

Oracle® Database Lite

Getting Started Guide

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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 to all users, including users that are disabled. 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/>.

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Related Documents

Since both the standalone Mobile Server and the Mobile Server over 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*
- *Oracle Fusion Middleware Administrator's Guide*
- *Oracle Fusion Middleware 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.
.	
.	

Convention	Meaning
...	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.

Oracle Database Lite Concepts

The following sections provide an introduction to Oracle Database Lite and its components:

- [Section 1.1, "Overview of Oracle Database Lite"](#)
- [Section 1.2, "Roadmap to Understanding and Using the Mobile Server"](#)

1.1 Overview of Oracle Database Lite

A common misconception of Oracle Database Lite is that it is a simplified, small-scale database designed to run on laptops, handhelds, cell phones, and so on. While you can use it in this manner, this is only one model for using the product. In addition, Oracle Database Lite provides a complete mobile infrastructure designed to run enterprise database applications within a world constantly on the go. Oracle Database Lite provides the infrastructure that makes the enterprise application and data store available even when communications to the enterprise itself are not available or reliable. Oracle Database Lite brings the applications that were once limited to the base office and deploys these applications out into the world where they are most needed.

The following sections describe how you can use Oracle Database Lite to streamline your operations in the field:

- [Section 1.1.1, "What is a Mobile Architecture?"](#)
- [Section 1.1.2, "What Are the Benefits of a Mobile Architecture?"](#)
- [Section 1.1.3, "Why Use Oracle Database Lite?"](#)

1.1.1 What is a Mobile Architecture?

The mobile architecture completes the enterprise system by merging the enterprise infrastructure with every remote aspect of the organization. Previously, the remote location was missing from the enterprise design. A mobile architecture contains the remote application, the remote data store, and the remote rules of the business. The Oracle Database Lite mobile infrastructure is responsible for connecting and synchronizing applications, associated data, and business rules with the applications, data store, and business rules of the enterprise.

There are several ways you can use and implement Oracle Database Lite. See Section 1.3, "Execution Models for Applications that Use the Oracle Lite Database" in the *Oracle Database Lite Client Guide* for more details.

1.1.2 What Are the Benefits of a Mobile Architecture?

A mobile architecture with the proper design, security components, and implementation saves money. Oracle Database Lite can remove some of the manual processes performed out in the field. In the past, you may have manually written down the information in the field and then manually entered the data in the enterprise database once you returned to the corporate environment. With Oracle Database Lite, you can capture the data once in the field by entering the data into a client device. Then, this data is synchronized up to the enterprise without returning to the office to manually enter data. This removes a loss of productivity due to manual processes and sends the data immediately to the enterprise where it belongs. In addition, data can flow bi-directionally. If you need information at the remote site that has been updated at the office, this data is brought down to the client device during synchronization.

You can use the mobile architecture in several types of application environments, as follows:

- **Mobile option**—An application is created, where the user enters data on a client device, known as the Mobile client. The Mobile client can use either the SQLite database client or the Oracle Lite database as the client database. The data on either Mobile client is synchronized with a back-end Oracle database. For example, if you have a sales force, each sales person retrieves only his/her data on the client device. Any modifications made on either the Mobile client by the sales person in regards to his/her accounts or modified on the server by the office can be synchronized.
- **Embedded option**—An application may need an independent small database to exist solely for the application's use. No synchronization of data with a back-end database is necessary. For example, if you have an individual accounting application, it may need a small embedded database to store the data for the individual accounting data. The embedded option is only supported by using the Oracle Database Lite client.

Alternatively, the software that supports hardware may need an embedded database to facilitate gathering information, which is then synchronized with a back-end database for the office to evaluate its state.

For example, a vending machine can use the Oracle Database Lite infrastructure to maintain inventory, control the dispatching of technicians and restock personnel, gather marketing statistics, and so on.

Another example is a system included in an automobile that tracks and communicates maintenance needs for the automobile. When maintenance needs are proactively found, the customer saves on repair costs, towing and expensive part replacement that may otherwise have occurred.

1.1.3 Why Use Oracle Database Lite?

Oracle Database Lite provides a complete mobile infrastructure suitable for almost any enterprise demands using the following:

- The Mobile repository resides in the back-end enterprise database, which links the enterprise data with the mobile data.
- The Mobile Server is a Web-based tier that integrates with OracleAS and the Oracle WebLogic Server. Support exists for previous versions that use Oracle Containers for J2EE (OC4J).

This accesses remote locations through different types of wireless or wired connectivity. It facilitates the major functions for the Mobile option, such as synchronization, application management, device management, and so on.

- The Mobile client uses a client database, which can be either a SQLite database or Oracle Lite database, and the means for deploying applications developed using the most popular languages. The Mobile client database stores the relational data in one or more data files on the file system on the client. While the SQLite database is already installed on many client devices, you can install the Oracle Lite database on most any device from a cell phone, to a personal digital assistant (PDA), Tablet PC, Laptop, and so on from the Mobile Manager.

1.2 Roadmap to Understanding and Using the Mobile Server

The Mobile Server is a compilation of two products: the Mobile Server and the Mobile client database.

- In an enterprise system, the Mobile Server facilitates the synchronization of data between multiple Mobile client databases and Oracle databases.
 - *SQLite client database:* If you are using the SQLite database as the Mobile client database, you must install this independently. If it is not already installed, refer to <http://www.sqlite.org/> for more information on installation, configuration and usage. After installing the SQLite database, install the SQLite Mobile client, which includes the Sync Engine for managing synchronization between the SQLite database and the back-end Oracle database. SQLite libraries are installed on Android and Blackberry; SQLite libraries are provided for Win32, WinCE, and Linux platforms. For details, see Chapter 2, "Installing the SQLite Mobile Client" in the *Oracle Database Lite SQLite Mobile Client Guide*.
 - *Oracle Lite database:* In a mobile environment, each Oracle Lite database must be installed from the Mobile Server to be enabled for synchronization. To properly install, develop and administer all components in the Mobile Server, first follow instructions in the Mobile Server books.

The instructions for installing the Oracle Lite database in a Mobile Server environment for synchronization support is in the *Oracle Database Lite Client Guide*.

- You can embed the Oracle Lite database within an application and use it independently of the Mobile Server. To understand the Oracle Lite database, see the *Oracle Database Lite Client Guide*.

The following sections provide a roadmap for where to find the information to design, develop and manage the Mobile Server:

- [Section 1.2.1, "Designing and Developing your Mobile Applications"](#)
- [Section 1.2.2, "Synchronizing Data from a Mobile Client to the Oracle Database"](#)
- [Section 1.2.3, "Configuring and Managing the Mobile Server Environment"](#)
- [Section 1.2.4, "Performance Techniques"](#)

1.2.1 Designing and Developing your Mobile Applications

When you design a Mobile application that provides synchronization of data from several users on multiple devices to one or more Oracle databases, you must carefully consider a balance between application functionality and minimizing the data being

synchronized before you start to develop your application. Synchronization from multiple users and devices can cause performance issues. Thus, the design has an impact on how performant is the data synchronization.

To streamline your development, we have provided several sections guiding you through design decisions before developing a Mobile application. For full details, see Chapter 1, "Overview for Designing Mobile Applications" in the *Oracle Database Lite Developer's Guide*.

1.2.2 Synchronizing Data from a Mobile Client to the Oracle Database

The following sections describe each Mobile client database type from which you can use to synchronize data to the back-end Oracle database:

- [Section 1.2.2.1, "Using the SQLite Database"](#)
- [Section 1.2.2.2, "Using the Oracle Lite Database"](#)

1.2.2.1 Using the SQLite Database

The SQLite database is a small, compact, and self-contained database available on multiple platforms and available to the public. It has a small footprint and is easy to install and administer. In addition, many devices already have the SQLite database installed, including Android and Blackberry devices.

If you want to use a SQLite database on any device and synchronize the data entered in the SQLite database to a back-end Oracle database, install the SQLite Mobile client, which includes the Sync Engine that supports synchronization. For Win32, WinCE and Linux platforms, both automatic and manual synchronization is supported. On Android and Blackberry devices, only manual synchronization is supported. For more details, see Chapter 2, "Installing the SQLite Mobile Client" in the *Oracle Database Lite SQLite Mobile Client Guide*.

1.2.2.2 Using the Oracle Lite Database

The Oracle Lite database is a small database specifically designed for a client device, it has a small footprint and is easy to administer. The Mobile Server uses the Oracle Lite database to gather and synchronize data from multiple mobile devices from several users.

The Oracle Lite database is its own product and is described completely in the *Oracle Database Lite Client Guide*. It can be used with the Mobile Server for synchronizing data to a back-end Oracle database or an Oracle RAC database. In this case, always consult the Mobile Server books first before consulting the Client guide, as the Oracle Lite database used within the Mobile Server environment has slight modifications in how you install, configure, and develop to enable the Oracle Lite database for synchronization.

1.2.3 Configuring and Managing the Mobile Server Environment

The Mobile Manager is a GUI tool that enables you to configure and manage the Mobile Server. Some of the functions you can perform through the Mobile Manager are as follows:

- Create users.
- Manage permissions.
- Execute statistics.
- Determine performance of your SQL queries.

- Resolve errors, including conflict errors.

Configuration and management of the Mobile Server are described in the *Oracle Database Lite Administration and Deployment Guide*.

1.2.4 Performance Techniques

Mobile devices do not have the processing power and memory that standard enterprise systems maintain. If the mobile applications and infrastructure are not tuned appropriately they really are of little benefit to the organization.

The most important performance concepts for a mobile infrastructure are as follows:

- The time it takes to enter and retrieve data.
- The time it takes to synchronize data with the enterprise data store.

See *Oracle Database Lite Troubleshooting and Tuning Guide* for techniques to enhance your performance for Oracle Database Lite.

Third Party Licensing in Oracle Database Lite

This chapter includes third-party license information for all third-party products included with Oracle Database Lite. Oracle acknowledges that that following Third Party and Open Source software are used in the provided programs covered by this documentation.

- [Section 2.1, "SQLite Database"](#)
- [Section 2.2, "Sun Microsystems JRE 1.4.2 and JRE 5.0"](#)
- [Section 2.3, "Third Party Licensing for ZLib and JZLib"](#)

2.1 SQLite Database

Any SQLite Database services that are provided with Oracle Database Lite are provided as a convenience to you and are provided "AS IS" with no express or implied conditions, endorsements, guarantees, representations, or warranties of any kind by Oracle and Oracle assumes no liability whatsoever, in relation thereto.

2.2 Sun Microsystems JRE 1.4.2 and JRE 5.0

This product includes code provided by Sun Microsystems.



2.3 Third Party Licensing for ZLib and JZLib

Oracle gratefully acknowledges the contributions of Jean-loup Gailly and Mark Adler, the authors of zlib.

This product includes JZlib.

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Requirements Before Installation or Development

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 3.1, "Include the Latest Patches"
- Section 3.2, "Release Notes"
- Section 3.3, "Supported Components and Technologies"
- Section 3.4, "Installation Requirements for the Oracle Database and Oracle Application Server in Working With Oracle Database Lite"
- Section 3.5, "System Requirements for Mobile Server on Windows"
- Section 3.6, "System Requirements For UNIX Systems"
- Section 3.7, "Recommended System Configuration For UNIX"
- Section 3.8, "System Requirements for Mobile Clients"
- Section 3.9, "System Requirements for Symbian Devices"
- Section 3.10, "Mounting the Installation CD-ROM For UNIX Systems"
- Section 3.11, "Setting Up Location of the Datafile on the Server"
- Section 3.12, "Defining Synchronization Tablespace"

3.1 Include the Latest Patches

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

<http://metalink.oracle.com>

3.2 Release Notes

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

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

3.3 Supported Components and Technologies

The following sections detail the supported components and technologies:

- [Section 3.3.1, "Oracle Universal Installer"](#)
- [Section 3.3.2, "Certified Oracle RDBMS to Use With Oracle Database Lite"](#)
- [Section 3.3.3, "JDK Platform Support"](#)
- [Section 3.3.4, "Certified Application Server Configurations"](#)
- [Section 3.3.5, "Certified Versions for OID Support"](#)
- [Section 3.3.6, "Certified Platforms and Technologies for the Mobile Server"](#)
- [Section 3.3.7, "Certified Browsers"](#)

3.3.1 Oracle Universal Installer

The version of the Oracle Universal Installer used is 2.3.0.10.0.

