

Oracle® Database Lite

Getting Started Guide

10g (10.2.0)

Part No. B15918-01

June 2005

Oracle Database Lite Getting Started Guide 10g (10.2.0)

Part No. B15918-01

Copyright © 2000, 2005, Oracle. All rights reserved.

Primary Author: Sheryl Maring

The Programs (which include both the software and documentation) contain proprietary information; they are provided under a license agreement containing restrictions on use and disclosure and are also protected by copyright, patent, and other intellectual and industrial property laws. Reverse engineering, disassembly, or decompilation of the Programs, except to the extent required to obtain interoperability with other independently created software or as specified by law, is prohibited.

The information contained in this document is subject to change without notice. If you find any problems in the documentation, please report them to us in writing. This document is not warranted to be error-free. Except as may be expressly permitted in your license agreement for these Programs, no part of these Programs may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose.

If the Programs are delivered to the United States Government or anyone licensing or using the Programs on behalf of the United States Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the Programs, including documentation and technical data, shall be subject to the licensing restrictions set forth in the applicable Oracle license agreement, and, to the extent applicable, the additional rights set forth in FAR 52.227-19, Commercial Computer Software—Restricted Rights (June 1987). Oracle Corporation, 500 Oracle Parkway, Redwood City, CA 94065

The Programs are not intended for use in any nuclear, aviation, mass transit, medical, or other inherently dangerous applications. It shall be the licensee's responsibility to take all appropriate fail-safe, backup, redundancy and other measures to ensure the safe use of such applications if the Programs are used for such purposes, and we disclaim liability for any damages caused by such use of the Programs.

Oracle, JD Edwards, PeopleSoft, and Retek are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

The Programs may provide links to Web sites and access to content, products, and services from third parties. Oracle is not responsible for the availability of, or any content provided on, third-party Web sites. You bear all risks associated with the use of such content. If you choose to purchase any products or services from a third party, the relationship is directly between you and the third party. Oracle is not responsible for: (a) the quality of third-party products or services; or (b) fulfilling any of the terms of the agreement with the third party, including delivery of products or services and warranty obligations related to purchased products or services. Oracle is not responsible for any loss or damage of any sort that you may incur from dealing with any third party.

Contents

Send Us Your Comments	vii
Preface	ix
Intended Audience.....	ix
Documentation Accessibility	ix
Structure	x
Related Documents	x
Conventions	x
1 Pre-Installation Requirements	
1.1 Include the Latest Patches	1-1
1.2 Release Notes.....	1-1
1.3 Supported Components and Technologies.....	1-1
1.3.1 Certified Platforms for the Mobile Server	1-2
1.3.2 Certified Application Server Configurations.....	1-2
1.3.3 Supported Technologies for the Mobile Server.....	1-2
1.3.4 Oracle Universal Installer.....	1-3
1.3.5 Supported Browsers	1-3
1.3.6 Certified Oracle RDBMS to Use With Oracle Database Lite	1-3
1.3.7 Oracle Database Lite Web.....	1-3
1.3.7.1 Certified Platforms for Oracle Database Lite Web	1-3
1.3.7.2 Supported Technologies for Oracle Database Lite Web	1-3
1.3.7.3 Certified Technologies for Oracle Database Lite Web	1-4
1.3.7.4 Notes for Oracle Database Lite Web.....	1-4
1.3.8 Oracle Database Lite Branch Office.....	1-4
1.3.8.1 Certified Platforms for Branch Office	1-4
1.3.8.2 Supported Technologies for Branch Office.....	1-4
1.3.8.3 Certified Technologies for Branch Office	1-4
1.3.8.4 Notes for Branch Office	1-4
1.3.9 Oracle Database Lite BC4J	1-4
1.3.9.1 Certified Platforms for Oracle Database Lite BC4J	1-5
1.3.9.2 Supported Technologies for Oracle Database Lite BC4J.....	1-5
1.3.9.3 Certified Technologies for Oracle Database Lite BC4J.....	1-5
1.3.9.4 Notes for Oracle Database Lite BC4J	1-5
1.3.10 Oracle Database Lite WIN32.....	1-5

1.3.10.1	Certified Platforms for Oracle Database Lite WIN32.....	1-5
1.3.10.2	Supported Technologies for Oracle Database Lite WIN32.....	1-5
1.3.10.3	Notes for Oracle Database Lite WIN32.....	1-6
1.3.11	Oracle Database Lite WinCE.....	1-6
1.3.11.1	Supported Platforms for Oracle Database Lite WinCE.....	1-6
1.3.11.2	Supported Technologies for Oracle Database Lite WinCE.....	1-6
1.3.11.3	Certified Technologies for Oracle Database Lite WinCE.....	1-6
1.3.11.4	Notes for Oracle Database Lite WinCE.....	1-7
1.3.12	Oracle Database Lite PALM.....	1-7
1.3.12.1	Certified Platforms for Oracle Database Lite PALM.....	1-7
1.3.12.2	Certified Platforms for Oracle Database Lite PALM.....	1-7
1.3.12.3	Supported Technologies for Oracle Database Lite PALM.....	1-7
1.3.12.4	Notes for Oracle Database Lite PALM.....	1-7
1.4	Oracle Components That Work With Oracle Database Lite.....	1-8
1.5	System Requirements For Mobile Clients.....	1-8
1.5.1	Hardware Requirements For Your Mobile Clients.....	1-8
1.5.2	Software Requirements For Your Mobile Clients.....	1-9
1.6	System Requirements For Windows Systems.....	1-9
1.6.1	Hardware Requirements For Windows.....	1-10
1.6.2	Software Requirements For Windows.....	1-10
1.7	System Requirements For UNIX Systems.....	1-10
1.7.1	Hardware Requirements For UNIX Systems.....	1-10
1.7.2	Operating System Requirements For UNIX.....	1-11
1.7.3	Software Requirements For UNIX Systems.....	1-13
1.8	Recommended System Configuration For UNIX.....	1-13
1.8.1	Setting UNIX Environment Variables.....	1-13
1.8.1.1	ORACLE_HOME.....	1-14
1.8.1.2	JAVA13_HOME.....	1-14
1.8.1.3	DISPLAY.....	1-14
1.8.1.4	TMP and TMPDIR.....	1-15
1.8.2	Creating UNIX Accounts and Groups.....	1-16
1.8.2.1	UNIX Group Name For the Oracle Universal Installer Inventory.....	1-16
1.8.2.2	UNIX Account to Own Oracle Software.....	1-16
1.8.3	Configuring Kernel Parameters and Shell Limits for UNIX.....	1-16
1.8.3.1	Configuring Shell Limits and System Configuration Parameters on AIX.....	1-17
1.8.3.2	Configuring Kernel Parameters on HP-UX.....	1-18
1.8.3.3	Configuring the Kernel Parameters on Linux.....	1-18
1.8.3.4	Set Shell Limits for the User oracle.....	1-19
1.9	Mounting the Installation CD-ROM For UNIX Systems.....	1-20
1.9.1	Mounting CD-ROMs For AIX.....	1-20
1.9.2	Mounting CD-ROMs For HP.....	1-21
1.9.3	Mounting CD-ROMs For Linux.....	1-22
1.9.3.1	Mounting CD-ROMs For Linux With Auto Mounting Software.....	1-22
1.9.3.2	Mounting CD-ROMs For Linux Manually.....	1-22
1.9.4	Mounting CD-ROMs For Tru64.....	1-23
1.10	Defining Synchronization Tablespace Layout for Performance.....	1-24
1.11	WebCache Installation Considerations.....	1-24

2 Installation of Oracle Database Lite

2.1	Starting Oracle Universal Installer	2-1
2.1.1	Starting the Oracle Universal Installer on Windows.....	2-2
2.1.2	Starting Oracle Universal Installer on UNIX.....	2-2
2.1.2.1	Using the oraInventory Directory	2-2
2.1.2.2	Location of Files on UNIX.....	2-2
2.2	Oracle Database Lite Installation Considerations	2-3
2.2.1	Installing Multiple Languages on a Single Solaris Machine	2-3
2.2.2	Mobile Server on a DHCP Server is Not Supported.....	2-3
2.3	Installing Oracle Database Lite	2-3
2.3.1	GUI Install of the Mobile Server and MDK Components.....	2-3
2.3.1.1	Installation of Mobile Development Kit.....	2-4
2.3.1.2	Installation of Mobile Server.....	2-4
2.3.2	Silent Install of Mobile Server and MDK Components.....	2-6
2.3.2.1	Silent Install Mobile Server or the Mobile Development Kit on UNIX	2-6
2.3.2.2	Silent Install for Mobile Server or Mobile Development Kit on Windows	2-8
2.3.3	Installation of Multiple Mobile Servers Against the Same Mobile Server Repository	2-9
2.3.4	Custom Install	2-10
2.3.5	Client Install.....	2-10
2.4	Post-Installation Configuration Requirements.....	2-10
2.4.1	Setup DISPLAY Variable for UNIX Systems in Oracle Application Server.....	2-10
2.4.2	Enabling Branch Office on Windows XP Service Pack 2	2-10
2.5	Starting Mobile Server.....	2-10
2.6	Testing Your Mobile Server Installation.....	2-11
2.7	Removing Demo Applications.....	2-12

3 Upgrade Oracle Database Lite

3.1	Upgrade Your Oracle Database Lite from 5.0.2.x to 10g Release 2.....	3-1
3.1.1	What 5.0.2.x Versions Can I Upgrade to 10g Release 2?	3-1
3.1.2	Pre-Upgrade Instructions for the 5.0.2.x Version	3-2
3.1.3	Upgrade Your 5.0.2.x Version Mobile Server Repository	3-2
3.1.4	Upgrade Your 5.0.2.x Version Existing Applications.....	3-3
3.1.4.1	Manual Upgrade Instructions For Web-to-Go Applications in Retrieving the OraUserProfile Class	3-4
3.1.5	Upgrading BC4J Mobile Client 5.0.2.x to Version 10g Release 2	3-4
3.1.6	Upgrading 5.0.2.x Version Branch Office.....	3-5
3.1.7	Use the Appropriate Context for Your Mobile Server	3-5
3.1.8	Migrate Your 5.0.2.x Version Users From the Mobile Server Repository to the Oracle Internet Directory	3-5
3.1.9	Post-Upgrade Instructions for 5.0.2.x Version.....	3-7
3.1.10	Remove the 5.0.2.x Installation	3-7
3.1.11	New Consolidator Sequence Properties Added During Upgrade	3-7
3.2	Upgrade Your Oracle Database Lite from 10g Release 1 to 10g Release 2	3-8
3.2.1	To What Versions Can I Upgrade Oracle Database Lite?.....	3-8
3.2.2	Pre-Upgrade Instructions	3-9
3.2.3	Upgrade Your Mobile Server Repository	3-9

3.2.4	Upgrade Your Existing Applications	3-10
3.2.5	Installing Sample Applications.....	3-10
3.2.6	Upgrading Branch Office 10g Release 1 to version 10g Release 2	3-11
3.2.7	Migrate Your Users From the Mobile Server Repository to the Oracle Internet Directory	3-11
3.2.8	Remove the 10g Release 1 Installation	3-13
3.2.9	Remove Duplicate Mobile Server IDs from the Repository	3-13

4 Quick Start for Oracle Database Lite

4.1	Installing the Sample Applications	4-1
4.2	Starting Oracle Database Lite and Its Job Scheduler	4-1
4.3	Starting a Windows 32 Application	4-2
4.3.1	Software Requirements for the Win32 Demo	4-3
4.3.2	Download the Mobile Client from the Mobile Server.....	4-3
4.3.3	Install the Mobile Client on the Win32 Device.....	4-3
4.3.4	Start the Win32 Sample Application.....	4-4
4.3.5	Enter and View Data in the Win32 Sample Application.....	4-4
4.3.6	Synchronize the Win32 Sample Application Data to the Database.....	4-4
4.4	Starting a Web-Based Application.....	4-5
4.4.1	Download the Mobile Client from the Mobile Server.....	4-5
4.4.2	Install the Web Mobile Client	4-6
4.4.3	Enter and Sync Data in the Web Client Sample	4-6
4.5	Starting an Application on Your Pocket PC Device.....	4-6
4.5.1	Verify the Software and Hardware Requirements for the Pocket PC Demo.....	4-7
4.5.2	Download the Mobile Client from the Mobile Server.....	4-7
4.5.3	Install the Pocket PC Mobile Client.....	4-8
4.5.4	Enter and View Data in the Pocket PC Sample Application.....	4-8
4.5.5	Synchronize the Pocket PC Application Data to the Database	4-9
4.6	Starting a Palm OS Application	4-9
4.6.1	Verify the Software and Hardware Requirements for the Palm OS Demo.....	4-10
4.6.2	Download the Mobile Client from the Mobile Server.....	4-10
4.6.3	Install the Palm OS Mobile Client	4-11
4.6.4	Execute the Palm OS Sample Application	4-11

5 Oracle Database Lite Proxy Support

5.1	Using HTTP Proxy to Communicate From Inside a Firewall	5-1
5.2	Using Reverse Proxy to Communicate from Internet to Intranet.....	5-2

Index

Send Us Your Comments

Oracle Database Lite Getting Started Guide 10g (10.2.0)

Part No. B15918-01

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

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

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

- Electronic mail: olitedoc_us@oracle.com
- FAX: (650) 506-7355. Attn: Oracle Database Lite
- Postal service:

Oracle Corporation
Oracle Database Lite Documentation
500 Oracle Parkway, Mailstop 1op2
Redwood Shores, CA 94065
U.S.A.

If you would like a reply, please give your name, address, telephone number, and electronic mail address (optional).

If you have problems with the software, please contact your local Oracle Support Services.

Preface

This preface introduces you to the *Oracle Database Lite Getting Started Guide*, discussing the intended audience, documentation accessibility, structure, and conventions of this document.

Intended Audience

This manual is intended for users, who are new to the product, and administrators who are installing or upgrading Oracle Database Lite.

Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible, with good usability, to the disabled community. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Accessibility standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For more information, visit the Oracle Accessibility Program Web site at

<http://www.oracle.com/accessibility/>

Accessibility of Code Examples in Documentation

Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

Accessibility of Links to External Web Sites in Documentation

This documentation may contain links to Web sites of other companies or organizations that Oracle does not own or control. Oracle neither evaluates nor makes any representations regarding the accessibility of these Web sites.

TTY Access to Oracle Support Services

Oracle provides dedicated Text Telephone (TTY) access to Oracle Support Services within the United States of America 24 hours a day, seven days a week. For TTY support, call 800.446.2398.

Structure

This guide includes the following topics:

Chapter 1, "Pre-Installation Requirements"

This chapter instructs you how to prepare to install Oracle Database Lite.

Chapter 2, "Installation of Oracle Database Lite"

This chapter instructs you how to install Oracle Database Lite.

Chapter 3, "Upgrade Oracle Database Lite"

This chapter instructs you how to upgrade your version of Oracle Database Lite to the current version.

Chapter 4, "Quick Start for Oracle Database Lite"

This chapter directs you, as a user, how to perform three tasks—software distribution, application deployment, and data synchronization—through sample applications on distinct platforms.

Chapter 5, "Oracle Database Lite Proxy Support"

This chapter describes how to use the proxy support in Oracle Database Lite.

Related Documents

Since both the standalone Mobile Server and the Mobile Server with Oracle9iAS or OracleAS use the Oracle Containers for J2EE (OC4J), the following manuals can be used as reference when configuring your application server:

- *Oracle Containers for J2EE Standalone User's Guide*
- *Oracle Containers for J2EE User's Guide*
- *Oracle Containers for J2EE Security Guide*

Conventions

The following conventions are also used in this manual:

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

Pre-Installation Requirements

Before you install, you must check to see that you have the correct hardware and software necessary for using Oracle Database Lite on your operating system. The requirements for each type of operating system are detailed in the following sections:

- [Section 1.1, "Include the Latest Patches"](#)
- [Section 1.2, "Release Notes"](#)
- [Section 1.3, "Supported Components and Technologies"](#)
- [Section 1.4, "Oracle Components That Work With Oracle Database Lite"](#)
- [Section 1.5, "System Requirements For Mobile Clients"](#)
- [Section 1.6, "System Requirements For Windows Systems"](#)
- [Section 1.7, "System Requirements For UNIX Systems"](#)
- [Section 1.8, "Recommended System Configuration For UNIX"](#)
- [Section 1.9, "Mounting the Installation CD-ROM For UNIX Systems"](#)

1.1 Include the Latest Patches

For the latest information and patches, refer to *OracleMetaLink* at the following Web site:

<http://metalink.oracle.com>

1.2 Release Notes

We recommend reading *Oracle Database Lite Release Notes* before installing Oracle Database Lite. *Oracle Database Lite Release Notes* are available as part of the documentation shipped with Oracle Database Lite. The most up-to-date version is also available at OTN at the following Web site:

<http://otn.oracle.com/documentation/index.html>

1.3 Supported Components and Technologies

The following sections detail the supported components and technologies:

- [Section 1.3.1, "Certified Platforms for the Mobile Server"](#)
- [Section 1.3.2, "Certified Application Server Configurations"](#)
- [Section 1.3.3, "Supported Technologies for the Mobile Server"](#)

- [Section 1.3.4, "Oracle Universal Installer"](#)
- [Section 1.3.5, "Supported Browsers"](#)
- [Section 1.3.6, "Certified Oracle RDBMS to Use With Oracle Database Lite"](#)
- [Section 1.3.7, "Oracle Database Lite Web"](#)
- [Section 1.3.8, "Oracle Database Lite Branch Office"](#)
- [Section 1.3.9, "Oracle Database Lite BC4J"](#)
- [Section 1.3.10, "Oracle Database Lite WIN32"](#)
- [Section 1.3.11, "Oracle Database Lite WinCE"](#)
- [Section 1.3.12, "Oracle Database Lite PALM"](#)

1.3.1 Certified Platforms for the Mobile Server

You can install the Mobile Server on the following platforms:

- Microsoft Windows 2000 Professional Edition with Service Pack 4
- Microsoft Windows XP Professional Edition
- Microsoft Windows XP Professional Edition with Service Pack 2
- Red Hat Enterprise Linux AS/ES 2.1
- Red Hat Enterprise Linux Advanced Server 3.0
- SUSE 9
- Sun SPARC Solaris 2.6, 7.0, 8.0, 9.0
- HP-UX 11.0 (64-bit)
- HP-UX 11i (11.11) PA-RISC or higher
- HP Tru64 UNIX 5.1B with Patch Kit 2 or higher
- AIX 5L version 5.2, Maintenance Level 1 or higher

1.3.2 Certified Application Server Configurations

The following lists accepted configuration options with a middle-tier application server:

- Standalone Mobile Server, which uses an Embedded OC4J (version 9.0.4) container
- OracleAS 10g (9.0.4.0.0), as long as Oracle Database Lite is installed in the same `ORACLE_HOME`

1.3.3 Supported Technologies for the Mobile Server

The following are the versions of the supported technologies used with the Mobile Server of Oracle Database Lite. For certified technologies for the different supported platforms, see sections [Section 1.3.7](#) through [Section 1.3.12](#).

