS schemas are named APPS_APPLMGR, APPS2_APPLMGR and APPS3_APPLMGR.

2. Maintains the APPS schema or schemas automatically.

AutoInstall grants privileges to and creates synonyms in the APPS schema(s) for the base product objects, and creates code objects in the APPS schema(s).

3. Registers the APPS schemas.

Each Oracle Applications schema is listed in the FND_ORACLE_USERID table. This table describes the schemas that currently exist in the database for Oracle Applications use. AutoInstall registers each APPS schema by creating entries in this table.

4. Associates each data group unit with the appropriate APPS schema.

Data group units map applications to ORACLE schemas for a data group (which is used by a responsibility). AutoInstall sets the ORACLE schema for each Oracle Application to the appropriate APPS schema, so that Oracle Applications run from an APPS schema instead of from a base product schema.

5. During an upgrade, AutoInstall changes the APPS schema password.

When upgrading, AutoInstall automatically sets each APPS schema password to match the FND schema password.

Warning: If you change the FND schema password after the installation or upgrade, you must also change each APPS schema password to match it.

Localizations Objects

A localization module may include new database objects. If a module is for one Oracle Applications product, the database objects may be installed in the product's base schema or in the appropriate region's schema, such as in the JE schema or JA schema. Additional space should be made in the table and index tablespaces for these database objects.

By default, AutoInstall creates an ORACLE schema for JG (Regional Localizations). It creates JE, JL, or JA schemas only if you install European, Latin America, or Asia / Pacific localizations, respectively.

Custom Schema Access

In some circumstances you may wish to create a schema that has limited or read-only access to Oracle Applications data. You may do this so your users can query Oracle Applications using a data query tool like SQL*Plus.

Warning: Since the APPS schema has all privileges to all Oracle Applications objects, you should not give users direct access to the APPS schema.

Grant access on objects to the user schema from the APPS schema, not from a base product schema.

Note: You may need to re-grant access if the underlying object is dropped and recreated.

Data Access

Some Oracle Applications views access PL/SQL packages or functions. The value returned by a package or function may depend on whether it is accessed from the Oracle Applications environment. Therefore, the values returned by an Oracle

Applications view may be different from the values returned by connecting directly to the same Oracle Applications schema.

Oracle Applications forms and concurrent programs always access database objects from within the Oracle Applications environment. If you use a tool like SQL*Plus to connect directly to an Oracle Applications schema, the values returned by the view through SQL*Plus may be different from those returned by an Oracle Applications form or concurrent program. For example, when accessed within the Oracle Applications environment, some views reference profile options at different levels. When accessed directly from SQL*Plus, views reference only the site-level value of the profile option.

Multiple Organization (Multi-Org) Architecture

Multiple Organization architecture determines how transactions flow through different organizations in Oracle Applications and how those organizations interact with each other.

Overview

New sites use the Multiple Organization architecture rather than the old Multiple Sets of Books architecture. This means that you use a single installation of any Oracle Applications product to support any number of organizations, even if those organizations use different sets of books.

You define multiple organizations and their relationships. These organizations can be sets of books, business groups, legal entities, operating units, or inventory organizations.

When you run any Oracle Applications product, you first choose an organization—either implicitly by choosing a responsibility, or explicitly in a Choose Organization window. Each form and report displays information only for your organization.

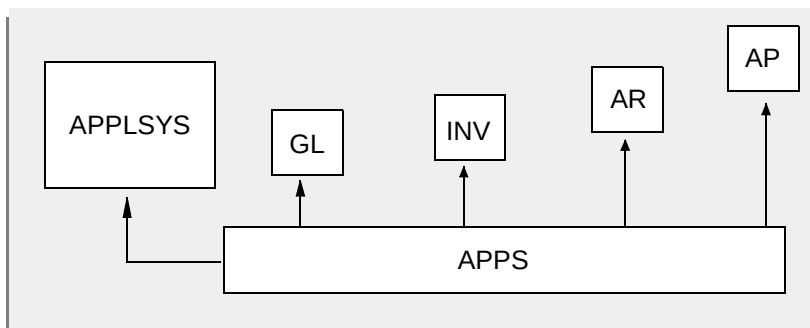
It is important that you understand these terms as you work with Multi-Org architecture:

Set of Books	A financial reporting entity that uses a particular chart of accounts, functional currency, and accounting calendar. Oracle General Ledger secures transaction information (journal entries, balances) by set of books. When you use Oracle General Ledger, you choose a responsibility that specifies a set of books. You then see information only for that set of books.
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Operating Unit An organization that uses Order Entry, Oracle Payables, Oracle Purchasing, or Oracle Receivables. It may be a sales office, a division, or a department. An operating unit is associated with a legal entity. Information is secured by operating unit for these applications; each user sees information only for their operating unit. To run any of these applications, you choose a responsibility associated with an organization classified as an operating unit.

A single product installation group architecture is used by Multi-Org, or if you do not use the old Multiple Sets of Books architecture. There is one APPS schema and a single schema for each product.

Figure 3–3 *Single Product Installation Group*



Partitioned Objects

Tables that contain Multi-Org data have the suffix "_ALL" in the table name. These tables include a column called ORG_ID that partitions Multi-Org data by organization.

Every Multi-Org table has a corresponding view that partitions the table's data by operating unit. Multi-Org views partition data by including a DECODE statement on the internal variable CLIENT_INFO. CLIENT_INFO is similar in operation to the variable LANGUAGE, which returns the language of the current session, and is set by the security system to the operating unit designated for the responsibility.

SO_HEADERS_ALL, with its corresponding view SO_HEADERS, is an example of a Multi-Org partitioned object.

Additional Information: Technical Overview, *Multiple Organizations in Oracle Applications*

Changes from Release 10.6

For a fresh install, the data model is identical whether you implement Multi-Org or not. Tables that contain Multi-Org partitioned data use the suffix "_ALL". When you upgrade, tables are renamed to use this suffix.

Multi-Org views partition data using CLIENT_INFO. These views are incorporated into the normal install and use predefined text. Previously, the text of the views was created dynamically based upon the site's configuration.

In Release 10.6, operating unit schemas were necessary to partition data by operating unit. Release 10.6 Multi-Org views incorporated a DECODE statement based upon the name of the schema. Beginning with Release 10.7, Multi-Org views use a DECODE statement based upon CLIENT_INFO. Therefore the Release 10.6 operating unit schemas are now obsolete.

In Release 11, you use the AD Administration utility, adadmin.exe, to initially convert seed data and transaction data to Multi-Org. The adadmin.exe utility does not change the data model. When you create a new operating unit, a concurrent program adds the appropriate seed data. You no longer need to run adadmin.exe (as you did in Release 10.6) after applying any database patches to a Multi-Org implementation, since the Multi-Org architecture is built into the underlying applications.

Additional Information: AD Administration Utility (adadmin.exe)
in Chapter 5 of *Oracle Applications Installation*

Multiple Reporting Currencies

The Multiple Reporting Currencies (MRC) feature allows you to report and maintain accounting records at the transaction level, in more than one functional currency. You do this by defining one or more reporting sets of books, in addition to your primary set of books.

Functional Currencies

In your reporting sets of books, you maintain records in a functional currency other than your primary functional currency.

Primary Functional Currency	The currency you use to record transactions and maintain your accounting data within Oracle Applications. The primary functional currency is generally the currency in which you perform most of your business transactions and the one you use for legal reporting.
Reporting Functional Currency	A currency, other than your primary functional currency, for which you need to report.
Primary Set of Books	A financial reporting entity in which you conduct business. The primary set of books uses a particular chart of accounts, accounting calendar, and functional currency (in the primary set of books, the functional currency is always the primary functional currency).
Reporting Set of Books	A financial reporting entity that is associated with a primary set of books. The reporting set of books has the same chart of accounts and accounting calendar as the primary set of books, but usually has a different functional currency. The reporting set of books allows you to report in a different functional currency than that of your primary set of books.

You must define a separate set of books for each of your reporting functional currencies. For each set of books you use with MRC, you need to specify which is the primary set of books and which are the reporting sets of books. You then assign the reporting sets of books to the primary set of books. You must also define a primary responsibility to correspond to your primary set of books, and a reporting responsibility to correspond to each reporting set of books.

Additional Information: Setup, *Multiple Reporting Currencies in Oracle Applications*

Setting Up the Primary Responsibility

Before you set up MRC, you need to prepare your database, run the adadmin.exe program to validate and compile your APPS schema, and install the MRC schema.

Additional Information: Installing Multiple Reporting Currencies, Appendix A of *Oracle Applications Installation*

The primary responsibility is linked to the primary set of books, and each reporting responsibility is linked to a corresponding reporting set of books. To create an association between a reporting responsibility and a reporting set of books, you set the profile options GL:Set of Books Name and MRC:Reporting Set of Books to the reporting set of books name at the responsibility level.

You assign the primary responsibility to the Standard data group, and the reporting responsibilities to the MRC data group. The data group determines the tables and privileges accessible by the associated responsibility. Data groups are used for the following purposes:

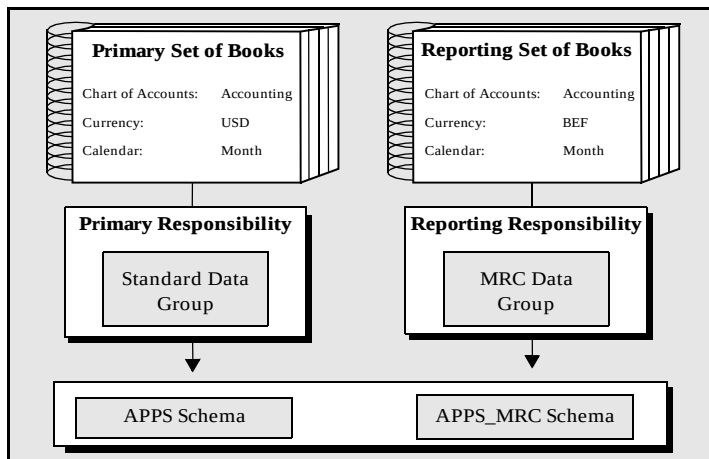
- To identify the ORACLE schema used by a responsibility
- To tell the concurrent manager which ORACLE schema to use when running a report or concurrent program

In your primary responsibility, the Standard data group connects the application associated with the responsibility to the APPS database schema. In a reporting responsibility, the MRC data group connects the application associated with the responsibility to the MRC database schema.