3.3.2 Certified Oracle RDBMS to Use With Oracle Database Lite

Use one of the following database versions with Oracle Database Lite: Oracle 9.2, Oracle 10g Release 1 (10.1.0), Oracle 10g Release 2 (10.2.0), or Oracle 11g.

3.3.3 JDK Platform Support

For all Mobile clients, use JRE 5.0. For the Mobile Server and Mobile Development Kit, the version required depends on what version of OracleAS 10g you are using.

Table 3–1 *JDK Version Supported*

OracleAS 10g Version Used	JDK Version Supported
Oracle Database Lite Standalone using OC4J Standalone	JDK 5.0
OracleAS 10g version 10.1.2.0.2	Use either JDK 1.4.2 or 5.0
OracleAS 10g version 10.1.3.5.0	JDK 5.0
Oracle WebLogic Suite 11g	JDK 1.6
Oracle WebLogic Server 11g Release 1	JDK 6.0

Install the Sun Microsystems JDK before installing the Mobile Server or Mobile Development Kit. If you need to use JDK 5.0 or 6.0 and you already have JDK 1.4.2 installed, then upgrade to version 5.0 as follows:

1. Uninstall the existing JDK version 1.4.2. If you do not remove this version first, then Mobile Server will continue to use version 1.4.2.
2. Install the appropriate JDK version 5.0 or 6.0. After installation, verify that the JDK bin directory is in the system path.

The `JAVA_HOME` environment variable must be set to the directory where the Java Development Kit has been installed. However, the Linux platform requires the `JAVA15_HOME` environment variable. For more information on `JAVA15_HOME`, see [Section 3.7.1.2, "JAVA15_HOME, JAVA_HOME and PATH"](#) for setting the JAVA environment variables on Linux.

3.3.4 Certified Application Server Configurations

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

- Standalone Oracle Database Lite, which uses an embedded, standalone OC4J (version 10.1.3) container
- Oracle Application Server 10g (10.1.2.0.2 or 10.1.3.5.0 Web Server), as long as Oracle Database Lite is installed in the same *ORACLE_HOME*
- Oracle WebLogic Server 11g Release 1, as long as Oracle Database Lite is installed in the same *WL_HOME*

3.3.5 Certified Versions for OID Support

If you want to use OID with your OracleAS on top of the Mobile Server, then the following shows the support for OID:

- When using OracleAS 10.1.2.0.2, then integration is supported with OID 10.1.2.0.2.
- When using OracleAS 10.1.3.0.x, then integration is NOT supported for OID.
- When using OracleAS 10.1.3.5.0, then integration is supported with OID 10.1.4.

3.3.6 Certified Platforms and Technologies for the Mobile Server

You can install the Mobile Server on the following platforms:

- Microsoft Windows Vista Ultimate
- Microsoft Windows XP Professional Edition with Service Pack 2 and 3
- Microsoft Windows 2003 (32 bit)
- Redhat Enterprise Linux Advanced Server 3.0 certified on x86
- Redhat Enterprise Linux Advanced Server 4.0 or 5.0, certified on x86 and AMD64
- Oracle Enterprise Linux 4.0, or 5.0, certified on x86 and AMD64
- SUSE 9, certified on x86 and AMD64
- SUSE 10
- Sun SPARC Solaris 8.0, 9.0, or 10.0
- HP-UX 11.0 (64-bit)
- HP-UX 11i PA-RISC Version 11.11, 11.23 and 11.31
- AIX 5L with either Version 5.2 and Maintenance Level 4 or Version 5.3
- AIX 6.1

The following are the versions of the supported technologies used with the Mobile Server of Oracle Database Lite. For certified technologies for the Mobile client platforms, see [Section 3.8, "System Requirements for Mobile Clients"](#).

Table 3–2 Supported Technologies for the Mobile Server

Technology	Standalone	OracleAS 10g (10.1.2)	OracleAS 10g (10.1.3)	Oracle WebLogic Server 11g Release 1
Java Version (JDK and JRE)	5.0	1.4.2 or 5.0	5.0	6.0
OC4J	10.1.3.4	10.1.2	10.1.3	N/A
Servlet	2.4	2.3	2.4	2.4
UIX	2.2.24	2.2.15	2.2.15	2.2.24
XML Parser	10.1.3.0.0	10.1.2.0.0	10.1.3.0.0	10.1.3.0.0
Oracle JSP	10.1.3.0.0	10.1.2.0.0	10.1.3.0.0	10.1.3.0.0
Oracle JDBC Driver	10.1.0.5.0	10.1.0.5.0	10.1.0.5.0	10.1.0.5.0

3.3.7 Certified Browsers

Internet Explorer 6.0 and Mozilla 1.7.x are certified as browsers for Oracle Database Lite.

3.4 Installation Requirements for the Oracle Database and Oracle Application Server in Working With Oracle Database Lite

The following sections describe installation requirements for the Oracle Database and Oracle Application Server:

- [Section 3.4.1, "Installation Requirements for the Oracle Database for Working With a Mobile Client"](#)
- [Section 3.4.2, "Installation Requirements for Using the Oracle Application Server With Oracle Database Lite"](#)

3.4.1 Installation Requirements for the Oracle Database for Working With a Mobile Client

When you synchronize the Mobile client, your changes are updated in an Oracle back-end database. Thus, you must have either the Standard or Enterprise Edition Oracle database to use the synchronization ability of Oracle Database Lite.

3.4.2 Installation Requirements for Using the Oracle Application Server With Oracle Database Lite

Oracle Database Lite uses a middle-tier to communicate between the Mobile clients and the back-end Oracle database. 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 or Oracle WebLogic Server 11g, which are not installed with Oracle Database Lite—These are recommended for production environments. If you choose to use the Oracle Application Server 10g (OracleAS) or the Oracle WebLogic Server 11g as your middle-tier, then you must install it before installing Oracle Database Lite.

When you are installing the Oracle Application Server (OracleAS) or Oracle WebLogic Server in preparation for using Oracle Database Lite, you must perform certain tasks, as described in the following sections:

- [Section 3.4.2.1, "Installing OracleAS Version 10.1.2"](#)
- [Section 3.4.2.2, "Installing OracleAS Version 10.1.3"](#)
- [Section 3.4.2.3, "Installing Oracle WebLogic Server 11g Release 1"](#)

Note: For more information about how Oracle Database Lite works with the middle-tier and the back-end database, see Chapter 1, "Overview" in the *Oracle Database Lite Developer's Guide*.

3.4.2.1 Installing OracleAS Version 10.1.2

When installing OracleAS, choose the Integrated Web and J2EE Server installation option.

Perform the following when installing the OracleAS version 10.1.2:

1. On the `Select a product to install` screen, select **Oracle Application Server**.
2. On the `What type of install do you want?` screen, select the **J2EE and Web Cache** option from the following options:
 - J2EE and Web Cache
 - Portal and Wireless
 - Business Intelligence and Forms

3.4.2.2 Installing OracleAS Version 10.1.3

When installing OracleAS, choose the Integrated Web and J2EE Server installation option.

In the OracleAS version 10.1.3 install, choose the Advanced Installation Mode. In the second screen, you will see the following options:

1. J2EE Server and Process Management
2. Web Server and Process Management
3. Integrated Web Server, J2EE Server and Process Management
4. Oracle Toplink

Select ONLY option 3, the Integrated Web Server, J2EE Server and Process Management. This option provides all of the functionality that you need. Do not select any of the other options, as then your OracleAS installation will be missing functionality that is necessary for Oracle Database Lite.

3.4.2.3 Installing Oracle WebLogic Server 11g Release 1

Install the Oracle WebLogic Server 11g Release 1 (10.3.2). Before installing Oracle Database Lite, set `ORACLE_HOME` to `WL_HOME`.

3.5 System Requirements for Mobile Server on Windows

Before you install the Mobile Server, 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:

- [Section 3.5.1, "Hardware Requirements For Windows"](#)
- [Section 3.5.2, "Software Requirements For Windows"](#)
- [Section 3.5.3, "Defining Password for OracleDatabaseLite User for Branch Office on Windows Machine"](#)

3.5.1 Hardware Requirements For Windows

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

Table 3–3 Hardware Requirements for Windows

Component	Hardware Requirements for this Component
Mobile Server Standalone	CPU: Pentium 4, 3 MHz Disk Space: 1 GB RAM: 1 GB Swap Space: 1535 MB
Mobile Server using OracleAS	See the OracleAS documentation for the OC4J container requirements. Swap Space: 1535 MB
Mobile Server using Oracle WebLogic Server	See the "Oracle Fusion Middleware System Requirements and Specifications 11g Release 1" document in the Oracle Fusion Middleware documentation.
Mobile Development Kit	CPU: Pentium 4, 3 MHz Disk Space: 512 MB RAM: 512 MB Swap Space: 1535 MB

Note: The requirements for Mobile Server is related to the number of users synchronizing and the amount of data transferred.

3.5.2 Software Requirements For Windows

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

Table 3–4 Software Requirements for Windows

Component	Operating System	Other Software Requirements
Mobile Server	Windows Vista Ultimate, Windows XP, or Windows 2003	For the appropriate JDK version, see Section 3.3.3, "JDK Platform Support" .
Mobile Development Kit	Windows Vista Ultimate, Windows XP, or Windows 2003	For the appropriate JDK version, see Section 3.3.3, "JDK Platform Support" .

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

3.5.3 Defining Password for OracleDatabaseLite User for Branch Office on Windows Machine

When you install the Branch Office Manager on the Windows machine, it creates the OracleDatabaseLite user account with the minimum set of privileges required to execute the Oracle Database Lite software. This prevents Oracle Database Lite Branch Office executing under the SYSTEM account, which has broad privileges within the system and can make the system vulnerable.

Both the 'Oracle Lite Multiuser Service' is created as well as the normal Web-to-Go service executes under the privileges of the OracleDatabaseLite user. The Oracle Lite Multiuser Server enables remote clients to connect to the Oracle Lite database.

Normally, when installed, the password for the OracleDatabaseLite user is randomly generated during the setup. You can either pre-configure this password before the Branch Office installation or modify it after the configuration using one of the following methods:

- [Section 3.5.3.1, "Pre-Configuring OracleDatabaseLite User Password Before Branch Office Installation"](#)
- [Section 3.5.3.2, "Modifying Existing OracleDatabaseLite User Password After Branch Office Installation"](#)

3.5.3.1 Pre-Configuring OracleDatabaseLite User Password Before Branch Office Installation

To pre-configure the OracleDatabaseLite user password, modify the password attribute in the BOS.INF file located in the <ORACLE_HOME>\mobile_oc4j\j2ee\mobileserver\applications\mobileserver\setup\dmc directory on the Mobile Server, which is as follows:

```
<user name='OracleDatabaseLite' password='aaaa'>
  <file>$OS_DIR$\odbc.ini</file>
  <file>$OS_DIR$\polite.ini</file>
  <registry>MACHINE\SOFTWARE\ODBC\ODBCINST.INI</registry>
</user>
```

3.5.3.2 Modifying Existing OracleDatabaseLite User Password After Branch Office Installation

To modify the password of an existing Branch Office installation, perform the following on the Branch Office Windows machine:

1. Modify the password with the Computer Management MMC console, which you can bring up with Control Panel->Administrative Tools-> Computer Management.
2. Set the new password in the Oracle Lite service using the Windows Service control panel.

3.6 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:

- [Section 3.6.1, "System Requirements For Linux"](#)
- [Section 3.6.2, "System Requirements For Sun SPARC-Based Systems"](#)
- [Section 3.6.3, "System Requirements For AIX-Based Systems"](#)
- [Section 3.6.4, "System Requirements For HP-Based Systems"](#)
- [Section 3.6.5, "Software Requirements For All UNIX Systems"](#)

3.6.1 System Requirements For Linux

[Table 3–5](#) lists the minimum hardware requirements for OracleAS Linux-based systems.