Table 1–1 Supported Technologies Used With Oracle Database Lite

Technology	Standalone	OracleAS 10g (9.0.4)
Java Version (JDK and JRE)	1.4.2	1.4.2
OC4J	9.0.4.0.0	9.0.4.0.0
Servlet	2.3	2.3
Oracle JSP	9.0.2.0.0	9.0.2.0.0
UIX	2.2.15	2.2.15
XML Parser	9.0.3.0.0	9.0.3.0.0

1.3.4 Oracle Universal Installer

The version of the Oracle Universal Installer used is 2.1.0.10.0.

1.3.5 Supported Browsers

You can only use Internet Explorer 6.0 as the browser for Oracle Database Lite.

1.3.6 Certified Oracle RDBMS to Use With Oracle Database Lite

Use one of the following database versions with Oracle Database Lite: Oracle 8.1.7.4, Oracle 9.0.1, Oracle 9.2, Oracle 10g Release 1 (10.1.0) and Oracle 10g Release 2 (10.2.0).

1.3.7 Oracle Database Lite Web

The following sections describe the certified and supported platforms and technologies for the Oracle Database Lite Web:

- [Section 1.3.7.1, "Certified Platforms for Oracle Database Lite Web"](#)
- [Section 1.3.7.2, "Supported Technologies for Oracle Database Lite Web"](#)
- [Section 1.3.7.3, "Certified Technologies for Oracle Database Lite Web"](#)
- [Section 1.3.7.4, "Notes for Oracle Database Lite Web"](#)

1.3.7.1 Certified Platforms for Oracle Database Lite Web

The following platforms are certified for Oracle Database Lite Web:

- Microsoft Windows 2000 Professional Edition with Service Pack 4
- Microsoft Windows XP Professional Edition
- Microsoft Windows XP Professional Edition with Service Pack 2
- Microsoft Windows XP Tablet PC

1.3.7.2 Supported Technologies for Oracle Database Lite Web

You can use the following technologies with Oracle Database Lite Web:

- JavaSoft Java Runtime Edition 1.4.2
- Java Servlets 2.2
- JDBC 1.2
- Oracle Java Server Pages Version 9.0.2.0.0
- Oracle UIX version 2.1.7

- Oracle XML Parser 9.0.3.0.0

1.3.7.3 Certified Technologies for Oracle Database Lite Web

Struts version 1.1 is certified for use with Oracle Database Lite Web.

1.3.7.4 Notes for Oracle Database Lite Web

Internet Explorer 6.0 is required when using SSL to synchronize with the Mobile Server.

The product requires `msvcrt.dll` 6.0 or higher.

1.3.8 Oracle Database Lite Branch Office

The following sections describe the platforms and technologies for Branch Office:

- [Section 1.3.8.1, "Certified Platforms for Branch Office"](#)
- [Section 1.3.8.2, "Supported Technologies for Branch Office"](#)
- [Section 1.3.8.3, "Certified Technologies for Branch Office"](#)
- [Section 1.3.8.4, "Notes for Branch Office"](#)

1.3.8.1 Certified Platforms for Branch Office

- Microsoft Windows 2000 Professional Edition with Service Pack 4
- Microsoft Windows XP Professional Edition
- Microsoft Windows XP Professional Edition with Service Pack 2

1.3.8.2 Supported Technologies for Branch Office

- JavaSoft Java Runtime Edition 1.4.2
- Java Servlets 2.2
- JDBC 1.2
- Oracle Java Server Pages Version 9.0.2.0.0
- Oracle UIX version 2.1.7
- Oracle XML Parser 9.0.3.0.0

1.3.8.3 Certified Technologies for Branch Office

Struts version 1.1

1.3.8.4 Notes for Branch Office

Internet Explorer 6.0 is required when using SSL to synchronize with the Mobile Server.

The product requires `msvcrt.dll` 6.0 or higher.

1.3.9 Oracle Database Lite BC4J

The following sections describe the supported and certified platforms and technologies for BC4J:

- [Section 1.3.9.1, "Certified Platforms for Oracle Database Lite BC4J"](#)
- [Section 1.3.9.2, "Supported Technologies for Oracle Database Lite BC4J"](#)

- [Section 1.3.9.3, "Certified Technologies for Oracle Database Lite BC4J"](#)
- [Section 1.3.9.4, "Notes for Oracle Database Lite BC4J"](#)

1.3.9.1 Certified Platforms for Oracle Database Lite BC4J

- Microsoft Windows 2000 Professional Edition with Service Pack 4
- Microsoft Windows XP Professional Edition
- Microsoft Windows XP Professional Edition with Service Pack 2
- Microsoft Windows XP Tablet PC

1.3.9.2 Supported Technologies for Oracle Database Lite BC4J

- JavaSoft Java Runtime Edition 1.4.2
- Java Servlets 2.2
- JDBC 1.2
- Oracle Java Server Pages Version 9.0.2.0.0
- Oracle UIX version 2.1.7
- Oracle XML Parser 9.0.3.0.0

1.3.9.3 Certified Technologies for Oracle Database Lite BC4J

- Struts version 1.1
- JDeveloper 9.0.3.3

1.3.9.4 Notes for Oracle Database Lite BC4J

Internet Explorer 6.0 is required when using SSL to synchronize with the Mobile Server.

The product requires msvcrt.dll 6.0 or higher.

1.3.10 Oracle Database Lite WIN32

The following sections describe the supported and certified technologies for Oracle Database Lite WIN32:

- [Section 1.3.10.1, "Certified Platforms for Oracle Database Lite WIN32"](#)
- [Section 1.3.10.2, "Supported Technologies for Oracle Database Lite WIN32"](#)
- [Section 1.3.10.3, "Notes for Oracle Database Lite WIN32"](#)

1.3.10.1 Certified Platforms for Oracle Database Lite WIN32

- Microsoft Windows 2000 Professional Edition with Service Pack 4
- Microsoft Windows XP Professional Edition
- Microsoft Windows XP Professional Edition with Service Pack 2
- Microsoft Windows XP Tablet PC

1.3.10.2 Supported Technologies for Oracle Database Lite WIN32

- JavaSoft Java Runtime Edition 1.4.2
- JDBC 1.2

- ADO.Net 1.1 – requires Microsoft .Net Framework 1.1
- ODBC 2.0, 3.51
- SQL92

1.3.10.3 Notes for Oracle Database Lite WIN32

Internet Explorer 6.0 is required when using SSL to synchronize with the Mobile Server.

The product requires msvcrt.dll 6.0 or higher.

1.3.11 Oracle Database Lite WinCE

The following sections describe the supported and certified platforms and technologies for the Oracle Database Lite WinCE:

- [Section 1.3.11.1, "Supported Platforms for Oracle Database Lite WinCE"](#)
- [Section 1.3.11.2, "Supported Technologies for Oracle Database Lite WinCE"](#)
- [Section 1.3.11.3, "Certified Technologies for Oracle Database Lite WinCE"](#)
- [Section 1.3.11.4, "Notes for Oracle Database Lite WinCE"](#)

1.3.11.1 Supported Platforms for Oracle Database Lite WinCE

Table 1–2 provides the full list of supported platforms for Pocket PC:

Table 1–2 Pocket PC Supported Platforms

Product Name	WinCE Version	Chipsets	Oracle Database Lite Version
Pocket PC 2000	3.0.9348	ARM	Oracle Lite PPC2000 ARM olite.us.pocket_pc.arm.cab
Pocket PC 2002	3.0.11171	ARM	Oracle Lite PPC2000 ARM olite.us.pocket_pc.arm.cab
Pocket PC 2003 Windows Mobile 2003	4.20.1081	ARM V4	Oracle Lite PPC2003 ARMV4 olite.us.ppc2003.armv4.cab
		XScale	Oracle Lite PPC2003 XScale olite.us.ppc2003.xscale.cab
		X86 Emulator	Oracle Lite PPC2003 Emulator olite.us.ppc2003.x86.cab
WindowsCE .Net 4.2	4.20		olite.us.stdsdk420.armv4.cab
Windows Mobile 2003 2nd Edition	4.21.1088	ARM V4	Oracle Lite PPC2003 ARMV4 olite.us.ppc2003.armv4.cab
		XScale	Oracle Lite PPC2003 XScale olite.us.ppc2003.xscale.cab
		X86 Emulator	Oracle Lite PPC2003 Emulator olite.us.ppc2003.x86.cab

1.3.11.2 Supported Technologies for Oracle Database Lite WinCE

- ODBC 2.0
- ADOCE 1.0 (WinCE 3.0 only)
- JDBC 1.2
- ADO.Net 1.1 (Requires Microsoft Compact .Net Framework 1.0 + Service Pack 2)
- Microsoft ActiveSync version 3.7.1.

1.3.11.3 Certified Technologies for Oracle Database Lite WinCE

Java support: Certified against CrEme 3.24

1.3.11.4 Notes for Oracle Database Lite WinCE

CrEme 3.24 is based on JavaSoft's PersonalJava Technology specification. This is not a J2ME CDC stack. Currently, the product has not been certified against a CDC stack. J2ME CLDC stack is never supported, as it does not include the required JNI and JDBC support necessary for Oracle Database Lite.

Java Stored Procedures are not supported on Windows CE.

1.3.12 Oracle Database Lite PALM

The following sections describe the supported and certified platforms and technologies for Oracle Database Lite PALM:

- [Section 1.3.12.1, "Certified Platforms for Oracle Database Lite PALM"](#)
- [Section 1.3.12.2, "Certified Platforms for Oracle Database Lite PALM"](#)
- [Section 1.3.12.3, "Supported Technologies for Oracle Database Lite PALM"](#)
- [Section 1.3.12.4, "Notes for Oracle Database Lite PALM"](#)

1.3.12.1 Certified Platforms for Oracle Database Lite PALM

- Palm OS 3.5
- Palm OS 4.0
- Palm OS 5.x
- Palm Desktop 4.1
- Mobile Development Kit

1.3.12.2 Certified Platforms for Oracle Database Lite PALM

- Microsoft Windows 2000 Professional Edition with Service Pack 4
- Microsoft Windows XP Professional Edition
- Microsoft Windows XP Professional Edition with Service Pack 2

1.3.12.3 Supported Technologies for Oracle Database Lite PALM

- JavaSoft Java Development Kit 1.4.2
- Java Servlets 2.2
- JDBC 1.2
- Oracle Java Server Pages Version 9.0.2.0.0
- Oracle UIX version 2.1.7
- Oracle XML Parser 9.0.3.0.0

1.3.12.4 Notes for Oracle Database Lite PALM

Internet Explorer 6.0 is required when using SSL to synchronize with the Mobile Server.

The product requires `msvcrt.dll` 6.0 or higher.

1.4 Oracle Components That Work With Oracle Database Lite

Since Oracle Database Lite stores and retrieves your information in an Oracle database, you must have a back-end Oracle database version 8.1.7 or higher, either the Standard or Enterprise Edition.

If you do not want to have the datafile for your Oracle Database Lite applications stored in the default location in the Oracle database, then modify the database configuration file to include the directory where you want your datafile stored. Configure the default directory for new tablespace in the `db_create_file_dest` parameter the database configuration file. Once updated, restart the Oracle database. This must be done before installing Oracle Database Lite. Refer to your database administration guide for details on how to modify the `db_create_file_dest` parameter.

In addition, Oracle Database Lite uses a middle-tier to communicate between the clients and the back-end database. You use one of the following as the middle-tier:

- Oracle Database Lite in standalone mode, which is automatically installed with Oracle Database Lite—This is the recommended configuration for development environments. Oracle Database Lite in standalone mode uses the standalone version of Oracle Containers for J2EE (OC4J).
- Oracle Application Server 10g, which is not installed with Oracle Database Lite—This is the recommended configuration for production environments. If you choose to use the Oracle Application Server 10g (OracleAS) as your middle-tier, then you must install it before installing Oracle Database Lite.

For more information about how Oracle Database Lite works with the middle-tier and the back-end database, see Section 2.1 "The Mobile Server Environment" in the *Oracle Database Lite Administration and Deployment Guide*.

1.5 System Requirements For Mobile Clients

Before you install, you must check to see that you have the correct hardware and software necessary for your Mobile Clients. The requirements for both are detailed in the following sections:

- [Section 1.5.1, "Hardware Requirements For Your Mobile Clients"](#)
- [Section 1.5.2, "Software Requirements For Your Mobile Clients"](#)

1.5.1 Hardware Requirements For Your Mobile Clients

The hardware requirements for your Mobile Clients are described in the following table:

Table 1–3 Hardware Requirements for Mobile Clients

Component	Hardware Requirements for this Component
Mobile Client for Win32	CPU: Pentium III 360 MHz Disk Space: 30 MB RAM: 128 MB
Mobile Client for Web-to-Go	CPU: Pentium III 360 MHz Disk Space: 40 MB RAM: 128 MB

Table 1–3 (Cont.) Hardware Requirements for Mobile Clients

Component	Hardware Requirements for this Component
Mobile Client for Palm	CPU: 68328 and 68328Z Disk Space: N/A RAM: 5 MB
Mobile Client for Windows CE/Pocket PC	CPU: ARM, XScale or x86 Storage Space: 8 MB RAM: 16 MB
Branch Office	CPU: Pentium III 360 MHz Disk Space: 40 MB RAM: 128 MB

1.5.2 Software Requirements For Your Mobile Clients

The software requirements for your Mobile Clients are described in the following table:

Table 1–4 Software Requirements for Mobile Clients

Component	Operating System	Other Software Requirements
Mobile Client for Win32	Windows 2000, Windows XP, or Windows 2003	JDK 1.4.2 or higher Microsoft .NET Framework 1.1
Mobile Client for Web-to-Go	Windows 2000, Windows XP, or Windows 2003	
Mobile Client for Palm	Palm OS 3.5, Palm OS 4.0, Palm OS 5 .x	N/A
Mobile Client for Pocket PC/Windows CE	Windows CE 3.0 or 3.0.1	If using JDBC, use the CrEme JDK version 3.24 from NSIcom. ActiveSync version 3.7.1 or later. Microsoft .NET Compact Framework 1.0
Branch Office	Windows 2000, Windows XP, or Windows 2003	

You should install all of the patches required for the JDK 1.4.2 for the Windows operating system. This is constantly under review and published on the JDK download page on the Sun Microsystems Web site.

1.6 System Requirements For Windows Systems

Before you install, you must check to see that you have the correct hardware and software necessary for your Windows machines that use Oracle Database Lite. The requirements for both are detailed in the following sections:

- [Hardware Requirements For Windows](#)
- [Software Requirements For Windows](#)

1.6.1 Hardware Requirements For Windows

The hardware requirements for each component of Oracle Database Lite for Windows 2000 or Windows XP are described in the following table:

Table 1–5 Hardware Requirements for Windows

Component	Hardware Requirements for this Component
Mobile Server	CPU: Pentium III 1 GHz Disk Space: 500 MB RAM: 256 MB
Mobile Development Kit	CPU: Pentium III 1GHz Disk Space: 200 MB RAM: 256 MB

1.6.2 Software Requirements For Windows

The software requirements for each component of Oracle Database Lite for Windows 2000 or Windows XP are described in the following table:

Table 1–6 Software Requirements for Windows

Component	Operating System	Other Software Requirements
Mobile Server	Windows 2000, Windows XP, or Windows 2003	When installed on top of Oracle9iAS version 9.0.4 standalone or OracleAS 10g, use JDK 1.4.2 or higher
Mobile Development Kit	Windows 2000, Windows XP, or Windows 2003	When installed on top of Oracle9iAS version 9.0.4 standalone or OracleAS 10g, use JDK 1.4.2 or higher

You should install all of the patches required for the JDK 1.4.2 for the Windows operating system. This is constantly under review and published on the JDK download page on the Sun Microsystems Web site.

1.7 System Requirements For UNIX Systems

Before you install, you must check to see that you have the correct hardware and software necessary for your UNIX machines that use Oracle Database Lite. The requirements for both are detailed in the following sections:

- [Hardware Requirements For UNIX Systems](#)
- [Operating System Requirements For UNIX](#)
- [Software Requirements For UNIX Systems](#)

1.7.1 Hardware Requirements For UNIX Systems

[Table 1–7](#) lists the minimum hardware requirements for OracleAS UNIX-based systems.

Table 1–7 Minimum Hardware Requirements for UNIX Systems

Item	Minimum Requirement
display	256 color display
Sun SPARC CPU	Sun SPARC Ultra 1 or higher
AIX CPU	All AIX-compatible processors (64-bit)
HP CPU	HP 9000 Series HP-UX processor for HP-UX 11.0 (64-bit)
Linux CPU	Pentium II 233 MHz or better (32-bit)
Tru64 CPU	Alpha processor (64-bit)
Memory	512 MB
Disk space for Sun SPARC	1 GB
Disk space for AIX	1 GB
Disk space for HP	1 GB
Disk space for Linux	1 GB
Disk space for Tru64	1 GB
TMP or swap space	1 GB

1.7.2 Operating System Requirements For UNIX

Use the following operating system requirements for installing Oracle Database Lite as a standalone product:

- [Table 1–8](#) lists the operating system requirements for Sun SPARC-based systems.
- [Table 1–9](#) lists the operating system requirements for AIX-based systems.
- [Table 1–10](#) lists the operating system requirements for HP-based systems.
- [Table 1–12](#) lists the operating system requirements for Linux-based systems.
- [Table 1–15](#) lists the operating system requirements for Tru64-based systems.

For the latest information on operating system requirements, refer to *OracleMetaLink* at the following Web site:

<http://metalink.oracle.com>

Table 1–8 Operating System Requirements for Sun SPARC-Based Systems

Item	Requirement
Operating System	Sun Solaris 2.6, Solaris 7, or Solaris 8
Window Manager	Use any supported Sun Solaris window manager that supports Motif.

Table 1–9 Operating System Requirements for AIX-Based Systems

Item	Requirement
Operating System	AIX 5L version 5.2, Maintenance Level 1 or higher
Window Manager	Use any supported IBM AIX window manager that supports Motif, such as <code>dtwm</code> , <code>twm</code> , and <code>olwm</code> .

Table 1–10 Operating System Requirements for HP-Based Systems

Item	Requirement
Operating System	HP-UX 11.0 (64-bit)
Quality Pack	For HP-UX 11.0 (64 bit), install the Quality Pack Sept 2002 (QPK11000 B.11.00.58.5) or higher.
Patches	PHKL_27813 s700_800 11.00 POSIX AIO;getdirent;MVFS;rcp;mmap/IDS patch
Window Manager	X Windows must be installed on the system from where the Installer is run. Use any supported X Windows server with support for Motif, such as dtwm, twm, and mwm.