The default name of the MRC schema is APPS_MRC. If your APPS schema is named something different than the default name of APPS, your MRC schema will be named according to the following format:

<name of your APPS schema>_MRC

Figure 3–4 MRC Set of Books, Responsibility, and Database Schema Setup



MRC Architecture

MRC is supported by the following Oracle Applications:

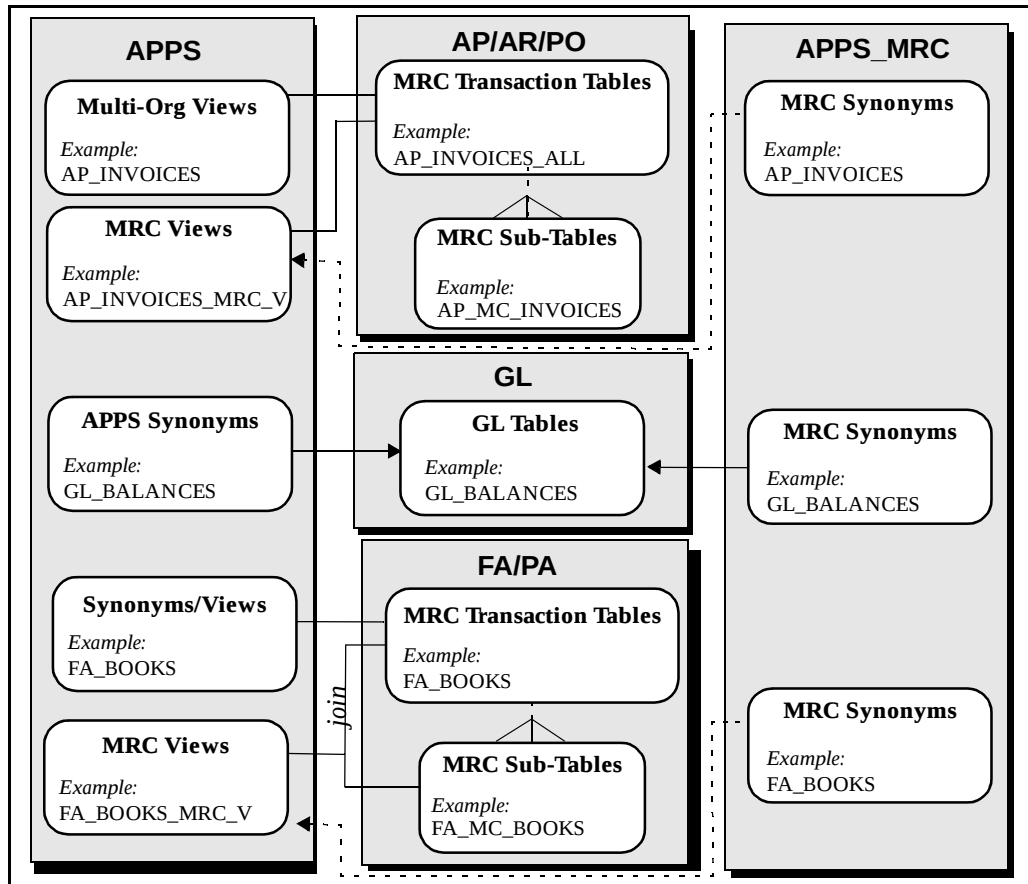
- General Ledger
- Assets
- Payables
- Receivables
- Purchasing
- Projects

For the subledgers that support MRC, each transaction table in the base schema that has currency-sensitive information, such as conversion rate and transaction amount, now has an associated MRC sub-table. Each record in the base transaction table may have one or more MRC sub-table records, which contain currency-sensitive information on the base transaction in each associated reporting currency. In the APPS schema, there are MRC views, which provide reporting currency representations of each base transaction table.

From the APPS_MRC schema, the MRC synonyms that have names identical to the corresponding APPS Multi-Org views (or synonyms for FA) point to these MRC views in the APPS schema. When you view a transaction in a reporting responsibility through these MRC synonyms and the MRC views they point to, you see a transaction representation in the reporting currency associated with the corresponding reporting set of books.

Attention: MRC can be used in a Release 11 installation even if Multi-Org architecture or Multiple Sets of Books architecture is not implemented.

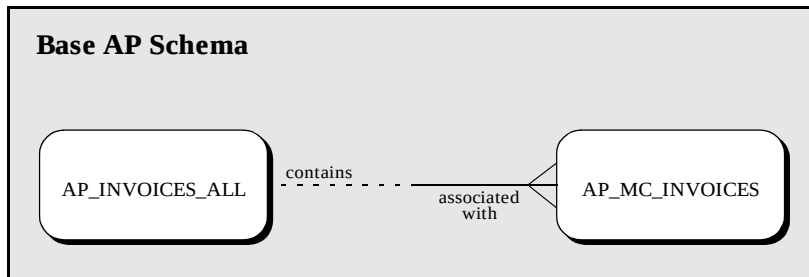
Figure 3-5 MRC Architecture



MRC Sub-Tables

For the subledgers that support MRC, each transaction table in the base schema that has currency-sensitive information, such as conversion rate and transaction amount, now has an associated MRC sub-table.

There is an optional one-to-many relationship between records in a base transaction table and records in the corresponding MRC sub-table. For each transaction record in the base transaction table, there may be one or more corresponding records in the MRC sub-table. Each record is associated with a reporting currency. The primary key for an MRC sub-table is the combination of the primary key of the base transaction table and the reporting set of books ID.

Figure 3–6 Transaction Table and MRC Sub-Table

MRC Triggers

There are MRC database triggers associated with each base transaction table. Whenever you insert, update, or delete records from the base transaction tables, the MRC triggers perform the corresponding database action for the associated records in the MRC sub-tables.

For example, when you enter an invoice in Oracle Payables, Payables inserts records into AP_INVOICES_ALL and AP_INVOICE_DISTRIBUTIONS_ALL. When Payables inserts these records, the database triggers in each of the two base transaction tables execute and create reporting currency records in the MRC sub-tables AP_MC_INVOICES and AP_MC_INVOICE_DISTs. See *Multiple Reporting Currencies in Oracle Applications* for information about the MRC sub-tables and their corresponding products.

MRC Views

MRC views provide representations of transactions in each reporting currency. They are created in the APPS schema. MRC views show information for only one set of books at a given time. That is, these views retrieve information based on the reporting set of books associated with the responsibility to which the user is currently logged on. When you sign on to a responsibility, Oracle Applications sets the userenv variable based on the profile option MRC: Reporting Set of Books. This variable value is used by the MRC views to show only the information associated with your reporting set of books.

MRC Views in Oracle Assets and Oracle Projects In Oracle Assets and Oracle Projects, the MRC views are joined table views, which consist of columns from the base transaction tables and the corresponding MRC sub-tables. These views retrieve currency-sensitive information from the MRC sub-tables for your reporting set of books.

MRC Views in Oracle Payables, Oracle Receivables, and Oracle Purchasing For performance reasons, MRC views in Oracle Payables, Oracle Receivables, and Oracle Purchasing are based on additional columns in the base transaction tables, instead of the MRC sub-tables. These columns consist of pairs of concatenated strings of the reporting set of books ID and its corresponding selected data. These columns are also maintained by the MRC database triggers.

AP_INVOICES_ALL	
invoice_id	NUMBER(15)
set_of_books_id	NUMBER(15)
invoice_date	DATE
amount	NUMBER
org_id	NUMBER(15)
base_amount	NUMBER
mrc_base_amount	VARCHAR2(2000)
posted_flag	VARCHAR2(1)
mrc_posted_flag	VARCHAR2(2000)

In the example, the column mrc_base_amount may contain information in the following format:

```
<reporting set of books id1>accounted amount1<reporting set of books id2>
accounted amount2.....
```

For example:

```
<104>35.49<105>389.47....
```

The MRC views in Oracle Payables, Oracle Receivables, and Oracle Purchasing are single-table views built on top of base transaction tables. Based on the reporting responsibility to which you are logged on, these views extract the currency-sensitive information from the MRC VARCHAR2 columns for the reporting set of books.

Using the example above, if you are currently in a reporting responsibility associated with the reporting set of books ID 105, the MRC view on top of AP_INVOICES_ALL (that is, AP_INVOICES_MRC_V) will extract from the mrc_base_amount column a base_amount of 389.47. See *Multiple Reporting Currencies in Oracle Applications* for information about base transaction tables that use additional columns to store reporting currency information.

Oracle Payables, Oracle Receivables, Oracle Purchasing, and Oracle Projects have Multi-Org views to perform data partitioning. These views, which reside in the APPS schema, use the information contained in the CLIENT_INFO internal variable to determine the operating unit. The MRC views give organization-specific and currency-specific views of the transaction tables.

MRC Synonyms

From the APPS_MRC schema, the MRC synonyms, which have names identical to the corresponding APPS Multi-Org views (or synonyms for FA), point to these MRC views in the APPS schema. When you view a transaction in a reporting responsibility through these MRC synonyms and the MRC views they point to, you see the transaction represented in the reporting currency associated with the corresponding reporting set of books.

General Ledger

Oracle General Ledger does not use MRC sub-tables to store, or MRC triggers to create, reporting currency information. Primary and reporting journal entries are created separately in the primary set of books and in each reporting set of books in the base journal tables. Synonyms are created identically in both the APPS and the APPS_MRC schemas.

Additional Information: *Multiple Reporting Currencies in Oracle Applications*

Oracle General Ledger and Oracle Applications modules that do not implement MRC are also maintained under the APPS_MRC schema. This is required to facilitate the integration and drilldown from these modules to the Oracle subledgers that support MRC in the reporting responsibilities.

Multiple Sets of Books

Multiple Sets of Books architecture from earlier releases is not automatically consolidated or converted to the Multiple Organization architecture. You can still upgrade an existing Multiple Sets of Books implementation to Release 11 without using Multiple Organization architecture.

In earlier releases, a set of books defined a company or group of companies within Oracle Applications that shared a common Accounting Flexfield structure, calendar, and functional currency. Oracle Applications let you set up multiple sets of books that each had its own flexfield structures, calendars, and currencies.

You set up multiple sets of books by installing one product group for each set of books. We implemented multiple sets of books within a single product group differently for different products. Some products, such as Oracle General Ledger, maintained multiple sets of books within one installation of their product tables. Others, such as Oracle Application Object Library, did not maintain multiple sets of books at all. We called these two classes of products *SOA products* (Single Oracle Account), because only a single copy of the database objects is installed.