Table 3–5 Minimum Hardware Requirements for UNIX Systems

Item	Requirement
Linux	3 GHz, 1 GB RAM
Disk space for Linux	1 GB
display	256 color display
Memory	512 MB
TMP or swap space	1 GB

For the operating system, you can use the following Linux operating systems:

- Redhat Enterprise Linux Advanced Server 3.0 certified on x86
- Redhat Enterprise Linux Advanced Server 4.0 or 5.0, certified on x86 and AMD64
- Oracle Enterprise Linux 4.0, or 5.0, certified on x86 and AMD64

Use the following requirements when installing Oracle Database Lite on the Redhat Enterprise Linux AS operating system:

Table 3–6 Operating System Requirements for Redhat Enterprise Linux AS

Item	Requirement
Operating System	For the Mobile Server, you can use Redhat Enterprise Linux Advanced Server version 3, 4 or 5. For using the MDK, you must use version 4. 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

Note: There are no additional requirements for Redhat Linux 4.0, 5.0 or Suse 9.

For the latest information on operating system requirements, refer to [OracleMetaLink](#) at the following Web site:

<http://metalink.oracle.com>

3.6.2 System Requirements For Sun SPARC-Based Systems

Table 3–7 lists the minimum hardware requirements for OracleAS Sun SPARC-based systems.

Table 3–7 Minimum Hardware Requirements for UNIX Systems

Item	Requirement
Sun SPARC	Sun SPARC Ultra 1 or higher, 300 MHz or better
Disk space for Sun SPARC	1 GB
Memory	512 MB
TMP or swap space	1 GB
display	256 color display

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

Table 3–8 Operating System Requirements for Sun SPARC-Based Systems

Item	Requirement
Operating System	Sun Solaris 8.0, 9.0, or 10.0
Window Manager	Use any supported Sun Solaris window manager that supports Motif.

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

<http://metalink.oracle.com>

3.6.3 System Requirements For AIX-Based Systems

Table 3–9 lists the minimum hardware requirements for OracleAS AIX-based systems.

Table 3–9 Minimum Hardware Requirements for UNIX Systems

Item	Requirement
AIX	All AIX-compatible processors (64-bit)
Disk space for AIX	1 GB
Memory	512 MB
TMP or swap space	1 GB
display	256 color display

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

Table 3–10 Operating System Requirements for AIX-Based Systems

Item	Requirement
Operating System	One of the following AIX versions: <ul style="list-style-type: none"> ■ AIX 5L with either version 5.2 including Maintenance Level 4 or version 5.3. ■ AIX 6.1

Table 3–10 (Cont.) Operating System Requirements for AIX-Based Systems

Item	Requirement
Window Manager	Use any supported IBM AIX window manager that supports Motif, such as <code>dtwm</code> , <code>twm</code> , and <code>olwm</code> .

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

<http://metalink.oracle.com>

3.6.4 System Requirements For HP-Based Systems

Table 3–11 lists the minimum hardware requirements for OracleAS HP-based systems.

Table 3–11 Minimum Hardware Requirements for UNIX Systems

Item	Requirement
HP	HP 9000 Series HP-UX processor for HP-UX 11.0 (64-bit)
Disk space for HP	1 GB
Memory	512 MB
TMP or swap space	1 GB
display	256 color display

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

Table 3–12 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;getdirententries;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 <code>dtwm</code> , <code>twm</code> , and <code>mwm</code> .

Table 3–13 Operating System Requirements for HP-Based Systems

Item	Requirement
Operating System	HP-UX 11i PA-RISC Version 11.11, 11.23 and 11.31
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 <code>dtwm</code> , <code>twm</code> , and <code>mwm</code> .

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

<http://metalink.oracle.com>

3.6.5 Software Requirements For All UNIX Systems

For all UNIX systems, you must have the JDK installed. See [Section 3.3.3, "JDK Platform Support"](#) for the versions supported.

3.7 Recommended System Configuration For UNIX

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

- [Section 3.7.1, "Setting UNIX Environment Variables"](#)
- [Section 3.7.2, "Pre-Install Requirements Before Installing the MDK on LINUX"](#)
- [Section 3.7.3, "Creating UNIX Accounts and Groups"](#)
- [Section 3.7.4, "Configuring Kernel Parameters and Shell Limits for UNIX"](#)

3.7.1 Setting UNIX Environment Variables

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

- [Section 3.7.1.1, "ORACLE_HOME"](#)
- [Section 3.7.1.2, "JAVA15_HOME, JAVA_HOME and PATH"](#)
- [Section 3.7.1.3, "DISPLAY"](#)
- [Section 3.7.1.4, "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 3–14](#) for the name of the library path environment variable for your platform.

[Table 3–14](#) lists the names of the library path environment variables for each platform.

Table 3–14 Library Path Environment Variable

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

3.7.1.1 ORACLE_HOME

The Oracle Home directory is the `root` directory in which Oracle software is installed. The `CLASSPATH` contains the entire path you enter for `ORACLE_HOME`; thus, the length of `ORACLE_HOME` effects the length of the `CLASSPATH`. 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.

3.7.1.2 JAVA15_HOME, JAVA_HOME and PATH

The Linux platform requires the `JAVA15_HOME` environment variable 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. For the appropriate JDK version, see [Section 3.3.3, "JDK Platform Support"](#).

Before installation of a Linux Mobile Server and the Linux MDK, set `JAVA15_HOME` to the JDK 1.5 home directory. When executing a Linux Mobile Server in standalone mode, set `JAVA15_HOME` to the JDK 1.5 or JDK 1.6 home directory.

[Table 3–15](#) provides examples for the location where the JDK could be installed on the system.

Table 3–15 *JAVA_HOME Environment Variables*

Platform	Sample <code>JAVA_HOME</code> Environment Variable
HP	<code>/opt/java1.5</code>
AIX	<code>/usr/java151</code>

Initialize the `JAVA_HOME` and `PATH` environment variables, as follows:

```
export JAVA_HOME=$JAVA15_HOME
export PATH=$JAVA_HOME/bin:$ORACLE_HOME/bin:$PATH
```

3.7.1.3 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 [Section 4.4.2, "Setup DISPLAY Variable for UNIX Systems in Oracle Application Server"](#).

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".

3.7.1.3.1 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 Host Machine Where the Installer is Running	In the Session on Your Host
C Shell	<code>prompt> setenv DISPLAY <hostname>:0.0</code>	<code>prompt> xhost +<hostname></code>
Bourne/Korn Shell	<code>prompt> DISPLAY=<hostname>:0.0;export DISPLAY</code>	<code>prompt> xhost +<hostname></code>

3.7.1.4 TMP and TMPDIR

During installation, Oracle Universal Installer uses a temporary directory for swap space. This directory must meet the requirements listed in [Section 3.6, "System 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
<code>prompt> setenv TMP <i>full_path</i></code>	<code>prompt> TMP=<i>full_path</i>;export TMP</code>
<code>prompt> setenv TMPDIR <i>full_path</i></code>	<code>prompt> TMPDIR=<i>full_path</i>;export TMPDIR</code>

3.7.2 Pre-Install Requirements Before Installing the MDK on LINUX

Of all of the UNIX platforms, the MDK is only supported on the Linux platform. But before installing the MDK on your Linux system, modify the following environment variables:

Table 3–16 Linux Environment Variable

Linux Environment Variable	Description
JDKDIR	Point to the JDK installation directory
OLITE_HOME	\$ORACLE_HOME/mobile/sdk
LD_LIBRARY_PATH	/usr/lib:\$JDKDIR/jre/lib/i386:\$JDKDIR/jre/lib/i386/server:\$OLITE_HOME/lib:\$LD_LIBRARY_PATH
CLASSPATH	.:\$ORACLE_HOME/mobile/sdk/bin/olite40.jar
PATH	\$JDKDIR/bin:\$OLITE_HOME/bin:\$PATH

3.7.3 Creating UNIX Accounts and Groups

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

- [Section 3.7.3.1, "UNIX Group Name For the Oracle Universal Installer Inventory"](#)
- [Section 3.7.3.2, "UNIX Account to Own Oracle Software"](#)

3.7.3.1 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 and `dba` as its secondary group.

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

3.7.3.2 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 3–17](#).

Table 3–17 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.

3.7.4 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 3.7.4.1, "Configuring Shell Limits and System Configuration Parameters on AIX"](#)
- [Section 3.7.4.2, "Configuring Kernel Parameters on HP-UX"](#)
- [Section 3.7.4.3, "Configuring the Kernel Parameters on Linux"](#)
- [Section 3.7.4.4, "Set Shell Limits for the User oracle"](#)

3.7.4.1 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.

3.7.4.1.1 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 3–18 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.

3.7.4.1.2 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
```

3.7.4.2 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 3–19 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`.

3.7.4.3 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 3–20 Kernel Parameters on Linux

Parameter	Value	File
file-max	131072	<code>/proc/sys/fs/file-max</code>

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
```

2. 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
```

3.7.4.4 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 3–21 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
```

```
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
```

3.8 System Requirements for Mobile Clients

The system requirements for either Mobile client, the SQLite database or the Oracle Lite database, are covered in each of the client guides. For the Oracle Lite Mobile client, see Chapter 1, "System Requirements for the Oracle Lite Database" in the *Oracle Database Lite Client Guide*. For the SQLite Mobile Client, see Chapter 1, "Installing the SQLite Mobile Client" in the *Oracle Database Lite SQLite Mobile Client Guide*.

3.9 System Requirements for Symbian Devices

If you are preparing to use Symbian devices in your Oracle Database Lite solution, then see Chapter 14, "Using Symbian Devices" in the *Oracle Database Lite Developer's Guide* for full details on requirements, installation, administration and development for the Symbian platform.

3.10 Mounting the Installation CD-ROM For UNIX Systems

Refer to these mounting procedures during installation as necessary:

- [Section 3.10.1, "Mounting CD-ROMs For AIX"](#)
- [Section 3.10.2, "Mounting CD-ROMs For HP"](#)
- [Section 3.10.3, "Mounting CD-ROMs For Linux"](#)

3.10.1 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
```

- Exit the root account:

```
# exit
```

[Example 3-1](#) 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 3-1 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.

3.10.2 Mounting CD-ROMs For HP

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

- Place the Oracle Database Lite CD-ROM Disk in the CD-ROM drive.
- 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
```

- 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/rdisk/c4t2d0
```

- 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
```