Table 1–11 Operating System Requirements for HP-Based Systems

Item	Requirement
Operating System	HP-UX 11i (11.11) PA-RISC or higher
Quality Pack	Dec 2001 Consolidate Patches (Dec01GQPK11i_Aux_Patch B.03.02.06) or higher.
Patches	PHNE_28089 s700_800 11.11 cumulative ARPA Transport patch
Window Manager	X Windows must be installed on the system from where the Installer is run. Use any supported X Windows server with support for Motif, such as dtwm, twm, and mwm.

Table 1–12 Operating System Requirements for Red Hat Enterprise Linux AS/ES 2.1

Item	Requirement
Operating System	Red Hat Enterprise Linux AS/ES 2.1
Patches	Red Hat Patches Errata 25 kernel or a higher errata patch that is approved by Red Hat
Software Packages	pdksh-5.2.14-13

Table 1–13 Operating System Requirements for Red Hat Enterprise Linux AS 3.0

Item	Requirement
Operating System	Red Hat Enterprise Linux Advanced Server 3.0 The minimum supported kernel and glibc versions are 2.4.21-4-EL and glibc-2.3.2-95.3
Patches	Apply patch 3006854, which is downloadable from OracleMetaLink .
Software packages	pdksh-5.2.14

Table 1–14 Operating System Requirements for UnitedLinux

Item	Requirement
Operating System	UnitedLinux 1.0
Patches	SP2a: The minimum supported kernel and glibc versions are 2.4.19 and glibc-2.2.5-179. SP3: The minimum supported kernel and glibc versions are 2.4.21 and glibc-2.2.5-213

Table 1–14 (Cont.) Operating System Requirements for UnitedLinux

Item	Requirement
Software packages	pdksh-5.2.14

Table 1–15 Operating System Requirements for Tru64-Based Systems

Item	Requirement
Operating System	HP Tru64 UNIX 5.1B with Patch Kit 2 or higher
Operating system subsets	OSFCMPLRS, OSFLIBA, OSFPGMR, OSFSER, OSFX11
Patches	<p>Patch Kit 2 or higher:</p> <p>T64V51BB22AS0002-20030415</p> <p>HP Tru64 UNIX V5.1BPK2 (BL22 ERP Kit - Fix for multiple applications may be granted an exclusive lock on the same file:</p> <p>T64KIT0021665-V51BB22-E-20040220</p> <p>Tru64 UNIX V5.1B PK2/BL22 Early Release Patch - Fix for Potential Application Core Dump:</p> <p>T64KIT0021681-V51BB22-E-20040223</p> <p>HP Tru64 UNIX - Problem with IP Multicast Packets:</p> <p>T64KIT0019662-V51BB22-E-20030818</p> <p>HP Tru64 UNIX 5.1B PK2 BL22 Fixes for AdvFS Panic in _OtsMove; and Possible Memory Corruption:</p> <p>T64KIT0020879-V51BB22-E-20031125</p>
Window Manager	<p>X Windows must be installed on the system from where the Installer is run. Use any supported X Windows server with support for Motif, such as dtwm, twm, and mwm.</p> <p>The X environments, Basic X environments (OSF 11), and X Servers (OSFSER) are required to run graphical products.</p>

1.7.3 Software Requirements For UNIX Systems

For all UNIX systems, you must have the JDK installed. When you are installed on top of Oracle9iAS 9.0.4 standalone or OracleAS 10g, install JDK 1.4.2 or higher. You should install all of the patches required for your JDK version for the appropriate operating system. This is constantly under review and published on the JDK download page on the appropriate operating system Web site.

1.8 Recommended System Configuration For UNIX

This section describes the following system configurations for UNIX-based systems:

- [Section 1.8.1, "Setting UNIX Environment Variables"](#)
- [Section 1.8.2, "Creating UNIX Accounts and Groups"](#)
- [Section 1.8.3, "Configuring Kernel Parameters and Shell Limits for UNIX"](#)

1.8.1 Setting UNIX Environment Variables

The following sections describe the environment variables that must be set before starting Oracle Universal Installer:

- [Section 1.8.1.1, "ORACLE_HOME"](#)

- [Section 1.8.1.2, "JAVA13_HOME"](#)
- [Section 1.8.1.3, "DISPLAY"](#)
- [Section 1.8.1.4, "TMP and TMPDIR"](#)

Note: Ensure your `PATH`, `CLASSPATH` and library path environment variables do not exceed 1024 characters. Longer values might generate errors such as "Word too long" during installation.

Refer to [Table 1–16](#) for the name of the library path environment variable for your platform.

[Table 1–16](#) lists the names of the library path environment variables for each platform.

Table 1–16 Library Path Environment Variable

Platform	Library Path Environment Variable
Tru64, Linux	LD_LIBRARY_PATH
HP	SHLIB_PATH and LD_LIBRARY_PATH
AIX	LIBPATH

1.8.1.1 ORACLE_HOME

The Oracle Home directory is the `root` directory in which Oracle software is installed. There are limits to the length of the values of the `CLASSPATH` values with JDK. If the `ORACLE_HOME` path is long, this will result in a long `CLASSPATH` and might cause problems running Oracle Database Lite. The workaround is to shorten `ORACLE_HOME` path.

The `ORACLE_HOME` environment variable must be set before starting the installer, which must be set to the directory where you want to install.

1.8.1.2 JAVA13_HOME

The `JAVA13_HOME` environment variable must be set to the directory where the Java Development Kit has been installed. If the JDK has not been installed, please install it before proceeding with the installation. If installed on top of Oracle*9i*AS version 9.0.4 standalone or OracleAS 10g, use JDK 1.4.2 or higher.

[Table 1–17](#) provides examples for the location where the JDK 1.4.2 could be installed on the system.

Table 1–17 JAVA13_HOME Environment Variables

Platform	Sample <code>JAVA13_HOME</code> Environment Variable
Tru64	<code>/usr/opt/java131</code>
HP	<code>/opt/java/java.1.4.2_05</code>
AIX	<code>/usr/java131</code>

1.8.1.3 DISPLAY

Set the `DISPLAY` environment variable to refer to the X Server that will display the installer and Oracle Database Lite. The format of the `DISPLAY` environment variable is:

`hostname:display_number.screen_number`

For example, set the `DISPLAY` environment variable, as follows:

```
setenv DISPLAY myhost:0.0
```

Note: In order for the Oracle Database Lite to install correctly, you must add a line to the `opmn.xml` file. This is a post-installation step that is described in .

Oracle Database Lite requires a running X server to properly create graphics for the installer, Web applications, and management tools. The frame buffer X server installed with your operating system requires that you remain logged in and have the frame buffer running at all times. If you do not want to do this, then you must use a virtual frame buffer, such as X Virtual Frame Buffer (XVFB) or Virtual Network Computing (VNC).

See Also:

- Your operating system documentation for more information on the `DISPLAY` environment variable.
- Oracle Technology Network (<http://otn.oracle.com>) for further information about obtaining and installing XVFB or other virtual frame buffer solutions. Search OTN for "frame buffer".

1.8.1.3.1 Installing From a Remote Machine Setting the `DISPLAY` environment variable enables you to run the Oracle Universal Installer remotely from another workstation. On the system where you launch the Oracle Universal Installer, set `DISPLAY` to the system name or IP address of your local workstation.

Note: You can use a PC X emulator to run the installer if it supports a PseudoColor color model or PseudoColor visual. Set the PC X emulator to use a PseudoColor visual, and then start the installer. Refer to the X emulator documentation for instructions on how to change the color model or visual settings.

If you get an Xlib error similar to "Failed to connect to server", "Connection refused by server," or "Can't open display" when starting the installer, then run the commands on your local workstations as listed in the following table.

Shell Types	On the Server Where the Installer is Running	In the Session on Your Workstation
C Shell	prompt> setenv DISPLAY hostname:0.0	prompt> xhost +server_name
Bourne/Korn Shell	prompt> DISPLAY=hostname:0.0;export DISPLAY	prompt> xhost +server_name

1.8.1.4 TMP and TMPDIR

During installation, Oracle Universal Installer uses a temporary directory for swap space. This directory must meet the requirements listed in [Section 1.7.1, "Hardware](#)

[Requirements For UNIX Systems](#)" before installing Oracle Database Lite. The installation may fail if you do not have sufficient space. The installer checks for the TMP and TMPDIR environment variable to locate the temporary directory. If the TMP environment variable is not set, then the installer uses the /tmp directory. If the TMPDIR environment variable is not set, then the installer uses the /var/tmp directory. Set the TMP and TMPDIR environment variable using the commands in the following table.

C Shell	Bourne/Korn Shell
prompt> setenv TMP <i>full_path</i>	prompt> TMP= <i>full_path</i> ;export TMP
prompt> setenv TMPDIR <i>full_path</i>	prompt> TMPDIR= <i>full_path</i> ;export TMPDIR

1.8.2 Creating UNIX Accounts and Groups

The following UNIX account and groups are required for the installation process:

- [Section 1.8.2.1, "UNIX Group Name For the Oracle Universal Installer Inventory"](#)
- [Section 1.8.2.2, "UNIX Account to Own Oracle Software"](#)

1.8.2.1 UNIX Group Name For the Oracle Universal Installer Inventory

Use the `admintool` or `groupadd` utility to create a group name. In the following text the group name is `oinstall`. The `oinstall` group will own Oracle Universal Installer's `oraInventory` directory. The `oracle` user account that runs the installer must have the `oinstall` group as its primary group.

For more information on these utilities, refer to your operating system documentation.

1.8.2.2 UNIX Account to Own Oracle Software

The `oracle` account is the UNIX account that owns Oracle software for your system. You must run Oracle Universal Installer from this account.

Create an `oracle` account with the properties listed in [Table 1–18](#).

Table 1–18 Oracle Account Properties

Variable	Property
Login Name	Select any name to access the account. This document refers to the name as the <code>oracle</code> account.
Group Identifier	The <code>oinstall</code> group.
Home Directory	Select a home directory consistent with other user home directories.
Login Shell	The default shell can be either the C, Bourne, or Korn shell.

Note: Do not use `root` as the `oracle` account.

1.8.3 Configuring Kernel Parameters and Shell Limits for UNIX

Depending on your operating system, see one of the following sections for information on checking the software requirements:

- [Section 1.8.3.1, "Configuring Shell Limits and System Configuration Parameters on AIX"](#)
- [Section 1.8.3.2, "Configuring Kernel Parameters on HP-UX"](#)
- [Section 1.8.3.3, "Configuring the Kernel Parameters on Linux"](#)
- [Section 1.8.3.4, "Set Shell Limits for the User oracle"](#)

1.8.3.1 Configuring Shell Limits and System Configuration Parameters on AIX

On AIX systems, you do not need to configure kernel parameters. However, Oracle recommends that you set shell limits and system configuration parameters as described in this section.

1.8.3.1.1 Configuring Shell Limits for AIX Systems Verify that the shell limits shown in the following table are set to the values shown. The procedure following the table describes how to verify and set the values.

Table 1–19 Shell Limits

Shell Limits as shown in smit	Recommended Value
Soft FILE size	-1 (Unlimited)
Soft CPU time	-1 (Unlimited) -- this is the default value
Soft DATA segment	-1 (Unlimited)
Soft STACK size	-1 (Unlimited)

To view or change the current value specified for these shell limits, follow these steps:

1. Enter the `smit` command: `#smit chuser`
2. In the **User Name** field, enter the user name of the Oracle software owner, such as `oracle`.
3. Scroll down the list and verify that the value shown for the soft limits listed in the previous table is -1. If necessary, modify the existing value to be -1.
4. Press F10 to exit.

1.8.3.1.2 Configure System Configuration Parameters for AIX Verify that the **Maximum number of processes** allowed for each user is set to 2048 or greater. The procedure following the table describes how to verify and set the value.

1. Enter the `smit` command: `#smit chgsys`
2. Verify that the value shown for **Maximum number of PROCESSES** allowed per user is greater than or equal to 2048.
3. Press F10 to exit.

Ensure that the `ARG_MAX` setting is set to the maximum value for AIX 5L:

1. Check the `ARG_MAX` setting, as follows:

```
prompt> getconf ARG_MAX
```

2. If the value is less than 524288, then run the following command as the root user:

```
#chdev -l sys0 -a ncargs=128
```

1.8.3.2 Configuring Kernel Parameters on HP-UX

Verify that the kernel parameters shown in the following table are set either to the formula shown or to values greater than or equal to the recommended value shown. The procedure following the table describes how to verify and set the values.

Table 1–20 Kernel Parameters for HP-UX

Parameter	Recommended Formula or Value
nfile	3000
nproc	2048

To view or modify the current value or formula specified for these kernel parameters, do the following:

- Optionally, set the DISPLAY environment variable to specify the display of the local system, as follows:
 - Bourne, Bash, or Korn shell:


```
$ DISPLAY=localhost:0.0 ; export DISPLAY
```
 - C shell:


```
$ setenv DISPLAY localhost:0.0
```
- Start System Administration Manager (SAM): `#/usr/sbin/sam`
- Choose the **Kernel Configuration** area, then choose the **Configurable Parameters** area.
- Check and possibly modify the value or formula specified for each of these parameters.
- Exit from SAM.
- If you modified the value specified for any parameter, then reboot the system with the following: `# /sbin/shutdown -r -now`
- If necessary, when the system restarts, log in and switch the user to `root`.

1.8.3.3 Configuring the Kernel Parameters on Linux

Verify that the kernel parameters shown in the following table are set either to the formula shown, or to values greater than or equal to the recommended value shown. The procedures following the table describe how to verify and set the values.

Table 1–21 Kernel Parameters on Linux

Parameter	Value	File
file-max	131072	/proc/sys/fs/file-max

To view or modify the current value specified for these kernel parameters, do the following:

- Enter the following command to view the current value of the `file-max` kernel parameter:


```
# /sbin/sysctl -a | grep file-max
```
- To modify the value, do the following:
 - a. Create or edit the `/etc/sysctl.conf` file and add the following.

```
fs.file-max = 131072
```

By specifying the values in the `/etc/sysctl.conf` file, they persist when you reboot the system.

- b. Change the current values of the kernel parameter with the following command:

```
# /sbin/sysctl -p
```

Review the output from this command to verify that the values are correct. If the values are incorrect, then perform these steps again.

- c. On UnitedLinux only, enter the following command to cause the system to read the `/etc/sysctl.conf` file when it reboots:

```
# chkconfig boot.sysctl on
```

1.8.3.4 Set Shell Limits for the User oracle

To improve the performance of the software on Linux systems, you must increase the following shell limits for the oracle user, depending on the user's default shell:

Table 1–22 Shell Limits for Linux Systems

Bourne or Bash Shell Limit	Korn Shell Limit	C or tcsh Shell Limit	Hard Limit
nofile	nofile	descriptors	16384
noproc	processes	maxproc	16384

To increase the shell limits, do the following:

1. Add the following lines to the `/etc/security/limits.conf` file, where the arrow (`->`) represents the tab character:

```
* -> -> soft -> nproc -> -> 2047
* -> -> hard -> nproc -> -> 16384
* -> -> soft -> nofile -> -> 2047
* -> -> hard -> nofile -> -> 16384
```

2. Add the following line to the `/etc/pam.d/login` file, if it does not already exist:

```
session required /lib/security/pam_limits.so
```

3. Depending on the oracle user's default shell, make the following changes to the default shell start-up file:

- For the Bourne, Bash, or Korn shell, add the following lines to the `/etc/profile` file:

```
if [ $USER = "oracle" ]; then
    if [ $SHELL = "/bin/ksh" ]; then
        ulimit -p 16384
        ulimit -n 16384
    else
        ulimit -u 16384 -n 16384
    fi
fi
```

- For the C or tcsh shell, add the following lines to the `/etc/csh.login` file:

```
if ( $USER == "oracle" ) then
```

```
limit maxproc 16384
limit descriptors 16384
endif
```

1.9 Mounting the Installation CD-ROM For UNIX Systems

Refer to these mounting procedures during installation as necessary:

- [Section 1.9.1, "Mounting CD-ROMs For AIX"](#)
- [Section 1.9.2, "Mounting CD-ROMs For HP"](#)
- [Section 1.9.3, "Mounting CD-ROMs For Linux"](#)
- [Section 1.9.4, "Mounting CD-ROMs For Tru64"](#)

1.9.1 Mounting CD-ROMs For AIX

Mount the disk to begin the installation. Follow these steps to mount the Oracle Database Lite CD-ROM manually:

1. Place the Oracle Database Lite CD-ROM Disk in the CD-ROM drive.
2. Log in as the `root` user and create a CD-ROM mount point directory, if one does not already exist, by using the following commands:

```
$ su root
# mkdir cdrom_mount_point_directory
```

3. Determine the CD-ROM device name by entering the following command:

```
# lsdev -Cc cdrom
```

The output should be similar to the following:

```
cd0 Available 10-60-00-4, 0 SCSI Multimedia CD-ROM Drive
```

4. Mount the CD-ROM drive on the mount point directory by entering the following commands:

```
# mount options device_name cdrom_mount_point_directory
```

5. Exit the root account:

```
# exit
```

[Example 1-1](#) shows how to mount the CD-ROM manually for AIX. In the following example, `/dev/cd0` is the CD-ROM device and `/cdrom` is the mount point.

Example 1-1 *Mounting the CD-ROM manually for AIX*

```
$ su root
# mkdir /cdrom
# mount -rv cdrfs /dev/cd0 /cdrom
# exit
```

Caution: Do not run the Installer while the CD-ROM directory is the current directory or you will be unable to unmount the current CD-ROM when prompted to do so.

1.9.2 Mounting CD-ROMs For HP

Mount the disk to begin the installation. Follow these steps to mount the Oracle Database Lite CD-ROM manually:

1. Place the Oracle Database Lite CD-ROM Disk in the CD-ROM drive.
2. Log in as the `root` user and create a CD-ROM mount point directory, if one does not already exist, by using the following commands:

```
$ su root
# mkdir cdrom_mount_point_directory
```

3. Determine the CD-ROM device name by entering the following command:

```
# ioscan -fun -C disk
```

The output should be similar to the following:

```
disk 10 10/12/5.2.0 sdisk CLAIMED DEVICE TOSHIBA CD-ROM
XM-5701TA /dev/dsk/c4t2d0 /dev/rdsk/c4t2d0
```

4. If there is not already an entry in the `/etc/pfs_fstab` file for your CD-ROM device, you must add one. As the `root` user, use a text editor to add a line, in the following format, to the `/etc/pfs_fstab` file:

```
device_file mount_point filesystem_type translation_method
```

In the preceding format, the first entry is the CD-ROM device, the second entry is the mount point, and the third entry indicates that the CD-ROM to be mounted is in ISO9660 format with Rockridge extensions.

