

Oracle® Database Mobile Server

Installation Guide

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Preface

This preface introduces you to the *Oracle Database Mobile Server Installation Guide*, discussing the intended audience, documentation accessibility, related documents, 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 Mobile Server.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Related Documents

Use the following manuals as reference when installing and configuring OracleAS, WebLogic or Glassfish server:

- *Oracle® Fusion Middleware Administrator's Guide*
- *Oracle® Fusion Middleware Installation Guide for Oracle WebLogic Server*
- *Oracle® GlassFish Server 3.1 Installation Guide*

Conventions

The following conventions are also used in this manual:

Convention	Meaning
. . .	Vertical ellipsis points in an example mean that information not directly related to the example has been omitted.
...	Horizontal ellipsis points in statements or commands mean that parts of the statement or command not directly related to the example have been omitted
boldface text	Boldface type in text indicates a term defined in the text, the glossary, or in both locations.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.
<i>italic monospace</i>	Italic monospace type indicates a variable in a code example that you must replace. For example: <pre>Driver=<i>install_dir</i>/lib/libtten.sl</pre> Replace <i>install_dir</i> with the path of your TimesTen installation directory.
<>	Angle brackets enclose user-supplied names.
[]	Brackets enclose optional clauses from which you can choose one or none.

Oracle Database Mobile Server Concepts

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

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

1.1 Overview of Oracle Database Mobile Server

Oracle Database Mobile Server provides a complete mobile infrastructure designed to run enterprise database applications for clients using either the Berkeley DB or SQLite databases. Oracle Database Mobile Server 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 Mobile Server 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 Mobile Server 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 Mobile Server?"](#)

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. A mobile architecture contains the remote application, the remote database, and the remote rules of the business. The Oracle Database Mobile Server mobile infrastructure is responsible for connecting and synchronizing applications, associated data, and business rules with the applications, database, and business rules of the enterprise.

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 Mobile Server 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 Mobile Server, 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.

An application is created, where the user enters data on a client device, known as the mobile client. The mobile client can use either Berkeley DB or the SQLite 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.

1.1.3 Why Use Oracle Database Mobile Server?

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

- The mobile server 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 Oracle WebLogic Server, Oracle GlassFish, OracleAS, or Apache TomEE.

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 Berkeley DB or a SQLite 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 Berkeley DB 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 for Understanding and Using the Mobile Server

The mobile server is a compilation of two products: the mobile server and the mobile client.

In an enterprise system, the mobile server facilitates the synchronization of data between multiple mobile clients and Oracle databases. The mobile client facilitates the synchronization of data from an independently installed client database to the mobile server. The supported client databases are listed below:

- *SQLite client database*: If you are using the SQLite database as the 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.
- *Berkeley DB*: If you are using the Berkeley DB with SQLite (Berkeley DB SQL interface) as the mobile client database, you must install this independently. If it is not already installed, refer to <http://www.oracle.com/technology/products/berkeley-db/index.html> for more information on installation, configuration, and usage.

In a mobile environment, install Berkeley DB and SQLite mobile client to enable synchronization. To properly install, develop and administer all components in the mobile server, first follow instructions in the mobile server books.

After installing the supported client database, install the mobile client, which includes the Sync Engine for managing synchronization between the client database and the back-end Oracle database. For details, see Chapter 2, "Installing the Mobile Client" in the *Oracle Database Mobile Server Mobile 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 more information, see Chapter 1, "Overview for Designing Mobile Applications" in the *Oracle Database Mobile Server 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 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 Berkeley DB SQL Interface"](#)

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, Linux and Android platforms, both automatic and manual synchronization is supported. On Blackberry devices, only manual synchronization is supported. For more information, see Chapter 2, "Installing the Mobile Client" in the *Oracle Database Mobile Server Mobile Client Guide*.

1.2.2.2 Using Berkeley DB SQL Interface

Berkeley DB is a small database that has a small footprint and is easy to administer. The mobile server gathers and synchronizes data from multiple mobile devices from several users.

Berkeley DB is its own product and is described completely in the *Berkeley DB documentation*. It can be used with the mobile server for synchronizing data to a back-end Oracle database or an Oracle RAC database.

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 Mobile Server 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 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 Mobile Server Troubleshooting and Tuning Guide* for techniques to enhance your performance for Oracle Database Mobile Server.

Third Party Licensing in Oracle Database Mobile Server

This chapter includes third-party license information for all third-party products included with Oracle Database Mobile Server. Oracle acknowledges 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, "Oracle JDK 1.5, JDK 1.6 and JDK 1.7"](#)
- [Section 2.3, "Third Party Licensing for ZLib and JZLib"](#)

2.1 SQLite Database

Any SQLite database services that are provided with Oracle Database Mobile Server 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 Oracle JDK 1.5, JDK 1.6 and JDK 1.7

This product includes code provided by Oracle.



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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Getting Started - Oracle Database Mobile Server

This chapter provides information for downloading and installing the Database Mobile Server (DMS) and its dependencies. DMS uses a middle-tier Application Server to communicate between the mobile clients and the backend Oracle database. Different Application Servers are supported for DMS, including Oracle WebLogic Suite, Oracle Glassfish, Apache TomEE. See the sections below:

- [Section 3.1, "Installation of Java Development Kit \(JDK\)"](#)
- [Section 3.2, "Installation Packages \(for Windows\)"](#)
- [Section 3.3, "Installation of Oracle Database Express Edition \(Oracle Database XE\)"](#)
- [Section 3.4, "Installation of Glassfish"](#)
- [Section 3.5, "Installation of Database Mobile Server \(DMS\)"](#)
- [Section 3.6, "Installation of Mobile Development Kit \(MDK\)"](#)

The following sections provide information on the transport demo and a review of the key installation steps:

- [Section 3.7, "Transport Demo"](#)
- [Section 3.8, "Summary"](#)

3.1 Installation of Java Development Kit (JDK)

There are two types of JDK for Windows:

- Windows x86 for 32bit
- Windows x64 for 64bit

DMS supports both of them. To download JDK, go to:

<http://www.oracle.com/technetwork/java/javase/downloads/index.html>

Double click on the *Installation Executable* and go through the required installation steps. By default, after the installation, you can find the JDK in *C:\Program Files\Java* or *C:\Program Files (x86)\Java*.

3.2 Installation Packages (for Windows)

Install and run the following products:

- Oracle Database Express Edition (Oracle Database XE):

<http://www.oracle.com/technetwork/database/database-technologies/express-edition/downloads/index.html>

- Oracle Glassfish:

<http://www.glassfish.java.net/downloads/3.1-final.html>

(glassfish-3.1-windows.exe)

- DMS:

<http://www.oracle.com/technetwork/database/database-technologies/database-mobile-server/downloads/index.html>

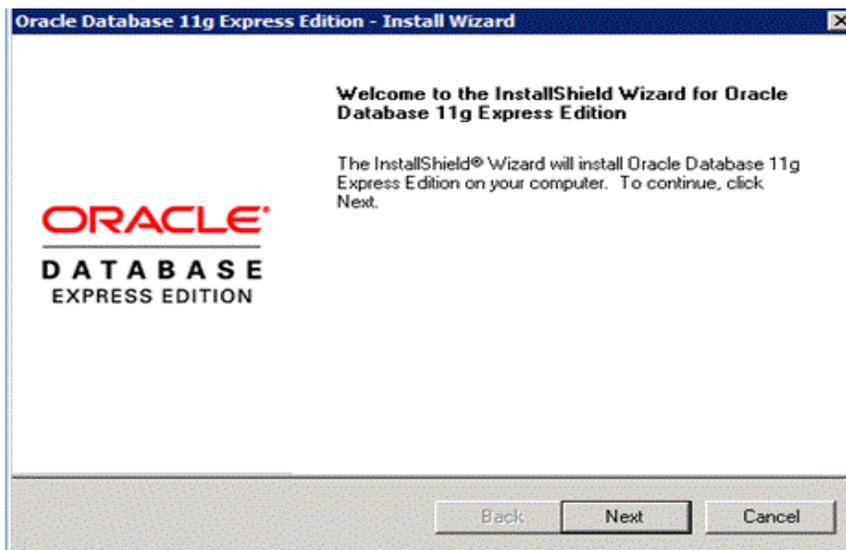
Note: To install and run all the above products, first, you need to install the latest JDK 6 or JDK 7.

3.3 Installation of Oracle Database Express Edition (Oracle Database XE)

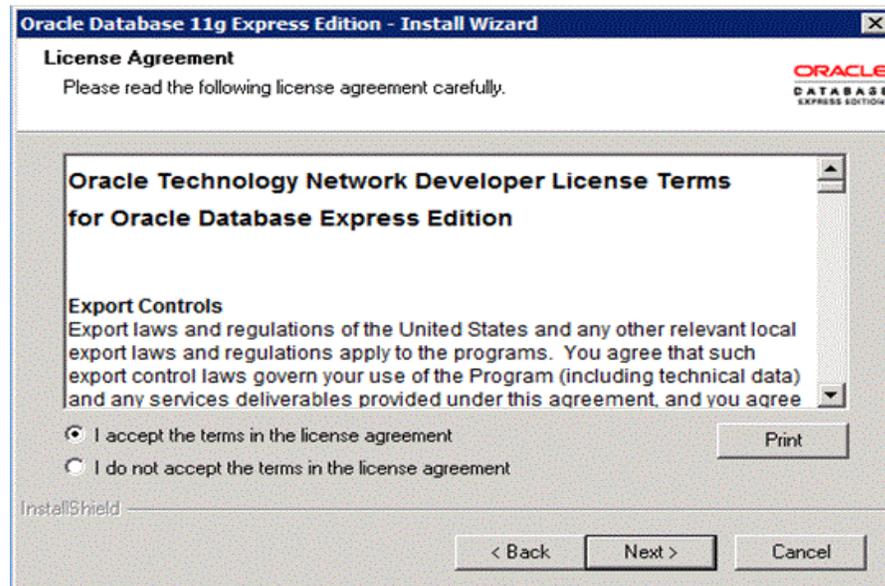
To install Oracle Database XE, follow the steps below:

1. Extract Oracle Database XE ZIP package in the current directory. You will get directory DISK1. Double click *DISK1\setup.exe* to install Oracle XE (see, [Figure 3-1](#)).