- Log in as the `root` user with the following command:

```
$ su root
```

- 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
```

3.10.3 Mounting CD-ROMs For Linux

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

- [Section 3.10.3.1, "Mounting CD-ROMs For Linux With Auto Mounting Software"](#)
- [Section 3.10.3.2, "Mounting CD-ROMs For Linux Manually"](#)

3.10.3.1 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 3.10.3.2](#).

3.10.3.2 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 3-2](#) shows how to mount the CD-ROM manually for Linux.

Example 3-2 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.

3.11 Setting Up Location of the Datafile on the Server

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 data files in the `db_create_file_dest` parameter. 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.

3.12 Defining Synchronization Tablespace

By default, the synchronization tablespace is `SYNCSERVER`, and is stored in the `mobilexx.dbf` file in the default location for the database under `ORACLE_HOME`, where `xx` is a number between 1 and 25. The tablespace name, filename, and file location for the tablespace is defined in the `$ORACLE_HOME/Mobile/Server/admin/consolidator_o8a.sql` script file, which is executed during the Mobile Server installation process. So, if you want to modify the tablespace, there are a few tasks you need to perform BEFORE you install the Mobile Server.

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.

For full details on how to alter the synchronization tablespace, see Section 1.2.6, "Synchronization Tablespace Layout" in the *Oracle Database Lite Troubleshooting and Tuning Guide* for more information.

Installation of Oracle Database Lite

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

- [Section 4.1, "Oracle Database Lite Installation Considerations"](#)
- [Section 4.2, "Starting Oracle Universal Installer"](#)
- [Section 4.3, "Installing Oracle Database Lite"](#)
- [Section 4.4, "Post-Installation Configuration Requirements"](#)
- [Section 4.5, "Starting Mobile Server"](#)
- [Section 4.6, "Testing Your Mobile Server Installation"](#)
- [Section 4.7, "Removing Demo Applications"](#)
- [Section 4.8, "How to Uninstall Oracle Database Lite"](#)

4.1 Oracle Database Lite Installation Considerations

Note the following issues before you start your installation:

- [Section 4.1.1, "Installing Multiple Languages on a Single Solaris Machine"](#)
- [Section 4.1.2, "National Language Support for Chinese, Japanese, and Korean \(CJK\)"](#)
- [Section 4.1.3, "Mobile Server on a DHCP Server is Not Supported"](#)

4.1.1 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.

4.1.2 National Language Support for Chinese, Japanese, and Korean (CJK)

The Mobile Server and Mobile Development kit have full National Language Support for Simplified Chinese, Japanese, and Korean (CJK). Only the client database component in the MDK supports the Traditional Chinese language.

4.1.3 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.

4.2 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 4–1](#) lists the prerequisite checks that are performed.

Table 4–1 Oracle Universal Installer Automatic Prerequisite Checks

Prerequisite Checks	See Also
Check for enough disk space for Oracle Home installation	Section 3.7, "Recommended System Configuration For UNIX"
On UNIX systems, checks for TMP and TMPDIR variable and sufficient swap space	Section 3.7, "Recommended System Configuration For UNIX"

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

- [Section 4.2.1, "Starting the Oracle Universal Installer on Windows"](#)
- [Section 4.2.2, "Starting Oracle Universal Installer on UNIX"](#)

4.2.1 Starting the Oracle Universal Installer on Windows

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

4.2.2 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 3.10, "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.

4.2.2.1 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 4-1](#) 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.

4.2.2.2 Location of Files on UNIX

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

Table 4-2 File Locations for Each Platform

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

4.3 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 4.3.1, "GUI Install of the Mobile Server and MDK Components"](#)
- [Section 4.3.2, "Silent Install of Mobile Server and MDK Components"](#)
- [Section 4.3.3, "Providing High Availability with a Farm of Multiple Mobile Servers"](#)
- [Section 4.3.4, "Install Oracle Database Lite on Linux"](#)
- [Section 4.3.5, "Install Oracle Database Lite on Symbian Devices"](#)
- [Section 4.3.6, "Mobile Client Install"](#)
- [Section 4.3.7, "Custom Install"](#)

Note: For instructions on how to install Branch Office, see Chapter 9, "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 6, "Quick Start for Oracle Database Lite"](#).

4.3.1 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:

Note: If you install multiple standalone Mobile Servers on a single machine or if you install Web-to-Go client for OC4J with the standalone Mobile Server on a single machine, change the RMI and JMS ports in the `rmi.xml` and the `jms.xml` files located in the `<ORACLE_HOME>\mobile_oc4j\j2ee\mobileserver\config` directory. The port numbers must not be used by another other process.

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 of the Oracle Database Lite `products.xml` file.
 - In the Destination field, enter the name and path of Oracle Home. The Oracle Home name and path **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 (standalone mode) or existing (OracleAS mode) 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 OracleAS installed.**
- **If you use 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 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 4.3.1.1, "Installation of Mobile Development Kit"](#)
- [Section 4.3.1.2, "Installation of Mobile Server"](#)

4.3.1.1 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.

4.3.1.2 Installation of Mobile Server

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

Note: When you install the Mobile Server on the OracleAS as the middle-tier, some default values are chosen for you. If you install the Mobile Server without OracleAS, this is referred to as standalone Mobile Server and you will be prompted for additional information. Any screen that mentions standalone Mobile Server only appears when installing in an environment that does not include OracleAS.

1. Choose Mobile Server and click **Next**.
2. Select **Yes** or **No** if you want to use SSL for a standalone Mobile Server. Click **Next**.
3. Enter the TCP/IP listener port for OC4J for a standalone Mobile Server. The default values are as follows:
 - Windows platform: Port 80 for an HTTP connection; port 443 for an HTTPS connection.
 - UNIX platform: Port 8888 for an HTTP connection; port 4443 for an HTTPS connection.

If you are using OracleAS, the ports defined in OracleAS are used. Click **Next**.

Note: If, after installation, you have port conflicts and need to change the port number for OC4J standalone, edit the appropriate XML file to modify the alternate port number.

- For HTTP, edit the `default-web-site.xml` file.
- For HTTPS, edit the `secure-web-site.xml` file.

These are located in the `ORACLE_HOME\mobile_oc4j\j2ee\mobileserver\config\` directory.

Modify the port number as follows:

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

4. 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**.
5. Click **Yes** or **No** indicating if you want the demo applications installed on the server. Click **Next**.
6. On the Summary page, click **Install** to start the installation of Mobile Server, which is installed in your Oracle Home.

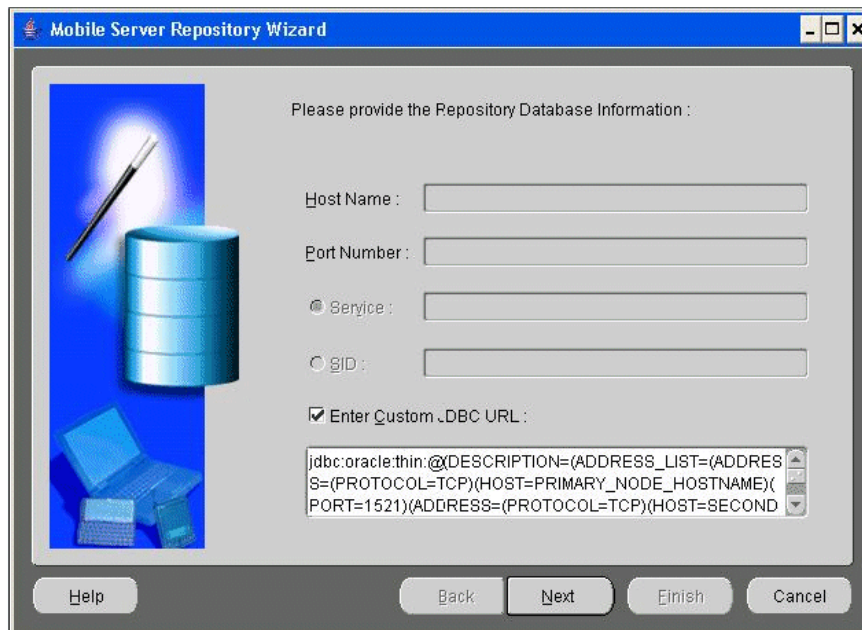
Note: If you previously clicked **Yes** to installing the Mobile Server Repository, then the Repository Wizard is now launched to create and populate the repository with the Mobile Server schema.

7. Provide the URL for the back-end Oracle database for the Mobile Server Repository, as follows:
 - If you are connecting to a single Oracle database, provide the hostname, port and SID or service name.
 - If you are connecting to an Oracle RAC database, select the **Enter Custom JDBC URL** checkbox and enter the JDBC URL for this database. This is shown in [Figure 4-1](#).

An Oracle RAC database URL takes the following format:

```
jdbc:oracle:thin:@(DESCRIPTION=
  (ADDRESS_LIST=
    (ADDRESS=(PROTOCOL=TCP)(HOST=PRIMARY_NODE_HOSTNAME)(PORT=1521))
    (ADDRESS=(PROTOCOL=TCP)(HOST=SECONDARY_NODE_HOSTNAME)(PORT=1521))
  )
  (CONNECT_DATA=(SERVICE_NAME=DATABASE_SERVICENAME)))
```

Figure 4-1 Enter JDBC URL for Back-End Database in Repository Wizard



The Mobile Server installs its meta-data in the back-end database. If you are not sure of the values to enter for the URL, then 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**.

8. 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. When the Mobile Server accesses the Mobile repository, it uses the repository username/password. This defaults to the user MOBILEADMIN and the password is set during install.

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, ANALYZE ANY,
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
SYNONYM, DROP ANY TRIGGER, DROP ANY INDEX, DROP ANY TABLE,
INSERT ANY TABLE, SELECT ANY TABLE, SELECT ANY DICTIONARY,
SELECT_CATALOG_ROLE, UPDATE ANY TABLE
```

Note: You can set the Mobile Server privileges independently through an API. See Section 2.17, "Set DBA or Operational Privileges for the Mobile Server" in the *Oracle Database Lite Developer's Guide*.

Click **Next**.

9. If this is a new Repository, the following message is displayed:

No existing Repository found. A new Repository will be installed.

Click **Next**.

10. Enter the username 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**.

Note: If you choose to install the samples, then the following Mobile Server user accounts will be created: S11U1, JOHN, JANE, JACK, and JUNE. These user accounts have default passwords; thus, after the installation completes, you should immediately modify the passwords through Mobile Manager.

You should install the samples only on a development system; you should NEVER install the samples on a production Mobile Server. Doing so creates a security risk on your production environment. The default user accounts that are created as part of the samples may cause a security risk, as they could provide unauthorized access to your production system.

11. Enter the Mobile Server administrator username and password that you will use to log into the Mobile Manager.

12. Enter the client schema username and password for the schema where the demo applications are installed. When the user accesses the user data in the Mobile Server repository, the Mobile Server authenticates the schema username and password before access is provided to the user data.
13. A summary screen appears informing you if a repository is installed or not. Click **Next**.
14. The installation screen appears. Wait until the install is completed. Click **Next**.
15. Once the repository wizard is finished, click **Finish** to leave the wizard.
16. Click **Exit** to complete the installation.
17. 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.
18. When you configure multiple Mobile Servers against a single repository, this is known as a farm. You must enable the Device Manager, Mobile Manager and Mobile client to work properly in a farm environment. For information on configuring all Mobile Servers to act properly in a farm, see Section 1.2.1.2, "Manage Mobile Server Farms" in the *Oracle Database Lite Administration and Deployment Guide*.
19. If you are installing on top of any version of the application server, then restart the application server.

4.3.2 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 Windows or UNIX platforms:

- [Section 4.3.2.1, "Silent Install for Mobile Server or Mobile Development Kit on Windows"](#)
- [Section 4.3.2.2, "Silent Install Mobile Server or the Mobile Development Kit on UNIX"](#)

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

The `setup.exe` command can be executed to run the installer in silent mode for Windows, as follows:

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

There are two response files that contain variables that define how the Mobile Server or the MDK are installed. The following sections describe the response files:

- [Section 4.3.2.1.1, "Response File for Mobile Server Install"](#)
- [Section 4.3.2.1.2, "Response File for MDK Install"](#)

4.3.2.1.1 Response File for Mobile Server Install 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
```

- Define the name for your Oracle Home, as follows:

```
ORACLE_HOME_NAME="OLITE"
```

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

```
s_repo_jdbc_url=("jdbc:oracle:thin:@<host>:<port>:<sid>")
```

- 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 demo schema user name and password, as follows:

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

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

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

- If the Mobile Server is standalone—that is, not installed on top of OracleAS— then set the following variables:

```
b_ssl=false
b_repository=true
b_olite_samples=true
s_rmi_ssl_port="23943"
s_rmi_port="23791"
s_jms_port="9127"
s_mobile_port="80"
s_mobile_port_nssl="80"
s_mobile_port_ssl="443"
```

For an SSL-enabled Mobile Server:

```
b_ssl=true
b_repository=true
b_olite_samples=true
s_rmi_ssl_port="23943"
s_rmi_port="23791"
s_jms_port="9127"
s_mobile_port="443"
s_mobile_port_nssl="80"
```

```
s_mobile_port_ssl="443"
```

4.3.2.1.2 Response File for MDK Install Variables in the `oracle.lite.install_type_1.rsp` response file to install MDK, are as follows:

```
ORACLE_HOME="c:\olite"
ORACLE_HOME_NAME="OLITE"
```

4.3.2.2 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 OracleAS installed.

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

4.3.2.2.1 Response File for Mobile Server Install 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\10g"
```

- 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:

```
s_repo_jdbc_url=("jdbc:oracle:thin:@<host>:<port>:<sid>")
```

- 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"
```

- If the Mobile Server is standalone—that is, not installed on top of OracleAS— then set the following variables:

```
b_ssl=false
b_repository=true
b_olite_samples=true
s_rmi_ssl_port="23943"
s_rmi_port="23791"
s_jms_port="9127"
s_mobile_port="80"
s_mobile_port_nssl="80"
s_mobile_port_ssl="443"
```

For an SSL-enabled Mobile Server:

```
b_ssl=true
b_repository=true
b_olite_samples=true
s_rmi_ssl_port="23943"
s_rmi_port="23791"
s_jms_port="9127"
s_mobile_port="443"
s_mobile_port_nssl="80"
s_mobile_port_ssl="443"
```

4.3.2.2 Response File for MDK Install 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"
```

4.3.2.3 Execute Silent Install of Mobile Server and MDK on UNIX After modifying the response files, if you want to install both the Mobile Server and the MDK, then 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 4–3 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.