The `device_file` in this example is `/dev/dsk/c4t2d0`. For a CD-ROM device with the path `/dev/dsk/c4t2d0`, you would enter the following:

```
/dev/dsk/c4t2d0 /SD_CDROM pfs-rrip xlat=unix 1 0
```

5. Log in as the `root` user with the following command:

```
$ su root
```

6. Enter the following commands:

```
# nohup /usr/sbin/pfs_mountd &
# nohup /usr/sbin/pfsd &
```

7. Place the Oracle Database Lite CD-ROM Disk in the CD-ROM drive and mount the CD-ROM by entering the following command:

```
# /usr/sbin/pfs_mount /SD_CDROM
```

8. Log out of the `root` account.

```
# exit
```

Follow these steps to unmount the CD-ROM:

1. Change to your system's root directory and log in as the `root` user:

```
$ cd /
$ su root
```

2. To unmount the CD-ROM, enter the following command:

```
# /usr/sbin/pfs_umount /SD_CDROM
```

3. Remove the CD-ROM from the CD-ROM drive:

```
# /usr/sbin/pfs_umount /SD_CDROM
```

1.9.3 Mounting CD-ROMs For Linux

Use the following instructions to mount the CD-ROM for Linux.

- [Section 1.9.3.1, "Mounting CD-ROMs For Linux With Auto Mounting Software"](#)
- [Section 1.9.3.2, "Mounting CD-ROMs For Linux Manually"](#)

1.9.3.1 Mounting CD-ROMs For Linux With Auto Mounting Software

Mount the disk to begin the installation. If you are using auto mounting software, the CD-ROM is mounted automatically to the directory specified in your auto mount configuration when you insert it into the CD-ROM drive.

To check whether you have auto mounting software, enter the following command:

```
$ ps -aux | grep automount
```

If you have auto mounting software, the output must be similar to the following:

```
root 628 0.0 0.2 1148 588 ? S 17:32 0:00 /usr/sbin/automount /misc file
/etc/auto.misc
```

In the preceding output, the `/etc/auto.misc` section defines the directory under the `/misc` file where the CD-ROM will be mounted.

- If the auto mounting software is running and configured properly, the CD-ROM is mounted automatically.
- If no lines are returned, the auto mounting software is not running, and you will have to mount the CD-ROM manually. Proceed to [Section 1.9.3.2](#).

1.9.3.2 Mounting CD-ROMs For Linux Manually

To mount the Oracle Database Lite CD-ROM manually, use the following steps:

1. Place the Oracle Database Lite CD-ROM Disk in the CD-ROM drive.
2. Log in as the `root` user and, if necessary, create a CD-ROM mount point directory by using the following commands:

```
$ su root
# mkdir cdrom_mount_point_directory
```

3. Mount the CD-ROM drive on the mount point directory by using the following commands:

```
# mount options device_name cdrom_mount_point_directory
```

4. Exit the `root` account.

```
# exit
```

If you are unsure of the correct device name, consult your system administrator. Typically, the device name is `/dev/cdrom`.

[Example 1–2](#) shows how to mount the CD-ROM manually for Linux.

Example 1–2 Mounting the CD-ROM For Linux Manually

```
$ su root
# mkdir /cdrom
# mount -t iso9660 /dev/cdrom /cdrom
# exit
```

Follow these steps to unmount the CD-ROM:

1. Change directory to the root directory of your system and log in as the `root` user by using the following commands:

```
$ cd /
$ su root
```

2. Unmount the CD-ROM by entering the following command:

```
# umount cdrom_mount_point_directory
```

3. Remove the CD-ROM from the CD-ROM drive.

1.9.4 Mounting CD-ROMs For Tru64

Follow these steps to mount the Oracle Database Lite CD-ROM manually:

1. Place the Oracle Database Lite CD-ROM Disk in the CD-ROM drive.
2. Log in as the root user and create a CD-ROM mount point directory, if one does not already exist, by using the following commands:

```
$ su root
# mkdir cdrom_mount_point_directory
```

3. Determine the CD-ROM device name by entering the following command:

```
$ ls /dev/disk/cdrom*c
```

The command should return a line similar to the following:

```
/dev/disk/cdrom0c
```

4. Mount the CD-ROM drive on the mount point directory, by using the following command:

```
# mount options device_name cdrom_mount_point_directory
```

5. Exit the `root` account.

```
# exit
```

[Example 1–3](#) shows how to mount the CD-ROM manually for Tru64.

Example 1–3 Mounting the CD-ROM For tru64 Manually.

```
$ su root
# mkdir /cdrom
# mount -t cdfs -r -o nodefperm, noversion, rrip /dev/disk/cdrom0c /cdrom
# exit
```

Follow these steps to unmount the next CD-ROM:

1. Change directory to the root directory of your system and log in as the `root` user by using the following commands:

```
$ cd /
$ su root
```

2. Unmount the CD-ROM by entering the following command:

```
# umount cdrom_mount_point_directory
```

3. Remove the CD-ROM from the CD-ROM drive.

1.10 Defining Synchronization Tablespace Layout for Performance

Tablespace layout across multiple disks can improve the performance of Mobile Server data synchronization, as it reduces movement of the disk heads and improves I/O response time.

In order to define where the tablespace is located, you must modify the `consolidator_o8a.sql` file before you install the Mobile Server. See the "Synchronization Tablespace Layout" section in the Performance chapter of the *Oracle Database Lite Administration and Deployment Guide* for more information.

1.11 WebCache Installation Considerations

If you decide to use WebCache with Oracle Database Lite, the performance of any synchronization you initiate from a Web-to-Go client is significantly slower—approximately anywhere from 30 seconds to 2.5 minutes.

Installation of Oracle Database Lite

This chapter describes all of the details for you to install Oracle Database Lite, including the following:

- [Section 2.1, "Starting Oracle Universal Installer"](#)
- [Section 2.2, "Oracle Database Lite Installation Considerations"](#)
- [Section 2.3, "Installing Oracle Database Lite"](#)
- [Section 2.4, "Post-Installation Configuration Requirements"](#)
- [Section 2.5, "Starting Mobile Server"](#)
- [Section 2.6, "Testing Your Mobile Server Installation"](#)

2.1 Starting Oracle Universal Installer

Oracle Database Lite uses Oracle Universal Installer to guide you through each step of the installation process. The Oracle Universal Installer provides the following features:

- Describes installation options for Oracle Database Lite
- Detects pre-set environment variables and configuration settings
- Sets environment variables and configuration during installation
- Offers configuration options for a customized installation of Oracle Database Lite
- Deinstalls products

The Oracle Universal Installer automatically checks your computer prior to installation to verify that your system meets operational requirements. [Table 2-1](#) lists the prerequisite checks that are performed.

Table 2-1 Oracle Universal Installer Automatic Prerequisite Checks

Prerequisite Checks	See Also
Check for enough disk space for Oracle Home installation	Table 1-7, "Minimum Hardware Requirements for UNIX Systems"
On UNIX systems, checks for TMP and TMPDIR variable and sufficient swap space	Table 1-7, "Minimum Hardware Requirements for UNIX Systems"

You start the Oracle Universal Installer using different methods for each type of operating system, as detailed in the following steps:

- [Section 2.1.1, "Starting the Oracle Universal Installer on Windows"](#)
- [Section 2.1.2, "Starting Oracle Universal Installer on UNIX"](#)

2.1.1 Starting the Oracle Universal Installer on Windows

Insert the CD-ROM labeled Oracle Database Lite and double-click `setup.exe`. The Welcome screen appears.

2.1.2 Starting Oracle Universal Installer on UNIX

Follow these steps to start Oracle Universal Installer and install Oracle Database Lite:

1. Insert the CD into the CD-ROM drive.
2. Mount the installation CD-ROM. For information on mounting the installation CD-ROM for your platform, see [Section 1.9, "Mounting the Installation CD-ROM For UNIX Systems"](#).
3. Run Oracle Universal Installer from the CD-ROM:

Note: Ensure you are **not** logged in as the `root` user when you start the Oracle Universal Installer.

- a. Log in as the `oracle` user.
- b. Start the installer by entering the following command:

```
prompt> mount_point/disk1/runInstaller
```

This launches Oracle Universal Installer, which installs Database Lite.

2.1.2.1 Using the oraInventory Directory

The Oracle Universal Installer creates the `oraInventory` directory the first time it is run on a computer. The `oraInventory` directory keeps an inventory of products that the Oracle Universal Installer installs on your computer, as well as other installation information. If you have previously installed Oracle products, then you may already have an `oraInventory` directory.

When a UNIX group name is created and specified, the Oracle Universal Installer grants the specified group the permission to write to the `oraInventory` directory. If another group attempts to run the installer, then they must have permission to write to the `oraInventory` directory. If they do not have permission, then the installation will fail.

The location of `oraInventory` is defined in the `oraInst.loc` file. See [Table 2-1](#) for the location of the `oraInst.loc` file for your system.

The latest installation log file is stored in:

```
/your_base_directory/oraInventory/logs/installActiontoday's_date_time.log
```

The `your_base_directory` identifier is the location for your installation files and `today's_date_time` is the date and time of installation. Log file names of previous installation sessions take the form `installActionstoday's_date_time.log`.

Do not delete or manually alter the `oraInventory` directory or its contents. Doing so can prevent the installer from locating products that you have installed on your system.

2.1.2.2 Location of Files on UNIX

The following table lists the location of the `oratab` and `oraInst.loc` file for each platform:

Table 2–2 File Locations for Each Platform

Platform	oratab and emtab	oralnst.loc
AIX	/etc	/etc
HP	/etc	/var/opt/oracle
Linux	/etc	/etc
Tru64	/etc	/var/opt/oracle

2.2 Oracle Database Lite Installation Considerations

Note the following issues before you start your installation:

- [Section 2.2.1, "Installing Multiple Languages on a Single Solaris Machine"](#)
- [Section 2.2.2, "Mobile Server on a DHCP Server is Not Supported"](#)

2.2.1 Installing Multiple Languages on a Single Solaris Machine

With Oracle Database Lite installed in a Solaris environment, you cannot install multiple languages on a single Solaris machine. Instead, you must perform a separate installation for each language.

2.2.2 Mobile Server on a DHCP Server is Not Supported

Mobile Server can only be installed on a server with a static IP address; thus, the Mobile Server does not function correctly if installed on a DHCP server.

2.3 Installing Oracle Database Lite

Oracle Database Lite consists of two main components: Mobile Server and Mobile Development Kit. Each is installed separately from the Oracle Database Lite CD-ROM. The following sections describe all of your installation options:

- [Section 2.3.1, "GUI Install of the Mobile Server and MDK Components"](#)
- [Section 2.3.2, "Silent Install of Mobile Server and MDK Components"](#)
- [Section 2.3.3, "Installation of Multiple Mobile Servers Against the Same Mobile Server Repository"](#)
- [Section 2.3.4, "Custom Install"](#)
- [Section 2.3.5, "Client Install"](#)

Note: For instructions on how to install Branch Office, see Chapter 10 "Manage Your Branch Office," in the *Oracle Database Lite Administration and Deployment Guide*. For instructions on how to create a Mobile Client and download an application, see [Chapter 4, "Quick Start for Oracle Database Lite"](#).

2.3.1 GUI Install of the Mobile Server and MDK Components

Once the Oracle Universal Installer is initiated, perform the following steps to install Oracle Database Lite:

1. On the Welcome screen, click **Next**.

2. On the File Locations screen, enter the following:
 - In the Source field, either accept or enter a new location and name of the Oracle Database Lite `products.jar` file.
 - In the Destination field, enter the name and path of Oracle Home. The Oracle Home name CANNOT include spaces. **Important: Read the following bulleted list for the appropriate Oracle Home.**

This is the Oracle Home where you want to install Oracle Database Lite. You may choose to install Oracle Database Lite into a new or existing Oracle Home. Take the following into consideration:

 - If you use Mobile Server in standalone mode for your middle-tier, do not use an Oracle Home that has any version of Oracle9iAS or OracleAS installed.
 - If you use Oracle9iAS or OracleAS as your middle-tier, then you must install Oracle Database Lite into the same Oracle Home where the application server is installed.

Click **Next**.

3. On the Installation Types screen, choose the components and the type of installation to execute. Your options are as follows:
 - Mobile Server
 - Mobile Development Kit
 - Custom

The first two are the main components of Oracle Database Lite. The custom option is for advanced users only. Each of these Install options are discussed in the following sections:

 - [Section 2.3.1.1, "Installation of Mobile Development Kit"](#)
 - [Section 2.3.1.2, "Installation of Mobile Server"](#)
 - [Section 2.3.3, "Installation of Multiple Mobile Servers Against the Same Mobile Server Repository"](#)
 - [Section 2.3.4, "Custom Install"](#)
 - [Section 2.3.5, "Client Install"](#)

2.3.1.1 Installation of Mobile Development Kit

Install Mobile Development Kit from the Installation Types screen by choosing the Mobile Development Kit and clicking **Next**. On the Summary screen, click **Install**. Click **Exit** to return to the installation screen.

You have now installed the Mobile Development Kit.

2.3.1.2 Installation of Mobile Server

Install the Mobile Server from the Installation Types screen, as follows:

1. Choose Mobile Server and click **Next**.
2. Provide the hostname, port, and SID for the back-end database for the Mobile Server Repository. Mobile Server installs its meta-data in the back-end database. If you are not sure, you can query the data dictionary to obtain these values. Connect as `SYSTEM` and run the following queries.

To retrieve the SID, execute:

```
select instance_name from v$instance;
```

If you need to retrieve the port number, check the `listener.ora` file on the back-end database.

Click **Next**.

3. Click **Yes** to install the Mobile Server Repository. For this option, always click **Yes** to install the repository—even if one has already been created. If you are installing a Mobile Server on another host that shares an existing repository, selecting yes updates the repository with the shared Mobile Server information. You only select **No** if instructed to for a certain environment. Click **Next**.
4. On the Mobile Server Configuration Options screen, enter the HTTP listener port for OC4J. Provide a port number for the OC4J HTTP listener if you are executing in standalone mode. The default value is 80. This screen only appears if you are using standalone. If you are using Oracle9iAS or OracleAS, the default ports are used. Click **Next**.

Note: If, after installation, you have port conflicts and need to change the port number for OC4J standalone, edit the file `ORACLE_HOME\mobile_oc4j\j2ee\mobileserver\config\http-web-site.xml` and modify the following with the alternate port number:

```
<web-site port="80" display-name="OracleAS Containers for J2EE HTTP
Web Site">
```

5. Click **Yes** or **No** indicating if you want the demo applications installed on the server.
6. On the Summary page, click **Install** to start the installation of Mobile Server, which is installed in your Oracle Home.
7. If, previously, you clicked **Yes** to installing the Mobile Server Repository, then the Repository Wizard is now launched to create and populate the repository with the Mobile Server schema.

The Repository Wizard asks for a user name and password which will be used to connect to the back-end database, create the schema and assign database privileges for the Mobile Server. Before you provide the username, this user has to have the following privileges to create the Mobile Server repository in the back-end database:

- CREATE TABLESPACE, CREATE USER
- The following privileges are required with the Admin option:
ALTER ANY TABLE, ALTER SESSION, ALTER SYSTEM, CREATE SESSION, CREATE ANY SEQUENCE, CREATE ANY VIEW, CREATE ANY TRIGGER, CREATE ANY INDEX, CREATE ANY TABLE, CREATE ANY SYNONYM, CREATE ANY PROCEDURE, CREATE PROCEDURE, CREATE SEQUENCE, CREATE SYNONYM, CREATE TABLE, CREATE VIEW, CREATE INDEXTYPE, DELETE ANY TABLE, DROP ANY SEQUENCE, DROP ANY PROCEDURE, DROP ANY VIEW, DROP ANY TABLE, DROP ANY SYNONYM, DROP ANY TRIGGER, DROP ANY INDEX, DROP ANY TABLE, SELECT ANY TABLE , SELECT ANY DICTIONARY, UPDATE ANY TABLE

- Lastly, the `SELECT_CATALOG_ROLE` role is required with the Admin option.
Click **Next**.
- 8. If this is a new Repository, the following message is displayed:
No existing Repository found. A new Repository will be installed.

Click **Next**.
- 9. Enter the schema name and password for the Mobile Server Repository. The default name is `MOBILEADMIN`. This schema contains all database objects used by the Mobile Server. Also, check whether you want to install sample applications or not. Click **Next**.
- 10. Enter the username and password that you will use to log into the Mobile Server administration GUI.
- 11. Enter the schema username and password for the schema where the demo applications are installed.
- 12. A summary screen appears informing you if a repository is installed or not. Click **Next**.
- 13. The installation screen appears. Wait until the install is completed. Click **Next**.
- 14. Once the repository wizard is finished, click **Finish** to leave the wizard.
- 15. Click **Exit** to complete the installation.
- 16. Review the installation log files for any errors, which are located in `ORACLE_HOME\mobile\server`. The `repository.log` file contains the log file of all general installation errors; the `samples.log` file contains a log of the sample installation errors.
- 17. If you are installing on top of any version of the application server, then restart the application server.

2.3.2 Silent Install of Mobile Server and MDK Components

You can execute a command-line tool that runs the installer in silent mode. That is, it installs either the Mobile Development Kit or the Mobile Server for you without having to use the Installation GUI. The following sections describe how to silently install these components on either the UNIX or Windows platforms:

- [Section 2.3.2.1, "Silent Install Mobile Server or the Mobile Development Kit on UNIX"](#)
- [Section 2.3.2.2, "Silent Install for Mobile Server or Mobile Development Kit on Windows"](#)

2.3.2.1 Silent Install Mobile Server or the Mobile Development Kit on UNIX

You can install the Mobile Server and/or the Mobile Development Kit by using the `runInstaller` command, which is on the top level of the CD or the downloaded ZIP file for the product.

There are two response files that contain variables that define how the Mobile Server or the MDK are installed, which are located in the `stage/Response` folder of the CD or ZIP file.

Note: If you use Mobile Server in standalone mode for your middle-tier, do not use an Oracle Home that has any version of Oracle9iAS or OracleAS installed.

If you use Oracle9iAS or OracleAS as your middle-tier, then you must install Oracle Database Lite into the same Oracle Home where the application server is installed.

- The response file for installing the Mobile Server is `oracle.lite.install_type_2.rsp`. The variables that you can modify in this file for defining your install are as follows:
 - Define the `ORACLE_HOME` destination directory, as follows:


```
ORACLE_HOME="\private\olite\orahome\10gr2"
```
 - Define the name for your Oracle Home, as follows:


```
ORACLE_HOME_NAME="OLITE10g"
```
 - Provide the hostname, port, and user for the back-end database, where the repository is to be installed, as follows:


```
db_info={"my-pc.us.oracle.com", "1521", "myuser" }
```
 - Specify true or false if the repository is to be created on the back-end database, as follows:


```
b_repository=false
```
 - Provide the Mobile Server port number, where incoming clients connect to it, as follows:


```
s_mobile_port="80"
```
 - Provide the database system username and password, as follows:


```
s_olite_sysdb_username="myuser"
s_olite_sysdb_pwd="mypwd"
```
 - Provide the Mobile Server schema name and password, as follows:


```
s_olite_mb_user="myschema"
s_olite_mb_pwd="myschemapwd"
```
 - Provide the Mobile Server demo schema user name and password, as follows:


```
s_olite_demoschema_username="demoschema"
s_olite_demoschema_pwd="demoschemapwd"
```
 - Provide the Mobile Server admin user name and password, as follows:


```
s_olite_admin_username="adminuser"
s_olite_admin_pwd="adminpwd"
```
- The response file for installing the MDK is `oracle.lite.install_type_1.rsp`. You can define two variables in this file for your install—the Oracle Home and the name for the Oracle Home—as follows:


```
ORACLE_HOME="c:\olite10g"
ORACLE_HOME_NAME="OLITE10g"
```

If you want to install both the Mobile Server and the MDK, execute the `runInstaller` command twice; each execution is provided a different response file. The following installs the Mobile Server, as follows:

```
./runInstaller -responseFile
  /full_directory_path_to_response_file/oracle.lite.install_type_2.rsp
  -silent -nowelcome
```

where the options for this command are as follows:

Table 2–3 The runInstaller Command Options

Command Option	Description
<code>responseFile</code>	Provide the path and name of the response file for the component that you are installing. There are two response files: one for installing the Mobile Server and one for installing the MDK.
<code>silent</code>	Always use this option, as it defines that this is a silent installation.
<code>nowelcome</code>	Stops the GUI from displaying.