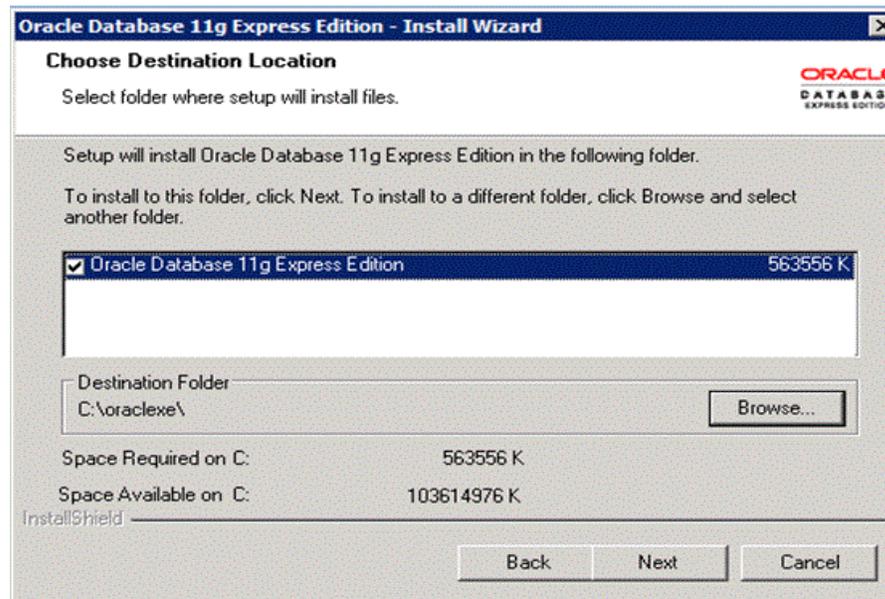
Figure 3-1 Welcome Screen of Oracle Database XE Install Wizard



2. On the "License Agreement" screen, choose "I accept the terms in the license agreement", then click "Next", as seen in [Figure 3-2](#).

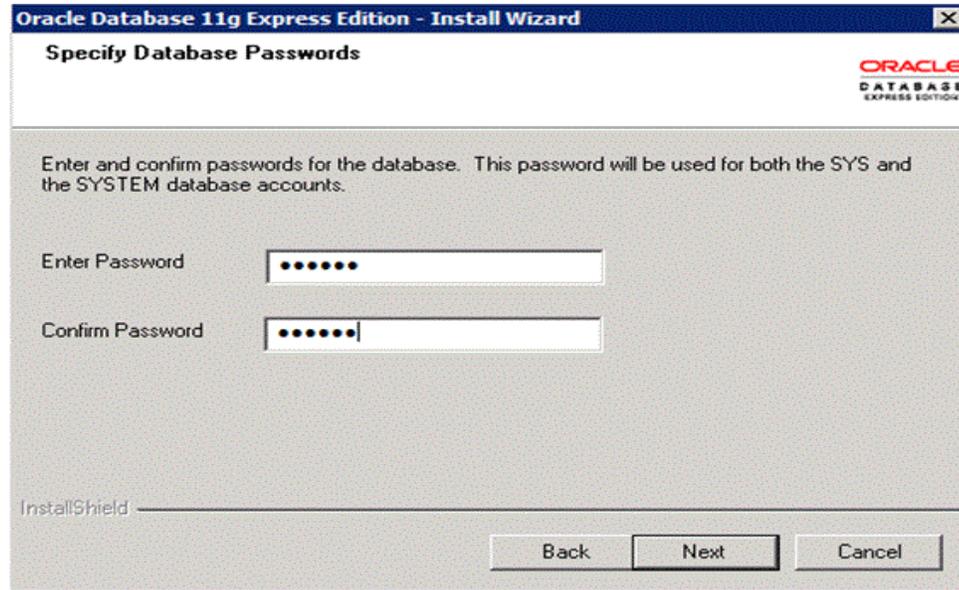
Figure 3–2 License Agreement

3. On the "Choose Destination Location" screen, click "Browse..." to select the path to install Oracle Database XE, as shown in [Figure 3–3](#).

Figure 3–3 Choose Destination Location

4. On the "Specify Database Password" screen, enter password for both the SYS and the SYSTEM database accounts, as shown in [Figure 3–4](#). Keep note of these as they will be required throughout the rest of the DMS setup process.

Figure 3-4 Specify Database Passwords



5. The "Summary" page shows current installation setting (before proceeding with the installation), as shown in [Figure 3-5](#). If all the settings are as expected, click "Install" to start the installation, as shown in [Figure 3-6](#).

Figure 3-5 Summary

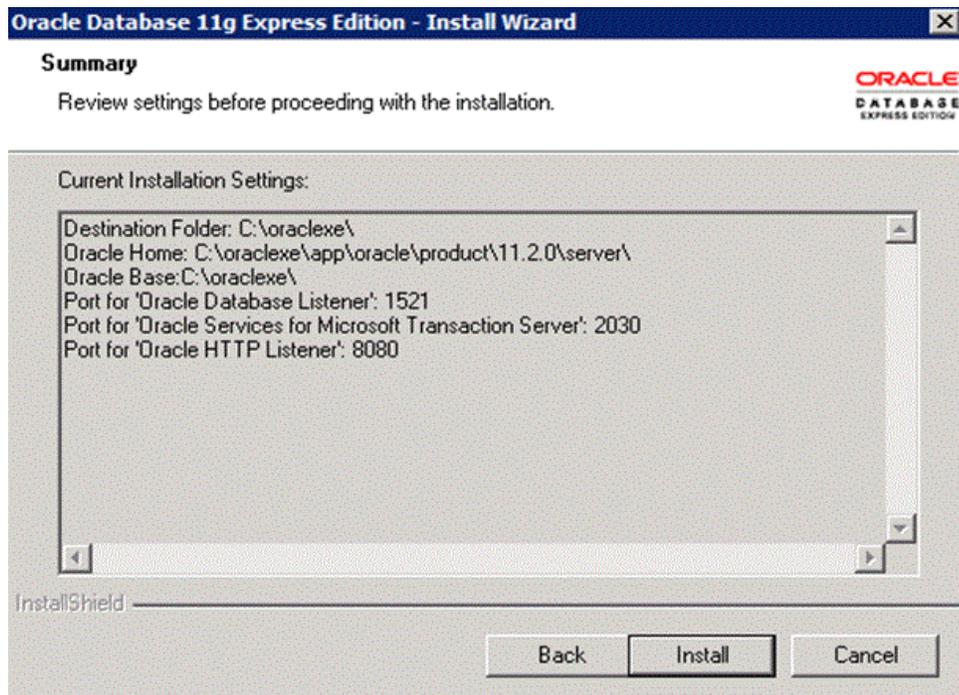
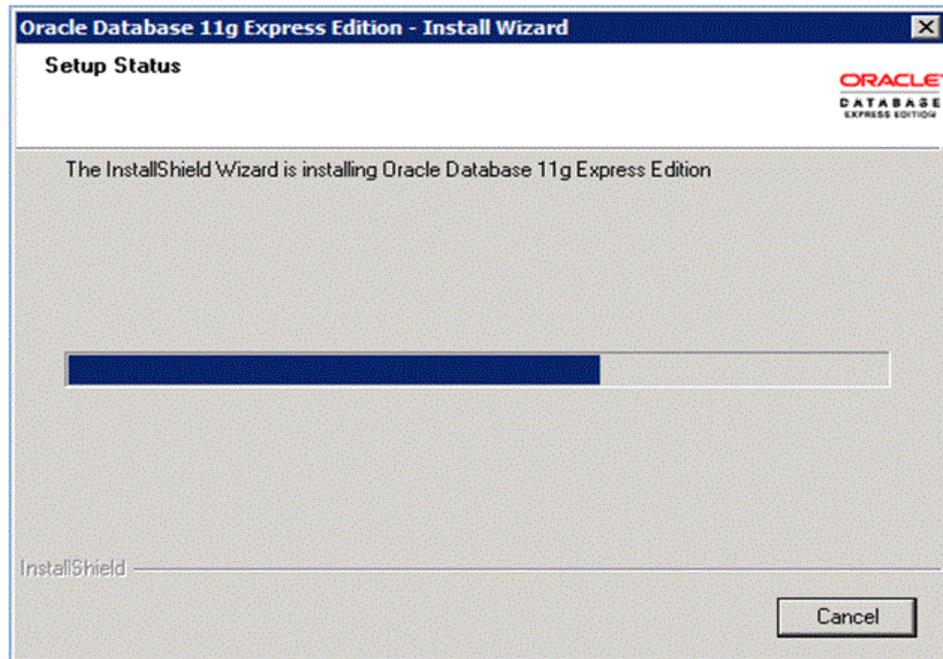
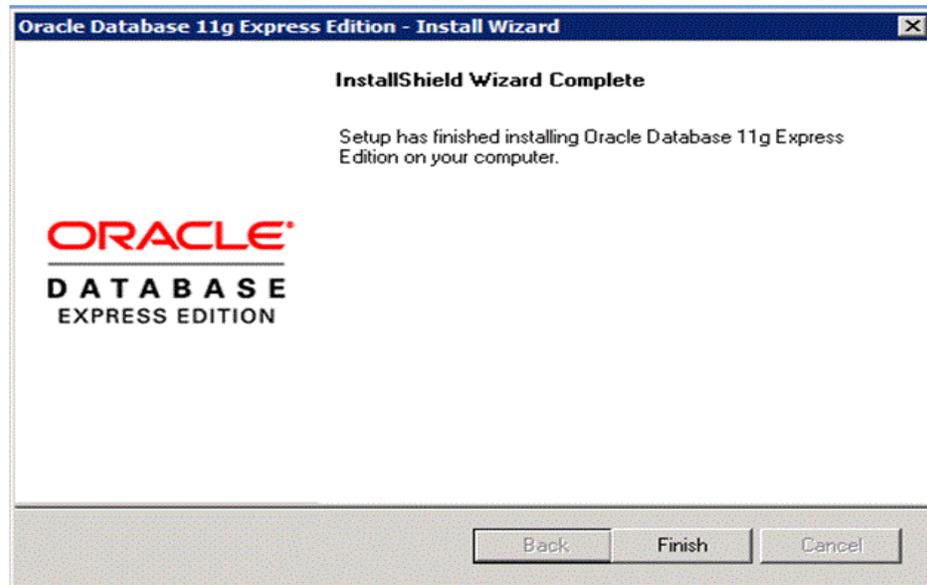


Figure 3–6 Installation Process

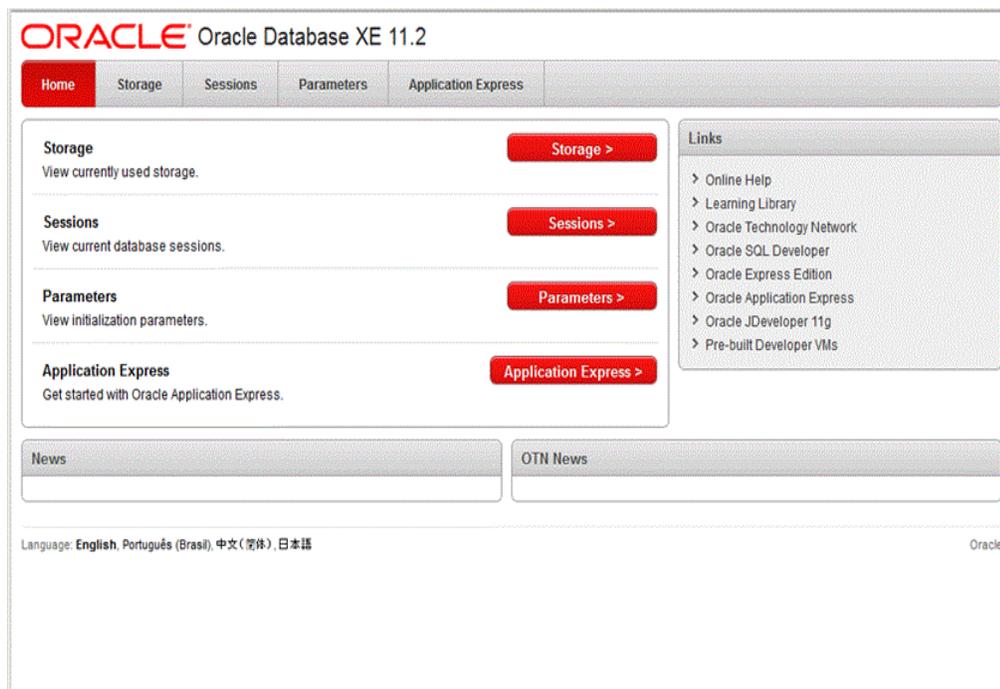
6. End of installation, click "Finish", as shown in [Figure 3–7](#).