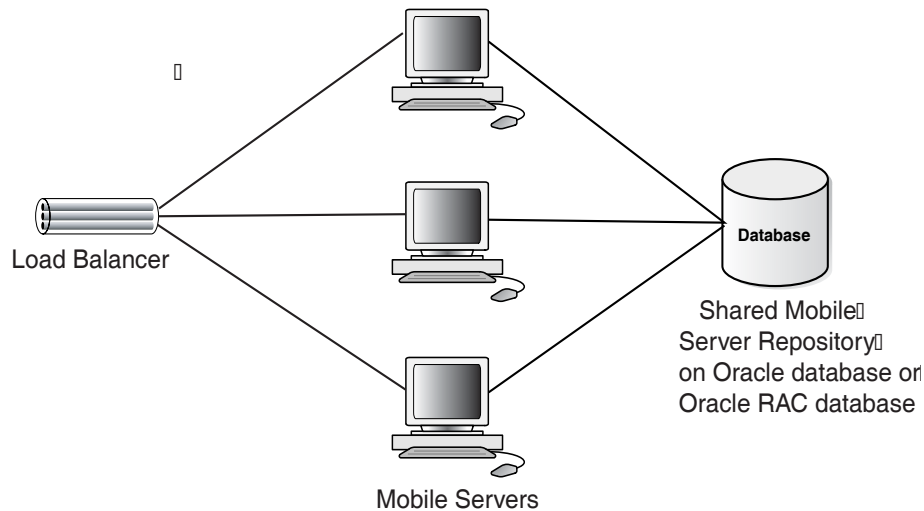
Table 4–3 (Cont.) The runInstaller Command Options

Command Option	Description
nowelcome	Stops the GUI from displaying.

4.3.3 Providing High Availability with a Farm of Multiple Mobile Servers

In some cases, you may want to have multiple Mobile Servers using the same Mobile Server repository on an Oracle database or an Oracle RAC database. For example, as [Figure 4–2](#) shows, if you wanted to load balance your Mobile clients across multiple Mobile Servers, you could add a load balancer—such as 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.

This is the type of configuration that entails an Oracle Database Lite Farm.

Figure 4–2 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 load balancer. Oracle Database Lite only certifies the Oracle Application Server Web Cache as a load balancer. You can use any load balancer as long as the JSESSIONID is used.
2. Install the first Mobile Server and the Mobile Server Repository following the instructions in [Section 4.3.1.2, "Installation of Mobile Server"](#).

Note: Each Mobile Server in the Farm must use the Oracle Application Server.

3. Install additional Mobile Servers. For each subsequent Mobile Server, follow the instructions in [Section 4.3.1.2, "Installation of Mobile Server"](#), supplying the same JDBC URL for the back-end Oracle database where the Mobile Server Repository exists. This URL can be either a regular JDBC URL or an Oracle RAC URL. Select **Yes** for creating the repository, which registers the shared Mobile Server with the repository.

4. Configure Mobile Servers with the load balancer URL. Because the Mobile client accesses any of these Mobile Servers through a load balancer, you need to configure each Mobile Server with the load balancer URL. This ensures that when the `setup.exe` is downloaded by the client, that the client is automatically configured with the load balancer URL, instead of the Mobile Server URL.

This process is similar to how the Mobile Server is configured to use with a reverse proxy. Configure both the `reverse_proxy` and `DM_AUTO_SYNC_CACHE` parameters in the `webtogo.ora` configuration file, as follows:

```
[WEBTOGO]
REVERSE_PROXY=http://<load_balancer_hostname>:<port_number>/webtogo
DM_AUTO_SYNC_CACHE=YES
```

5. Configure the load balancer to honor the `JSESSIONID` cookie. When a user logs into a Mobile Server, an HTTP session is created for that user. An HTTP cookie with the name `JSESSIONID` is sent back to the Mobile client. Subsequent HTTP requests from the Mobile client will contain the HTTP cookie, which allows the Mobile Server to identify the session for that user.

In a configuration with multiple Mobile Servers and a load balancer, you must ensure that the load balancer is configured to route HTTP requests within the same HTTP session to the same Mobile Server. To do this, configure the load balancer to honor the `JSESSIONID` cookie.

If the load balancer uses a different algorithm to distribute HTTP requests, such as round-robin or server-load based, then the Mobile Server will not work correctly.

6. Perform additional configuration for device management and data synchronization for all Mobile Servers in the farm as described in Section 1.2.1.2, "Manage Mobile Server Farms" in the *Oracle Database Lite Administration and Deployment Guide*.

4.3.4 Install Oracle Database Lite on Linux

Oracle Database Lite 10g includes a Mobile Development Kit for Linux.

The following sections provide considerations when installing Oracle Database Lite on a Linux platform:

- [Section 4.3.4.1, "Patch Required if Using Linux Redhat 3.0"](#)
- [Section 4.3.4.2, "Providing Enough Swap Space on the Linux Platform"](#)

4.3.4.1 Patch Required if Using Linux Redhat 3.0

If you install Oracle Database Lite 10g on Linux Redhat 3.0 and the following error occurs, apply the 3006854 patch and start the installation again.

```
Error occurred during initialization of VM Unable to load native library:
/tmp/myhost/jre/lib/i386/libjava.so: symbol __libc_wait, version
GLIBC_2.0 not defined in file libc.so.6 with link time reference.
```

4.3.4.2 Providing Enough Swap Space on the Linux Platform

If the swap space is not sufficient on your Linux machine, then modify the value for the `SWAP_SPACE` variable in the `install/linux/oraparam.ini` file. The default value is set to `SWAP_SPACE=1536`. For example, if your machine is not as powerful, decrease the swap space; for example, `SWAP_SPACE=1024`.

4.3.5 Install Oracle Database Lite on Symbian Devices

The following sections describe the installation directions for Symbian devices:

- [Section 4.3.5.1, "Prerequisites for Installation"](#)
- [Section 4.3.5.2, "Oracle Database Lite 10g Components"](#)
- [Section 4.3.5.3, "Installing Oracle Database Lite on Symbian Devices"](#)

4.3.5.1 Prerequisites for Installation

Before installing Oracle Database Lite, perform the following:

- You must install the SDK for the target device on the development machine. For example, if you are using a Motorola device, go to www.motorola.com and download the M1000 SDK on the development machine.
- It is recommended, but not mandatory, that for development, you install the target device development suite of either the "PC Suite" or "Desktop Suite".
- In order to use command-line prompts on your device, you need to install `eshell.exe` on the device. In addition, we recommend that you purchase a hardware keyboard to connect to your phone to type in the `eshell.exe` window.

We assume that you have a basic Symbian OS development knowledge to develop your application.

4.3.5.2 Oracle Database Lite 10g Components

The following are the components that you will see when you install the Oracle Database Lite 10g for Symbian devices:

- `OLAES.DLL` : AES Encryption Module
- `OLOBJ40.DLL` : Core Database Module
- `OLSQ40.DLL` : SQL Parser Module
- `OLOD2040.DLL` : ODBC 2.0 Driver
- `ZLIB.DLL` : zlib Compression Module
- `OCAPI.DLL` : Synchronization Module
- `POLITE.INI` : System-wide Common Configuration File
- `ODBC.INI` : Data-source Name Management File
- `OLITE40.MSB` : Message File (English)
- `CREATEDB.EXE` : Utility to create a new database
- `REMOVEDB.EXE` : Utility to remove an existing database
- `ENCRYPDB.EXE` : Utility to encrypt a database
- `DECRYPDB.EXE` : Utility to decrypt an encrypted database
- `ODBINFO.EXE` : Utility to display/modify database setting

4.3.5.3 Installing Oracle Database Lite on Symbian Devices

To install Oracle Database Lite on Symbian devices, perform the following:

1. On the development machine, unzip `olite_epoc.zip` in the `EPOCROOT` directory. For example, the `EPOCROOT` directory could be `C:\Symbian\8.0a\S60_2nd_FP2_J`.

When you complete the installation, the following files are unzipped:

- Header files are placed in the `epoc32\include\olite` directory.
- ARMI (urel) `.lib` files are placed in the `epoc32\release\armi\urel` directory.
- THUMB (urel) `.lib` files are placed in the `epoc32\release\thumb\urel` directory.
- WINS (udeb) binaries and `.lib` files are copied into the `epoc32\release\wins\udeb` directory.
- Initial configuration files are copied into the `epoc32\wins\c\System\Data` directory.
- Samples are copied into the `OliteEx` directory.

2. On the target device, perform the following:

- a. For most devices, copy the `olite_core.sis` file to the device using PC Suite, Desktop Suite, or an external memory card. If you are using the Sony Ericsson P910 device, then you must copy the `olite_core_uiq2x.sis` file to the device.
- b. Install the `olite_core.sis` file (or the `olite_core_uiq2x.sis` file, if using the Sony Ericsson P910 device), which causes the following:

The following files are copied into the target drive, which by default is the `!:\System\Libs\` directory: `OLAES.DLL`, `OLOBJ40.DLL`, `OLSQL40.DLL`, `OLOD2040.DLL`, `ZLIB.DLL`, and `OCAPI.DLL`.

Note: You may choose a different target directory during installation.

If the configuration files do not already exist on the device, then the following files are copied into the `C:\System\Data\` directory: `polite.ini`, `odbc.ini`, and `olite40.msb`.

3. To optionally install the Oracle Database Lite 10g Utility Tools, perform the following:

Note: These utility tools are command line based programs; thus, you need to install and use the `eshell.exe` program to execute them.

- a. For most devices, copy the `olite_tools.sis` file to the target device using PC Suite, Desktop Suite, or a memory card. If you are using a Sony Ericsson P910, then copy the `olite_tools_uiq2x.sis` file.
- b. Install either the `olite_tools.sis` file or if using the Sony Ericsson P910 device, the `olite_tools_uiq2x.sis` file. This copies the following files into the target directory (which by default is the `!:\System\Programs\` directory): `CREATEDB.EXE`, `REMOVEDB.EXE`, `ENCRYPDB.EXE`, `DECrypDB.EXE`, and `ODBINfO.EXE`.

Note: You may choose a different target directory during installation.

4.3.6 Mobile Client Install

The Mobile client can use either the SQLite database or the Oracle Lite database.

- If you have the SQLite database installed on your mobile device, install the SQLite Mobile client, which downloads the Sync Engine. For instructions on how to install the SQLite Mobile client, see Chapter 2, "Installing the SQLite Mobile Client" in the *Oracle Database Lite SQLite Mobile Client Guide*.
- For instructions on how to install the Oracle Lite database on your mobile device, see Chapter 3, "Installing the Oracle Lite Database" in the *Oracle Database Lite Client Guide* for instructions on how to download the Mobile client onto the device.

4.3.7 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.

4.4 Post-Installation Configuration Requirements

The following describes any post-installation requirements:

- [Section 4.4.1, "Username and Password for WebLogic Server Domain"](#)
- [Section 4.4.2, "Setup DISPLAY Variable for UNIX Systems in Oracle Application Server"](#)
- [Section 4.4.3, "Enabling Branch Office on Windows XP Service Pack 2"](#)

4.4.1 Username and Password for WebLogic Server Domain

When installing the Mobile Server on the WebLogic Server 10g, a new domain is created in the WebLogic Server called `mobileserver`. You can log into the WebLogic Server console for administration tasks, such as changing the port number or checking traces.

The new WebLogic Server domain is the `mobileserver` domain. The default administrator username is `weblogic`. The password is set to the Mobile Repository schema password appended with `weblogic123`. You should modify this password after your first login.