Other products, such as Oracle Payables, maintained multiple sets of books using multiple installations of their product tables. We called these *MOA products* (Multiple Oracle Account), because we installed multiple copies of the database objects for these products—one copy for each set of books.

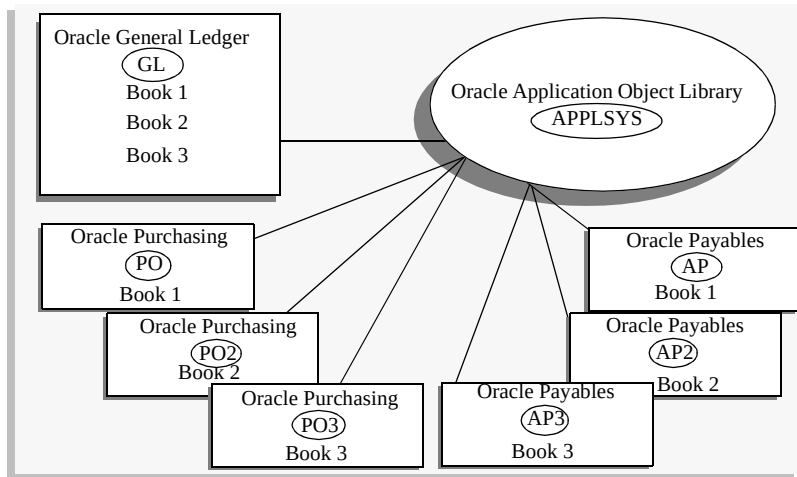
The #APPL_TOP#\admin\applprod.txt file is a text file listing information for each Oracle Applications product. The applprod.txt file contains, among other things, a notation on whether a product requires multiple copies of the database objects. If the line immediately after "Multiple product installations for MSOB" begins with Yes, the product is an MOA product and requires multiple installations of the product tables. If the line begins with No, the product is SOA.

If you upgrade a Multiple Sets of Books implementation, each installation of product tables must be in a unique ORACLE schema. For example, the Oracle Payables tables for the first set of books may be installed in the AP schema, while the tables for the second set are installed in the AP2 schema.

Note: Upgrading a Multiple Sets of Books implementation requires a considerable amount of free SYSTEM tablespace.

Figure 3–7 illustrates a product group consisting of Oracle Application Object Library, Oracle General Ledger, Oracle Purchasing, and Oracle Payables. The products in this group, except for Oracle Application Object Library, maintain three sets of books.

Suggestion: Multiple Sets of Books architecture will not be supported in future releases. Contact Oracle Consulting Services before upgrading Multiple Sets of Books architecture or converting to Multi-Org architecture.

Figure 3–7 Multiple Sets of Books Architecture

Multiple Product Installation Groups and Multiple Sets of Books

The multiple product installation group architecture was used with Multiple Sets of Books architecture in earlier releases to implement multiple sets of books accounting functionality.

Previously you would install multiple copies of the same product (say Oracle Receivables), each in a different ORACLE schema (for instance AR and AR2), in order to partition the product's data by set of books.

Some products, such as GL and APPLSYS, only needed one product install no matter how many sets of books you maintained. But most products required multiple installs. There was one APPS schema as well for each set of books.

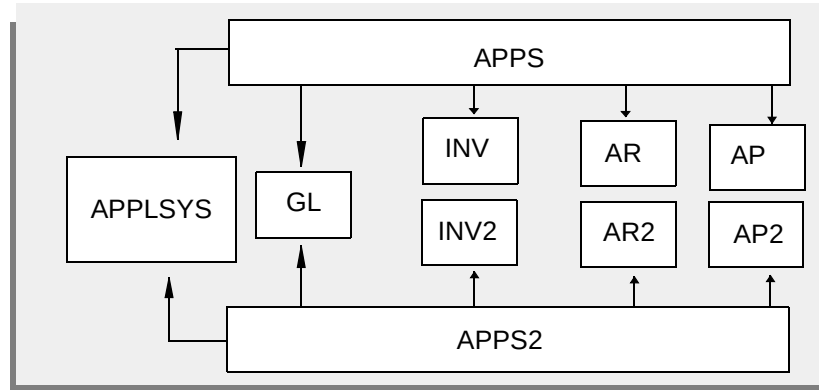
Figure 3–8 Multiple Product Installation Groups

Figure 3–8 illustrates a multiple product installation group architecture for two sets of books. There were two APPS schemas, two INV schemas, two AR schemas and two AP schemas. The APPLSYS schema, like the GL schema, was installed only once.

With MSOB multiple product installation groups, it was difficult to have cross-product or cross-set of books functionality. With the installation shown in Figure 3–8, it would be difficult to view all inventory items in all sets of books. Although a global view incorporating data from multiple sets of books was possible, it tended to be inefficient and complex. Beginning with Release 10.6, Multiple Organization architecture resolved this problem.

Oracle8 Server Organization and Requirements

This section discusses how to set up an Oracle8 Enterprise Edition database for use with Oracle Applications. It provides recommendations on tablespaces to use and explains how the AutoInstall sizing factor controls the amount of database space reserved for Oracle Applications products.

You should plan to distribute tablespaces across different disks. This can reduce disk head contention and improve system response time. Refer to your Oracle8 Server documentation for complete information about planning a database and its tablespaces.

Additional Information: PART III: Oracle Server Configuration, *Oracle8 Administrator's Guide*; Chapter 1: Optimal Flexible Architecture on Oracle8, and Chapter 3: Tuning Oracle8, *Oracle8 Administrator's Reference* (for your platform)

Database Creation

Observe the following recommendations and requirements when you create a Oracle8 database for use with Oracle Applications. See your Oracle8 Server documentation for complete information about database creation.

Additional Information: Creating an Oracle8 Database, *Oracle8 Administrator's Guide*

Database Character Set

You must specify a character set when creating the database. It is important to consider carefully which character set to use because you cannot change it after the database is created.

Oracle Applications requires you use an eight-bit character set or the appropriate character set for your language. Appendix A in *Oracle Applications Installation* contains a table that lists the default character sets for the languages supported by Oracle Applications. For example, WE8ISO8859P1 is used for American English and ZHT16BIG5 is used for Traditional Chinese.

Additional Information: Appendix A, *Oracle Applications Installation*

We recommend you use the default character set. You may choose an alternate character set if there is a conversion path from the default character set. If you do, AutoInstall automatically converts text files to the alternate character set when it unloads the files. For example, you may install into a JA16SJIS database and client environment, even though the files are in JA16EUC on the distribution media.

Data Files

Keep data files to a size that is convenient to back up on your system. You may want the maximum file size to be 300 to 600 MB, for example. You can create the database with one or more data files for tablespaces used by the Oracle8 Server, such as SYSTEM. You can then create one or more new data files for each Oracle Applications tablespace you set up.

When you create the database, set the MAXDATAFILES parameter to a value larger than the number of data files you intend to create. A value such as 256 is typically sufficient. The limit is platform-specific. Note that you can alter the MAXDATAFILES parameter by recreating the database control file.

Additional Information: Managing Control Files, *Oracle8 Administrator's Guide*

The DB_BLOCK_SIZE parameter in the database initialization parameter file indicates the size of ORACLE database blocks that are created when you use the CREATE DATABASE command. For optimum performance, set this to 8192 before you create your database. If you are upgrading from an earlier release, however, do not change the DB_BLOCK_SIZE parameter. If you change the parameter when upgrading, you may not be able to generate ORACLE control files.

Additional Information: Creating an Oracle Database, *Oracle8 Administrator's Guide*

Initialization Parameters

Set the database initialization parameters to the "large" settings in the initialization parameter file (init<SID>.ora). Set the DB_FILES parameter to a value less than or equal to the value specified for MAXDATAFILES during database creation. Your Oracle8 Server database administrator will have to modify other parameters in this file before you install Oracle Applications.

Oracle8 Server Tablespaces

The following are recommendations for setting up tablespaces for the Oracle8 Server and for Oracle tools. Your database administrator may want to set up the tablespaces differently, however. See the section Oracle Applications Tablespaces in this chapter for sizing guidelines for the tablespaces listed in this section.

SYSTEM Tablespace

This tablespace, which holds data dictionary tables owned by the SYS account, is created when you install the database. You may have to increase its initial size to accommodate the growth of data dictionary tables that occurs when you upgrade Oracle Applications.

Tools Tablespace

Tools tables, such as forms and report tables, are created in the default tablespace of the ORACLE schema used to install the tools. This default tablespace is typically SYSTEM. However, you may want to install these tables in a tablespace such as TOOLS if you plan to develop applications. This can help reduce resource contention between developers and Oracle Applications users.

Users Tablespace

Create a tablespace, such as USERS, for ORACLE schemas that hold demonstration tables for Oracle tools. These are IDs such as SCOTT/TIGER and EXAMPLE/EXAMPLE. You can also use this tablespace as the default for database administrator accounts.

Rollback Tablespace

The Oracle8 Server uses rollback segments to track database changes until they are committed. It uses them during an installation or upgrade of Oracle Applications, as well as during normal, daily use. Create a tablespace such as RBS for rollback segments.

Oracle Applications Tablespaces

You must create product tablespaces before you install your Oracle Applications products. The following sections give recommendations on the tablespaces to set up. See the section on Sizing Factor in this chapter for sizing guidelines.

You designate the table, index, and temporary tablespaces used by each Oracle Applications product when you install the products.

Suggestion: Your tablespace design affects how your system operates and can affect system expansion and upgrades. An Oracle Applications consultant can help you set up tablespaces that meet your present and projected future system requirements.

Product Tablespaces

For each Oracle Applications product, we recommend that you create a tablespace for tables and another one for indexes. Creating separate table and index tablespaces for each product makes it easier to license and install products later and may increase database performance.

Some products maintain multiple sets of books through multiple installations of product tables. If you already use this architecture, you can install each set of these product tables in separate tablespaces. For example, you could set up a new table tablespace and a new index tablespace for a new set of Oracle Payables books. The tables and indexes for some dependent products will be installed multiple times as well. You can install all of these in the dependent product's main table and index tablespaces.

Designate tablespaces with a standard naming convention, such as the product's short name or ORACLE schema name along with D for data or X for indexes. For example, create the tablespaces APD and APX for Oracle Payables tables and indexes, respectively. The tablespaces for a second product installation group could be AP2D and AP2X.

AutoInstall automatically sets the MAXEXTENTS for all product tablespaces to UNLIMITED.