Figure 3–7 Installation Complete

7. After installation, the Install Wizard will create a shortcut on the desktop, as shown in [Figure 3–8](#).

Figure 3–8 Oracle Getting Started Page

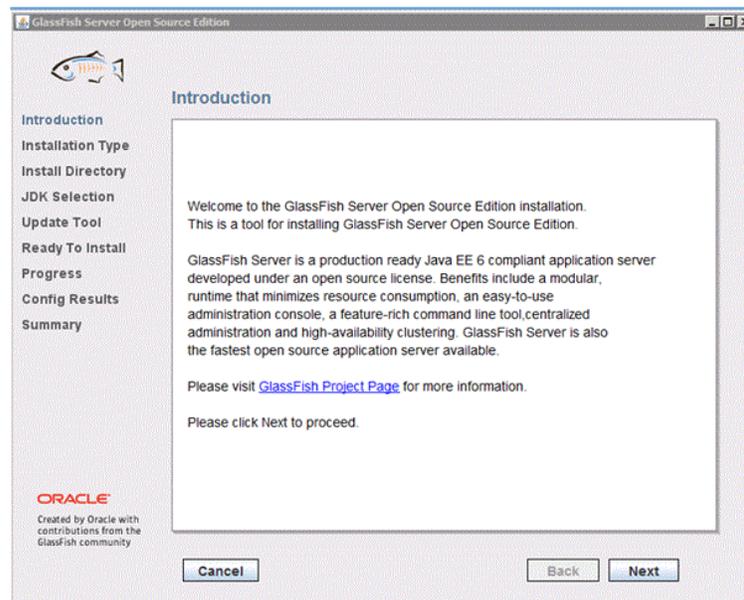
8. Double click this shortcut and it will run the default internet browser and show the home page of Oracle Database XE, as shown in [Figure 3–9](#). Click the link on the home page to check the status of database.

Figure 3–9 Home Page of Oracle Database XE

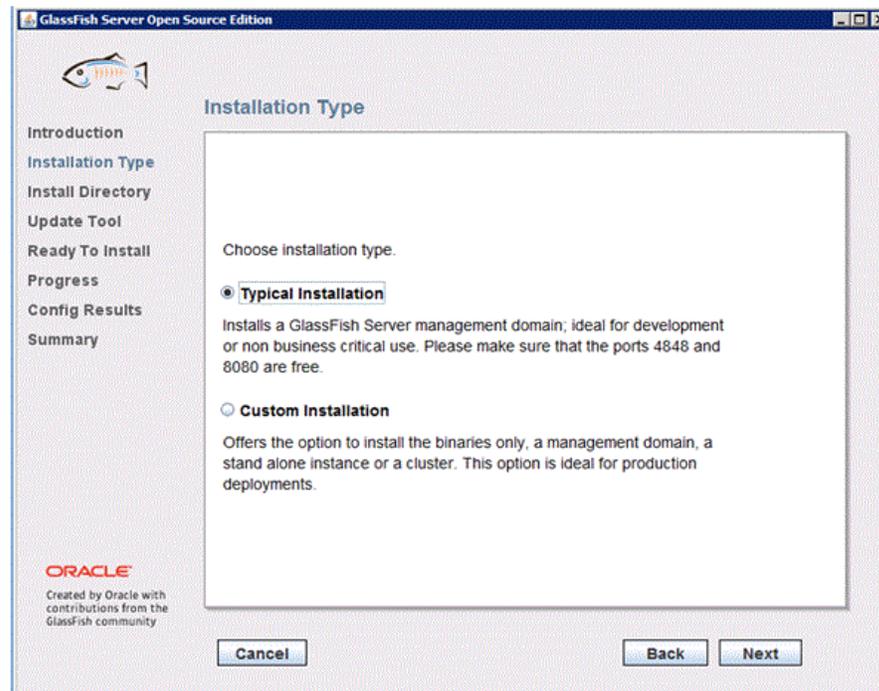
3.4 Installation of Glassfish

To install glassfish, follow the steps below:

1. Double click *glassfish-3.1-windows.exe* to start installation. On the "Introduction" page, click "Next" to proceed (see, [Figure 3–10](#)).

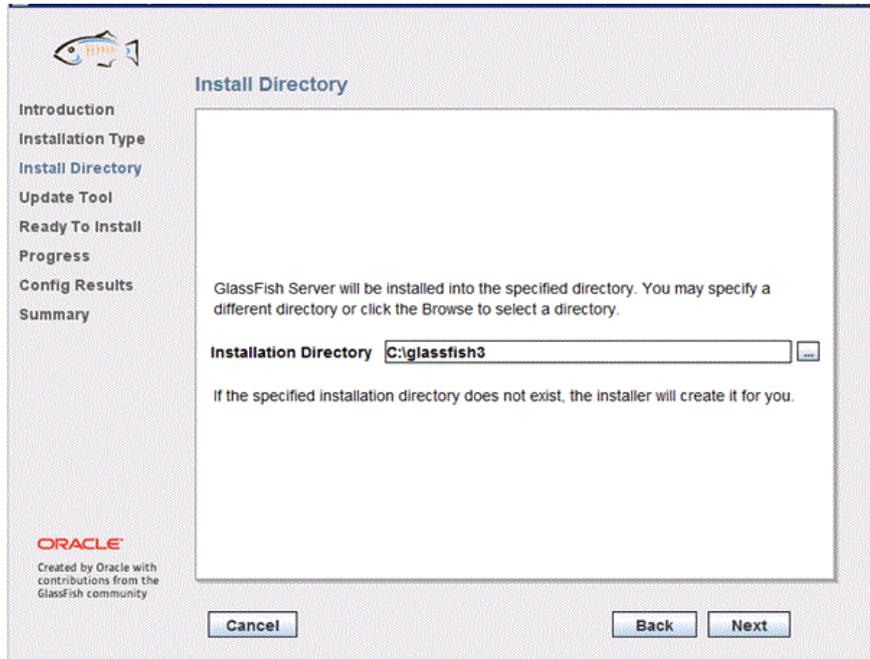
Figure 3–10 Introduction

2. Choose "Installation Type". Here, we choose the default type "Typical Installation", as seen in [Figure 3–11](#).

Figure 3–11 Installation Type

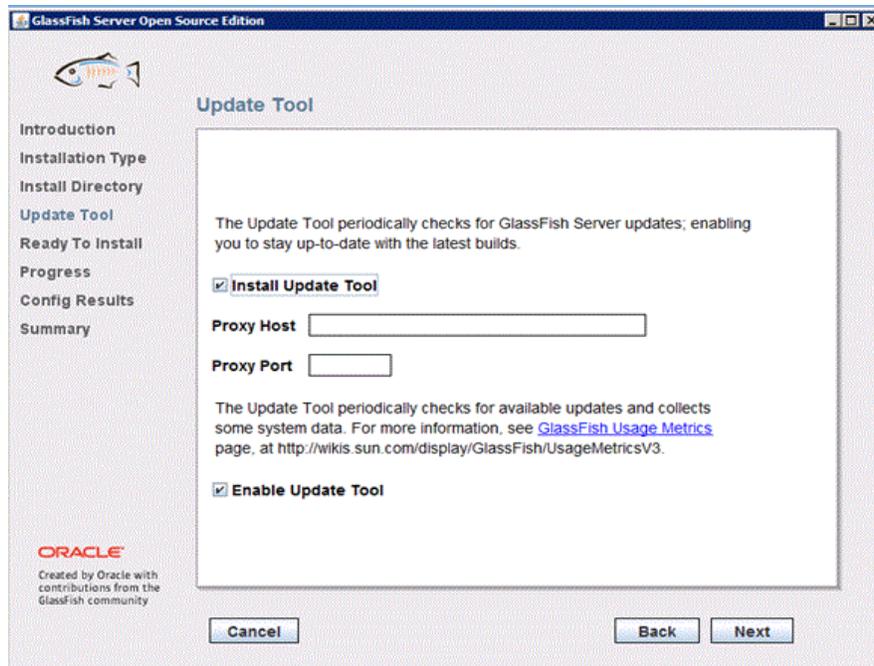
3. On the "Install Directory" screen, click "." to select the path to install Oracle Glassfish. Click "Next" as shown in [Figure 3–12](#).