2.3.2.2 Silent Install for Mobile Server or Mobile Development Kit on Windows

Command to run the installer in silent mode for Windows.

```
setup.exe -responseFile
  /full_directory_path/stage/Response/oracle.lite.install_type_2.rsp
  -silent -nowelcome
```

Variables to be filled for silent install in the response file `oracle.lite.install_type_2.rsp` to install Oracle Database Lite are as follows:

- Define the `ORACLE_HOME` destination directory, as follows:


```
ORACLE_HOME="\private\olite\orahome\10gr2"
```
- Define the name for your Oracle Home, as follows:


```
ORACLE_HOME_NAME="OLITE10g"
```
- Provide the hostname, port, and user for the back-end database, where the repository is to be installed, as follows:


```
db_info={"my-pc.us.oracle.com", "1521", "myuser"}
```
- Specify true or false if the repository is to be created on the back-end database, as follows:


```
b_repository=false
```
- Provide the Mobile Server port number, where incoming clients connect to it, as follows:


```
s_mobile_port="80"
```
- Provide the database system username and password, as follows:


```
s_olite_sysdb_username="myuser"
s_olite_sysdb_pwd="mypwd"
```
- Provide the Mobile Server schema name and password, as follows:


```
s_olite_mb_user="myschema"
s_olite_mb_pwd="myschemapwd"
```

- Provide the Mobile Server demo schema user name and password, as follows:

```
s_olite_demoschema_username="demoschema"
s_olite_demoschema_pwd="demoschemapwd"
```

- Provide the Mobile Server admin user name and password, as follows:

```
s_olite_admin_username="adminuser"
s_olite_admin_pwd="adminpwd"
```

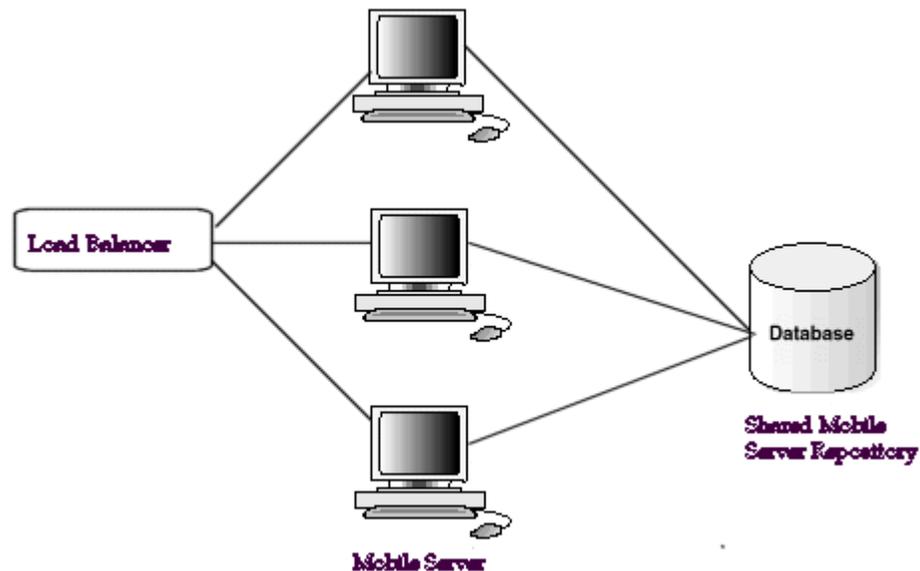
Variables in the `oracle.lite.install_type_1.rsp` response file to install Mobile SDK, are as follows:

```
ORACLE_HOME="c:\olite10g"
ORACLE_HOME_NAME="OLITE10g"
```

2.3.3 Installation of Multiple Mobile Servers Against the Same Mobile Server Repository

In some cases, you may want to have multiple Mobile Servers using the same Mobile Server repository. For example, as [Figure 2–1](#) shows, if you wanted to load balance your Mobile Clients across multiple Mobile Servers, you could add a load balancer, such as BIG-IP or Oracle WebCache, before the shared Mobile Servers, and then your clients would be balanced across these Mobile Servers, of which each accesses the same data in the shared repository.

Figure 2–1 Multiple Mobile Servers Sharing a Repository



You can install multiple Mobile Servers, each on its own host, that use the same Mobile Server Repository, as follows:

1. Install the first Mobile Server and the Mobile Server Repository following the instructions in [Section 2.3.1.2, "Installation of Mobile Server"](#).
2. For each subsequent Mobile Server, follow the instructions in [Section 2.3.1.2, "Installation of Mobile Server"](#), supplying the same host name, port and SID where the Mobile Server Repository exists and select **Yes** for creating the repository, which registers the shared Mobile Server with the repository.

2.3.4 Custom Install

The custom install option enables a user to install separate components within the Mobile Development Kit and Mobile Server. This is only for the user who is familiar with these components and not for the beginner.

2.3.5 Client Install

See "Installing Mobile Clients" chapter in the *Oracle Database Lite Administration and Deployment Guide* for instructions on how to download the Mobile client onto the device.

2.4 Post-Installation Configuration Requirements

The following describes any post-installation requirements:

- [Section 2.4.1, "Setup DISPLAY Variable for UNIX Systems in Oracle Application Server"](#)
- [Section 2.4.2, "Enabling Branch Office on Windows XP Service Pack 2"](#)

2.4.1 Setup DISPLAY Variable for UNIX Systems in Oracle Application Server

If you are using a UNIX system, you may have to configure the `DISPLAY` variable. Mobile Manager uses `UIX` to create the graphics in its display, which requires access to your XServer. If you have the XServer on the local machine where the Mobile Manager is executing, then you do not have to perform any configuration. However, if the XServer is on another machine, then set the `DISPLAY` variable in the `OPMN` component of the Oracle Application Server to point to that machine. In the `opmn.xml` file, modify the `<environment>` section and add the following property:

```
<prop name="DISPLAY" value="hostname:display_number.screen_number"
```

where the host is the machine where the XServer is available. For example, if the XServer is on `myhost`, then set the `DISPLAY` environment variable, as follows:

```
<environment>  
  <prop name="DISPLAY" value="myhost:0.0"  
</environment>
```

2.4.2 Enabling Branch Office on Windows XP Service Pack 2

When you install Windows XP Service Pack 2, the Internet Connection Firewall (ICF) defaults to ON. In order for the Branch Office Server to work properly, you either need to turn the ICF OFF or enable port 1531 within the ICF. To enable port 1531, go to the Windows Firewall control on your Windows machine. Select the Exception tab. Click **Add Port**. Add port 1531 with any name.

2.5 Starting Mobile Server

You can start the Mobile Server through the Windows All Programs item or automatically when you start the middle-tier. Both options are described below:

- Select All Programs->Oracle Database Lite 10g->Mobile Server
- Mobile Server is automatically started when you start the middle-tier, as follows:
 - If you are using standalone Mobile Server, which uses OC4J standalone, start the standalone version by executing the following:

```
cd ORACLE_HOME\Mobile\Server\bin
runmobileserver
```

Note: The `runmobileserver` script contains the default Java flags for starting OC4J. If you want to modify the flags for how Mobile Server is started, you can modify the `runmobileserver` script.

You should no longer use the `webtogo.exe` to launch the standalone version of the Mobile Server.

OR

- Start Oracle9iAS (9.0.4) or OracleAS through the Windows Services panel. Alternatively, you can start the application server from the Oracle9iAS or OracleAS GUI.

Note: If you have installed the Web Cache with your application server installation, then you must always start the Web Cache in order for Mobile Server to execute properly. If Web Cache has not been started, you will receive a Page Not Found when directed to the `http://<application server host>:7777/webtogo/index.html` page.

2.6 Testing Your Mobile Server Installation

To test whether your Mobile Server was installed correctly, test it in one of the following ways:

- If you are using the standalone version, test your Mobile Server through a browser with the following URL:

```
http://<machine-name>[:port]/webtogo
```

Note: If, after installation, you have port conflicts and need to change the port number for OC4J standalone, edit the file `ORACLE_HOME\mobile_oc4j\j2ee\mobileserver\config\http-web-site.xml` and modify the following with an alternate port number. For all UNIX and Linux platforms, if you are not running as root or superuser when you start the server, then use a port number greater than 1024.

The following shows the port set to 80:

```
<web-site port="80" display-name="OracleAS Containers for J2EE HTTP
Web Site">
```

- If you are using Oracle9iAS or OracleAS as your middle-tier, test Mobile Server through a browser with the following URL:

```
http://<machine-name>[:port]/webtogo
```

For more information on testing your installation using the samples, see [Chapter 4, "Quick Start for Oracle Database Lite"](#).

2.7 Removing Demo Applications

Before you use Oracle Database Lite in a production environment, you may wish to remove the demo applications. To remove the demo applications, execute the following batch file:

```
demoinstaller [-i | -u] <sys_user> <sys_pwd> <mobile_user> <mobile_pwd>
```

where the options are as follows:

Option	Description
-i or -u	-i: install the demos -u: remove the demos
<sys_user> <sys_pwd>	Provide the system username and password that are used to drop the schema in which the demos are installed.
<mobile_user> <mobile_pwd>	Provide the Mobile Server log on username and password, which is necessary to remove the demos from the repository.

The removal process enables you to delete the schema into which the applications were installed. If you did not use the schema for any other purpose, then allow the batch file to remove the demo application schema.

Upgrade Oracle Database Lite

The following sections describe the steps for upgrading your Oracle Database Lite software:

- [Section 3.1, "Upgrade Your Oracle Database Lite from 5.0.2.x to 10g Release 2"](#)
- [Section 3.2, "Upgrade Your Oracle Database Lite from 10g Release 1 to 10g Release 2"](#)

3.1 Upgrade Your Oracle Database Lite from 5.0.2.x to 10g Release 2

The following sections describe the steps for upgrading your Oracle Database Lite software from 5.0.2.x to 10g Release 2:

- [Section 3.1.1, "What 5.0.2.x Versions Can I Upgrade to 10g Release 2?"](#)
- [Section 3.1.2, "Pre-Upgrade Instructions for the 5.0.2.x Version"](#)
- [Section 3.1.3, "Upgrade Your 5.0.2.x Version Mobile Server Repository"](#)
- [Section 3.1.4, "Upgrade Your 5.0.2.x Version Existing Applications"](#)
- [Section 3.1.5, "Upgrading BC4J Mobile Client 5.0.2.x to Version 10g Release 2"](#)
- [Section 3.1.6, "Upgrading 5.0.2.x Version Branch Office"](#)
- [Section 3.1.7, "Use the Appropriate Context for Your Mobile Server"](#)
- [Section 3.1.8, "Migrate Your 5.0.2.x Version Users From the Mobile Server Repository to the Oracle Internet Directory"](#)
- [Section 3.1.9, "Post-Upgrade Instructions for 5.0.2.x Version"](#)
- [Section 3.1.10, "Remove the 5.0.2.x Installation"](#)
- [Section 3.1.11, "New Consolidator Sequence Properties Added During Upgrade"](#)

3.1.1 What 5.0.2.x Versions Can I Upgrade to 10g Release 2?

Upgrading Oracle Database Lite from 5.0.2.x to 10g Release 2 is only supported in a separate *ORACLE_HOME* from the previous installation; thus, an existing Oracle Database Lite 5.0.2.x installation cannot be upgraded to the Oracle Database Lite 10g Release 2 in the same *ORACLE_HOME*. [Table 3-1](#) details what version of Oracle Database Lite and *iAS* installation can be upgraded to Oracle Database Lite 10g Release 2.

Table 3–1 Upgrading 5.0.2.x Oracle Database Lite to 10g Release 2

	10gR2 Standalone (diff Oracle Home)	10g R2 and iAS 10.1.x	10g R2 and iAS 10.1.x with OID	10g R2 and iAS 9.0.4	10g R2 and iAS 9.0.4 with OID
5.0.2.x Standalone	Supported	Supported	Not Supported	Supported	Not Supported
5.0.2.x and iAS 9.0.2	Supported	Supported	Not Supported	Supported	Not Supported
5.0.2.x and iAS 9.0.2 with OID	Not Supported	Not Supported	Supported	Not Supported	Supported
5.0.2.x and iAS 9.0.3	Supported	Supported	Not Supported	Supported	Not Supported
5.0.2.x and iAS 9.0.3 with OID	Not Supported	Not Supported	Supported	Not Supported	Supported

3.1.2 Pre-Upgrade Instructions for the 5.0.2.x Version

In order to upgrade your Oracle Database Lite 5.0.2.x installation, perform the following:

1. If you are upgrading a 5.0.2.10 Mobile Server that uses Oracle9iAS (version 9.0.4), then remove references to the `wtgias.conf` and `wtgapach.conf` files from the Oracle9iAS `oracle_apache.conf` or the HTTP `httpd.conf` configuration files before you perform the upgrade for the Mobile Server. The following line is an example of the reference to the `wtgias.conf` file:

```
include "c:\olite502\Mobile\Server\bin\wtgias.conf"
```

2. If you have multiple Mobile Servers that use the same Mobile Server Repository on a back-end database, you must shut down all of these Mobile Servers before you start the upgrade. Then, upgrade one of these Mobile Servers and the Mobile Server Repository. After this upgrade completes successfully, you can upgrade each additional Mobile Server that uses the Repository. After all of the shared Mobile Servers are upgraded, you can restart them.
3. Install the current version of Oracle Database Lite in a separate Oracle Home than your 5.0.2.x version.

WARNING: Upgrading Oracle Database Lite version 5.0.1.x or previous versions is not supported with this process. You must first upgrade to 5.0.2.x before starting this process.

See [Chapter 2, "Installation of Oracle Database Lite"](#) for instructions on how to install Oracle Database Lite. When the Repository Wizard is executed, see [Section 3.1.3, "Upgrade Your 5.0.2.x Version Mobile Server Repository"](#) for directions on how to upgrade the repository on the back-end database.

3.1.3 Upgrade Your 5.0.2.x Version Mobile Server Repository

During installation of Oracle Database Lite 10g Release 2, the Repository Wizard detects if you have a 5.0.2.x version of Oracle Database Lite installed and starts the upgrade process, as follows:

Note: If you need to start the Repository Wizard outside of the install process, execute

```
ORACLE_HOME\Mobile\Server\admin\repwizard
```

1. Enter the SYSTEM password. Click **Next**.
2. Select the schema that you are going to upgrade. Click **Next**.
3. Enter the password for the Mobile Server Repository—MOBILEADMIN—and click **Yes** for installing sample applications. Click **Next**.
4. A summary screen appears. Click **Next**.
5. After the repository is upgraded, click **Finish**.

To upgrade each individual Mobile Server, follow the instructions in [Section 3.1.2, "Pre-Upgrade Instructions for the 5.0.2.x Version"](#).

3.1.4 Upgrade Your 5.0.2.x Version Existing Applications

Once you have installed the Oracle Database Lite 10g Release 2 in a new Oracle Home and the Repository Wizard has upgraded the Mobile Server Repository successfully, you must execute the Application Upgrade Assistant to upgrade your existing applications.

Note: Before you upgrade the application, you must remove references to the `wtgias.conf` and `wtgapach.conf` files from the Oracle9iAS `oracle_apache.conf` or the HTTP `httpd.conf` configuration files before you perform the upgrade for the Mobile Server. The following line is an example of the reference to the `wtgias.conf` file:

```
include "c:\olite502\Mobile\Server\bin\wtgias.conf"
```

The Application Upgrade Assistant moves the applications from the 5.0.2.x Oracle Home to your new 10g Release 2 Oracle Home. In addition, the assistant transforms your Mobile applications to the new application model. In previous versions, you could create a single Mobile application for all platforms with a single dataset. In 10g, you must create a single Mobile application for each platform, each with its own dataset. Thus, if you have the `myapp` application, the Application Upgrade Assistant transforms your `myapp` application into the following:

- Web platform: named `myapp` and exists in the `myapp` directory
- Win32 platform: named `myapp_win32` and exists in the `myapp/win32` directory
- Palm OS platform: named `myapp_palm` and exists in the `myapp/palm` directory
- WinCE platform: named appropriately by the language and in a directory that is also named according to the language, as follows:
 - English: The application is named `myapp_wce_Pocket_PC_us_arm` and exists in the `/myapp/wce/Pocket_PC/us/arm` directory.
 - Chinese: The application is named `myapp_wce_Pocket_PC_cn_arm` and exists in the `/myapp/wce/Pocket_PC/cn/arm` directory.
 - Japanese: The application is named `myapp_wce_Pocket_PC_jn_arm` and exists in the `/myapp/wce/Pocket_PC/jn/arm` directory.

- Korean: The application is named `myapp_wce_Pocket_PC_ko_arm` and exists in the `/myapp/wce/Pocket_PC/ko/arm` directory.

Each application is upgraded with the dataset and access rights that was in the original application.

In addition, Oracle Database Lite 10g Release 2 uses OC4J for all middle-tier functionality. Thus, all Mobile Web applications must now be contained within a J2EE WAR or JAR file. The Application Upgrade Assistant converts your applications by adding the required XML files and packages your Web applications into a WAR file and publishes these applications. However, for all future applications, you must create the XML files and package them into a WAR or JAR file.

The Application Upgrade Assistant is located in the following locations:

- On a Windows environment:

```
ORACLE_HOME\mobile\server\admin\ApplicationUpgradeAssistant.bat
```

- On a UNIX environment:

```
ORACLE_HOME/mobile/server/admin/ApplicationUpgradeAssistant.sh
```

On the command-line, supply the Mobile Server Repository Name, the Mobile Server Repository Password, the old Oracle Home and the new Oracle Home. For example, on a Windows system, where the repository name is `mobileadmin`, its password is `manager`, the old Oracle Home is `c:\oracle\ora502` and the new Oracle Home is `c:\oracle\ora10g`, execute as follows:

```
ApplicationUpgradeAssistant mobileadmin manager c:\oracle\ora502 c:\oracle\ora10g
```

3.1.4.1 Manual Upgrade Instructions For Web-to-Go Applications in Retrieving the OraUserProfile Class

In previous versions, Web-to-Go applications retrieved the `OraUserProfile` class as follows:

```
OraUserProfile p = ((OraHttpServletRequest)req).getUserProfile();
```

For Oracle Database Lite 10g, all existing and future Mobile applications must retrieve the `OraUserProfile` class with the following lines:

```
HttpSession s = request.getSession(true);  
OraUserProfile p = (OraUserProfile)s.getAttribute ("x-mobileserver-user");
```

You must manually modify all existing Mobile applications to use the new method of retrieving the `OraUserProfile` class and then republish the application to complete the upgrade process for your 5.0.2.x Mobile applications.