4.4.2 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>
```

4.4.3 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 1160 within the ICF. To enable port 1160, go to the Windows Firewall control on your Windows machine. Select the Exception tab. Click **Add Port**. Add port 1160 with any name.

4.5 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.

If you want to stop the standalone Mobile Server, you need to stop the OC4J standalone process by executing `admin.jar`. If you use the `-shutdown` option, then it waits for the process to end normally. To end immediately, use the `-shutdown force` option. Both options are as follows:

```
java -jar admin.jar ormi://<mobile_server_host>:<port> oc4jadmin
<mobileadmin_password> -shutdown
```

To end immediately, use the following `-shutdown force` option:

```
java -jar admin.jar ormi://<mobile_server_host>:<port> oc4jadmin
<mobileadmin_password> -shutdown force
```

Where:

- * The `<mobile_server_host>` is the host where the standalone Mobile Server resides.
- * The `<port>` is the port number on the Mobile Server
- * The `<mobileadmin_password>` is the password you use when you sign in as the mobile administrator for Mobile Server.

Refer to the OC4J documentation for full details.

OR

- Start OracleAS through the Windows Services panel. Alternatively, you can start the application server from the 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.

4.6 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 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 6, "Quick Start for Oracle Database Lite"](#).

4.7 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 [-install | -uninstall] <sys_user> <sys_pwd> <mobile_user> <mobile_pwd>
```

where the options are as follows:

Option	Description
-install or -uninstall	-install: install the demos -uninstall: 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.

Option	Description
<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.

4.8 How to Uninstall Oracle Database Lite

After you remove the Oracle Database Lite components through the Oracle Universal Installer, also perform the following tasks:

1. Delete the following directories:
 - `ORACLE_HOME\Mobile`
 - If you are using Oracle Database Lite Standalone, then delete the `ORACLE_HOME\Mobile_oc4j` directory; if you are using OracleAS, then delete the `ORACLE_HOME\j2ee\home\applications\mobileserver` directory.
2. Drop `TABLESPACE SYNCSERVER INCLUDING CONTENTS`
3. Delete the `Mobile01.dbf` database file from the operating system.

Upgrade Oracle Database Lite

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

- [Section 5.1, "Upgrade Your Oracle Database Lite from 5.0.2.x to 10g Release 3"](#)
- [Section 5.2, "Upgrade Your Oracle Database Lite from 10g Release 1 or 2 to 10g Release 3"](#)
- [Section 5.3, "Upgrade the Oracle Lite Mobile Client"](#)

5.1 Upgrade Your Oracle Database Lite from 5.0.2.x to 10g Release 3

The following sections describe the steps for upgrading your Oracle Database Lite software from 5.0.2.x to 10g Release 3:

- [Section 5.1.1, "What 5.0.2.x Versions Can I Upgrade to 10g Release 3?"](#)
- [Section 5.1.2, "Pre-Upgrade Instructions for the 5.0.2.x Version"](#)
- [Section 5.1.3, "Upgrade Your 5.0.2.x Version Mobile Server Repository"](#)
- [Section 5.1.4, "Upgrade Your 5.0.2.x Version Existing Applications"](#)
- [Section 5.1.5, "Upgrading BC4J Oracle Lite Mobile Client 5.0.2.x to Version 10g Release 2"](#)
- [Section 5.1.6, "Upgrading 5.0.2.x Version Branch Office"](#)
- [Section 5.1.7, "Use the Appropriate Context for Your Mobile Server"](#)
- [Section 5.1.8, "Migrate Your 5.0.2.x Version Users From the Mobile Server Repository to the Oracle Internet Directory"](#)
- [Section 5.1.9, "Post-Upgrade Instructions for 5.0.2.x Version"](#)
- [Section 5.1.10, "Remove the 5.0.2.x Installation"](#)
- [Section 5.1.11, "New Consolidator Sequence Properties Added During Upgrade"](#)
- [Section 5.1.12, "Upgrade Oracle Database Lite Release 2 to Release 3"](#)

5.1.1 What 5.0.2.x Versions Can I Upgrade to 10g Release 3?

Upgrading Oracle Database Lite from 5.0.2.x to 10g Release 3 can be performed on an installation in the same or a separate *ORACLE_HOME*. [Table 5-1](#) details what version of Oracle Database Lite and *iAS* installation can be upgraded to Oracle Database Lite 10g Release 3.

Table 5–1 Upgrading 5.0.2.x Oracle Database Lite to 10.3.0.3

From Installation <Version>	To Oracle Database Lite 10.3.0.3 Base	Same Oracle Home	Different Oracle Home
5.0.2.x Standalone	Standalone	Not Supported	Supported
	Oracle <i>iAS</i> 10.1.2.0.2	Not Supported	Not Supported
	Oracle <i>iAS</i> 10.1.3.5.0	Not Supported	Not Supported
	Oracle WebLogic Server 11g R1	Not Supported	Not Supported
5.0.2.x and OAS 1.0.2.2	Standalone	Not Supported	Not Supported
	Oracle <i>iAS</i> 10.1.2.0.2	Not Supported	Supported
	Oracle <i>iAS</i> 10.1.3.5.0	Not Supported	Supported
	Oracle WebLogic Server 11g R1	Not Supported	Supported
5.0.2.x and Apache 1.3.27	Any	Not Supported	Not Supported
5.0.2.x and Oracle <i>iAS</i> 9.0.2.1	Any	Not Supported	Not Supported

Note: Applications use Oracle *iAS* 1.0.2.2 to enable SSL with 5.0.2; therefore, Apache or Oracle *iAS* 9.0.2 based configurations are not supported.

5.1.2 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 Oracle9*iAS* (version 9.0.4), then remove references to the `wtgias.conf` and `wtgapach.conf` files from the Oracle9*iAS* `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 4, "Installation of Oracle Database Lite"](#) for instructions on how to install Oracle Database Lite. When the Repository Wizard is executed, see

[Section 5.1.3, "Upgrade Your 5.0.2.x Version Mobile Server Repository"](#) for directions on how to upgrade the repository on the back-end database.

5.1.3 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 5.1.2, "Pre-Upgrade Instructions for the 5.0.2.x Version"](#).

5.1.4 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
- 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.

Note: Only the Mobile Development Kit has the full National Language Support for (Traditional and Simplified) Chinese, Japanese, and Korean (CJK). All other components, including Mobile clients, support CJK without the Traditional Chinese language. However, the Simplified Chinese language is supported.

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, and the old Oracle Home. The new Oracle Home destination is taken from the environment variables. 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
```

5.1.4.1 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.

5.1.5 Upgrading BC4J Oracle Lite 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 Oracle Lite 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 2, 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` file and restart Mobile Server:


```
CLIENT_502_UPGRADE_TYPE = BC4J
```
4. Login into the Oracle Lite BC4J Mobile client using the Oracle Lite 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 Oracle Lite 5.0.2.x BC4J Mobile client username and password.
8. After all the Oracle Lite 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.

5.1.6 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.

5.1.7 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`.

5.1.8 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 Oracle Application Server.

When you migrate users from a Mobile Server repository into OID, you cannot have duplicate users in OID. So, if you migrate users from two repositories into a single OID, and you have users with the same name, but different passwords on two separate repositories, the user that is first migrated into OID is the one that is valid. The second attempt to migrate an existing username into OID from a different repository will not migrate and no message is provided. This can be a problem if you have two users in different repositories with different passwords.

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 Oracle*9i*AS, 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 with either randomly-generated passwords or a common password, as follows:

Note: The existing password will not be migrated. Instead, either choose to have the new password randomly generated or to use a common password, such as `admin`.

- 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 ldap://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.

Note: If logging in to Mobile Manager results in a page that contains one workspace inside another workspace, then refresh the browser.

5.1.9 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.

5.1.10 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.

5.1.11 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.

For full details on sequences, see Section 5.6, "Create a Sequence" in the *Oracle Database Lite Developer's Guide*.

5.1.12 Upgrade Oracle Database Lite Release 2 to Release 3

Once you have completed the upgrade to Oracle Database Lite Release 2, then upgrade this version to Release 3, as described in [Section 5.2, "Upgrade Your Oracle Database Lite from 10g Release 1 or 2 to 10g Release 3"](#).

5.2 Upgrade Your Oracle Database Lite from 10g Release 1 or 2 to 10g Release 3

If you have Oracle Database Lite 10g Release 1 or 2, you must upgrade to the latest version. The following sections describe the steps for upgrading your software:

- [Section 5.2.1, "To What Versions Can I Upgrade Oracle Database Lite?"](#)
- [Section 5.2.2, "Pre-Upgrade Instructions"](#)
- [Section 5.2.3, "Upgrade Your Mobile Server Repository"](#)
- [Section 5.2.4, "Upgrade Your Existing Applications"](#)
- [Section 5.2.5, "Installing Sample Applications"](#)
- [Section 5.2.6, "Upgrade Branch Office 10g Release 1 or 2 to version 10g Release 3"](#)
- [Section 5.2.7, "Migrate Your Users From the Mobile Server Repository to the Oracle Internet Directory \(OID\)"](#)
- [Section 5.2.8, "Remove the 10g Release 1 or 2 Installation"](#)
- [Section 5.2.9, "Remove Duplicate Mobile Server IDs from the Repository"](#)

5.2.1 To What Versions Can I Upgrade Oracle Database Lite?

Upgrading Oracle Database Lite from 10g Release 1 or 2 to 10g Release 3 is supported in the same or a separate `ORACLE_HOME` from the previous installation. Before you upgrade your Mobile Server from Oracle Database Lite 10g Release 2 to Release 3, be sure to apply all patches first. See the Release Notes for the required patch numbers.

The following sections describe how to perform the upgrade:

- [Section 5.2.1.1, "Upgrading in the Same ORACLE_HOME"](#)
- [Section 5.2.1.2, "Upgrading in a Separate ORACLE_HOME"](#)
- [Section 5.2.1.3, "Supported Oracle Database Lite Versions for Upgrade"](#)

5.2.1.1 Upgrading in the Same ORACLE_HOME

The Oracle Universal Installer detects the earlier version and uninstalls this version. All deployed application files and existing configuration files remain to be used by the new installation. When prompted, you can re-execute the Repository Wizard, which detects that the repository exists and runs the repository upgrade instead of the install.

5.2.1.2 Upgrading in a Separate ORACLE_HOME

These steps are the standard steps to follow when upgrading a Mobile Server in a separate `ORACLE_HOME` directory.

1. Install the desired version of Oracle Application Server into the new `ORACLE_HOME`. This step is optional.
2. Install Mobile Server in the new `ORACLE_HOME`.
3. Execute the Repository Wizard to upgrade the repository.
4. Execute the application upgrade assistant.
5. Uninstall the previous Mobile Server version from the old `ORACLE_HOME`.

5.2.1.3 Supported Oracle Database Lite Versions for Upgrade

Table 5–2 details what versions of Oracle Database Lite and OracleAS installation can be upgraded to Oracle Database Lite 10.3.0.3

Table 5–2 Upgrading Oracle Database Lite 10.1.x to Oracle Database Lite 10.3.0.3

From <Version>	To Oracle Database Lite 10.3.0.3 Base	Same Oracle Home	Different Oracle Home
10g R1 Standalone	Standalone	Supported	Supported
	Oracle iAS 10.1.2.0.2	Not Supported	Supported
	Oracle iAS 10.1.3.5.0	Not Supported	Supported
	Oracle WebLogic Server 11g Rel 1	Not Supported	Supported
10g R1 with Oracle iAS 9.0.2	Any	Not Supported	Not Supported
10g R1 with Oracle iAS 9.0.3	Any	Not Supported	Not Supported
10g R1 with Oracle iAS 9.0.4	Any	Not Supported	Not Supported
10g R1 with Oracle iAS 10.1.2 with patch 5723922	Standalone	Not Supported	Supported
	Oracle iAS 10.1.2.0.2	Supported	Supported
	Oracle iAS 10.1.3.5.0	Not Supported	Supported
	Oracle WebLogic Server 11g Rel 1	Not Supported	Supported

For Oracle Database Lite 10.0, support was removed for installations with Oracle iAS 9.0.2, 9.0.3 and 9.0.4. In addition, the OC4J version in the standalone installation is Oracle iAS version 9.0.4. You can apply the patch that enables support for Oracle iAS 10.1.2 and upgrades the version of standalone OC4J to Oracle iAS 10.1.2. The patch is 5723922: Needs migration path from Oracle iAS and OC4J 9.0.4.x to Oracle iAS 10.1.2.

In Oracle Database Lite 10.0, the path used was `mobile/j2ee/home`. However, in Oracle Database Lite 10.3, this was modified to use the `mobile/j2ee/mobileserver` path. This may cause problems with certain Oracle iAS upgrades.

Table 5–3 Upgrading Oracle Database Lite 10.2.x to Oracle Database Lite 10.3.0.3

From <Version>	To Oracle Database Lite 10.3.0.3 Base	Same Oracle Home	Different Oracle Home
10g R2 Standalone	Standalone	Supported	Supported
	Oracle iAS 10.1.2.0.2	Not Supported	Supported
	Oracle iAS 10.1.3.5.0	Not Supported	Supported
	Oracle WebLogic Server 11g Rel 1	Not Supported	Supported
10g R2 with Oracle iAS 9.0.4	Standalone	Not Supported	Not Supported
	Oracle iAS 10.1.2.0.2	Not Supported	Not Supported
	Oracle iAS 10.1.3.1.0	Not Supported	Not Supported

Table 5–3 (Cont.) Upgrading Oracle Database Lite 10.2.x to Oracle Database Lite 10.3.0.3

From <Version>	To Oracle Database Lite 10.3.0.3 Base	Same Oracle Home	Different Oracle Home
	Oracle <i>iAS</i> 10.1.3.5.0	Not Supported	Not Supported
	Oracle WebLogic Server 11g Rel 1	Not Supported	Not Supported
10g R2 with Oracle <i>iAS</i> 10.1.2 with patch 5723922	Standalone	Not Supported	Supported
	Oracle <i>iAS</i> 10.1.2.0.2	Supported	Supported
	Oracle <i>iAS</i> 10.1.3.5.0	Not Supported	Supported
	Oracle WebLogic Server 11g Rel 1	Not Supported	Supported

For Oracle Database Lite 10.2, support was removed for installations with Oracle *iAS* 9.0.4. In addition, the OC4J version in the standalone installation is Oracle *iAS* version 9.0.4. You can apply the patch that enables support for Oracle *iAS* 10.1.2 and upgrades the version of standalone OC4J to Oracle *iAS* 10.1.2. The patch is 5723922: Needs migration path from Oracle *iAS* and OC4J 9.0.4.x to Oracle *iAS* 10.1.2.

Table 5–4 Upgrading Oracle Database Lite 10g Release 3 to Oracle Database Lite 10.3.0.3

From <Version>	To Oracle Database Lite 10.3.0.3 Base	Same Oracle Home	Different Oracle Home
10.3.0.1 Standalone	Standalone	Supported	Supported
	Oracle <i>iAS</i> 10.1.2.0.2	Not Supported	Supported
	Oracle <i>iAS</i> 10.1.3.5.0	Not Supported	Supported
	Oracle WebLogic Server 11g Rel 1	Not Supported	Supported
10.3.0.1 with Oracle <i>iAS</i> 10.1.2	Standalone	Not Supported	Supported
	Oracle <i>iAS</i> 10.1.2.0.2	Supported	Supported
	Oracle <i>iAS</i> 10.1.3.1.0	Not Supported	Supported
10.3.0.1 with Oracle <i>iAS</i> 10.1.3	Standalone	Not Supported	Not Supported
	Oracle <i>iAS</i> 10.1.2.0.2	Not Supported	Not Supported
	Oracle <i>iAS</i> 10.1.3.5.0	Supported	Supported
	Oracle WebLogic Server 11g Rel 1	Supported	Supported
10.3.0.1 with Oracle <i>iAS</i> 10.1.3.1	Standalone	Not Supported	Supported
	Oracle <i>iAS</i> 10.1.2.0.2	Not Supported	Not Supported
	Oracle <i>iAS</i> 10.1.3.5.0	Supported	Supported
	Oracle WebLogic Server 11g Rel 1	Supported	Supported

Table 5–5 Upgrading Oracle Database Lite with OID to Oracle Database Lite 10.3.0.3

From <Version>	From OID <Version>	To OID <Version>	Supported?
5.0.2.10	Oracle iAS 9.0.2	Any	Not Supported
10.0.0	Oracle iAS 9.0.2	Any	Not Supported
	Oracle iAS 9.0.3	Any	Not Supported
	Oracle iAS 9.0.4	Any	Not Supported
	Oracle iAS 10.1.2.	Oracle iAS 10.1.2 with OID 10.1.2	Supported
	Oracle iAS 10.1.2.	Oracle iAS 10.1.3.5.0 with OID 10.1.4	Supported
10.2.0.2	Oracle iAS 9.0.4	Any	Not Supported
	Oracle iAS 10.1.2 with OID 10.1.2	Oracle iAS 10.1.2.0.2 with OID 10.1.2	Supported
10.3.0.1	Oracle iAS 10.1.2 with OID 10.1.2	Oracle iAS 10.1.2 with OID 10.1.2	Supported
	Oracle iAS 10.1.3.1 with OID 10.1.4	Oracle iAS 10.1.3.x with OID 10.1.4	Supported

5.2.2 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 or 2 to the Release 3 in the same Oracle Home OR you can install the Release 2 of Oracle Database Lite in a separate Oracle home than your Database Lite 10g Release 1 or 2 home.

See [Chapter 4, "Installation of Oracle Database Lite"](#) for instructions on how to install Oracle Database Lite. When the Repository Wizard is executed, see [Chapter 5.2.3, "Upgrade Your Mobile Server Repository"](#) for directions on how to upgrade the repository on the back-end database.

3. When you migrate any of your Mobile Servers to an instance running on a WebLogic Server, the the Mobile Server URL and port may change. Each client application, including `msync.exe`, that interacts with these Mobile Servers must apply the new server URL on the client side.

When the Mobile Server URL change occurs, perform the following on each client:

- a. Stop all processes on the client.
- b. Modify the URL on the client by opening `msync.exe`, change the server URL, and apply the changes.
- c. Perform a synchronization.

5.2.3 Upgrade Your Mobile Server Repository

During installation of Oracle Database Lite 10g Release 3, the Repository Wizard detects if Release 1 or 2 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 5.2.2, "Pre-Upgrade Instructions"](#).

5.2.4 Upgrade Your Existing Applications

You have to upgrade existing applications only if you installed Oracle Database Lite 10g Release 3 in a separate *ORACLE_HOME* than Oracle Database Lite 10g Release 1 or 2. Thus, once you have installed the Oracle Database Lite 10g Release 3 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 or 2 to your the new *ORACLE_HOME* for Oracle Database Lite 10g Release 3.

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
```