Figure 3–12 Install Directory

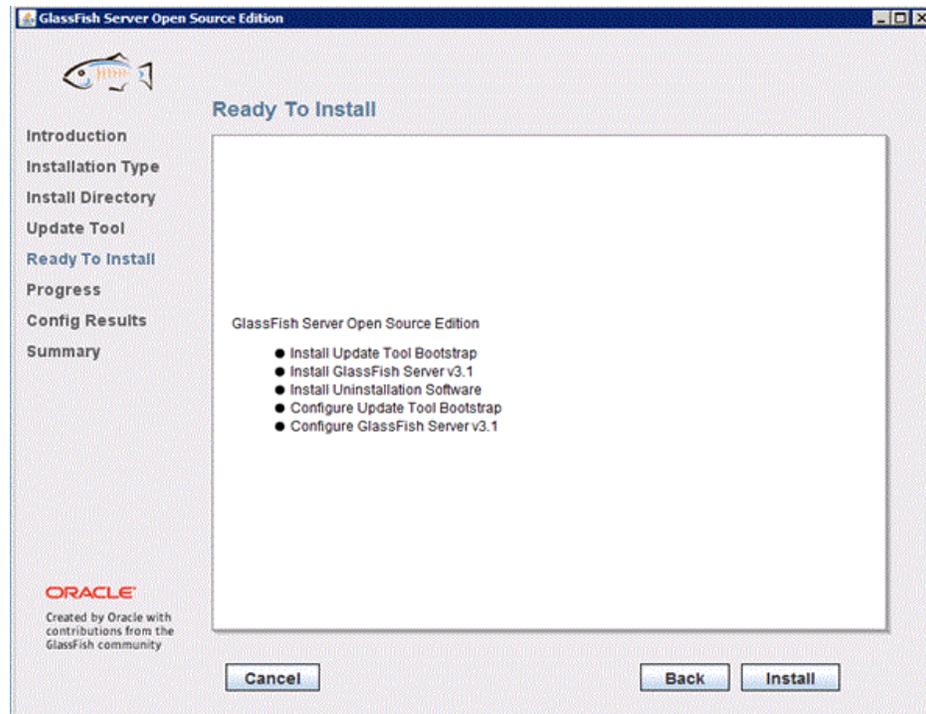


4. On the "Update Tool" screen, you can check for glassfish updates periodically or you can disable it, as shown in [Figure 3–13](#).

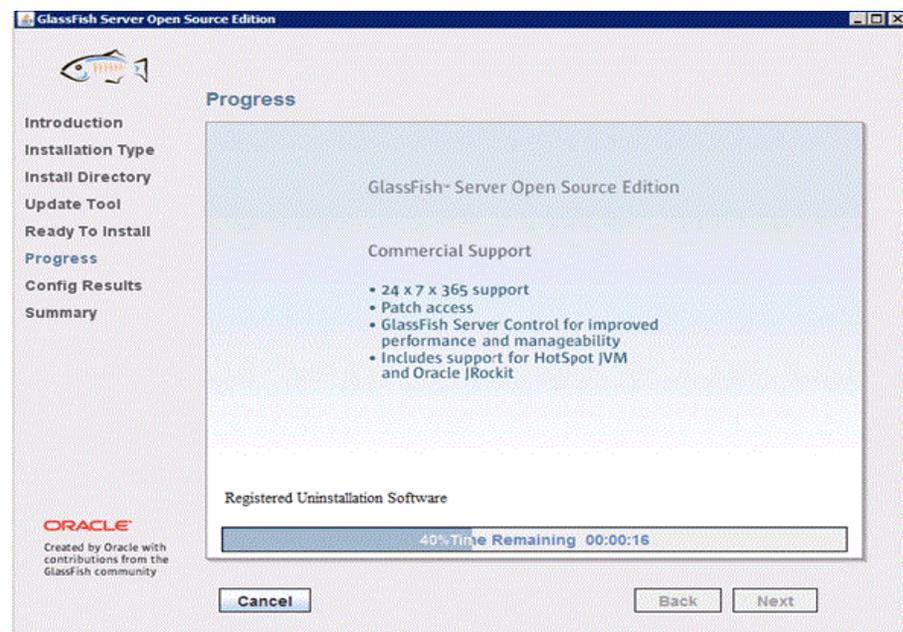
Figure 3–13 Update Tool



5. The "Ready To Install" screen shows the current installation setting before proceeding with the installation, as shown in [Figure 3–14](#).

Figure 3–14 Ready to Install

6. The installation process begins, as shown in [Figure 3–15](#).

Figure 3–15 Installation Process

7. For the configuration results and summary, see [Figure 3–16](#) and [Figure 3–17](#).

Figure 3–16 Configuration Result

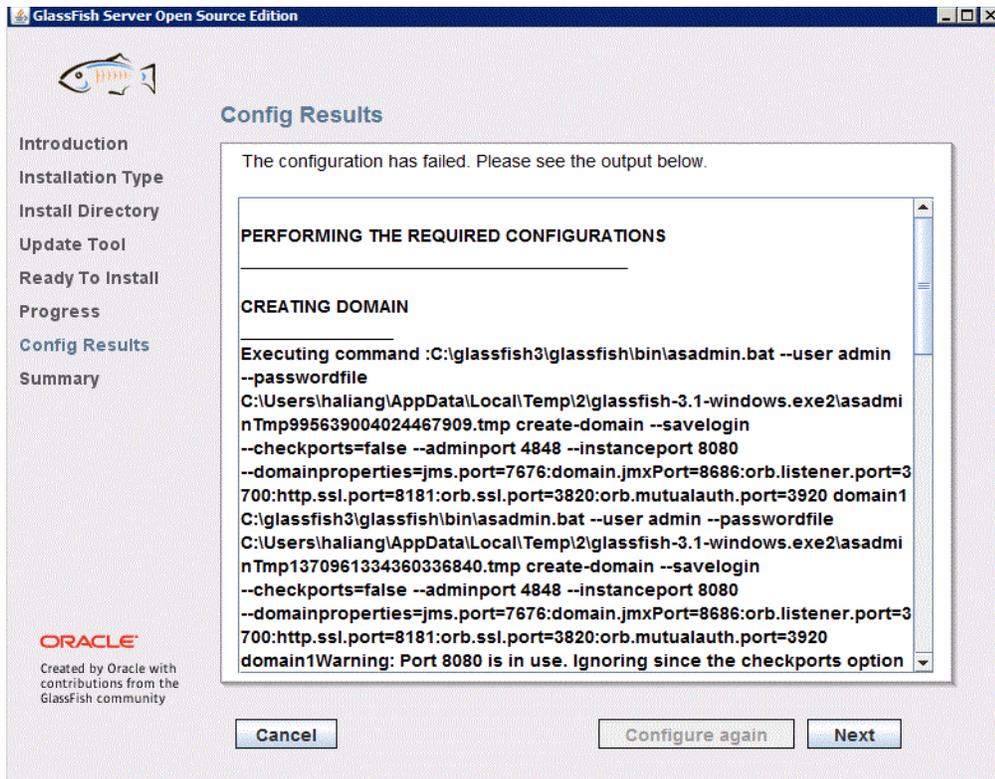
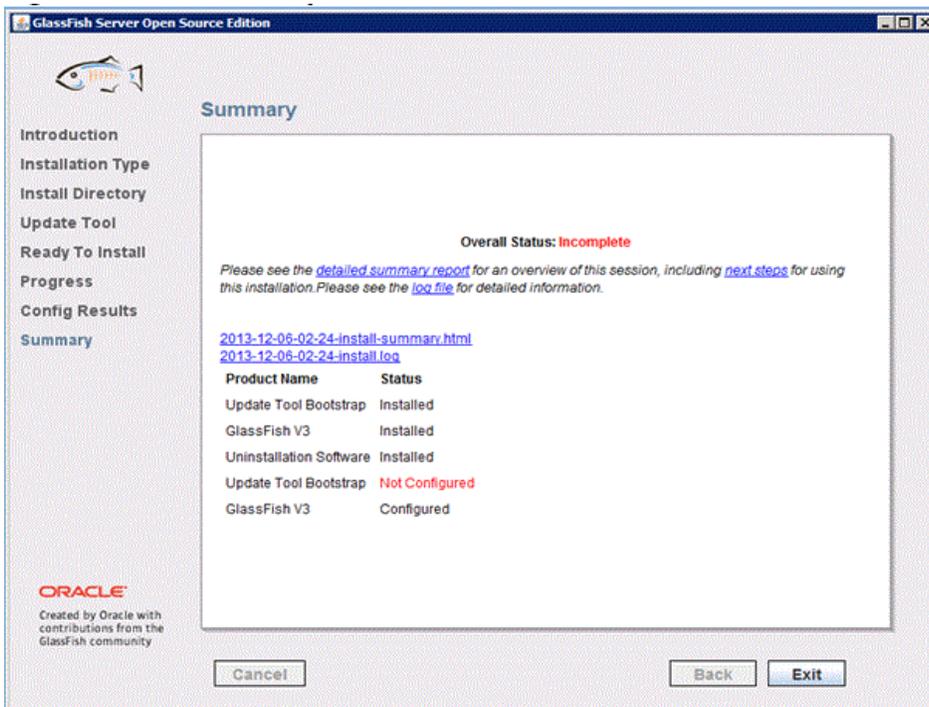


Figure 3–17 Summary

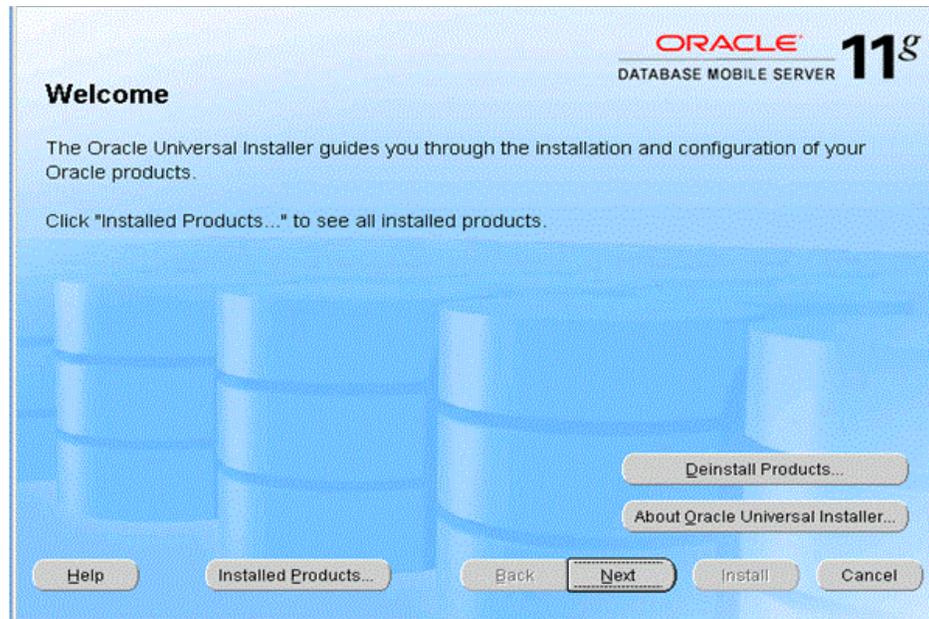


3.5 Installation of Database Mobile Server (DMS)

To install DMS, follow the steps below:

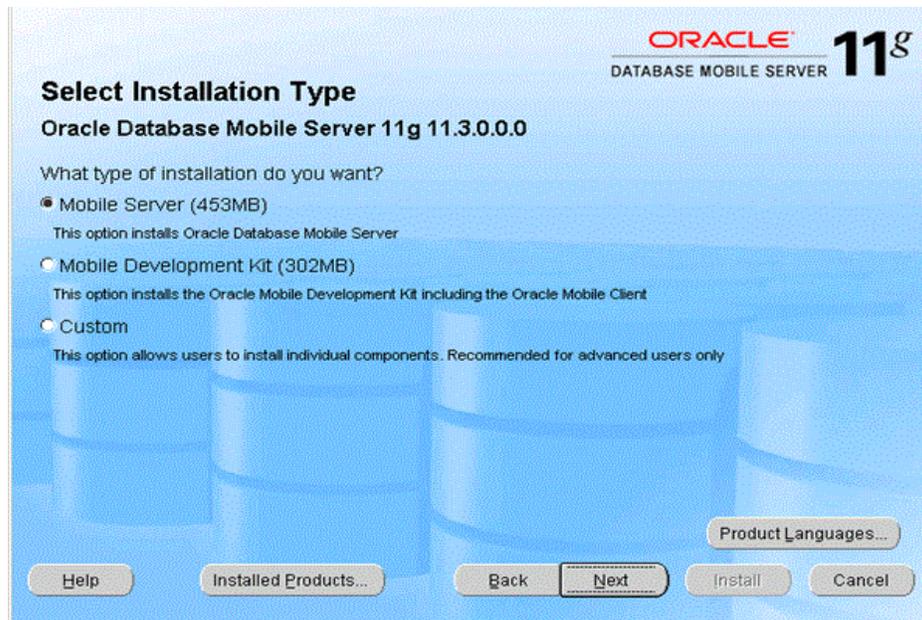
1. Extract Oracle DMS ZIP package in the current directory. Double click <DMS_home>\Disk1\install\win32\setup.exe to start installation. If your CPU is 64bit, run <DMS_home>\Disk1\install\win64\setup.exe instead, where DMS_home is the directory extracted from the ZIP package (see, [Figure 3–18](#)).

Figure 3–18 Welcome Screen



2. Choose "Mobile Server" and click "Next", as seen in [Figure 3–19](#).

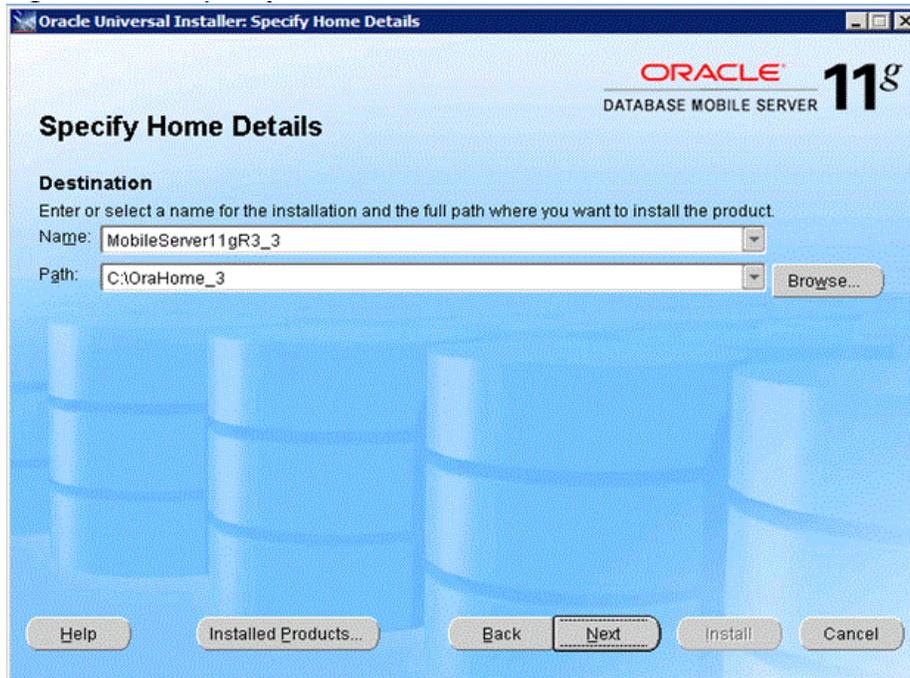
Figure 3–19 Select Mobile Server



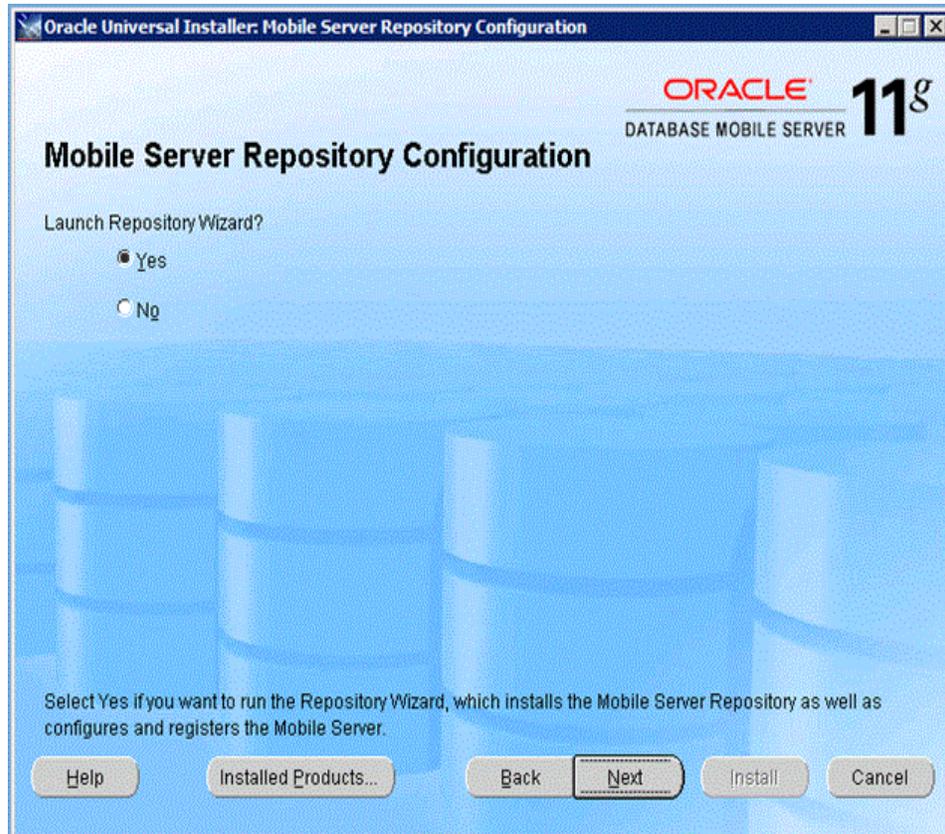
3. On the "Specify Home" screen, as seen in [Figure 3–20](#), enter the name for your Mobile Server installation, and path where you want to install Oracle Database Mobile Server.

Note: You must choose an empty directory to install Mobile Server. If the installation location you specified is not empty, you will get a warning.

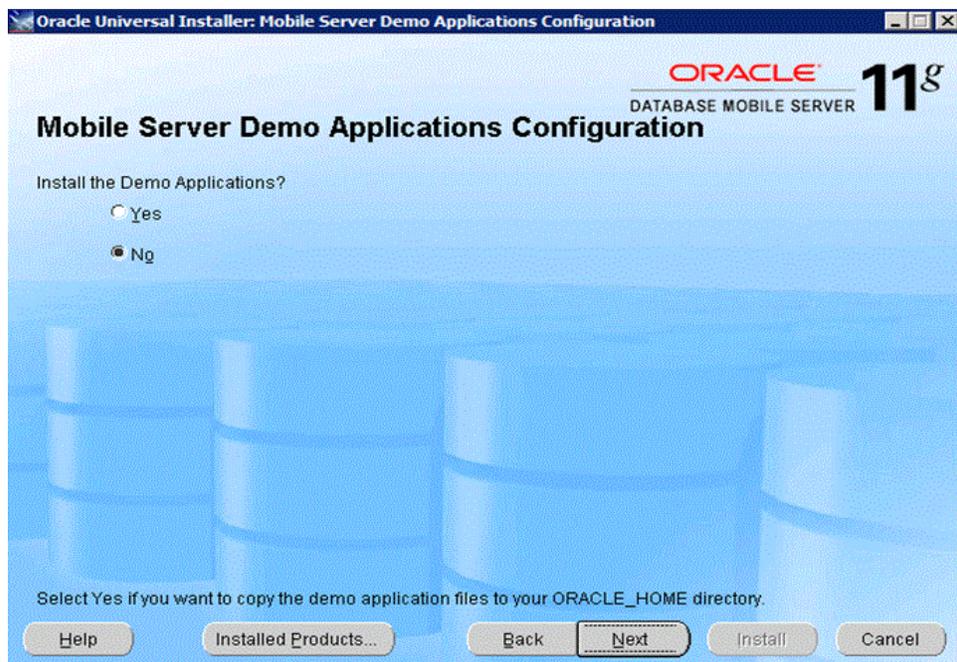
Figure 3–20 Specify Home Details



4. Click "Yes" to "Launch Repository Wizard" to install the Mobile Server repository. Click "Next". See [Figure 3–21](#).

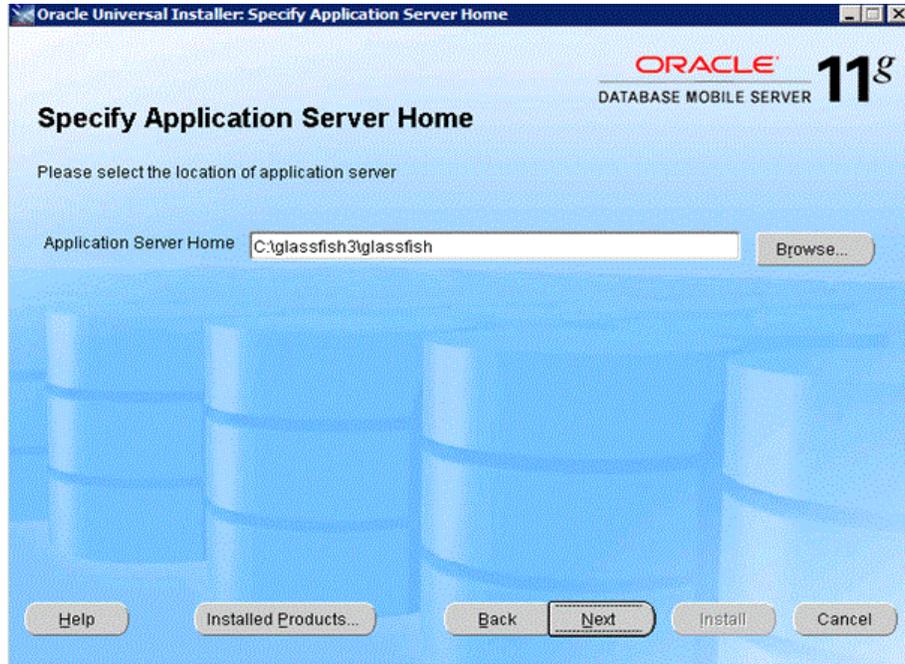
Figure 3–21 Mobile Server Repository Configuration

5. Click "Yes" or "No" to indicate if you want the demo applications to be installed on the server. Click "Next", as shown in [Figure 3–22](#).