3.1.5 Upgrading BC4J Mobile Client 5.0.2.x to Version 10g Release 2

If you have Oracle Database Lite 5.0.2.x, perform the following steps to upgrade your BC4J mobile client to 10g Release 2:

1. Upgrade the existing Oracle Database Lite 5.0.2.x to Oracle Database Lite 10g Release 2.
2. If you have any 5.0.2.x Web-to-Go clients, which are upgrading to the 10g release, then first upgrade all your Web-to-Go clients before continuing to step 3.
3. Add following line in the `[WEBTOGO]` section of server side `webtogo.ora` and restart Mobile Server:

```
CLIENT_502_UPGRADE_TYPE = BC4J
```

4. Login into the BC4J mobile client using the 5.0.2.x BC4J mobile client user.
5. Perform a synchronization.
6. Select **Yes** when prompted for "Do you want to upgrade".
7. The upgrade program prompts for username and password, use the 5.0.2.x BC4J mobile client username and password.
8. After all the BC4J mobile clients are upgraded, remove the `CLIENT_502_UPGRADE_TYPE = BC4J` parameter from the server side `webtogo.ora` file and restart the Mobile Server.

3.1.6 Upgrading 5.0.2.x Version Branch Office

To upgrade your 5.0.2.x version Branch Office to the 10g version of Oracle Database Lite, perform the following steps:

1. Upgrade the existing Oracle Database Lite 5.0.2.x to Oracle Database Lite 10g Release 2.
2. If you have any 5.0.2.x Web-to-Go clients, which are upgrading to version 10g, then first upgrade all all of these Web-to-Go clients before continuing to step 3.
3. Add following line in the `[WEBTOGO]` section of server side `webtogo.ora` file and restart Mobile Server:

```
CLIENT_502_UPGRADE_TYPE = BOS
```

4. Login into the Branch Office Client using the 5.0.2.x Branch Office user.
5. Perform a synchronization.
6. Select **Yes** when prompted for "Do you want to upgrade".
7. The upgrade program prompts for a username and password, where you will provide the 5.0.2.x Branch Office username and password.
8. After all of the Branch Office clients are upgraded, remove the `CLIENT_502_UPGRADE_TYPE = BOS` parameter from the server side `webtogo.ora` and restart the Mobile Server.

3.1.7 Use the Appropriate Context for Your Mobile Server

The servlet context that you use for all Web-to-Go applications is changed for this version. You must add the `/webtogo/` servlet context to all URLs for your Web-to-Go applications. For example, in the past, you tested your Mobile Server using `<hostname:port>/sample1/hello`. For Oracle Database Lite 10g, enter `<hostname:port>/webtogo/sample1/hello`.

3.1.8 Migrate Your 5.0.2.x Version Users From the Mobile Server Repository to the Oracle Internet Directory

If you want, you can use the Oracle Internet Directory (OID) for storing and retrieving user information instead of the Mobile Server Repository. To facilitate using OID, you must first migrate all user information from the repository into OID. Once migrated, you can use OID instead of the repository.

OID is part of the Oracle*9i*AS or OracleAS application server.

Migrate your existing users in the repository to the OID through the `oiduser` tool, which is located in `ORACLE_HOME\mobile\server\bin`. The `oiduser` tool migrates your existing users with either randomly-generated passwords or a common password.

1. Set the `SSO_ENABLED` parameter in the `webtogo.ora` file to `YES`.
2. If you are using Oracle9iAS, then explicitly grant permission to the `webtogo.jar` file to enable calls originating from this JAR file by adding the following content to the `jazn-data.xml` file, which is located in the `ORACLE_HOME/config` directory:

```
<grant>
  <grantee>
    <codesource>
      <url>file:$MIDTIER_ORACLE_HOME/mobile/server/bin/webtogo.jar</url>
    </codesource>
  </grantee>
  <permissions>
    <permission>
      <class>oracle.ias.repository.schemaimpl.CheckRepositoryPermission</class>
      <name>connectAs</name>
    </permission>
  </permissions>
</grant>
```

3. Migrate the user information using the `oiduser` tool, for either randomly-generated passwords or a common password, as follows:

- To use randomly-generated passwords for each user, execute the `oiduser` tool without the `-P` option, as follows:

```
oiduser <Oracle_Home> <Mobile Server Repository username> <Mobile Server
Repository password> <OID port number> <OID host name> <OID password>
```

For example, the default setting would be:

```
oiduser <Oracle_Home> mobileadmin manager 389 myhost-pc1.com welcome1
```

- To use a common password for all users, provide the common password with the `-P` option, as follows:

```
oiduser <Oracle_Home> <Mobile Server Repository username> <Mobile Server
Repository password> <-P> <common password> <OID port number> <OID host
name> <OID password>
```

where the common password is specified by you.

Executing `oiduser` generates the `mobile_oid_user.bat` and `oiduserfile.Idif` files.

4. Copy the `mobile_oid_user.bat` and `oiduserfile.Idif` files to the same directory in the application infrastructure machine where OID is installed. You can copy them to any directory, as the `mobile_oid_user.bat` is an executable that uses the `oiduserfile.Idif` file.

Note: The `mobile_oid_user.bat` executable requires that the `ldapadd` executable is in the `PATH`. The `ldapadd` executable is part of the application server installation.

5. Execute the `mobile_oid_user.bat` file from the command-line on the application server infrastructure machine. This creates the Oracle Database Lite users in the OID.

All users from the Mobile Server Repository are now migrated to the OID with the passwords, as designated in step 1.

6. Set the `SSO_ENABLED` parameter in the `webtogo.ora` file to `NO`.
7. Login to Mobile Manager as the administrator and select the appropriate server.
8. Click on the Administration tab.
9. Click **Edit Config File** to edit the `webtogo.ora` file for this server.
10. If `SSO_ENABLED` has a hash mark (#) before it, eliminate the hash mark and set `SSO_ENABLED` to `YES`.
11. Click **Apply**.
12. Restart both the application server and the Mobile Server.

3.1.9 Post-Upgrade Instructions for 5.0.2.x Version

After upgrading the Mobile Server and before you synchronize, perform the following for your Web-to-Go, BC4J, and Branch Office clients:

1. Modify the `SERVER_URL` parameter in the `webtogo.ora` file on the Mobile client in the `WebToGo` directory and append the `/webtogo` context to the end.
2. Restart the Web-to-Go client and synchronize.

3.1.10 Remove the 5.0.2.x Installation

Once you have completed all of the upgrade exercises, you can now remove the 5.0.2.x version of the Oracle Database Lite from your system. This is not a required step, but is recommended for clarity in the future.

1. Start up the Oracle Universal Installer by double-clicking on `setup.exe`.
2. On the File Locations screen, enter the Oracle Home and path for the 5.0.2.x installation. Click **Installed Products**.
3. On the Inventory screen, select the '+' next to the Oracle Home for your 5.0.2.x installation. Then, click the box next to the 5.0.2.x installation that you are going to remove. Click **Remove**.
4. On the Confirmation screen, click **Yes**.
5. When the removal is complete, click **Close**.
6. To exit the Installer, click **Exit**.
7. Optionally, you can go into your directories and remove the directory where the 5.0.2.x installation existed.

3.1.11 New Consolidator Sequence Properties Added During Upgrade

Any upgrade from a previous version of the Mobile Server upgrades the Consolidator Sequences to a new Sequence model, which contains additional property information. The new Sequence properties have the following default values:

- `MIN_VALUE`: 0
- `WINDOW_SIZE`: 1000

- THRESHOLD: 100
- INCREMENT_BY: 1
- SEQUENCE_MODE: NA_SEQ

You can modify any of these properties through the Java `modifySequence` API, which is described fully in the *Consolidator Admin API Specification* JavaDoc.

3.2 Upgrade Your Oracle Database Lite from 10g Release 1 to 10g Release 2

If you have Oracle Database Lite 10g Release 1, you must upgrade to the latest version. The following sections describe the steps for upgrading your software:

- [Section 3.2.1, "To What Versions Can I Upgrade Oracle Database Lite?"](#)
- [Section 3.2.2, "Pre-Upgrade Instructions"](#)
- [Section 3.2.3, "Upgrade Your Mobile Server Repository"](#)
- [Section 3.2.4, "Upgrade Your Existing Applications"](#)
- [Section 3.2.5, "Installing Sample Applications"](#)
- [Section 3.2.6, "Upgrading Branch Office 10g Release 1 to version 10g Release 2"](#)
- [Section 3.2.7, "Migrate Your Users From the Mobile Server Repository to the Oracle Internet Directory"](#)
- [Section 3.2.8, "Remove the 10g Release 1 Installation"](#)
- [Section 3.2.9, "Remove Duplicate Mobile Server IDs from the Repository"](#)

3.2.1 To What Versions Can I Upgrade Oracle Database Lite?

Upgrading Oracle Database Lite from 10g Release 1 to 10g Release 2 is supported in the same or a separate `ORACLE_HOME` from the previous installation.

[Table 3–2](#) details what versions of Oracle Database Lite and Oracle *iAS* installation can be upgraded to Oracle Database Lite 10g Release 2.

Table 3–2 Upgrading 10g Release 1 Oracle Database Lite to 10g Release 2

	10gR2 Standalone	10g R2 and iAS 10.1.x	10g R2 and iAS 10.1.x with OID	10g R2 and iAS 9.0.4	10g R2 and iAS 9.0.4 with OID
10g R1 Standalone	Supported	Supported	Not Supported	Supported	Not Supported
10g R1 and iAS 9.0.2	Supported	Supported	Not Supported	Supported	Not Supported
10g R1 and iAS 9.0.2 with OID	Not Supported	Not Supported	Supported	Not Supported	Supported
10g R1 and iAS 9.0.3	Supported	Supported	Not Supported	Supported	Not Supported

Table 3–2 (Cont.) Upgrading 10g Release 1 Oracle Database Lite to 10g Release 2

	10gR2 Standalone	10g R2 and iAS 10.1.x	10g R2 and iAS 10.1.x with OID	10g R2 and iAS 9.0.4	10g R2 and iAS 9.0.4 with OID
10g R1 and iAS 9.0.3 with OID	Not Supported	Not Supported	Supported	Not Supported	Supported
10g R1 and iAS 9.0.4	Supported	Supported	Not Supported	Supported	Not Supported
10g R1 and iAS 9.0.4 with OID	Not Supported	Not Supported	Supported	Not Supported	Supported

3.2.2 Pre-Upgrade Instructions

In order to upgrade your Oracle Database Lite Installation, perform the following:

1. If you have multiple Mobile Servers that use the same Mobile Server Repository on a back-end database, you must shut down all of these Mobile Servers before you start the upgrade. Then, upgrade one of these Mobile Servers and the Mobile Server Repository. After this upgrade completes successfully, you can upgrade each additional Mobile Server that uses the Repository. After all of the shared Mobile Servers are upgraded, you can restart them.
2. You can upgrade your existing Database Lite 10g Release 1 to the release 2 in the same Oracle Home OR you can install the Release2 of Oracle Database Lite in a separate Oracle home than your Database Lite 10g Release 1 home.

See [Chapter 2, "Installation of Oracle Database Lite"](#) for instructions on how to install Oracle Database Lite. When the Repository Wizard is executed, see [Chapter 3.2.3, "Upgrade Your Mobile Server Repository"](#) for directions on how to upgrade the repository on the back-end database.

3.2.3 Upgrade Your Mobile Server Repository

During installation of Oracle Database Lite 10g Release 2, the Repository Wizard detects if Release 1 is installed and initiates the upgrade process, as follows:

Note: If you need to start the Repository Wizard outside of the install process, execute
`ORACLE_HOME\Mobile\Server\admin\repwizard`

1. Enter the SYSTEM password. Click **Next**.
2. Select the schema that you are going to upgrade. Click **Next**.
3. Enter the password for the Mobile Server Repository—MOBILEADMIN—and click **No** for installing the sample applications. Click **Next**.
4. A summary screen appears. Click **Next**.
5. After the repository is upgraded, click **Finish**.

To upgrade each individual Mobile Server, follow the instructions in [Section 3.2.2, "Pre-Upgrade Instructions"](#).

3.2.4 Upgrade Your Existing Applications

You have to upgrade existing applications only if you installed Oracle Database Lite 10g Release 2 in a separate *ORACLE_HOME* than Oracle Database Lite 10g Release 1. Thus, once you have installed the Oracle Database Lite 10g Release 2 in a new *ORACLE_HOME* and the Repository Wizard has upgraded the Mobile Server Repository successfully, execute the Application Upgrade Assistant to upgrade your existing applications.

The Application Upgrade Assistant moves applications from the *ORACLE_HOME* for Oracle Database Lite 10g Release 1 to your the new *ORACLE_HOME* for Oracle Database Lite 10g Release 2.

The Application Upgrade Assistant is located in the following locations:

- On a Windows environment:

```
ORACLE_HOME\mobile\server\admin\ApplicationUpgradeAssistant.bat
```

- On a UNIX environment:

```
ORACLE_HOME/mobile/server/admin/ApplicationUpgradeAssistant.sh
```

On the command-line, supply the following:

- Mobile Server Repository Name
- Mobile Server Repository Password
- The old *ORACLE_HOME*
- The new *ORACLE_HOME*

For example, on a Windows system, where the repository name is *mobileadmin*, password is *manager*, the old *ORACLE_HOME* is *c:\oracle\ora10gR1* and the new *ORACLE_HOME* is *c:\oracle\ora10gR2*, execute the Application Upgrade Assistant, as follows:

```
ApplicationUpgradeAssistant mobileadmin manager  
c:\oracle\ora10gR1 c:\oracle\ora10gR2
```

3.2.5 Installing Sample Applications

For the sample applications, you can either upgrade the existing sample applications, use the existing samples in Release 2, or install new sample applications. The Release 1 samples will still work in Release 2 without any upgrade.

To install samples use following command:

```
demoinstaller -install  
[Database_Administrator_User_Name] [Database_Administrator_Password]  
[Repository_Owner] [Repository_Password]  
[Demo_user_name ] [Demo_password  
]
```

For Example:

```
demoinstaller -install system manager mobileadmin manager master master
```

The *demoinstaller* utility is located in the following directories:

- On a Windows environment:

```
ORACLE_HOME\mobile\server\demos\demoinstaller.bat
```

- On a UNIX environment:

ORACLE_HOME/mobile/server/demos/demoinstaller.sh

3.2.6 Upgrading Branch Office 10g Release 1 to version 10g Release 2

If you have Oracle Database Lite 10g Release 1, then upgrade your Branch Office to 10g Release 2, as follows:

Note: These steps assume that you have a 10g Release 1 Branch Office environment already configured and synchronized. If you do not have this environment currently configured, you do not need to upgrade.

1. Install Oracle Lite 10g Release 2 Mobile Server in the same `ORACLE_HOME` directory where you installed Release 1.
2. Stop the Branch Office client executing as a Windows Service.
3. Open a command prompt, navigate to the `BO_CLIENT_HOME\bin` directory, and start the Branch Office Client by issuing the `webtogo -d0` command.
4. Login into the Branch Office Client using the Release 1 Branch Office user.
5. Perform a synchronization.
6. Select **Yes** when prompted for "Do you want to upgrade". The Web-to-Go component of the Branch Office Client upgrades.

Once the upgrade completes, then the Branch Office client restarts as a Windows Service. In order to perform the next step, stop the service.

7. Open another command prompt, navigate to the `BO_CLIENT_HOME\bin` directory, and invoke `update.exe` to upgrade the Branch Office Component.

Note: The upgrade fails if you invoke `update.exe` without stopping the Branch Office client running as a service.

8. Start the Branch Office client either as a Windows Service or from the command prompt invoking `webtogo -d0`.

3.2.7 Migrate Your Users From the Mobile Server Repository to the Oracle Internet Directory

You can use the Oracle Internet Directory (OID), which is part of the Oracle application server, for storing and retrieving user information instead of the Mobile Server Repository. To use OID, you must migrate all user information from the existing repository into OID.

Migrate existing users in the repository to OID through the `oiduser` tool, which is located in `ORACLE_HOME\Mobile\Server\bin`. The `oiduser` tool migrates existing users with either randomly-generated passwords or a common password.

1. Set the `SSO_ENABLED` parameter in the `webtogo.ora` file to `YES`.
2. If you are using Oracle9iAS, then explicitly grant permission to the `webtogo.jar` file, which enable calls originating from this JAR file. Grant this permission by adding the following to the `jazn-data.xml` file, which is located in the `ORACLE_HOME/config` directory:

```

<grant>
  <grantee>
    <codesource>
      <url>file:$MIDTIER_ORACLE_HOME/mobile/server/bin/webtogo.jar</url>
    </codesource>
  </grantee>
  <permissions>
    <permission>
      <class>oracle.ias.repository.schemaimpl.CheckRepositoryPermission</class>
      <name>connectAs</name>
    </permission>
  </permissions>
</grant>

```

3. Migrate the user information using the `oiduser` tool, for either randomly-generated passwords or a common password, as follows:
 - To use randomly-generated passwords for each user, execute the `oiduser` tool without the `-P` option, as follows:


```
oiduser <ORACLE_HOME> <Mobile Server Repository username> <Mobile Server Repository password> <OID port number> <OID host name> <OID password>
```

 For example, the default setting would be:


```
oiduser <ORACLE_HOME> mobileadmin manager 389 myhost-pc1.com welcome1
```
 - To use a common password for all users, provide the common password with the `-P` option, as follows:


```
oiduser <ORACLE_HOME> <Mobile Server Repository username> <Mobile Server Repository password> <-P> <common password> <OID port number> <OID host name> <OID password>
```

where the common password is specified by you.
4. The `oiduser` tool generates the `mobile_oid_user` and `oiduserfile.Idif` files. Copy these files to the same directory in the application infrastructure machine where OID is installed. You can copy them to any directory, as the `mobile_oid_user` is an executable that uses the `oiduserfile.Idif` file.

Note: The `mobile_oid_user` executable requires that the `ldapadd` executable is in the `PATH`. The `ldapadd` executable is part of the application server installation.

5. Execute the `mobile_oid_user` file from the command-line on the application server infrastructure machine. This creates the Oracle Database Lite users in the OID.