5.2.5 Installing Sample Applications

For the sample applications, you can either upgrade the existing sample applications, use the existing samples in Release 3, or install new sample applications. The Release 1 or 2 samples will still work in Release 3 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
```

5.2.6 Upgrade Branch Office 10g Release 1 or 2 to version 10g Release 3

If you have Oracle Database Lite 10g Release 1 or 2, then upgrade your Branch Office to 10g Release 3, as follows:

Note: These steps assume that you have a 10g Release 1 or 2 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 3 Mobile Server in the same `ORACLE_HOME` directory where you installed Release 1 or 2.
2. Stop the Branch Office client executing as a Windows Service.
3. From the Branch Office client machine, which is being migrated to 10g Release 3, point your browser to `http://<hostname>:<port>/webtogo/setup` on the Mobile Server 10g Release 3.
4. Click on "Oracle Lite Branch Office Client" link from the list of Mobile clients. Download and save the `setup.exe` file into the `BO_CLIENT_HOME\bin` directory. Overwrite the existing `setup.exe` file.
5. Open a command prompt, navigate to the `BO_CLIENT_HOME\bin` directory, and execute the `update.exe` command to start the upgrade process. Alternatively, you can open Programs->Oracle Database Lite->Oracle Lite Update.

5.2.7 Migrate Your Users From the Mobile Server Repository to the Oracle Internet Directory (OID)

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.

When you migrate users from a Mobile Server repository into OID, you cannot have duplicate users in OID. So, if you migrate users from two repositories into a single OID, and you have users with the same name, but different passwords on two separate repositories, the user that is first migrated into OID is the one that is valid. The second attempt to migrate an existing username into OID from a different repository will not migrate and no message is provided. This can be a problem if you have two users in different repositories with different passwords.

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.

The following sections describe how to migrate your users based on which Oracle Application Server you have installed:

- [Section 5.2.7.1, "Mobile Server Installed On Oracle Application Server 10.1.2.0.0"](#)
- [Section 5.2.7.2, "Mobile Server Installed on Oracle Application Server 10.1.3.1.0 or Higher"](#)

5.2.7.1 Mobile Server Installed On Oracle Application Server 10.1.2.0.0

Perform the following to migrate your users to OID:

1. Set the `IAS_MODE` 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> <OID
admin name> <OID subscriber name>
```

For example, the default setting would be:

```
oiduser <ORACLE_HOME> mobileadmin manager 389 ldap://myhost-pc1.com
welcome1 orcladmin dc=us,dc=oracle,dc=com
```

- 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> <OID admin name> <OID subscriber name>
```

where the common password is specified by you.

4. The `oiduser` tool generates the `LDAP.bat`, `oiduser.dat` and `mobile_oid_user` 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 `LDAP.bat` executable uses `oiduser.dat` and the `mobile_oid_user` executable uses the generated `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 `LDAP.bat` from the command-line with the `oiduser.dat` as input on the machine where the application server resides. This creates the `oiduserfile.Idif` file.
6. Execute the `mobile_oid_user` file from the command-line on the application server 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.

Perform the following to enable user authentication from OID on the Mobile Server:

1. Login to Mobile Manager as the administrator and select the appropriate server.
2. Click on the Administration tab.
3. Click **Edit Config File** to edit the `webtogo.ora` file for this server.
4. If `SSO_ENABLED` has a hash mark (#) before it, then eliminate the hash mark and set `SSO_ENABLED` to YES. Click **Apply**.
5. Restart both the application server and the Mobile Server.

Note: If logging in to Mobile Manager results in a page that contains one workspace inside another workspace, then refresh the browser.

5.2.7.2 Mobile Server Installed on Oracle Application Server 10.1.3.1.0 or Higher

Perform the following to migrate your users to OID:

1. Set the `IAS_MODE` parameter in the `webtogo.ora` file to YES.
2. 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> <OID
admin name> <OID subscriber name>
```

For example, the default setting would be:

```
oiduser <ORACLE_HOME> mobileadmin manager 389 ldap://myhost-pc1.com
welcome1 orcladmin dc=us,dc=oracle,dc=com
```