Figure 3–22 Mobile Server Demo Application Configuration

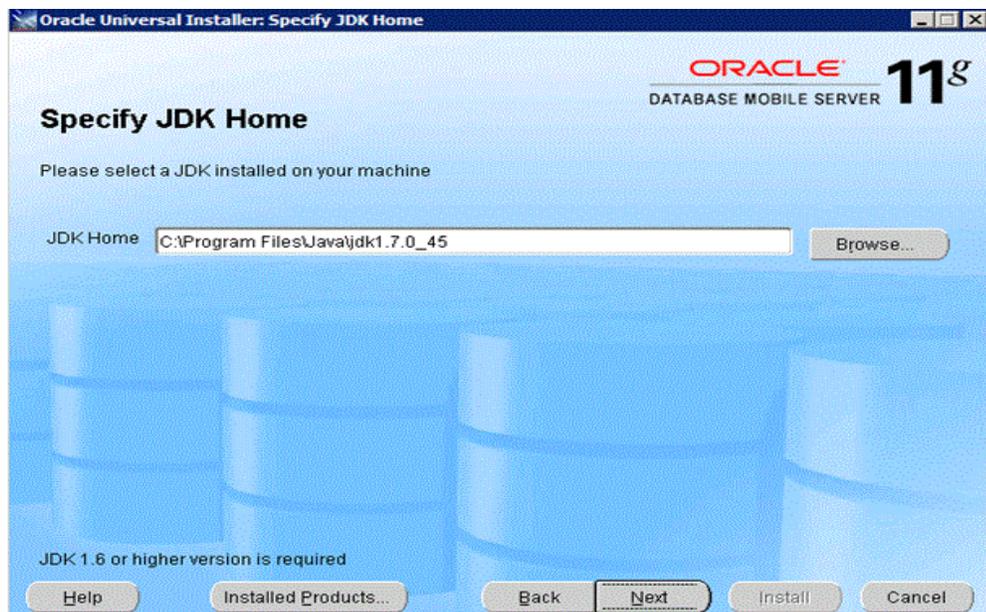
- On the "Specify Application Server Home" screen, select the installation directory of your application server. Set the Application Server Home to `C:\glassfish3\glassfish`, where `C:\glassfish3` is the base installation directory for Glassfish Server, as shown in [Figure 3-23](#).

Figure 3-23 Specify Application Server Home



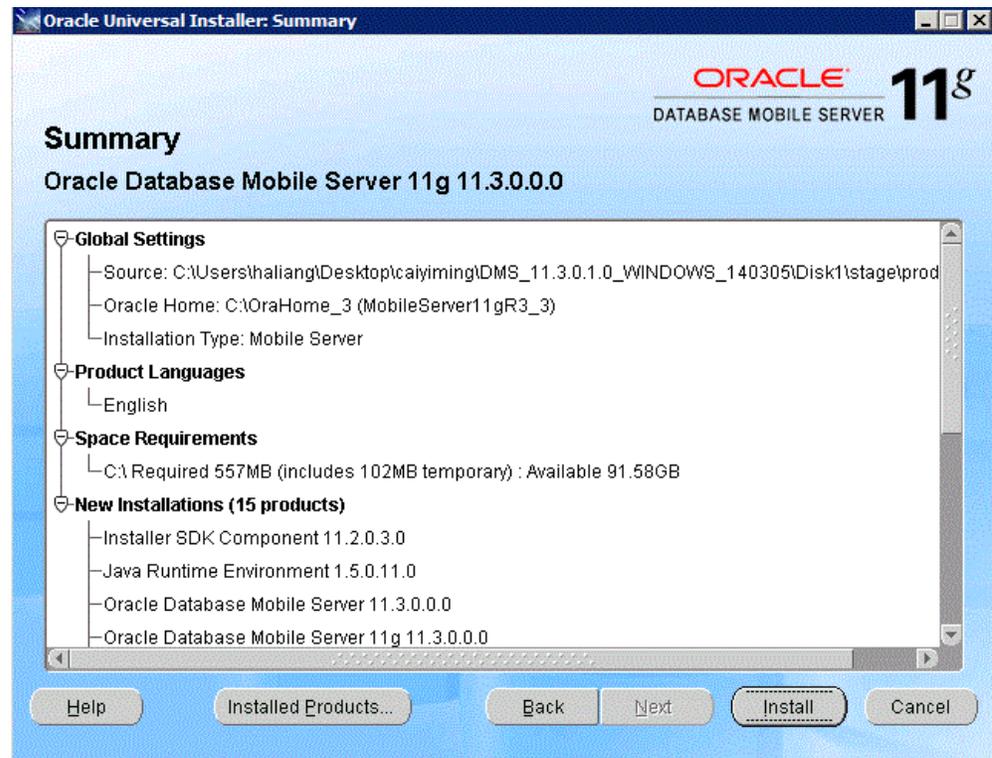
- On the "Specify JDK Home" screen, select a JDK installed on your machine, as shown in [Figure 3-24](#).

Figure 3-24 Specify JDK Home



8. On the "Summary" page, click "Install" to start the installation of Mobile Server, as shown in [Figure 3–25](#).

Figure 3–25 Installation of Mobile Server



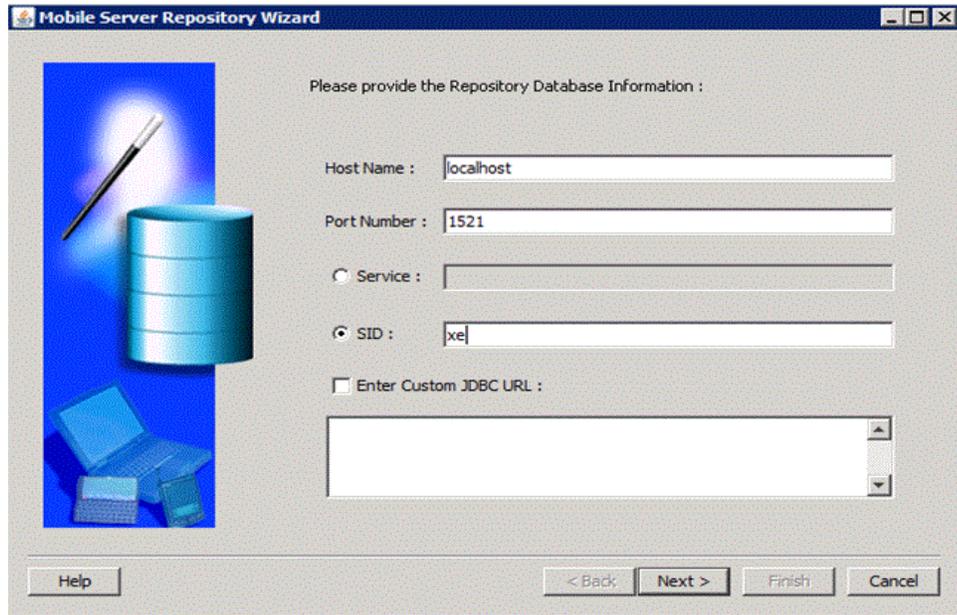
9. Provide the URL for the backend Oracle database for the Mobile Server repository, as shown in [Figure 3–26](#).

Host Name: localhost (the hostname/IP of machine where Oracle Database XE is installed)

Port Number: 1521

SID: xe

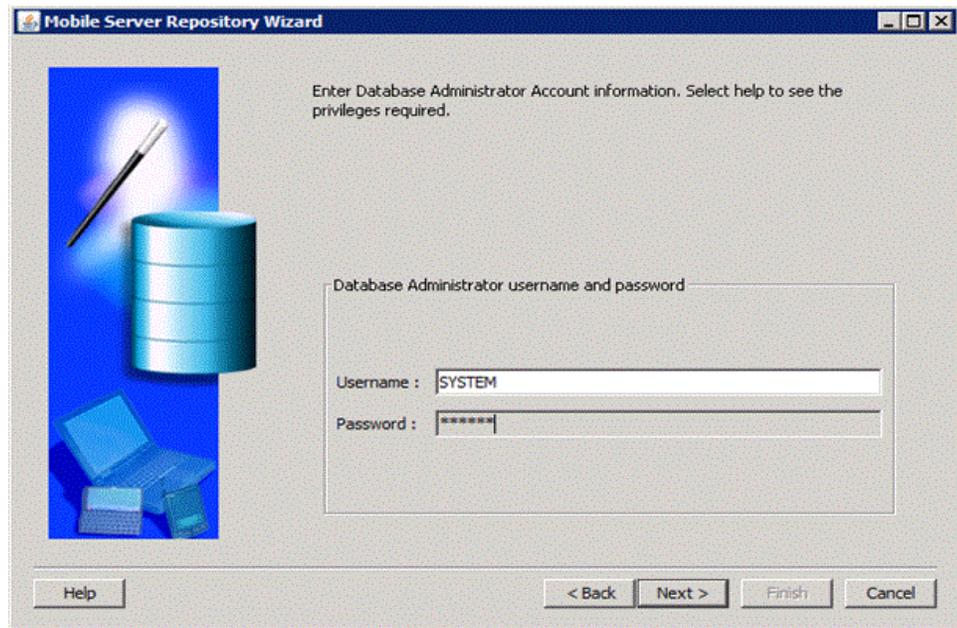
Figure 3–26 Provide Repository Database Information



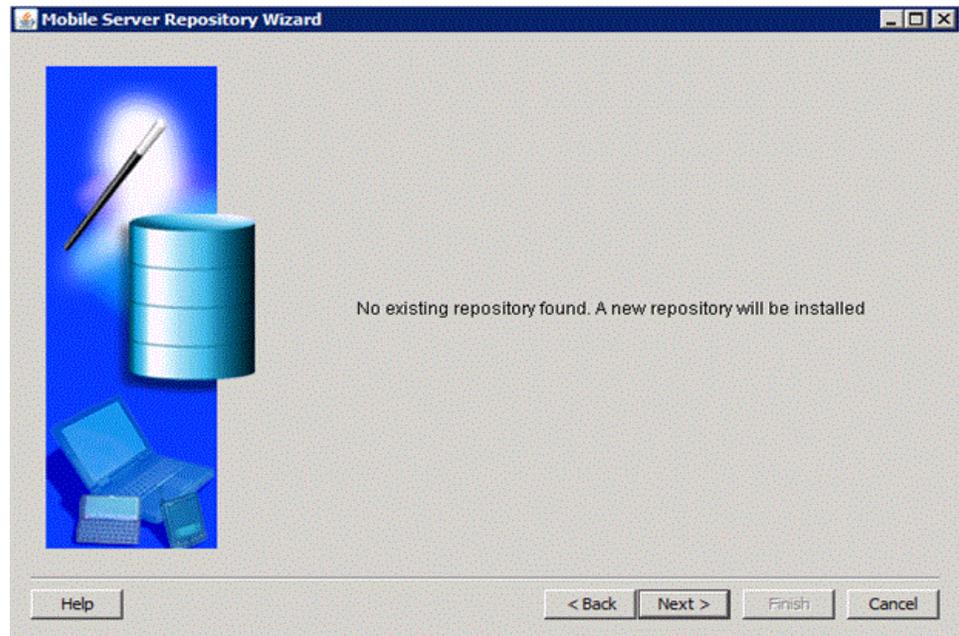
10. The Repository Wizard asks for a database user name and password. Use these details to connect to the backend database. Create the schema and assign database privileges for the Mobile Server schema.