Temporary Tablespaces

The Oracle8 Server uses temporary tablespaces to sort data. You can use one tablespace, such as TEMP, as the temporary tablespace for all Oracle Applications products. You can also create up to one temporary tablespace for each product, although this is not necessary. Users access Applications objects through the APPS schema, so the temporary tablespace for that schema (initially the same as that for APPLSYS) is the tablespace used by each product.

Interim Tablespace

Oracle General Ledger and Oracle Government General Ledger use large interim tables during certain processes. Create an interim tablespace such as INTERIM if you plan to install one of these products. You designate the interim tablespace after installing the product.

Additional Information: Storage Parameters for Interim Tables, *Oracle General Ledger User's Guide* or *Oracle Public Sector General Ledger User's Guide*

Sizing Factor

A sizing factor sets the extent sizes for dynamic objects such as tables and indexes for an Oracle Applications product. Its value is a percentage of the default estimated growth rate for Applications database objects. You choose a sizing factor for each product when you run AutoInstall. The sizing factor affects only the size of next extents, determined by the Oracle8 Server with the NEXT object creation parameter. The NEXT extent size is not applied to existing objects, only to newly created objects.

Suggestion: An Oracle Applications consultant can help you determine what sizing factors to choose for your products.

Additional Information: Chapter 3: Data Blocks, Extents, and Segments, *Oracle8 Concepts*

100% Sizing Factor (default)

The default sizing factor of 100% creates database objects based on an estimate of how the objects grow at a typical site. Most objects are defined with small first extents and larger additional extents. The NEXT extent sizes vary by object, however.

Objects are created with an initial extent and add extents as necessary. By default, the initial extent is defined as 10 KB for tables and indexes. ORACLE uses at least two blocks when creating objects, so if you created your database using a blocksize of 8 KB, for example, the initial storage allocated is actually 16 KB.

The following table shows NEXT extent sizes for two sample tables and two sample indexes created at a 100% sizing factor. These tables and indexes each have an initial extent size of 10 KB.

Table 3–1 Sample Extent Sizes for a 100% Sizing Factor

Tables	Next Extent
AP_AGING_PERIODS	32 KB
AR_STATEMENT_LINE_CLUSTERS	1 MB
Indexes	Next Extent
AP_AGING_PERIODS_U1	32 KB
AR_STATEMENT_LINE_CLUSTERS_N1	256 KB

Oracle Applications Installation lists the database space used by product tables and indexes installed with a 100% sizing factor. The tables in *Installation* tell you the sizes of the tablespaces required to hold products when all database objects are allocated two extents. Your space usage will vary according to how you use your products. Some tables may never grow past their initial extent. Some may grow to several extents.

Sizing Factor Greater or Less than 100%

A sizing factor greater or less than 100% (except for 0%) creates database objects at that percentage of their 100% size. For example, a 200% sizing factor doubles each object's 100% next extent sizes. The 200% sizing factor creates AP_AGING_PERIODS with a next extent size of 64 KB.

If you do not use the default sizing factor, use a sizing factor that is 100% multiplied or divided by a factor of 2, such as 50%, 200%, or 400%. There is no upper limit on sizing factors. They do not affect static objects, such as product lookup tables, that generally do not increase in size beyond the initial seed data. AutoInstall creates static objects at one size regardless of the product's sizing factor.

Suggestion: As the default initial extent size is relatively small, 10 KB, we do not recommend a sizing factor less than 100%. If you had sizing factors less than 100% in earlier releases, we suggest you change them to 100%. When installing systems for low-transaction testing or training purposes, however, use 0% sizing to conserve space.

File System

This chapter discusses file management for Oracle Applications. It includes the following topics:

- Directory Structure
- Log and Output Files

Directory Structure

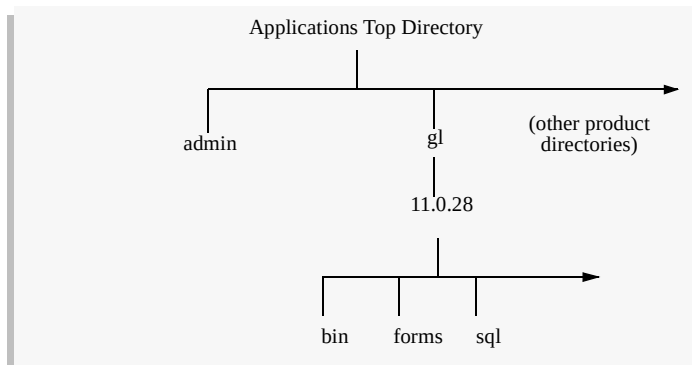
This section explains the directory structure of Oracle Applications product files. These include the forms, reports, files to install or upgrade the database, and other components shipped with the software release. Tables and other database objects are stored separately in an Oracle8 Server database.

Basic Directory Structure

In the basic directory structure, a top Applications directory holds one set of product files. You create this directory and set the environment setting `APPL_TOP` to point to it. AutoInstall sets up a directory tree for each fully installed or dependent product in this directory. AutoInstall also sets up a minimal product tree for all other products so it can install their database components.

A product directory tree starts with a directory that uses the product's abbreviation, such as `gl` for Oracle General Ledger. Below that is a subdirectory that uses the product version, such as `11.0.28`. Below that are various subdirectories for product files.

Figure 4–1 Basic Directory Structure



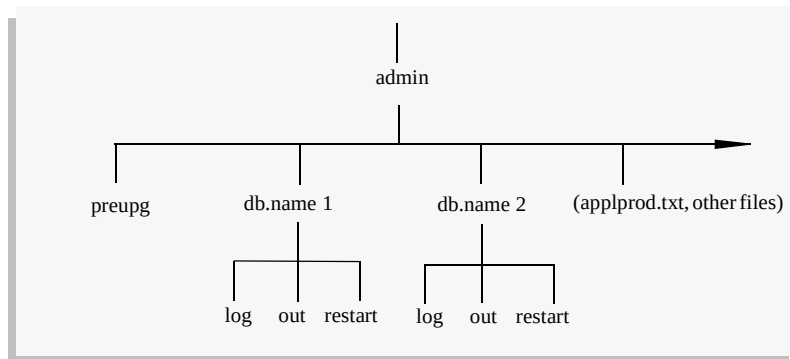
Product TOP Variables

AutoInstall sets <prod>_TOP environment settings that point to each product's directory tree. In the installation depicted in Figure 4–1, the GL_TOP environment setting points to #APPL_TOP#\gl\11.0.28. To display data entry forms for Oracle General Ledger, for example, the Oracle Applications system accesses files in #GL_TOP#\forms.

Additional Information: Table 2–1 in this manual lists product top directory names.

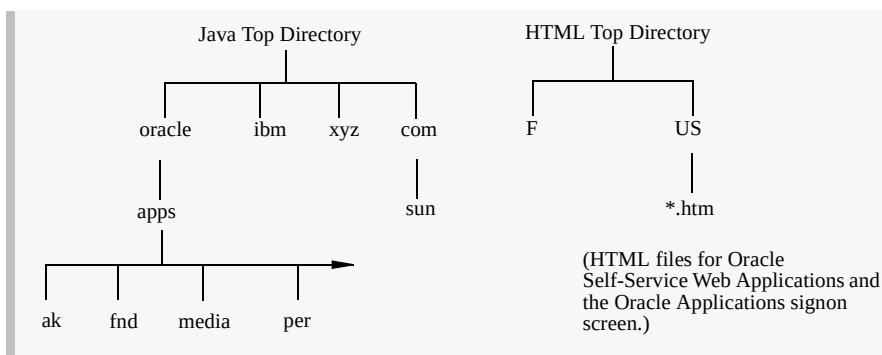
Admin Directory

The admin directory (which replaces the install directory from previous releases) holds files used to install or upgrade any Oracle Applications products. This admin directory is used by AutoInstall. Subdirectories in this directory hold the log and restart files that record the actions AutoInstall performs.

Figure 4-2 admin Directory Structure

Java and HTML Files

Java file naming conventions indicate that a machine should have a single directory under which all Java class files are stored. This directory contains multiple namespaces, which provide a way of keeping Java programs written by one company from interfering with those written by another. A namespace maps to a subdirectory tree underneath the top-level Java directory. This way, for example, XYZ Corporation can have a file called "uiDisplay.class," and Oracle Corporation can have a file with the same name. Oracle Applications will always know which one to use because the Oracle version of this file is always installed in the Oracle namespace—the \oracle subdirectory.

Figure 4-3 Java and HTML Directory Structure

Oracle Applications requires that you define the location of Java files on your system using the JAVA_TOP environment setting before you begin your installation or upgrade. The Java and HTML directories can be anywhere in your file

system—they do not have to be under #APPL_TOP#. AutoInstall will then install all Applications class files in a subdirectory in the Oracle namespace under your #JAVA_TOP# directory— #JAVA_TOP#\oracle\apps. Each product will install its Java class files into a subdirectory beneath this directory, as shown in the example figure.

Additional Information: Set Environment and Registry Variables in Chapter 2, *Oracle Applications Installation*

Note: Oracle Applications installs all media files, such as GIF images, under the #JAVA_TOP# directory. You must not change this setting after the installation. If you do, Oracle Applications will not work properly.

In order to make it easier to maintain the virtual directory settings for your web server, Oracle Applications also consolidates all HTML files into a single directory tree during installation. You determine the location of this top-level directory with the environment setting OAH_TOP before you begin your installation or upgrade. The HTML file used to launch the initial Applications signon screen is typically installed in this directory tree, as are all HTML files used by the Oracle Self-Service Web Applications product. Note that there are subdirectories named for the language code. See the Language Directory Structure section in this chapter for more information.

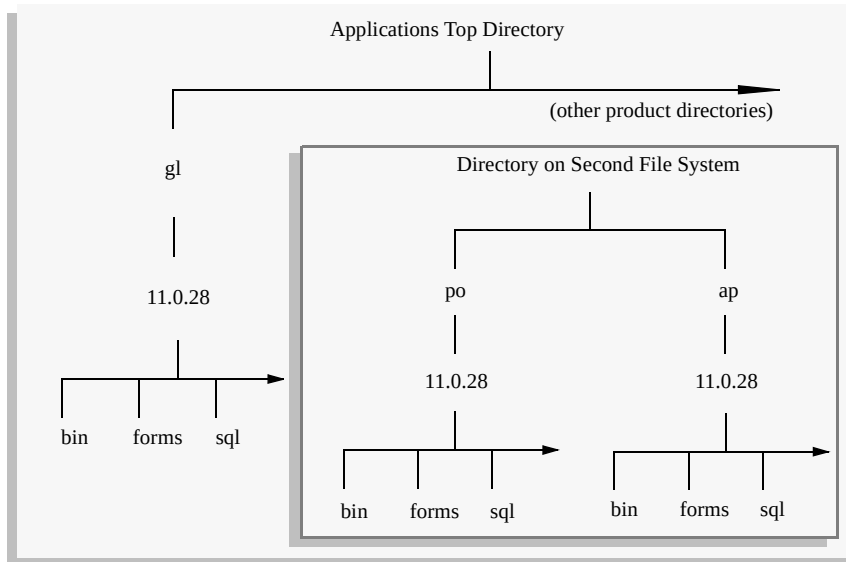
Additional Information: Set Environment and Registry Variables in Chapter 2, and Configure the Web Server in Chapter 4, *Oracle Applications Installation*

Distributed Directory Structure

A *distributed directory structure* places product files on different file systems. You must use a distributed structure if you do not have enough disk space available on a single file system for all Oracle Applications product files.