All users from the Mobile Server Repository are now migrated to the OID with the passwords, as designated in step 1.
6. Set the `SSO_ENABLED` parameter in the `webtogo.ora` file to `NO`.
7. Login to Mobile Manager as the administrator and select the appropriate server.
8. Click on the Administration tab.
9. Click **Edit Config File** to edit the `webtogo.ora` file for this server.
10. If `SSO_ENABLED` has a hash mark (#) before it, then eliminate the hash mark and set `SSO_ENABLED` to `YES`. Click **Apply**.

11. Restart both the application server and the Mobile Server.

3.2.8 Remove the 10g Release 1 Installation

Once you have completed all of the upgrade exercises, you can now remove the Oracle Database Lite 10g Release 1 from your system. Only perform these steps if you have installed Oracle Database Lite 10g Release 2 in a separate *ORACLE_HOME*. In addition, this is not required, but is recommended for clarity.

1. Start the Oracle Universal Installer by double-clicking on *setup.exe*.
2. On the File Locations screen, enter the *ORACLE_HOME* and *PATH* for the 10g Release 1 installation. Click **Installed Products**.
3. On the Inventory screen, select the '+' next to the *ORACLE_HOME* for your 10g Release 1 installation. Then, click the box next to the installation that you are going to remove. Click **Remove**.
4. On the Confirmation screen, click **Yes**.
5. When the removal is complete, click **Close**.
6. To exit the Installer, click **Exit**.

3.2.9 Remove Duplicate Mobile Server IDs from the Repository

After migrating Oracle Database Lite 10g Release 1 to Release 2, you will see duplicate entries in the Mobile Manager Farms page. To delete these entries from the repository, use the *unregistermobileserver* utility:

```
unregistermobileserver <MobileServerId>
```

Following is the location of *unregistermobileserver*:

- On a Windows environment:
ORACLE_HOME\mobile\server\admin\unregistermobileserver.bat
- On a UNIX environment:
ORACLE_HOME/mobile/server/admin/unregistermobileserver.sh

Quick Start for Oracle Database Lite

As a user, there are three tasks that you normally perform—software distribution, application deployment, and data synchronization. This chapter uses the installed samples in Oracle Database Lite to demonstrate—quickly—how to perform these three functions on the Windows 32, Web-based, Pocket PC, and Palm OS platforms. The following sections describe how to install the sample applications, start Oracle Database Lite, and then distribute, deploy, and sync your application on separate platforms.

- [Section 4.1, "Installing the Sample Applications"](#)
- [Section 4.2, "Starting Oracle Database Lite and Its Job Scheduler"](#)
- [Section 4.3, "Starting a Windows 32 Application"](#)
- [Section 4.4, "Starting a Web-Based Application"](#)
- [Section 4.5, "Starting an Application on Your Pocket PC Device"](#)
- [Section 4.6, "Starting a Palm OS Application"](#)

4.1 Installing the Sample Applications

As Step 8 in [Section 2.3.1.2, "Installation of Mobile Server"](#) notes, you should choose to install the sample applications while you are installing the Mobile Server. However, if you did not install them, start up the Repository Wizard on its own by executing one of the following:

- On Windows:
`ORACLE_HOME\mobile\server\admin\repwizard.bat`
- On UNIX:
`ORACLE_HOME/mobile/server/admin/repwizard`

Follow Steps 6 through 11 in [Section 2.3.1.2, "Installation of Mobile Server"](#) to install the sample applications. The Repository Wizard detects whether the repository is installed or, if it exists, its status. The Repository Wizard takes the appropriate action.

4.2 Starting Oracle Database Lite and Its Job Scheduler

Before you can execute any of the sample applications, verify that the Oracle Database, Oracle Database Lite and its Job Scheduler is started. To start Oracle Database Lite, execute `runmobileserver` on the Mobile Server host. Start the Job Scheduler, as follows:

1. Logon to the Mobile Server.

Start a browser with the URL `http://<Mobile Server>/webtogo`. Note that the Mobile Server host name that you provide is not the back-end database, but is the host where the Mobile Server and the middle-tier application server was installed.

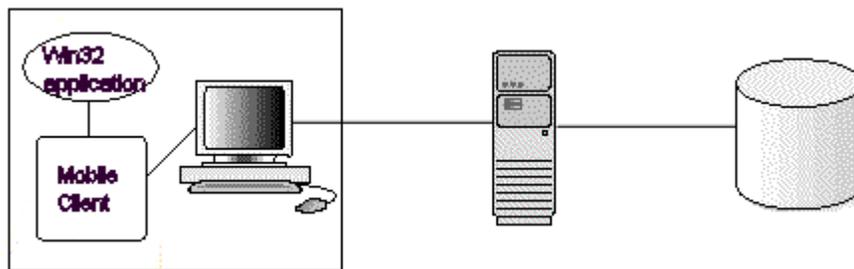
Also, the URL assumes that you are using the default port of 80. If there was a port conflict and you had to change the port number, use the URL `http://<Mobile Server>:<port_number>/webtogo`. For more information on modifying port numbers, see Step 4 of [Section 2.3.1.2, "Installation of Mobile Server"](#).

2. Logon as the administrator. The default administrator username/password is `administrator/admin`.
3. On the Mobile Workspace screen, click **Mobile Manager**. This brings up the list of Mobile Servers available.
4. Click on the Mobile Server with which you wish to connect. These are listed by host name and port number.
5. On the Mobile Server screen, verify that the Job Scheduler is running. This is indicated by a green check under the Status column in the Components section at the bottom of the page.
6. If the Job Scheduler is not running, select the button next to it and click the **Start** button.
7. Exit the Mobile Manager by closing the window.

4.3 Starting a Windows 32 Application

When you have a Windows 32 (Win32) machine that is set up to interact with Mobile Server, you have an environment similar to [Figure 4–1](#):

Figure 4–1 *Windows 32 Interacting With Mobile Server*



[Figure 4–1](#) demonstrates how the Mobile Server accesses the Mobile Server Repository, which exists in a back-end database. The Mobile Client and client applications are on the Win32 machine. The Mobile Client database synchronizes with the Mobile Server.

To install and use the sample application on your Windows 32 machine, verify that you have the correct environment, retrieve the sample from the Mobile Server and install it on your Win32 machine, as follows:

1. [Software Requirements for the Win32 Demo](#)
2. [Download the Mobile Client from the Mobile Server](#)
3. [Install the Mobile Client on the Win32 Device](#)
4. [Start the Win32 Sample Application](#)

5. [Enter and View Data in the Win32 Sample Application](#)
6. [Synchronize the Win32 Sample Application Data to the Database](#)

The sample application for the Win32 environment is the transportation demo.

Note: This section demonstrates how to install, deploy and use the transport demo. However, if you want to see how to build the transport demo, see Chapter 10, "Building Offline Mobile Applications for Win32: A Tutorial" in the *Oracle Database Lite Developer's Guide*.

4.3.1 Software Requirements for the Win32 Demo

The Win32 sample application requires Microsoft Windows 2000/XP and that you install Microsoft .NET Framework 1.1. For directions on how to install the .NET Framework, see the following:

<http://msdn.microsoft.com/netframework/technologyinfo/howtoget/>

4.3.2 Download the Mobile Client from the Mobile Server

To download the Mobile Client, do the following:

1. Open the Mobile Client Setup through the Mobile Server, as follows:
 - a. In a browser on your Win32 machine, point the browser to the Mobile Server using the URL `http://<Mobile Server>/webtogo/`.
 - b. On the upper right corner, click **Setup**.
2. Click **Oracle Lite Win32**.
3. The Save As dialog box appears. The file name field displays the executable setup file for the selected platform. Save the executable to a local directory on your Win32 machine.

4.3.3 Install the Mobile Client on the Win32 Device

You install the Mobile Client on your Win32 device by performing the following steps:

1. Navigate to the local directory on your Win32 machine and double-click the Mobile Client `setup.exe`.
2. On the Logon to Server screen, enter the username and password JUNIUS/JUNIUS and click **OK**. The Mobile Client is now installed.
3. Navigate to the `\bin` directory where you installed the Mobile Client—such as `c:\mobileclient\bin`—and launch the Mobile Sync application by double-clicking `msync.exe`.
4. On the Mobile Sync dialog box, verify that the correct information is filled in as follows:
 - Username and Password of JUNIUS/JUNIUS.
 - Check Save Password.
 - Enter the host name for the Mobile Server.Click **Apply**. Click **Sync**.
5. When the sync completes, the Sync Result Dialog appears. Click **OK**.

6. On the Oracle Lite Software Update window, click **Install** to install the Transport Demo (Transport_WIN32) on your system.
7. Select the directory where you would like to install the demo and click **OK**.

4.3.4 Start the Win32 Sample Application

The Win32 sample application is the transport application, which tracks delivery of packages for a trucking delivery service. To start the application, perform the following:

1. Launch the transport demo application on your client by navigating to the directory where you installed the demo and double-click on `transport.exe`.
2. Enter username and password of JUNIUS/JUNIUS when prompted to logon to the sample application. Click **OK**.

4.3.5 Enter and View Data in the Win32 Sample Application

The Win32 sample application—the transport application—enables you to add package delivery information for a truck delivery service.

1. On the Transport Demo screen, you can create or view a package. Click **Create Package**.
2. On the Create Package screen, fill in the following information about the package and the truck on which it is to be delivered:
 - Name of the package: Oracle Lite CD
 - Package weight: 5
 - Truck number: 1
 - The route taken to deliver package: Santa Clara Route
 - Package priority: HIGH

Click **Next**.

On the next screen, fill in the package delivery location, as follows:

- Street: 500 Oracle Parkway
- City: Redwood Shores
- State: CA

Click **Save**.

3. The "Package created successfully" dialog box displays. Click **OK**.
4. Click the **Exit** button, which is the icon with a red sphere, to return to the main screen.
5. On the Transport Demo screen, click **View Packages** to see the data you just entered.
6. Click the **Exit** button to return to the main screen of the transport demo.

4.3.6 Synchronize the Win32 Sample Application Data to the Database

After you have updated all of the records that you want on your client, you can synchronize the application data to the Mobile Server, which updates the database. To

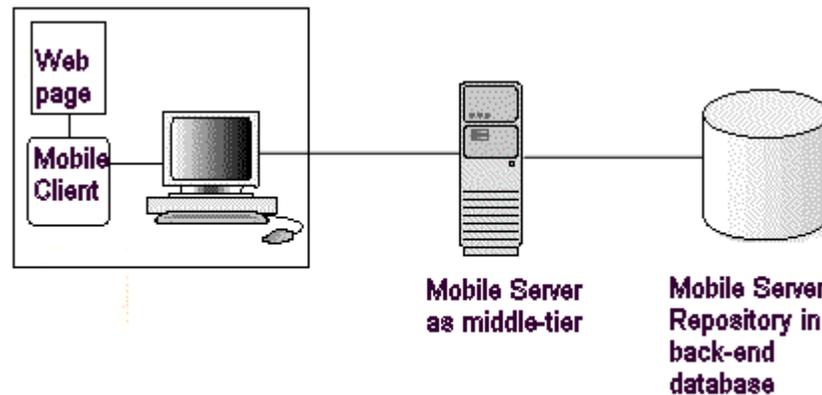
synchronize the data to the database, click the **mSync** button, which is the icon of a database with dual arrows.

You can check to see if the transport applications data was synchronized with the database by viewing the tables used by the sample—the Packages, Trucks and Routes tables—in the repository in the **MASTER** schema with username/password of **MASTER/MASTER**.

4.4 Starting a Web-Based Application

When you have a Web-based application that is set up to interact with Mobile Server, you have an environment similar to [Figure 4-2](#):

Figure 4-2 *Web-Based Application Interacting With Mobile Server*



To install and use the Web-based Mobile Client, verify that you have the correct environment, retrieve the sample from the Mobile Server and install it on your machine, as follows:

Note: You cannot access the Mobile Server from a Web application that is local to the Mobile Server; that is, you must access the Mobile Server from a machine that is remote to the host where Mobile Server is installed. Direct access is not supported.

1. [Download the Mobile Client from the Mobile Server](#)
2. [Install the Web Mobile Client](#)
3. [Enter and Sync Data in the Web Client Sample](#)

The Web sample application tracks your music. This sample application is also used as the base application for a tutorial on how to build Web-based applications. See Chapter 11, "Building Mobile Web Applications: A Tutorial" in the *Oracle Database Lite Developer's Guide* for a full description.

4.4.1 Download the Mobile Client from the Mobile Server

To download the Mobile Client, do the following:

1. Open the Mobile Client Setup through the Mobile Server, as follows:

- a. In a browser on your remote machine, point the browser to the Mobile Server using the URL `http://<Mobile Server>/webtogo/`.
 - b. On the upper right corner, click **Setup**.
2. Click **Oracle Lite WEB**.
 3. The Save As dialog box appears. The file name field displays the executable setup file for the selected platform. Save the executable to a local directory on your machine—which is remote from the Mobile Server host.

4.4.2 Install the Web Mobile Client

You install the Web Mobile Client by performing the following steps:

1. Navigate to the local directory where you installed the Mobile Client and double-click the Mobile Client `setup.exe`.
2. On the Logon to Server screen, enter the username and password `JOHN/JOHN` and click **OK**.
3. If you are prompted for a port number, there is a conflict with the default port. Enter an unused port number and click **OK**. Use this port number when accessing the Web logon page through a URL.

The Web Mobile Client Sample is now installed.

4. The Web logon page should appear in your browser. Alternatively, you can launch it through a Web browser with URL `http://localhost/webtogo/index.html`.
5. Enter the username and password of `JOHN/JOHN`. Click **Logon**.
6. A confirmation and client initialization screen appears. Click **Next** to synchronize the new Web Client with the Mobile Server.
7. After installation, the client is restarted and the Web Workspace appears.

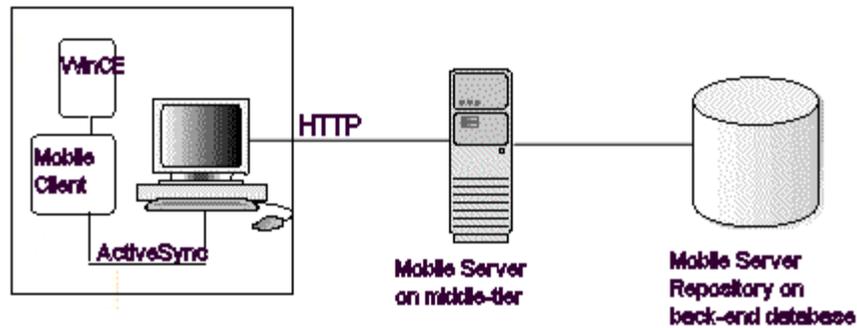
4.4.3 Enter and Sync Data in the Web Client Sample

There are several sample applications that you can try; however, this section talks about using `Sample3`, which tracks music.

1. Select the **Applications** tab. This shows the available samples that you can execute.
2. Click **Sample3**, which launches the application.
3. Add or change data in the `Sample3` application by adding musical record details, commit the changes, and close the application window.
4. Select the **Sync** tab to synchronize the modified data with the Mobile Server.
5. You can check to see if the data was synchronized with the database by viewing the `Records`, `Tracks`, and `Titles` tables in the back-end database.

4.5 Starting an Application on Your Pocket PC Device

When you have a Pocket PC (WinCE) application that is set up to interact with Mobile Server, you have an environment similar to [Figure 4-3](#):

Figure 4-3 Pocket PC Application Interacting With Mobile Server

To install and use the Mobile client for your Pocket PC, verify that you have the correct environment, retrieve the sample from the Mobile Server and install it on your machine, as follows:

- [Section 4.5.1, "Verify the Software and Hardware Requirements for the Pocket PC Demo"](#)
- [Section 4.5.2, "Download the Mobile Client from the Mobile Server"](#)
- [Section 4.5.3, "Install the Pocket PC Mobile Client"](#)
- [Section 4.5.4, "Enter and View Data in the Pocket PC Sample Application"](#)
- [Section 4.5.5, "Synchronize the Pocket PC Application Data to the Database"](#)

The Pocket PC sample application is the transport application.

Note: This section demonstrates how to install, deploy and use the transport demo. However, if you want to see how to build the transport demo, see Chapter 11, "Building Offline Mobile Applications for Windows CE: A Tutorial" in the *Oracle Database Lite Developer's Guide*.

4.5.1 Verify the Software and Hardware Requirements for the Pocket PC Demo

The Pocket PC sample application requires the following:

- Software requirements: ActiveSync 3.5 or higher and Microsoft .NET Compact Framework 1.0. For information on how to install Microsoft .NET Compact Framework, see the following:

<http://msdn.microsoft.com/mobility/downloads/default.aspx/>

- Hardware requirements: Hardware as appropriate for the Pocket PC used. In this example, the device necessary is XScale with Pocket PC 2003.

4.5.2 Download the Mobile Client from the Mobile Server

To download the Mobile client, do the following:

1. Open the Mobile client setup through the Mobile Server, as follows:
 - a. In a browser on your Windows machine that supports the Pocket PC device, open and point a browser to the Mobile Server host, which is remote to your machine, using the URL `http://<Mobile Server>/webtogo/`.

2. On the Transport Demo screen, you can create or view a package. Click **Create Package**.
3. On the Create Package screen, fill in the following information about the package and the truck on which it is to be delivered:
 - Name of the package: Oracle Lite CD
 - Package weight: 5
 - Truck number: 1
 - The route taken to deliver package: Santa Clara Route
 - Package priority: HIGH

Click **Next**.

On the next screen, fill in the package delivery location, as follows:

- Street: 500 Oracle Parkway
- City: Redwood Shores
- State: CA

Click **Save**.

4. The "Package created successfully" dialog box displays. Click **OK**.
5. Click the **OK** button in the upper right-hand corner to return to the main screen.
6. On the Transport Demo screen, click **View Packages** to see the data you just entered.
7. Click the **Exit** button—which is the icon with a red sphere—to return to the main screen.

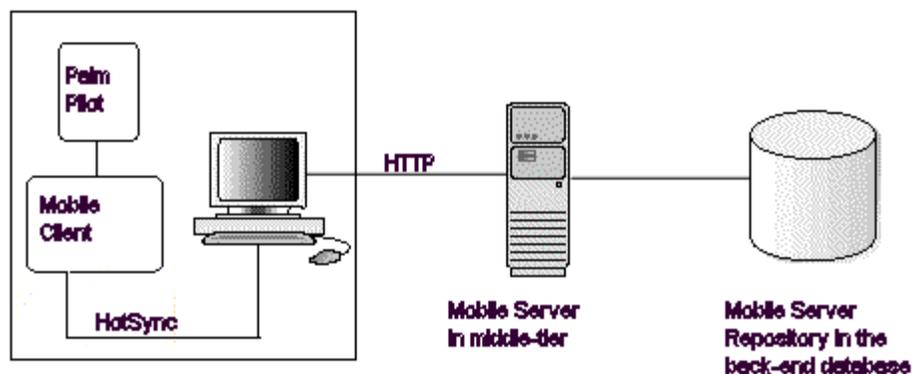
4.5.5 Synchronize the Pocket PC Application Data to the Database

After you have updated all of the records that you want on your client, you can synchronize the data to the Mobile Server, which updates the database. To synchronize the data to the database, click the **mSync** button, which is the icon of a database with dual arrows, to synchronize the modified data with the Mobile Server.