Here we use user SYSTEM created during the installation of Oracle Database XE since it has database administrative privileges, as shown in [Figure 3–27](#).

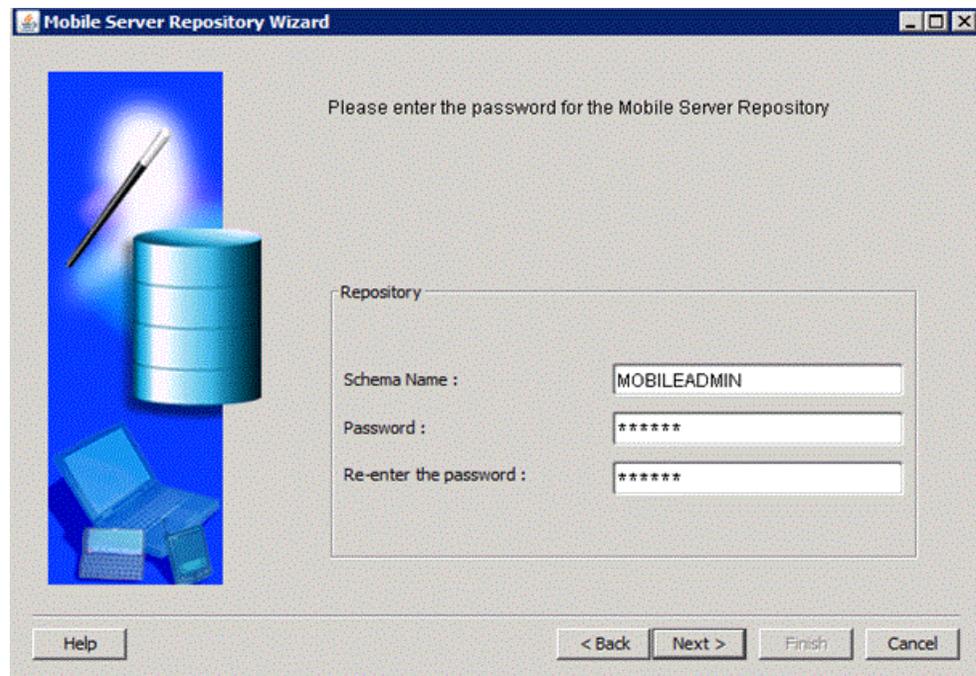
Figure 3–27 Specify Username/Password



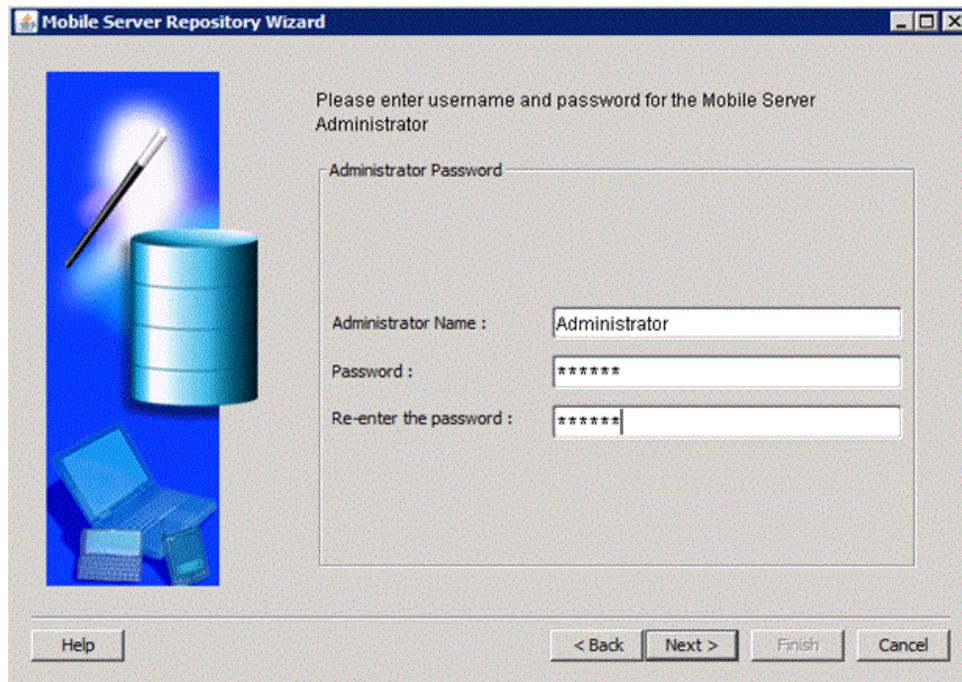
11. Since there is no existing DMS repository in our Oracle Database XE, click "Next" to install a new one, as shown in [Figure 3–28](#).

Figure 3–28 Create a New Repository

12. Enter the schema name and password for the Mobile Server repository. The default name is MOBILEADMIN. This schema contains database objects used by the Mobile Server. Click "Next". See [Figure 3–29](#).

Figure 3–29 Enter Password for Mobile Server Repository

13. Enter the Mobile Server Administrator name and password that you will use to log into the Mobile Manager - a web GUI tool which allows administration of the Mobile Server. See [Figure 3–30](#).

Figure 3–30 Mobile Server Administrator

14. When using the Repository Wizard, users can deploy the Mobile Server either on a new domain or on an existing domain under GlassFish. See [Figure 3–31](#). To deploy the Mobile Server on a new domain under GlassFish, follow the instructions below:
- a. Choose "Yes" for "Create a New Domain" for the Mobile Server option.
 - b. Specify a "Domain Name".
 - c. Specify an "Admin Username" for the Glassfish domain.
 - d. Specify an "Admin Port" for the Glassfish domain. Ensure the ports you specified are free at the time of deployment.
 - e. Specify a "Server Port" for the Glassfish domain. Ensure the ports you specified are free at the time of deployment.
 - f. Specify an "Admin Password" for the admin user.
 - g. Keep note of the values you entered, as they will be used in the consequent steps of the installation.

Note: A domain is comprised of a set of instances. Each domain behaves like a separate server. It is a separated space within its own boundary and you can create as many domains as you like.

For example, if you specify 'mobileserver' as the domain name and Glassfish is installed at C:\glassfish3\glassfish, then C:\glassfish3\glassfish\domains\mobileserver will be created and the domain configuration files will be stored in that directory.

Figure 3–31 Deploy Mobile Server on the Application Repository

Mobile Server Repository Wizard

Please provide information to deploy Mobile Server on your web application server

Deploy Mobile Server Yes No

Please specify properties for a new domain

Domain Name :

Admin Port :

Server Port :

Admin Username :

Admin Password :

Re-Enter Password :

Help < Back Next > Finish Cancel

15. The next page is summary page and 'End of Installation' page. Click "Exit" to finish installation. You have now installed the Database Mobile Server.
16. Run `C:\OraHome_3\Mobile\Server\bin\runmobileserver.bat` to start the server, where `C:\OraHome_3` is the Oracle Home. To verify your installation, open your browser, input `http://localhost:7002/mobile`. Check that the Mobile Manager login page is displayed, as shown in [Figure 3–32](#).

If DMS is not running, you will see an error page: "The webpage cannot be displayed or Unable to connect". Start the DMS and refresh the page.

Figure 3–32 Mobile Manager Login Page

ORACLE Database Mobile Server 11g

Mobile Manager

Home Setup File

Mobile Manager Login

* Username

* Password

Login

Home | Setup | File Sync | Startup | Help

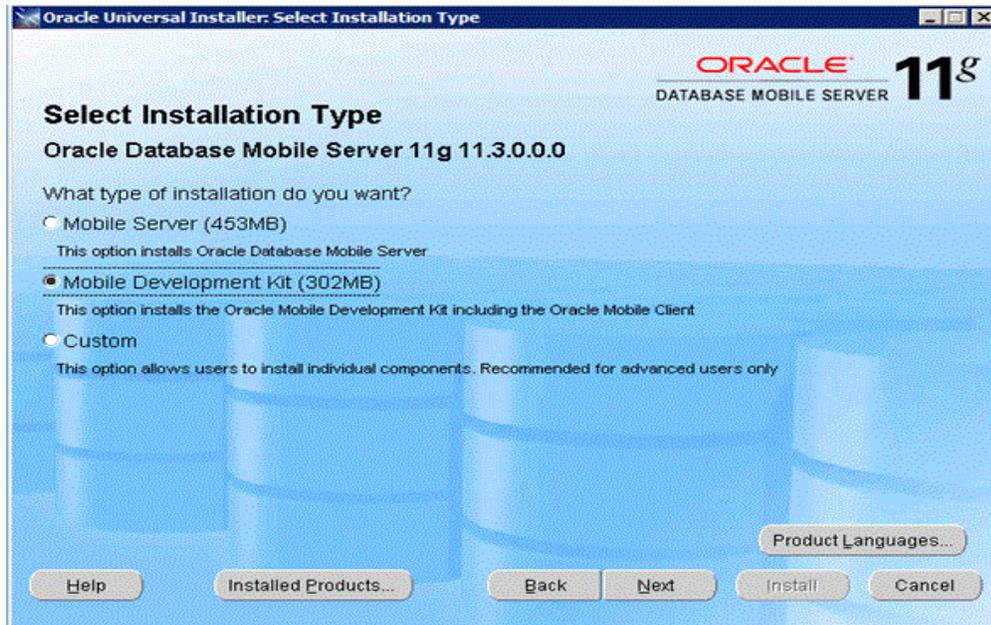
Copyright © 1997, 2013, Oracle. All rights reserved.