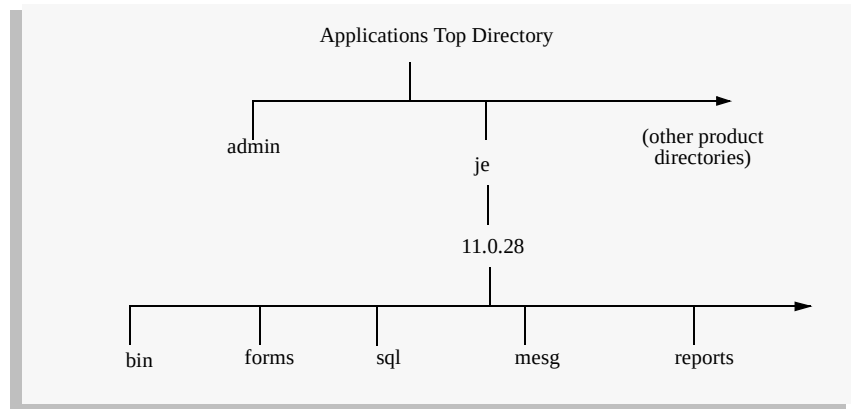
Figure 4–4 illustrates a distributed directory structure. Oracle General Ledger product files are stored in #APPL_TOP#, with Oracle Purchasing (po) and Oracle Payables (ap) files stored on a different file system. AutoInstall lets you define which file system holds each product’s directory tree.

Product files for Oracle Application Object Library (fnd) and Oracle Applications DBA (ad) are unloaded automatically in #APPL_TOP# when you run AutoInstall. You cannot unload these files to a different file system.

Figure 4–4 Distributed Directory Structure

Localization Directories

For product files, each localization region is treated like a separate product. Module files are stored in the region directory trees. Figure 4–5 illustrates the directory tree for European localizations (je). For this directory tree, AutoInstall sets the environment setting JE_TOP to #APPL_TOP#\je\11.0.28

Figure 4–5 Localization Directory Structure

Like all other Oracle Applications products, localizations are also translated into various languages. These translated files follow the standard language directory structure.

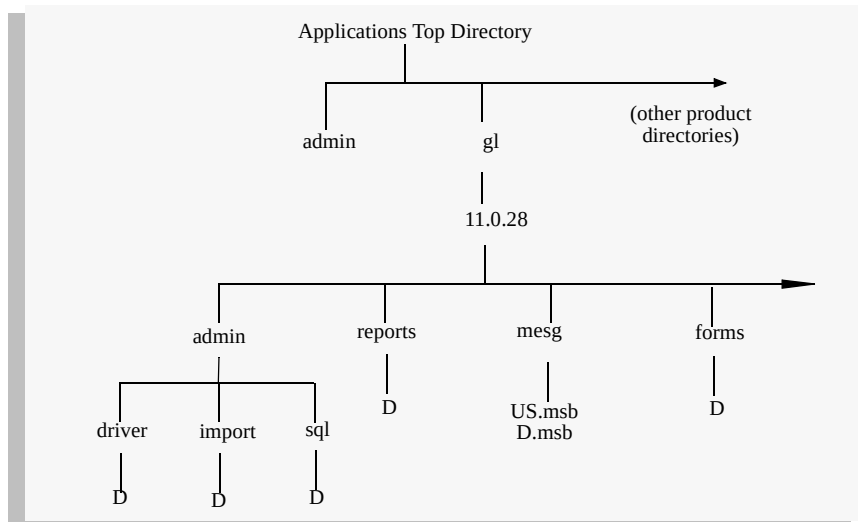
Language Directory Structure

When you install Oracle Applications in a language other than American English, each product directory tree includes directories that use the NLS language code. These directories hold translated form, report, message, SQL, and installation files. The language directory in Figure 4–6 is D, which designates German.

D subdirectories in the driver, import, and sql subdirectories of the admin directory contain files to convert the database from American English to German. The reports directory holds Oracle Reports report files in American English. Its D subdirectory contains these same files translated into German.

The forms directory shown in Figure 4–6 contains Oracle Forms files in American English. The D subdirectory in the forms directory contains the same files translated into German. The msg directory contains message files in both American English and German.

Additional Information: Appendix A, *Oracle Applications Installation*

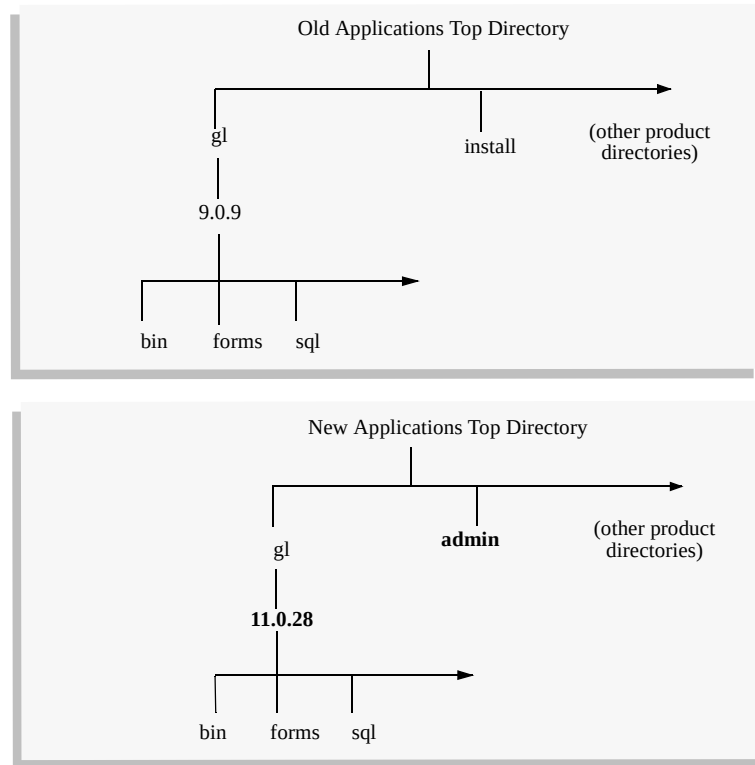
Figure 4–6 Language Directory Structure

Applications Top Directory for Upgrade

You must create a new APPL_TOP directory when you upgrade to Release 11. You cannot have multiple releases and product versions in one APPL_TOP directory. Figure 4–7 illustrates the directory structure after an upgrade that uses a new APPL_TOP directory. New components are shown in **boldface** text.

Additional Information: Appendix C, *Oracle Applications Installation*

Figure 4–7 Multiple Product Versions Installed on One File System



Attention: Because upgrading changes the Oracle Applications database structure, you cannot use old product files with an upgraded database. You can delete them once you are certain the upgrade is complete and successful.

Log and Output Files

When the concurrent managers run Oracle Applications concurrent processes, they write the output files, as well as diagnostic log files and temporary files, to directories that you define during the installation process. This section explains your options for setting up these directories. Note the following:

- Concurrent managers inherit directory privileges from the login that installs and starts them. Since you start the managers from the main Oracle

Applications login, applmgr, they can write to any directory for which applmgr has write permission.

- Log files for the concurrent managers themselves are stored in #APPLCSF#\#APPLLOG# if APPLSCF is set, or in #FND_TOP#\#APPLLOG# if APPLCSF is not set.

Additional Information: Appendix A, *Oracle Applications Installation*

You should be familiar with the basics of concurrent processing before you install Oracle Applications.

Additional Information: Overview of Concurrent Processing, *Oracle Applications System Administration Reference Manual*

Log and Output Files for a Single Product Group

When you install a single Oracle Applications product group, you can choose one of two methods for storing the group's log and output files:

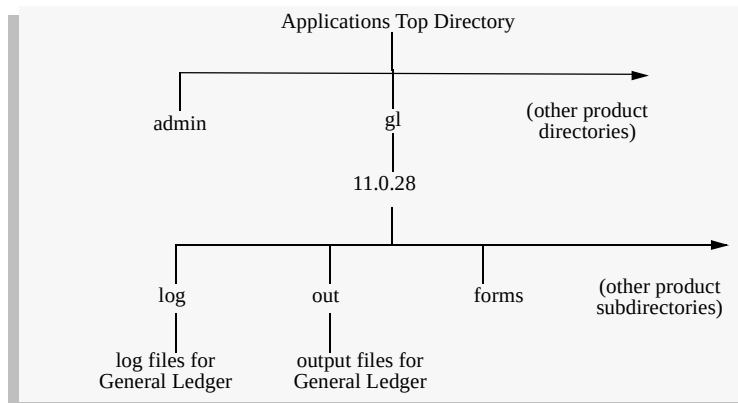
- Log and output subdirectories in each product's directory tree (default).
- One log and one output subdirectory in a common directory.

The following sections explain these methods in detail. *Oracle Applications Installation* guides you through setting up a common directory.

Default Storage in Product Directory Tree

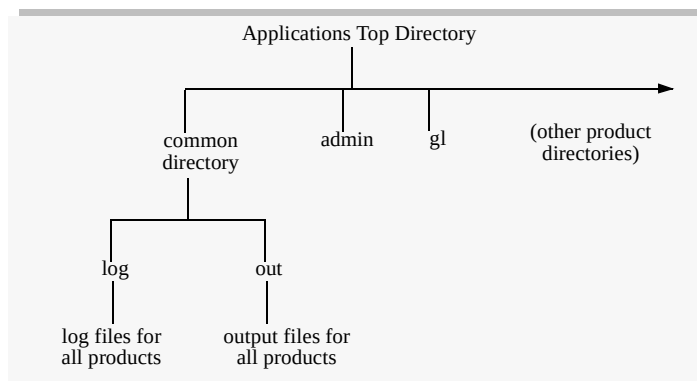
Figure 4–8 illustrates the default storage method that uses log and out subdirectories in each product's directory tree. AutoInstall sets up this storage method automatically unless you specify otherwise.