You can check to see if the transport applications data was synchronized with the database by viewing the tables used by the sample—the Packages, Trucks and Routes tables—in the repository in the `MASTER` schema with username/password of `MASTER/MASTER`.

4.6 Starting a Palm OS Application

When you have a Palm OS application that is set up to interact with Mobile Server, you have an environment similar to [Figure 4-4](#):

Figure 4–4 Palm OS Application Interacting With Mobile Server

To install and use the Palm OS Mobile Client, verify that you have the correct environment, retrieve the sample from the Mobile Server and install it on your machine, as follows:

- [Section 4.6.1, "Verify the Software and Hardware Requirements for the Palm OS Demo"](#)
- [Section 4.6.2, "Download the Mobile Client from the Mobile Server"](#)
- [Section 4.6.3, "Install the Palm OS Mobile Client"](#)
- [Section 4.6.4, "Execute the Palm OS Sample Application"](#)

Instructions for building a Palm OS application are detailed in Chapter 7, "Developing Mobile Applications for Palm OS Devices" in the *Oracle Database Lite Developer's Guide*.

4.6.1 Verify the Software and Hardware Requirements for the Palm OS Demo

The Palm OS sample application requires the following:

- Software requirements: Palm Desktop 3.1 or higher and HotSync
- Hardware requirements: Palm OS 4.0 or higher device and a device cradle

4.6.2 Download the Mobile Client from the Mobile Server

To download the Mobile Client, do the following:

1. Open the Mobile Client Setup through the Mobile Server, as follows:
 - a. In a browser on the Windows machine that supports the Palm OS device, point to the remote Mobile Server host using the URL `http://<Mobile Server>/webtogo/`.
 - b. On the upper right corner, click **Setup**.
2. Click **Oracle Lite PALM**.
3. The Save As dialog box appears. The file name field displays the executable setup file for the selected platform. Save the executable to a local directory on your Windows machine.

4.6.3 Install the Palm OS Mobile Client

You install the Mobile Client on your Palm OS device by performing the following steps:

1. Navigate to the local directory on the Windows machine that supports the Palm OS device and double-click the Mobile Client `setup.exe`.

This copies the Mobile Client libraries into the Palm download folder.

2. Execute a HotSync and select the appropriate user. This installs the Palm libraries onto the Palm OS device.
3. On the Palm OS device, launch Mobile Sync application by double-clicking on `mSync`.
4. On the Mobile Sync dialog box, enter the following:
 - Username: JUNIUS
 - Password: JUNIUS
 - Check the Save Password checkbox
 - IP address of the Mobile Server

Click **Sync**.

5. Click the **OK** button when synchronization succeeds. The download of the Mobile Client is complete.

4.6.4 Execute the Palm OS Sample Application

The `FormOrders` sample application tracks orders. You first create an order and then add the items that are contained within the order. To execute the `FormOrders` application on your Palm, perform the following:

1. Navigate to the Oracle Lite folder on your Palm. Click the **FormOrders** icon to run the application.
2. Click **New**, which is the '+' sign, to create a new order.
3. Enter the following data for the new order:
 - Date: 1/1/04
 - Name: Oracle Corp.
 - Description: 10g

Click **Save**, which is the icon of the disk with the arrow pointing down.

4. Add items to the new Order by selecting the blank space under the Items column. Click **New**, the '+' sign, to add the first item.
5. Add in the item with the following data:
 - Date: 1/1/04
 - Items: Oracle Lite CD
 - Ordered: 250
 - Shipped: 250
 - Received: 250
 - Cost: 25000

Click **Exit**, which is the door icon.

6. The main Order screen updates with the first item.
7. Synchronize the data with Mobile Server by selecting **Form->Sync Data With Mobile Server**. Click **OK** when the sync succeeds.
8. Verify the updates on the Mobile Server by verifying the data in the Orders table [ORD_MASTER and ORD_DETAIL] in the MASTER on the back-end database.

Note: The data may not be immediately available depending on how often the MGP executes. The MGP is the process that performs the sync on the back-end database.

Oracle Database Lite Proxy Support

Normally, the Mobile client synchronizes data inside a firewall on the corporate intranet, where the Mobile Server also resides. However, what if the user wishes to synchronize the Mobile client either from outside the firewall from the internet into a Mobile Server that exists inside the firewall? Or what if the Mobile Server exists on the public internet and the Mobile client is inside the firewall on the corporate intranet? Either way, you have to modify your configuration to enable a Mobile client and Mobile Server to communicate through a firewall.

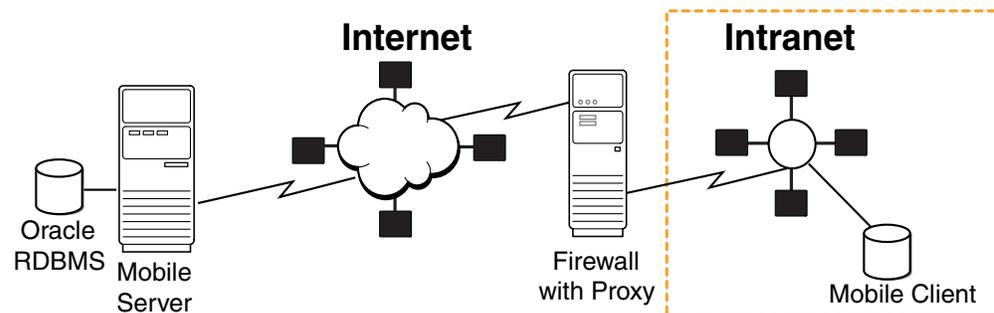
The following sections describe how to configure the Mobile Server and Mobile client to enable communication through a firewall:

- [Section 5.1, "Using HTTP Proxy to Communicate From Inside a Firewall"](#)
- [Section 5.2, "Using Reverse Proxy to Communicate from Internet to Intranet"](#)

5.1 Using HTTP Proxy to Communicate From Inside a Firewall

Use the HTTP proxy for clients inside a corporate network that want to connect to a resource on the Internet. As shown in [Figure 5-1](#), the corporate network is protected by a firewall, which blocks direct access from inside the corporate network to the outside world. However, you can configure a proxy server on the firewall to allow designated traffic travel through the firewall.

Figure 5-1 Client Accessing Mobile Server on Internet



For example, in order for communication to occur between Web browsers—where the browser is located in the corporate network behind the firewall—and Internet Web servers—where the web server is located on the public Internet—you must configure the proxy settings in the browser. In the same sense, if the Mobile client is located in the corporate intranet and the Mobile Server is located somewhere in the public Internet—where both are separated by a firewall—then the firewall must be configured to let HTTP traffic travel through by means of a proxy server.

To enable communication from the Mobile client to a Mobile Server outside the corporate firewall, do one of two things:

For all Mobile clients other than the Web-to-Go Mobile clients, perform the following when you synchronize using the `msync.exe` tool:

1. Check the Use Proxy checkbox.
2. Enter the hostname and port number of the proxy server.

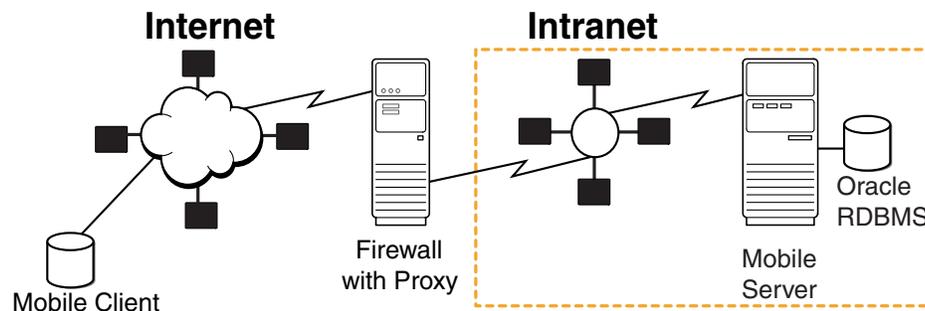
For all Web-to-Go Mobile clients, add the proxy server settings as follows in the `webtogo.ora` file:

```
[WEBTOGO]
PROXY_SERVER=hostname_proxy_server
PROXY_PORT=port_proxy_server
```

5.2 Using Reverse Proxy to Communicate from Internet to Intranet

If you are traveling to a customer site and you want to synchronize over the internet to the Mobile Server inside the corporate firewall, use a reverse proxy to communicate. A reverse proxy is used whenever a client outside a corporate network wants to connect to a resource available inside the corporate network, as shown in [Figure 5-2](#). The corporate network is protected by a firewall, which stops the outside world from having direct access with the systems inside the corporate network. However, the reverse proxy lets designated traffic that originates outside the corporate network to reach inside systems.

Figure 5-2 Mobile Client Communicating With Mobile Server Through Firewall Using Reverse Proxy



When you configure the reverse proxy, then the Mobile client communicates directly with the reverse proxy, which turns around and communicates with the Mobile Server. In order for this communication to occur seamlessly, do the following:

1. Configure the Mobile client to communicate with the reverse proxy in one of the two following methods:
 - Download Mobile client software directly from the reverse proxy. If you download the Mobile client `setup.exe` program from the reverse proxy from the internet, then the configuration is automatic to point to the reverse proxy when you perform the installation of the Mobile client.
 - Configure the `webtogo.ora` configuration file for your Mobile client. However, if you installed the Mobile client from within the corporate intranet, you must modify the `SERVER_URL` parameter in the `webtogo.ora` configuration file to point to the host/port of the reverse proxy server, as follows:

```
SERVER_URL=HTTP://<reverse_proxy_host>:<port>/webtogo
```

If you use the `msync.exe` to synchronize, then enter the hostname of the reverse proxy in the Server box.

Note: If you are planning on using the Mobile client both inside and outside of the corporate internet, you may want to have two `SERVER_URL` definitions—one for the internal corporate Mobile Server address and one for the reverse proxy address. Then, comment the one that you are not using and uncomment the one that you are using.

2. Post-installation steps for the client:

After you configure the client, if the client is a Windows client—such as Windows XP/2000 and Pocket PC devices—then Oracle Database Lite uses the WININET API for SSL over HTTP. The following are known issues when using SSL over HTTP:

- The HTTP connection may slow down if you have the `Auto Detect Proxy` enabled in the Internet Explorer. In addition, it may also slow down if you do not have a proxy server in your network. In this case, uncheck the `Automatically detect proxy` option in the Internet Explorer.
- For Windows 2000 clients, `mSync` may hang if you do not have all of the Microsoft patches applied.
- If your Mobile Server or Reverse Proxy does not have a valid SSL certificate, then the Oracle Database Lite clients may stop working. This is critical if there are errors in Certificate chaining.

3. When setting up the Apache Web Server software for the reverse proxy, use Apache 2.0 or later. In addition, set the following parameter in the `httpd.conf` configuration file:

```
BrowserMatch MSIE AuthDigestEnableQueryStringHack=On
```

4. Configure the Mobile Server to accept communication from the reverse proxy.

Configure the `reverse_proxy` parameter in the `webtogo.ora` configuration file on the Mobile Server, as follows:

```
[WEBTOGO]
REVERSE_PROXY=http://<reverse_proxy_hostname>: <port_number>/webtogo
```

5. If your server is a Windows XP machine, you must have the Service Pack 2 installed.
6. When you use reverse proxy authentication, you must upper-case the username of the proxy digest.

Index

A

accounts
 UNIX, 1-16
administrator
 default username, 4-2
application
 deployment
 example, 4-1
 install samples, 4-1
 upgrade, 3-3
Application Upgrade Assistant, 3-3

B

BC4J
 upgrade applications, 3-4
BIG-IP
 using as load balancer, 2-9
Branch Office
 enabling on Windows Service Pack 2, 2-10
 upgrade instructions, 3-5

C

client
 Palm OS download, 4-10
 proxy, 5-1
 using reverse proxy, 5-2
 Web download, 4-5
 Win32 download, 4-3
 WinCE download, 4-7
Consolidator
 upgrade, 3-7

D

datafile
 specifying location, 1-8
db_create_file_dest parameter, 1-8
deinstalling
 Oracle Lite 5.0.2, 3-7
deployment
 example, 4-1
DHCP
 install, 2-3
DISPLAY property, 1-14

DISPLAY variable, 2-10

E

environment variables
 UNIX, 1-13

F

firewall
 communication through proxy, 5-1

G

groups
 UNIX, 1-16

H

hardware requirements
 Mobile Clients, 1-8
 UNIX, 1-10
 Windows, 1-10
HTTP listener port
 configure, 2-5

I

INCREMENT_BY property, 3-8
install, 2-1
 custom, 2-10
 DHCP, 2-3
 instructions, 2-3
 log files, 2-6
 Mobile Client, 4-3
 Mobile Development Kit, 2-4
 Mobile Server, 2-4
 multiple servers, 2-9
 multiple languages, 2-3
 Oracle software requirements, 1-8
 repository, 2-5
 sample applications, 4-1
 system requirements, 1-1, 1-8, 1-9, 1-10
internet
 communication from inside intranet, 5-1
Internet Connection Firewall

enabling ports, 2-10

J

JAVA13_HOME, 1-14

Job Scheduler
starting, 4-1

K

kernel parameters
configuring, 1-16

L

language
multiple language install, 2-3
LD_LIBRARY_PATH, 1-14
LIBPATH, 1-14
load balancing, 2-9

M

migration
Oracle Database Lite, 3-1
MIN_VALUE property, 3-7
Mobile Client
download, 4-3, 4-5, 4-7, 4-10
hardware requirements, 1-8
install, 4-6, 4-8, 4-11
software requirements, 1-9
system requirements, 1-8
Mobile client
configuring reverse proxy, 5-2
proxy, 5-1
Mobile Development Kit
install, 2-4
Mobile Manager
GUI, 4-2
Mobile Server
configuring reverse proxy, 5-3
GUI, 4-2
install, 2-4
load balancing, 2-9
logging in, 4-1
multiple servers, 2-9
port number, 4-2
quick start, 4-1
starting, 2-10, 4-1
testing install, 2-11
Mobile Server Repository, see repository
mounting
UNIX, 1-20
msync.exe
communicating with proxy, 5-2

O

OC4J
port number, 2-5
starting, 4-1

OID
migrating to use, 3-5
migrating users, 3-5
operating system
UNIX requirements, 1-11
Oracle Database Lite
quick start, 4-1
starting, 4-1
upgrade, 3-2
Oracle Internet Directory, see OID
Oracle Lite 5.0.2
removal, 3-7
Oracle WebCache
using as load balancer, 2-9
ORACLE_HOME, 1-14
Oracle9iAS
port number, 2-5
OracleAS
port number, 2-5
OraUserProfile class
upgrade requirements, 3-4

P

Page Not Found error, 2-11
Palm OS
application example, 4-1
client download, 4-10
environment, 4-9
example, 4-9
hardware requirements, 4-10
install client, 4-11
sample application, 4-9
synchronizing data, 4-12
software requirements, 4-10
performance
synchronization, 1-24
Pocket PC
environment, 4-6
example, 4-6
sample application
creating data, 4-8
synchronizing data, 4-9
port number
conflict, 2-5
Mobile Server, 4-2
retrieving, 2-5
ports
enabling on Windows Service Pack 2, 2-10
proxy, 5-1
reverse, 5-1

Q

quick start, 4-1

R

repository
install, 2-5
migrating users to OID, 3-5

- schema name, 2-6
- upgrade, 3-2
- Repository Wizard
 - command-line startup, 4-1
 - install, 2-5
 - samples, 4-1
- reverse proxy, 5-1, 5-2
 - configuring Mobile client, 5-2
- reverse_proxy parameter, 5-3
- runmobileserver script, 2-10

S

- samples
 - install, 4-1
 - Palm OS, 4-9
 - Pocket PC, 4-6
 - Web application, 4-5
 - Win32 application, 4-2
 - WinCE application, 4-6
- SEQUENCE_MODE property, 3-8
- Sequences
 - upgrade, 3-7
- SERVER_URL parameter
 - reverse proxy, 5-2
- servlet context
 - Web-to-Go applications, 3-5
- shell limits
 - UNIX, 1-16
- SHLIB_PATH, 1-14
- SID
 - retrieving, 2-5
- software
 - distribution, 4-1
 - Mobile Client requirements, 1-9
 - UNIX requirements, 1-13
 - Windows requirements, 1-10
- synchronization
 - performance, 1-24
- synchronizing data
 - example, 4-1
 - sample application, 4-4, 4-9
- system requirements, 1-1, 1-8, 1-9, 1-10
 - hardware, 1-8, 1-10
 - Oracle software, 1-8
 - software, 1-9, 1-10

T

- THRESHOLD property, 3-8
- TMP, 1-15
- TMPDIR, 1-15
- troubleshooting
 - Page Not Found, 2-11

U

- UIX
 - setting DISPLAY, 2-10
- UNIX
 - creating accounts, 1-16

- creating groups, 1-16
- environment variables, 1-13
- hardware requirements, 1-10
- kernel parameters, 1-16
- mounting, 1-20
- operating system requirements, 1-11
- setting display, 2-10
- shell limits, 1-16
- software requirements, 1-13
- system configuration, 1-13
- system requirements, 1-10
- upgrade
 - applications, 3-3
 - BC4J applications, 3-4
 - Branch Office, 3-5
 - Consolidator, 3-7
 - Mobile Server Repository, 3-2
 - Oracle Database Lite, 3-1, 3-2
 - OraUserProfile class, 3-4
 - Web-to-Go applications, 3-4, 3-5
- users
 - migrating to OID, 3-5

W

- Web application
 - client download, 4-5
 - environment, 4-5
 - example, 4-1, 4-5
 - install client, 4-6
 - sample application
 - creating data, 4-6
 - synchronizing data, 4-6
- Web Cache, 2-11
- WebCache
 - pre-install consideration, 1-24
- Web-to-Go
 - performance, 1-24
 - proxy communication, 5-2
- Web-to-Go applications
 - servlet context, 3-5
 - upgrade, 3-4, 3-5
- webtogo.exe, 2-11
- webtogo.ora
 - configuring reverse proxy, 5-2, 5-3
- Win32
 - client download, 4-3
 - default client username, 4-3
 - environment, 4-2
 - example, 4-1
 - install client, 4-3
 - sample application, 4-2
 - creating data, 4-4
 - synchronizing data, 4-4
 - software requirements, 4-3
- WinCE
 - application example, 4-1
 - client download, 4-7
 - environment, 4-6
 - example, 4-6

- hardware requirements, 4-7
- install client, 4-8
- software requirements, 4-7
- WINDOW_SIZE property, 3-7
- Windows
 - hardware requirements, 1-10
 - Service Pack 2, 2-10
 - software requirements, 1-10
 - system requirements, 1-9
- Windows 32, see Win32
- Windows CE, see WinCE