- 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> <OID admin name> <OID subscriber name>
```

where the common password is specified by you.

All users from the Mobile Server Repository are now migrated to the OID with the required passwords.

If you want to enable Oracle Single Sign on on the Mobile Server then perform the following:

1. Login to Mobile Manager as the administrator and select the appropriate server.
2. Click on the Administration tab.
3. Click **Edit Config File** to edit the `webtogo.ora` file for this server.
4. If `SSO_ENABLED` has a hash mark (#) before it, then eliminate the hash mark and set `SSO_ENABLED` to YES. Click **Apply**.
5. Restart both the application server and the Mobile Server.

Note: If logging in to Mobile Manager results in a page that contains one workspace inside another workspace, then refresh the browser.

5.2.8 Remove the 10g Release 1 or 2 Installation

Once you have completed all of the upgrade exercises, you can now remove the Oracle Database Lite 10g Release 1 or 2 from your system. Only perform these steps if you have installed Oracle Database Lite 10g Release 3 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 or 2 installation. Click **Installed Products**.
3. On the Inventory screen, select the '+' next to the `ORACLE_HOME` for your 10g Release 1 or 2 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**.

5.2.9 Remove Duplicate Mobile Server IDs from the Repository

After migrating Oracle Database Lite 10g Release 1 or 2 to Release 3, 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`

5.3 Upgrade the Oracle Lite Mobile Client

The following sections describe how to upgrade each Oracle Lite Mobile client platform:

- [Section 5.3.1, "Upgrade the Oracle Lite Mobile Client Version 5.0.2.10 to Version 10g Release 3"](#)
- [Section 5.3.2, "Upgrade the Oracle Lite Mobile Client 10g Release 1 or 2 to 10g Release 3"](#)
- [Section 5.3.3, "Upgrade the Oracle Lite Mobile Clients from De-Supported Mobile Client Platforms"](#)

5.3.1 Upgrade the Oracle Lite Mobile Client Version 5.0.2.10 to Version 10g Release 3

[Table 5–6](#) shows how each Oracle Lite Mobile client platform updates to the latest version.

Table 5–6 Upgrade Mobile Client 5.0.2.10 to 10g Release 3

Mobile Client Platform	Upgrade Instructions
Web-to-Go	Automatic. User is prompted for username/password.
Branch Office	Supported, but manual steps required. See Section 5.1.6, "Upgrading 5.0.2.x Version Branch Office" .
BC4J	Supported, but manual steps required. See Section 5.1.5, "Upgrading BC4J Oracle Lite Mobile Client 5.0.2.x to Version 10g Release 2" .
Win32	Not supported
WinCE	Supported from 5.0.2.9.0 and higher. Run <code>update.exe</code> or <code>msync.exe</code> , which launches <code>update.exe</code> after the synchronization completes.
Linux native clients	Not applicable
Linux Web-to-Go clients	Not applicable

5.3.2 Upgrade the Oracle Lite Mobile Client 10g Release 1 or 2 to 10g Release 3

[Table 5–7](#) shows how each Oracle Lite Mobile client platform updates to the latest version.

Table 5–7 Upgrade Mobile Client Release 1 or 2 to 10g Release 3

Mobile Client Platform	Upgrade Instructions
Web-to-Go	Automatic.

Table 5–7 (Cont.) Upgrade Mobile Client Release 1 or 2 to 10g Release 3

Mobile Client Platform	Upgrade Instructions
OC4J	Automatic. After the Mobile Client for OC4J is upgraded, the Web browser may not display the login page automatically. The user needs to click on the desktop browser shortcut for Mobile client for OC4J to open the login page.
Branch Office	Supported, but manual steps required. See Section 5.2.6, "Upgrade Branch Office 10g Release 1 or 2 to version 10g Release 3" .
BC4J	Automatic.
Win32	Supported. Run <code>update.exe</code> or <code>msync.exe</code> , which launches <code>update.exe</code> after the synchronization completes.
WinCE	Supported. Run <code>update.exe</code> or <code>msync.exe</code> , which launches <code>update.exe</code> after the synchronization completes.
Linux native clients	Not applicable for 10.0; for the 10.2 version, run <code>update</code> .
Linux Web-to-Go clients	Not applicable for 10.0; for the 10.2 version, it is automatic.

5.3.3 Upgrade the Oracle Lite Mobile Clients from De-Supported Mobile Client Platforms

For the Oracle Lite Palm, PPC2003 Emulator, and PPC2000 ARM Mobile client platforms, there is no upgrade option. These client device platforms are no longer supported for Oracle Database Lite.

[Table 5–8](#) displays how you can migrate the following de-supported Mobile client platforms to currently available platforms:

Table 5–8 Upgrading De-Supported Mobile Client Platforms

De-Supported Client Platform	Upgrade to this Available Platform
Oracle Lite PPC2003 XScale	Oracle Lite PPC2003 ARMV4
Oracle Lite WCESTD42 ARMV4	Oracle Lite PPC50 ARMV4I

During the upgrade process, be sure to not cancel in the middle. If your device is Windows 5.0 or later, then you must perform the following after the CAB files are downloaded to the device:

1. Tap on the CAB files to extract the files to the device.
2. Tap on `dmagent` to execute start the Device Manager.

The following describes what happens for those Mobile client devices that want to continue to use the de-supported platforms:

- Any client device that has a de-supported platform is given the option to migrate to the upgrade platform when they execute `msync.exe` or `update.exe`.
- If you do not want to upgrade the client platform, then these clients can still synchronize with the Mobile Server; however, they will be prompted to upgrade each time.
- You can continue to administer de-supported client platforms, as they will still appear in the platform tabs in the Mobile Manager. We will not disable them from your administration management GUI. However, they will not be included in the setup page for you to create new clients using these platforms.

- The applications that already exist on the de-supported client platforms will still run as expected. And you may apply any patches for the application. However, you cannot deploy any new applications to that platform.
- If you do upgrade the client platform, then you must re-package and re-publish each application as a new application for the new client platform.

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, and Windows Mobile platforms for an Oracle Lite Mobile client. The following sections describe how to install the sample applications on an Oracle Lite Mobile client, start Oracle Database Lite, and then distribute, deploy, and sync your application on separate platforms.

- [Section 6.1, "Installing the Sample Applications"](#)
- [Section 6.2, "Starting Oracle Database Lite and Its Job Scheduler"](#)
- [Section 6.3, "Starting a Windows 32 Application"](#)
- [Section 6.4, "Starting a Web-Based Application"](#)
- [Section 6.5, "Starting an Application on Your WinCE Device"](#)

6.1 Installing the Sample Applications

As Step 8 in [Section 4.3.1.2, "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, you can install them with the `demoinstaller` command as described in [Section 5.2.5, "Installing Sample Applications"](#).

6.2 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.

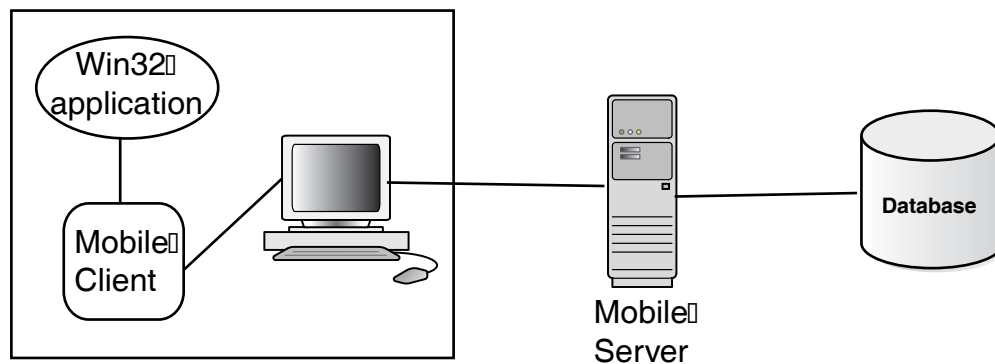
Also, the URL assumes that you are using the default port of 80. If there was a port conflict and you had to change the port number, use the URL `http://<Mobile Server>:<port_number>/webtogo`. For more information on modifying port numbers, see Step 4 of [Section 4.3.1.2, "Installation of Mobile Server"](#).

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.

6.3 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 6-1](#):

Figure 6-1 Windows 32 Interacting With Mobile Server



[Figure 6-1](#) demonstrates how the Mobile Server accesses the Mobile Server Repository, which exists in a back-end database. The Oracle Lite 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 Oracle Lite 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 11, "Tutorial for Building Mobile Applications for Win32" in the *Oracle Database Lite Developer's Guide*.

6.3.1 Software Requirements for the Win32 Demo

The Win32 sample application requires Microsoft Windows 2003/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/>

6.3.2 Download the Oracle Lite 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.

6.3.3 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 `JUNE/JUNE` 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 `JUNE/JUNE`.
 - 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**.

6.3.4 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 JUNE/JUNE when prompted to logon to the sample application. Click **OK**.

6.3.5 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.

6.3.6 Synchronize the Win32 Sample Application Data to the Database

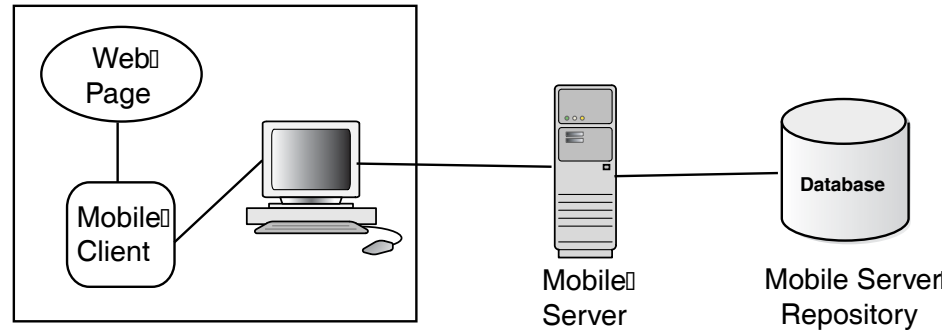
After you have updated all of the records that you want on your client, you can synchronize the application data to the Mobile Server, which updates the database. To synchronize the data to the database, click the **mSync** button, which is the icon of a database with dual arrows.

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.

6.4 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 6-2](#):

Figure 6-2 *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 9, "Tutorial for Building Mobile Web Applications" in the *Oracle Database Lite Developer's Guide* for a full description.

6.4.1 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.

6.4.2 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.

6.4.3 Enter and Sync Data in the Web Client Sample

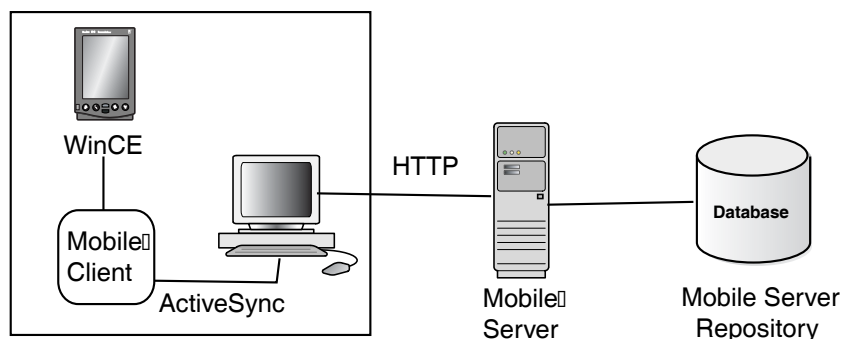
There are several sample applications that you can try; however, this section talks about using `Sample3`, which tracks music.

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.

6.5 Starting an Application on Your WinCE Device

When you have a WinCE (Windows Mobile) application that is set up to interact with Mobile Server, you have an environment similar to [Figure 6-3](#):

Figure 6-3 *Windows Mobile Application Interacting With Mobile Server*



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

- [Section 6.5.1, "Verify the Software and Hardware Requirements for the WinCE Demo"](#)
- [Section 6.5.2, "Download the Mobile Client from the Mobile Server"](#)
- [Section 6.5.3, "Install the WinCE Mobile Client"](#)
- [Section 6.5.4, "Enter and View Data in the WinCE Sample Application"](#)
- [Section 6.5.5, "Synchronize the WinCE Application Data to the Database"](#)

The WinCE 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 12, "Tutorial for Building Mobile Applications for Windows CE" in the *Oracle Database Lite Developer's Guide*.

6.5.1 Verify the Software and Hardware Requirements for the WinCE Demo

The WinCE sample application requires the following:

- Software requirements: ActiveSync 3.8 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 WinCE device used.

6.5.2 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 Windows Mobile device, open and point a browser to the Mobile Server host, which is remote to your machine, using the URL `http://<Mobile Server>/webtogo/`.
 - b. On the upper right corner, click **Setup**.
2. Click on the sample that corresponds to the Windows Mobile device that you have. For example, the ARM example is **Oracle Lite PPC50 ARMV4I;US**.
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.

6.5.3 Install the WinCE Mobile Client

You install the Mobile Client on your Windows Mobile (WinCE) device by performing the following steps:

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

2. On the Logon to Server screen, enter the username and password JUNE/JUNE and click **OK**.

The WinCE Mobile Client is now registered with ActiveSync.

3. Launch the ActiveSync Launcher on the Windows machine. You will be asked if you would like to install Oracle Lite using the default application directory. Click **Yes**. this installs the Mobile Client libraries into the \ORACE directory on the Windows CE device.
4. On the Windows Mobile device, navigate to the \ORACE directory where you installed the Mobile Client and launch the Mobile Sync application by double-clicking `msync.exe`.
5. On the Mobile Sync dialog box, enter the following:
 - Username and Password of JUNE/JUNE.
 - Check Save Password.
 - Enter the host name for the Mobile Server.

Click **Apply**. Click **Sync**.

Note: The Mobile client device clock must be accurate for the time zone set on the device before attempting to synchronize. An inaccurate time may result in the following exception during synchronization: CNS: 9026 "Wrong username or password. Please enter correct value and reSync."

6. When the synchronization completes, the Sync Result Dialog appears. Click **OK**.
7. On the Oracle Lite Software Update window, click **Install** to install the Transport Demo (Transport_PPC) on your system.
8. Select the directory where you would like to install the demo and click **OK**.

6.5.4 Enter and View Data in the WinCE Sample Application

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

1. Launch the transport demo application on your client. Find the Transport demo in the program list under Start->Programs or through Explorer.
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.

6.5.5 Synchronize the WinCE 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.

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