By default, AutoInstall sets the variable APPLLOG to *log* and the variable APPOUT to *out* in the product group's registry subkey. Concurrent managers write to these subdirectories in each product tree. For Oracle General Ledger, for example, the concurrent managers write log files to #GL_TOP#\#APPLLOG# and output files to #GL_TOP#\#APPOUT#.

Figure 4–8 Default Storage for Log and Output Files**Common Directory**

Instead of using the default storage method, you can set up a common directory that has a subdirectory for all log files and a subdirectory for all output files. The common directory can reside on any file system accessible to the concurrent managers. Figure 4–9 illustrates a common directory in the APPL_TOP directory.

You designate the common directory and the subdirectories when you run AutoInstall or by recreating the Applications registry subkey using the AD Administration utility. The APPLCSF environment setting is set to the common directory name, and the APPLLOG and APPOUT environment settings are set to the log and output subdirectories, respectively. The concurrent managers write all log files to #APPLCSF#\#APPLLOG# and all output files to #APPLCSF#\#APPOUT#.

Figure 4–9 Common Directory for Log and Output Files

Log and Output Files for Multiple Product Groups

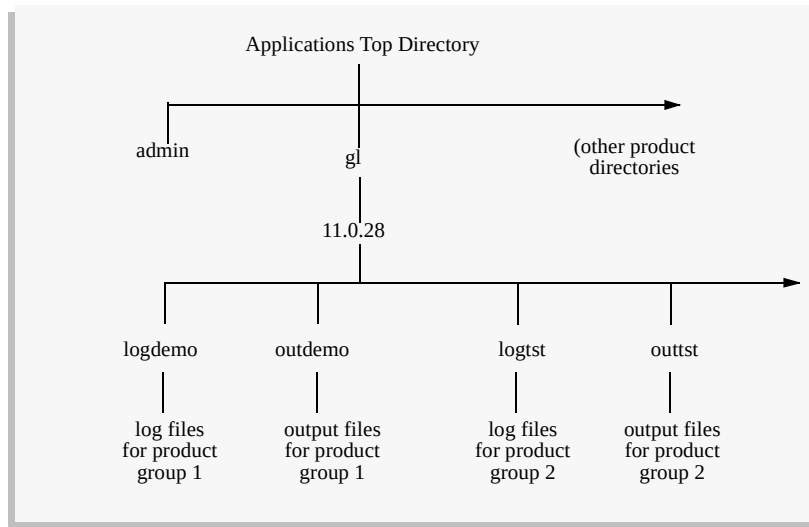
If you install multiple product groups in the same APPL_TOP directory, each one needs its own log and output directories to keep its log and output files separate from those of other product groups. There are three methods for creating separate log and output areas:

- Multiple log and output subdirectories in each product's directory tree.
- Multiple log and output subdirectories in one common directory.
- Multiple common directories.

Log and Output Directories in Each Product's Directory Tree

The default storage method depicted in Figure 4–10 uses multiple log and output subdirectories in each product's directory tree. The `\logdemo` and `\outdemo` subdirectories are for log and output files from a demonstration product group. The `\logtst` and `\outtst` subdirectories are for a test product group. You select the subdirectory names when you run AutoInstall or the AD Administration utility, but you must manually create the subdirectories if you name them something other than `log` or `out`.

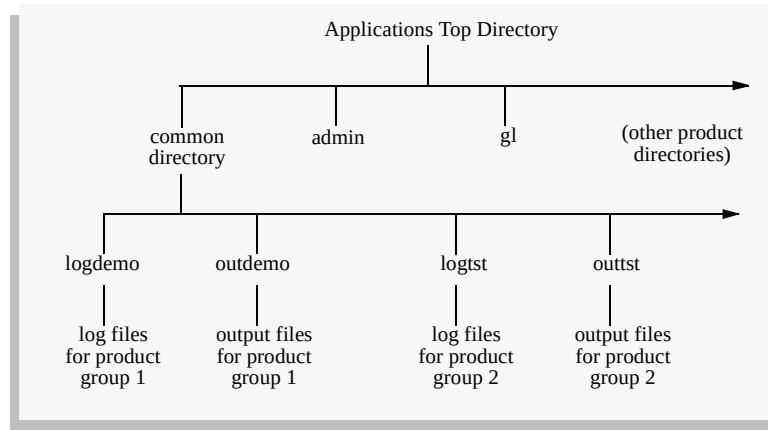
Each product group's registry subkey defines the product group's log and output subdirectories as the values of the APPLLOG and APPOUT environment settings, respectively. A product group's concurrent managers write log and output files to `#APPLLOG#` and `#APPOUT#` in each product's directory tree. For Oracle General Ledger, for example, the concurrent managers write log files to `#GL_TOP#\#APPLLOG#` and output files to `#GL_TOP#\#APPOUT#`.

Figure 4–10 Default Log and Output File Storage for Multiple Product Groups

Single Common Directory

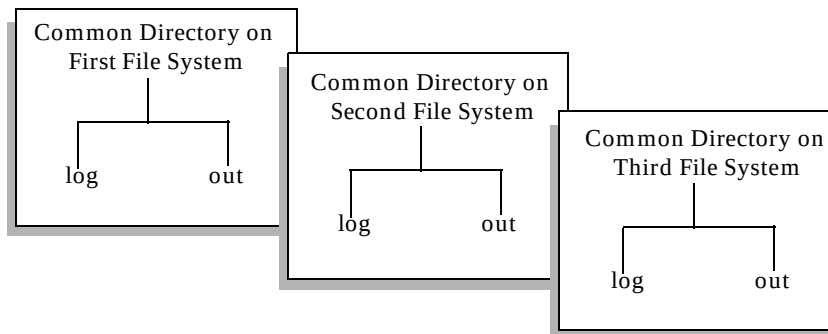
As Figure 4–11 shows, a single common directory should use separate log and output subdirectories for each product group. The common directory can reside on any file system accessible to the concurrent managers. You designate a product group's common directory and its log and output subdirectories when you run AutoInstall or the AD Administration utility for each product group, but you must manually create the subdirectories if you name them something other than *log* or *out*.

All product group registry subkeys use the same common directory name for the value of the APPLCSF environment setting. However, each registry subkey uses log and output subdirectory names that are unique to that product group for the values of the APPLLOG and APPOUT environment settings. The concurrent managers for each product group write the product group's log and output files to #APPLCSF#\#APPLLOG# and #APPLCSF#\#APPOUT#, respectively.

Figure 4–11 Common Directory for Multiple Product Groups

Multiple Common Directories

Figure 4–12 illustrates three common directories set up for three product groups on three separate file systems. You designate a product group's common directory and the log and output subdirectories when you run AutoInstall or the AD Administration utility.

Figure 4–12 Multiple Common Directories for Multiple Product Groups

All product group registry subkeys use the same log and output subdirectory names for the values of the APPLLOG and APPLOUT environment settings. However, each uses a common directory name that is unique to that product group for the value of the APPLCSF environment setting. The concurrent managers for each product group write the product group's log files to #APPLCSF#\#APPLLOG# and output files to #APPLCSF#\#APPLOUT#.

Selecting a Log and Output File Storage Method

Consider the following when selecting a method for storing log and output files:

- anticipated size of log and output files

Oracle Applications Installation contains information that helps you estimate how much disk space you need for log and output files. You may want to store files across file systems if you plan to keep a large volume of log and output data.

- security needs

With the default storage method where each product's directory tree has its own log and output subdirectories, you can restrict operating system access to log and output subdirectories on a product-by-product basis. For example, you can grant access to the Oracle General Ledger log and output subdirectories to only the General Ledger users, or the Oracle Receivables log and output subdirectories to only the Oracle Receivables users. You would not be able to implement such security if you used a common directory.

Temporary Files

Oracle Applications uses temporary files for many different functions. You may specify up to three separate locations for these files, according to the type of process that creates them. This allows you to avoid potential disk space allocation problems with the operating system temporary directories (defined by the environment variables TEMP and TMP) and to be able to restrict access to particular temporary files. You specify these temporary directories when you run AutoInstall or the AD Administration utility to create a new Applications registry subkey.

Most Oracle Applications temporary files are written to the location specified by the APPLTMP environment setting. Oracle Reports temporary files can be directed to a separate location specified by the REPORTS25_TMP environment setting. Both of these environment settings can be set to any directory on your file system accessible to the concurrent managers. The default is for both environment settings is C:\temp.

Oracle Applications also produces temporary PL/SQL output files used in concurrent processing. These files are written to the location specified by the APPLPTMP environment setting. APPLPTMP can also be located anywhere on your file system accessible to the concurrent managers, but is more restricted because it uses PL/SQL I/O functionality. For security reasons, in order to direct output to a directory using this functionality, you must list the directory in your database initialization file, as part of the value for the utl_file_dir parameter. Without this

setting, Oracle Applications will fail to install or function properly. For this reason, the APPLPTMP environment setting has no default value.

Additional Information: Creating a Registry Subkey in Chapter 3,
Oracle Applications Installation

Attention: Some Applications utilities will use the default temporary directory for your operating system (typically C:\temp), even if you set the environment settings listed in the previous paragraphs to different values. Be sure to have disk space available in this operating system default temporary directory as well as in those directories specified by APPLTMP, REPORTS25_TMP, and APPLPTMP.

Glossary

administration server

The machine from which a user—typically an administrator—runs programs that maintain and update an Oracle Applications database. For example, AutoInstall and AutoPatch are both run on this machine to install, upgrade, or update the database, which may reside on another machine (the database server).

applet

A Java program that is downloaded to a desktop client from a web server, and run within a Java-enabled web browser or appletviewer.

appletviewer

A program that runs a Java applet or application.

application servers

Machines that reside in a middle tier, between desktop clients and a high-end, or back-end, tier. Desktop clients send their requests to application servers, which process the request by sending it to another server, such as the database server. In this manner, the desktop clients never connect directly to the database server. The forms server and web server are types of application servers. See also *tier*.

applmgr

The login used to install and upgrade Oracle Applications. This account owns the Oracle Applications product files.

APPS schema

An ORACLE schema that has access to the complete Oracle Applications data model.

AutoInstall

The Oracle Applications installation and upgrade program.

background process

A non-interactive process that runs in an operating system environment and performs a task.

bandwidth

The amount of data that can be sent through a network connection, measured in bits per second (bps). The speed and capacity of a network depend on both bandwidth and latency. See also *latency*.

base language

The language used for seed data of products that do not support multiple languages. (Multiple language products include FND, AK, AS, AX, and AZ).

browser

See *web browser*.

cartridge

A software component that, when linked with other cartridges, forms a complete software solution. Cartridges are "wrappers" around a program. The program may be written in any programming language, such as C, C++, or Java. The wrapper enables the program to interface with other cartridges on the same machine or across a network. Cartridges may be used in many places: the Oracle ConText Cartridge is an example of a data cartridge (residing on the database tier), while the Oracle Forms Load Balancing Cartridge is an example of an application cartridge (residing on the application tier).

certificate file

Contains the identity of a "trusted source" that the desktop client uses to guarantee the authenticity of a JAR file. Information contained within the certificate file allows the desktop client to decrypt the digital signature of a JAR file. If the identity can be confirmed, the desktop client assumes the JAR file is safe to download and execute. See also *digital signature*.

character set

A set of encoded binary values that represents the letters, numerals, and punctuation marks of a language, or of a group of languages that use similar written symbols. For example, the WE8ISO8859P1 character set can be used by English and many other languages that use a Latin-based alphabet and Arabic numerals. Terminals and printers handle text data by converting these encoded values to characters. A character set may also be called a *codeset*.

client

A general term for the computer in a client/server configuration that requests services, data, or processing. The computer supplying the services, data, or processing is the *server*.

client/server configuration

A configuration in which one or several servers perform database processing or other functions for applications that are run on clients.

codeset

See *character set*.

command

An instruction or request for the system to perform a particular action. An entire command can consist of the command name, parameters, and qualifiers.

command file

A file containing a predefined sequence of commands to be executed by the operating system.

concurrency

The simultaneous access of the same data by multiple users.

concurrent manager

A process manager that coordinates the processes generated by users' requests to run various data-intensive programs. An Oracle Applications product group can have several concurrent managers.

concurrent process

A task run by a concurrent manager. A concurrent process runs simultaneously with interactive functions and other concurrent processes.

concurrent processing server

An Oracle Applications server that runs time-consuming, non-interactive tasks in the background.

concurrent queue

A list of concurrent requests awaiting completion. Each concurrent manager has its own queue of pending requests.

concurrent request

A request issued to the concurrent processing server when you submit a non-interactive task, such as running a report.

customization

Enhancements to an Oracle Applications system made to fit the needs of a specific user community.

data dictionary

A set of database tables and views that contains administrative information about users, data storage, and privileges. It is created and maintained automatically.

database

A collection of data, stored in tables, and objects, such as stored procedures and triggers. The term can also refer to the software used to create, store, and manage this data—for example, the Oracle8 Server.

database administrator (DBA)

Prepares the Oracle8 Server and Oracle tools for an installation or upgrade of Oracle Applications, and performs maintenance on them after the installation. The DBA has access to the ORACLE SYSTEM and SYS accounts.

database instance

A running ORACLE system. There is always a one-to-one correspondence between an ORACLE instance and a system global area (SGA).

database object

A logical entity created and stored in a database. Tables, views, synonyms, indexes, sequences, stored procedures, and triggers are all examples of database objects.

database server (Release 11)

A machine on which the database holding Oracle Applications data resides. The database server processes SQL requests from other machines, such as forms servers and concurrent processing servers.

database space

The amount of disk space used by a set of database objects.

demonstration product group

A product group that includes predefined transaction data for Oracle Applications products. It is used primarily for system testing and user training. See also *product group*.

dependent product

An Applications product that is not licensed, but whose files are shared in part by a fully installed Applications product. A dependent product is also known as a *shared product*.

desktop client

A computer that sends user requests to the forms server and handles responses such as screen updates, pop-up lists, graphical widgets, and cursor movements.

digital signature

A means of guaranteeing the authenticity of a program or collection of data, such as a JAR file. It is typically an encrypted message that contains the identity of the code's author. See also *certificate file*.

distributed concurrent processing

See *parallel concurrent processing*.

distributed directory structure

Applications product files installed in more than one file system, as when there is insufficient disk space in a single file system for all Applications product files.

environment file

A command file that sets environment variables. Only servers running UNIX or OpenVMS use these files—Windows NT servers use the Windows registry instead.

environment setting

A parameter that controls the behavior of Applications and Applications programs for your installation. Environment settings are stored as environment variables on UNIX servers, as logicals on OpenVMS servers, or as registry keys or environment variables on Windows NT servers.

environment variable

A variable maintained by the UNIX shell that can be referenced by any program running within the shell. Environment variables hold values used by many Oracle programs and utilities.

On Windows NT, a string consisting of environment information, such as a drive, path, or filename, associated with a symbolic name. You use the System option in the Control Panel or the set command from the Windows NT command prompt to define environment variables.

Export utility

An Oracle8 Server utility used to write database data to operating system files external to the database. These files can then be used with the Import utility to read the data back into the same database or into a different one.

extension

The second part, or suffix, of a filename, used to indicate the type or purpose of the file. For example, the extension .sql indicates a SQL*Plus script. See also *filename*.

form

A logical collection of fields, regions, and graphical components that appears on a single screen. Oracle Applications forms resemble paper forms used to run a business. You enter data by typing information into the form.

forms client

A Java applet that runs on a desktop client and provides the user interface and interaction with a forms server.

Forms Metrics Server

A machine that manages and distributes requests from forms clients among multiple forms servers. See also *load balancing*.

forms server

A type of application server that hosts the Oracle Forms Server engine. It mediates between the desktop client and the database, providing input screens to the desktop client and creating or changing database records based on user actions.

functional currency

In Multiple Reporting Currencies, a currency other than your primary currency.

Gigabyte (GB)

A unit of memory or disk space equal to 1,073,741,824 bytes. One Gigabyte is equal to 1,024 Megabytes. Often rounded to 1,000,000,000 bytes.

GUI (Graphical User Interface)

An interface used with personal computers and workstations that allows the user to access fields and regions of the screen with a pointing device, typically a mouse. The acronym is pronounced "goo-ee".

HTML (Hypertext Markup Language)

A simple language used to format documents, predominantly for viewing with a web browser. Portions of text or images, called hypertext, can be associated with other documents.

HTTP (Hypertext Transfer Protocol)

The TCP/IP-based network protocol used to transmit requests and documents between a web server and a web browser.

HTTP listener

A program on a web server that accepts and processes incoming HTTP requests from web browsers.

Import utility

An Oracle8 Server utility used to read operating system files written by the Export utility. You use it to restore data into a database.

index

A database object associated with a table and used by the Oracle8 Server to locate rows of that table quickly.

initialization parameters

Parameters defined in an initialization file that configure an Oracle8 Server database. The parameters affect how the database performs.

Internal concurrent manager

A concurrent manager process that monitors, controls, and dispenses requests to all other concurrent manager processes.

intranet

A network of computers that are internal to a company. A company's intranet is basically a local extension to the globally-distributed Internet, which is a global inter-connected network of computers and smaller computer networks.

Java

A computing language used, among other things, to produce programs that can be downloaded and run on a desktop client using a web browser. It is also used to produce platform-independent programs that run on a server, either interactively or when invoked through a request from a web browser. See also *applet* and *servlet*.

JAR (Java Archive) file

A collection of Java classes compressed into a single file for faster download to a desktop client.

Java class

Components of a Java program that define objects and operations performed on objects. In the *Architecture* and *Installation* manuals, Java class also identifies an operating system file that contains a program or part of a program written in Java.

JDBC (Java Database Connectivity)

A Java programming interface that enables Java programs to execute SQL statements and access databases, such as the Oracle8 Server.

JVM (Java Virtual Machine)

An interpreter that translates a compiled Java program, called bytecode, to machine code. JVM makes Java portable, because each operating system's JVM translates bytecode to instructions that the microprocessor can execute. An appletviewer or Java-enabled web browser has an internal JVM that allows it to execute applets or applications written in Java.

LAN (Local Area Network)

A limited-distance, high-speed, data communications network that allows various data processing resources to be connected and shared. A LAN is a network contained within a single physical site (one or more buildings), as opposed to a WAN. See also *WAN*.

latency

In networking, the amount of time it takes a packet of data to travel from a source to its destination. The speed and capacity of a network depend on both bandwidth and latency. See also *bandwidth*.

load balancing

Distributing tasks to the server that is least busy when several servers are handling the same workload. For example, the Oracle Forms Load Balancing Cartridge has a single coordinator (the Forms Metrics Server) that monitors load information from other forms servers and determines which server currently has the lightest load. Upon receiving a request from a forms client, the Forms Metrics Server can balance the processing load by instructing the forms client to connect to the forms server that has the lightest load. This server is called the "least loaded host".

LOCAL

Under Windows NT, an environment setting that identifies the network alias of an ORACLE instance running on the local machine or on another networked machine. This variable overrides any setting for ORACLE_SID and causes the Net8 software to manage the connection request. See also *ORACLE_SID* and *TWO_TASK*.

localizations

Modules that extend Oracle Applications to meet the unique business requirements of one or more geographic regions.

log in

To perform a sequence of actions that establishes communication with the operating system or a secured program, such as the Oracle8 Server or Oracle Applications, and sets up default characteristics for the session.

Megabyte (MB)

A unit of memory or disk space equal to 1,048,576 bytes (1024 x 1024). Often rounded to one million bytes.

MOA

See *multiple ORACLE account product*.

multiple ORACLE account product

In earlier Multiple Sets Of Books Architecture, an Oracle Applications product whose data is divided among multiple product schemas to implement multiple sets of books. For example, Oracle Payables requires three product schemas to implement three sets of books in this architecture. In the newer Multi-Org architecture, multiple ORACLE account products only require one product schema, no matter how many organizations you define.

Multiple Organization Architecture (Multi-Org)

A single installation of any Oracle Applications product to support any number of organizations or different sets of books. The data contained in product schemas is for all organizations, and is partitioned by the ORG_ID column in tables.

Multiple Reporting Currency (MRC)

An Oracle Applications feature that allows you to create, maintain, and report on accounting records at the transaction level in more than one functional currency.

Multiple Sets Of Books Architecture (MSOB)

An older Oracle Applications mechanism for implementing an organization or group of organizations that shares a common Accounting Flexfield structure, calendar, and functional currency. With MSOB architecture, you must define at least one set of books for each business location. MSOB architecture is superseded by the newer Multiple Organization Architecture. See also *Multiple Organization Architecture*.

multi-tier architecture

A computing model in which various functions are distributed among multiple levels, or *tiers*, of machines. Typically there are at least three such tiers: desktop clients issuing user requests, back-end servers used for database processing and other intensive tasks, and a middle tier that mediates connections between the two. See also *NCA*.

NCA (Network Computing Architecture)

An Internet-based Oracle framework that provides communication in a multi-tier architecture.

Net8

The Oracle product that enables network connectivity between a client machine and the Oracle8 Server. Net8 manages communication sessions between these machines by opening and closing sessions and by packaging and sending SQL statements and data responses. Prior to the Oracle8 Server release, Net8 was called SQL*Net.

NLS (National Language Support)

Oracle Applications NLS allows the use of various character sets, and provides translated messages, help files, and seed data for languages other than American English.

operating system

The computer software that performs basic tasks such as allocating memory and allowing computer components to communicate.

ORACLE

An Oracle8 Server database. This generally refers to a database and the objects it contains, not to the Oracle8 Server product files.

ORACLE_HOME

An environment setting that specifies the top directory for Oracle8 Server program files.

ORACLE schema

See *schema*.

Oracle8 Server

The database management system used by Release 11. The term refers in general to the product files or the ORACLE instances created using these files.

Oracle Server Manager

An Oracle8 Server utility that allows DBAs to start, stop, monitor, and maintain databases.

ORACLE_SID

An environment setting that identifies an ORACLE instance running on the current machine. See also *TWO_TASK* and *LOCAL*.

ORACLE user ID

A username and password used to access an ORACLE instance.

parameter

A value passed to a command. A parameter can be a file specification, a symbol, or a word understood by the program.

parallel concurrent processing

In a UNIX environment, distribution of concurrent processes among multiple concurrent processing servers. Also called *distributed concurrent processing*.

password

An identification word, associated with your username, that you must supply to access an ORACLE instance or an Oracle Applications system.

PDF (Portable Document Format)

A file format developed by Adobe Systems. PDF files may contain formatted text, graphics, color, and images that you can view, navigate within, and print. You need Adobe Acrobat Reader to view a PDF file.

platform

The underlying structure of a computer system, including hardware and software, on which application programs run. The hardware component includes the microprocessor, which is the microchip that performs logic operations and data management. The software component includes the operating system, which is the computer system's coordinating program. Sun SPARC Solaris and Alpha Windows NT are examples of platforms. Some Oracle Applications functionality is platform-specific, meaning its behavior may differ on other platforms.

PL/SQL

A procedural extension of SQL that provides programming constructs such as blocks, conditionals, and functions.

primary functional currency

The currency you use to record transactions and maintain your accounting data within Oracle Applications.

primary set of books

A financial reporting entity in which you conduct business.

Pro*C

An Oracle precompiler product that allows developers of C programs to embed standard database calls to an ORACLE database in C programs.

product group

A set of Oracle Applications product schemas linked together by a single Oracle Application Object Library schema.

product installation group

A set of related products in a Multiple Sets Of Books Architecture installation, such as AP2, PO2, and INV2, that partition the data for a single set of books.

registry

A Windows NT database that holds configuration information. During installation, Oracle Applications writes data to the registry. You can also edit the registry directly with the Registry Editor (regedt32.exe).

registry key

A folder that appears in the left pane of the Registry Editor window. A key can contain subkeys and value entries. For example: Environment is a key of HKEY_CURRENT_USER. See also *subkey*.

registry subkey

A key within a key. Subkeys are analogous to subdirectories in the registry hierarchy. Keys and subkeys are similar to the section heading in .ini files; however subkeys can carry out functions. Oracle Applications stores important information about a product group in a registry subkey. See also *registry key* and *registry*.

report

An organized display of Oracle Applications information. A report can be viewed online or sent to a printer. The content of a report can range from a summary to a complete listing of values.

Report Review Agent

A tool used by Oracle Applications to view concurrent processing files online.

reporting functional currency

A currency, other than your primary functional currency, for which you need to generate reports.

reporting set of books

A financial reporting entity that is associated with a primary set of books. It has the same chart of accounts and accounting calendar, but usually a different functional currency.

reserved word

A word that has a special meaning to any computer program. Custom-built programs that integrate with Oracle Applications must not use reserved words.

responsibility

A collection of functions within an Oracle Application. Each Applications user is assigned one or more responsibilities to allow them access to Applications forms.

rollback segment

A set of entries used to undo changes in the database in the event of transaction rollback, crash, or media recovery.

rollback tablespace

A tablespace created for rollback segments.

RPC (Remote Procedure Call)

A protocol that allows a client to execute a program on a server. The client sends a message to the server with appropriate arguments and the server returns a message containing the program's results.

schema

An ORACLE account or ORACLE ID.

server

A program or machine that provides resources, such as files, processing, or other information, to other programs or machines, which are called *clients*. For example, the Oracle Forms Server process runs on a forms server (machine), and the Oracle8 Server (database process) runs on a database server. Server processes may communicate with other programs, such as desktop client processes, or other servers.

service

A Windows NT internal software routine that provides support for other applications. The Oracle8 Server, Net8, and Oracle Applications concurrent managers all make use of services.

servlet

A Java program executed on a web server, rather than downloaded to a desktop client. See also *applet*.

SGA (System Global Area)

A reserved section of main memory that provides communication between all database users and the ORACLE background processes.

shared product

See *dependent product*.

short name

An abbreviation for an Oracle Applications product (such as *gl* for Oracle General Ledger).

shut down

The process of stopping an active process, such as an ORACLE instance or a concurrent manager, to make it unavailable.

single ORACLE account product

In the older Multiple Sets Of Books Architecture, an Oracle Applications product that only requires one product schema to implement multiple sets of books. For example, Oracle General Ledger only requires one product schema to implement three sets of books in this architecture. In the newer Multi-Org architecture, single ORACLE account products also require only one product schema.

sizing factor

An integer that determines the growth rate, as a percentage of their defaults, for the database objects of an Oracle Applications product.

SmartClient

An implementation used with Release 10 to provide client/server access to Oracle Applications.

SOA

See *single ORACLE account product*.

SQL (Structured Query Language)

An internationally standard language used to access data in a relational database. The acronym is pronounced “sequel.”

SQL*Loader

An Oracle8 Server tool used to load unstructured data from operating system files into Oracle8 Server database tables.

SQL*Plus

An Oracle program you can use to enter and run SQL commands and PL/SQL blocks that store data in and retrieve data from an ORACLE database.

SQL script

A file containing SQL statements that you run with a tool such as SQL*Plus to query or update ORACLE data.

Standard Request Submission

A standard interface in Oracle Applications that lets you run and monitor concurrent requests.

subdirectory

A directory that is contained within another directory.

synonym

An alias for a table, view, sequence, or program unit that masks the real name and owner of the object, provides public access to the object, and simplifies SQL statements for database users.

syntax

The orderly system by which commands, qualifiers, and parameters are arranged together to form valid command strings.

SYS username

One of two standard DBA usernames automatically created with each database (the other is SYSTEM). SYS owns the base data dictionary tables and views. See also *SYSTEM username*.

SYS.DUAL table

A necessary table in any relational database. SYS.DUAL contains exactly one row, and is used as a "dummy" table in a SQL statement to return values that are not stored in tables, such as constant values, evaluations of arithmetic expressions, or system values like the current date.

system administrator

Responsible for administering the Applications development system, including configuring and maintaining hardware and software. The term also applies to the person who manages administrative tasks in Applications, such as registering new users and defining system printers, using the System Administrator responsibility.

SYSTEM schema

See *SYSTEM username*.

SYSTEM tablespace

Holds data dictionary tables owned by the SYS account. It is created when you install the database.

SYSTEM username

One of two standard usernames automatically created with each database (the other is SYS). The SYSTEM username is the preferred username to use when performing database maintenance. See also *SYS username*.

table

The basic unit of storage in a relational database management system. A table represents entities and relationships, and consists of one or more units of information (rows), each of which contains the same kinds of values (columns).

tablespace

A logical portion of an ORACLE database used to allocate storage for data and to group related logical structures. For example, one tablespace may contain all of one Oracle Applications product's database tables and indexes.

TCP/IP (Transmission Control Protocol / Internet Protocol)

A widely-used industry-standard networking protocol used for communication among computers.

technical specialist

Responsible for designing, developing, unit testing, implementing, and maintaining customizations for Oracle Applications.

temporary tablespace

A tablespace used when a SQL statement requires the creation of temporary segments (for example, the creation of an index).

thin client

A desktop client designed to be small and low-maintenance, usually without a hard drive, and intended for optimal use in a multi-tier architecture environment. Server machines perform data processing actions instead of the thin client. The term refers to either a desktop client computer, such as a Network Computer, or the client software that is running on that machine. See also *tier*.

tier

A set of machines that perform similar tasks. Client/server is a two-tier architecture, with machines on the client tier connecting to machines on the server tier. A multi-tier architecture consists of three or more tiers. In Release 11, machines on the desktop client tier communicate with machines on the application tier, which in turn, communicate with each other and with machines on the database tier.

TWO_TASK

Under UNIX, an environment setting that identifies the network alias of an ORACLE instance running on the local machine or on another networked machine. This variable overrides any setting for ORACLE_SID and causes the Net8 software to manage the connection request. See also *ORACLE_SID* and *LOCAL*.

user ID

The combination of a username and its password.

username

A name that grants access to a secure environment or program, such as an ORACLE database or Oracle Applications. A username is customarily associated with a collection of privileges and data available to a particular user (*responsibilities* in Oracle Applications). Every username is associated with a password.

view

A custom-tailored presentation of the data in one or more tables. A view can be thought of as a "stored query."

WAN (Wide Area Network)

A communications network that connects geographically separated areas. See also *LAN*.

web browser

A program running on a desktop client that views documents formatted in HTML and runs Java applets. A web browser sends requests to a web server using a special protocol (*HTTP*) to retrieve documents and Java applets.

web server

A type of application server that runs an HTTP listener. (The term is also used by some in an informal manner to describe the software running the HTTP listener, as in "the Apache web server." Oracle Applications manuals use only the first definition.)

World Wide Web (WWW)

A hypertext-based system for browsing multimedia documents that uses the Internet as its transport mechanism. In a hypertext system, you navigate among documents by following hyperlinks, which take you to other documents. Often simply referred to as "the Web." See also *HTML* and *HTTP*.

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