3.6 Installation of Mobile Development Kit (MDK)

To install MDK, follow the steps below:

1. Double click `<DMS_home>/\Disk1\install\win32\setup.exe` to start installation. If your CPU is 64bit, run `<DMS_home>/\Disk1\install\win64\setup.exe` instead, where DMS_home is the directory extracted from the ZIP package.
2. Choose the Mobile Development Kit and click "Next.", as seen in [Figure 3–33](#).

Figure 3–33 Select Mobile Development Kit

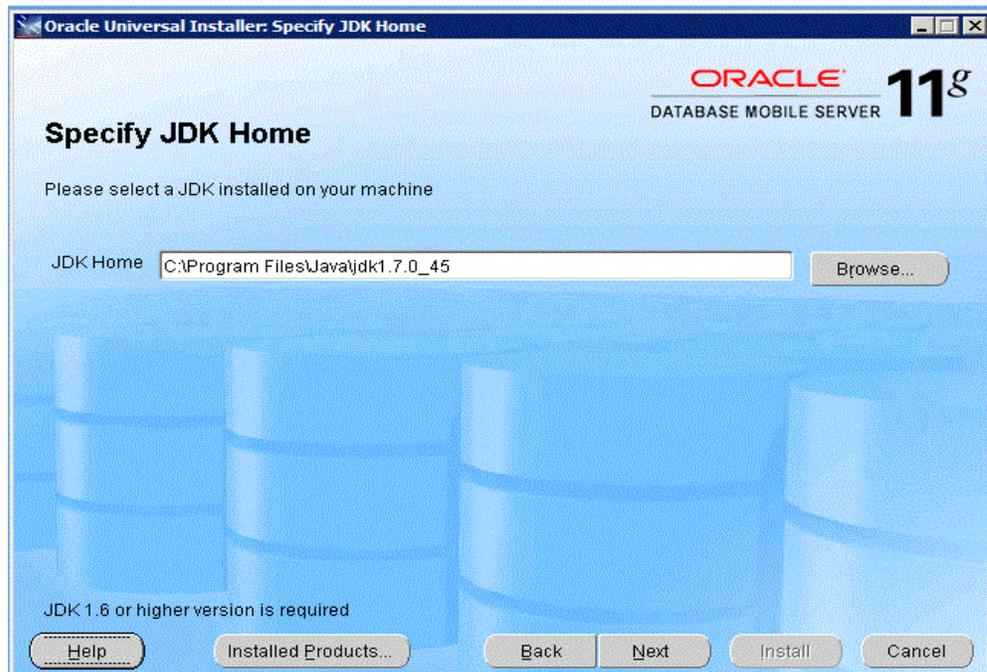


3. On the "Specify Home Details" screen, enter the name and path where you want to install Mobile Development Kit, as shown in [Figure 3–34](#).

Note: The path should not include any spaces.

Figure 3–34 Specify Home Details

4. On the 'Specify JDK Home' page, click 'Browse...' to select a JDK installed on your machine, as shown in [Figure 3–35](#).

Figure 3–35 Specify JDK Home

5. On the "Summary" screen, click "Install". Click "Exit" to return to the installation screen. MDK is now installed.

3.7 Transport Demo

Once DMS and MDK are installed, you are ready to move on to the next step - the Mobile Server synchronization and the application development and deployment models.

For more information, see your mobile client platform-specific version of the Transport demo tutorial included in the MDK:

Win32/WinCE: <ORACLE_HOME>\Mobile\Sdk\samples\dotnet\bdb\transport\doc\Transport Tutorial.doc

Note: Android and iOS tutorials are only included in the DMS version 11.3.0.1 and above.

- For Android: <ORACLE_HOME>\Mobile\Sdk\samples\android\ transport\Transport Tutorial.pdf
 - For iOS: <ORACLE_HOME>\Mobile\Sdk\samples\ios\ transport\Transport Tutorial.pdf
-
-

3.8 Summary

After going through all the installation instructions in this chapter, here are the key steps:

1. Download and install the required software (JDK, Oracle Database XE, Oracle Glassfish, and DMS).
2. Create the Application Schema and data in Oracle Database XE.
3. Create a Mobile Server publication for the application data using the MDW - a GUI publication tool included in the MDK.
4. Create the Transport Application for your device platform.
5. Publish the application using the Packaging Wizard.
6. Create mobile users using the Mobile Manager.
7. Grant user access to the application using the Mobile Manager - DMS online administrative console.
8. Setup and run the Transport Application on your mobile device.

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 Mobile Server on your operating system. The requirements for each type of operating system are detailed in the following sections:

- [Section 4.1, "Include the Latest Patches"](#)
- [Section 4.2, "Release Notes"](#)
- [Section 4.3, "Supported Components and Technologies"](#)
- [Section 4.4, "Installation Requirements for the Oracle Database and Application Server in Working With Oracle Database Mobile Server"](#)
- [Section 4.5, "Hardware Requirements for Mobile Server on Windows"](#)
- [Section 4.6, "System Requirements For UNIX Systems"](#)
- [Section 4.7, "Recommended System Configuration For UNIX"](#)
- [Section 4.8, "System Requirements for Mobile Clients"](#)
- [Section 4.9, "Setting Up Location of the Datafile on the Server"](#)
- [Section 4.10, "Defining Synchronization Tablespace"](#)

4.1 Include the Latest Patches

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

<http://metalink.oracle.com>

4.2 Release Notes

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

<http://www.oracle.com/technetwork/documentation/index.html>

4.3 Supported Components and Technologies

The following sections detail the supported components and technologies:

- [Section 4.3.1, "Certified Oracle RDBMS to Use With Oracle Database Mobile Server"](#)
- [Section 4.3.2, "JDK Platform Support"](#)
- [Section 4.3.3, "Certified Application Server Configurations"](#)
- [Section 4.3.4, "Certified Platforms and Technologies for the Mobile Server"](#)
- [Section 4.3.5, "Certified Platforms for the Mobile Development Kit"](#)
- [Section 4.3.6, "Certified Versions for OID Support"](#)
- [Section 4.3.7, "Certified Browsers"](#)

4.3.1 Certified Oracle RDBMS to Use With Oracle Database Mobile Server

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

4.3.2 JDK Platform Support

Different JDKs are supported for mobile client, Mobile Server and Mobile Development Kit. For all non Java mobile clients, use 32-bit Oracle JDK 1.6 or 1.7. For pure Java mobile client and Mobile Development Kit, use 32-bit Oracle JDK 1.6 or 1.7 on 32-bit platform, and 64-bit Oracle JDK 1.6 or 1.7 on 64-bit platform. For the mobile server, the JDK version required depends on what target platform you are going to run the mobile server and what version of the application server you are using. Refer to [Table 4–1](#) for detailed information.

Table 4–1 JDK Version Supported

Application Server Version Used	JDK Version Supported
Oracle WebLogic Suite 11g	JRockit JDK 1.6 or Oracle JDK 1.6 JBM J9 VM 1.7 for AIX HP-UX 11i JDK for HP-UX
Oracle WebLogic Suite 12c	JRockit JDK 1.6 update 29+ Oracle JDK 1.7 update 9 JBM J9 VM 1.7 for AIX HP-UX 11i JDK for HP-UX
Oracle GlassFish 3.1	Oracle JDK 1.7 JBM J9 VM 1.7 for AIX HP-UX 11i JDK for HP-UX
Oracle Application Server 10.1.3.5.0	Oracle JDK 1.6
Apache TomEE 1.5 Web Profile	Oracle JDK 1.6 HP-UX 11i JDK for HP-UX

Install JDK before installing the mobile server or Mobile Development Kit.

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 Oracle website.

If you have JDK 1.4.2 installed, upgrade to the right version of JDK 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 required version of JDK. After installation, verify that the JDK `bin` directory is in the system path.

The `JDK_HOME` environment variable must be set to the directory where the Java Development Kit has been installed. For more information on `JDK_HOME`, see [Section 4.7.1.2, "JDK_HOME and PATH"](#) for setting the `JAVA` environment variables on Linux.

4.3.3 Certified Application Server Configurations

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

- Oracle WebLogic Server 11g Release 1, Oracle WebLogic Server 12c
- Oracle GlassFish Server 3.1. For more information, see the following site:
<http://www.oracle.com/technetwork/middleware/glassfish/documentation/index.html>
- Oracle Application Server 10g (10.1.3.5.0 OC4J Container and Web Server)

Note: Depending on the platform, iAS is installed with either the Oracle Application Server 10g Release 3 package or from the Oracle SOA Suite 10g (10.1.3.1.0) package. In addition, certain platforms have unique patches that need to be applied. For more information, refer to the Oracle Application Server documentation. Failure to install iAS properly will prevent Database Mobile Server from working correctly.

- Apache TomEE 1.5 Web Profile

4.3.4 Certified Platforms and Technologies for the Mobile Server

You can install the mobile server on the following platforms:

- Microsoft Windows XP Professional Edition with Service Pack 3 (32-bit)
- Microsoft Windows 7 (32-bit and 64-bit)
- Microsoft Windows 2003 (64-bit)
- Microsoft Windows 2008 R2 (64-bit)
- Oracle Enterprise Linux 5.0, or 6.0 with or without Unbreakable Enterprise Kernel (32-bit and 64-bit)
- OpenSUSE 12 (64-bit)
- Ubuntu 11 (64-bit)
- Fedora 16 (64-bit)
- Solaris 10 (64-bit, SPARC) and Solaris 11 (64-bit, X86)
- AIX 6.1 (64-bit)
- Windows 8 (64 bit)
- HP-UX Itanium 11i v3 (64-bit)

4.3.5 Certified Platforms for the Mobile Development Kit

The Mobile Development Kit (MDK) is certified for Oracle JDK 1.6 and 1.7 and can be installed on the following platforms:

- Microsoft Windows 2003 (64-bit)
- Microsoft Windows 2008 R2 (64-bit)
- Microsoft Windows XP Professional Edition with Service Pack 3 (32-bit)
- Microsoft Windows 7 (32-bit and 64-bit)
- Oracle Enterprise Linux 5.0, or 6.0 containing Unbreakable Enterprise Kernel (32-bit and 64-bit)
- Ubuntu 11 (64-bit)

4.3.6 Certified Versions for OID Support

The following versions of OID are supported in conjunction with the mobile server:

- OID 10.1.4.
- OID 11.0

4.3.7 Certified Browsers

You can use any of the latest modern browsers.

4.4 Installation Requirements for the Oracle Database and Application Server in Working With Oracle Database Mobile Server

The following sections describe installation requirements for the Oracle Database and the application server you choose to use:

- [Section 4.4.1, "Installation Requirements for the Oracle Database for Working With a Mobile Client"](#)
- [Section 4.4.2, "Installation Requirements for Using an Application Server With Oracle Database Mobile Server"](#)

4.4.1 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 Mobile Server.

4.4.2 Installation Requirements for Using an Application Server With Oracle Database Mobile Server

Oracle Database Mobile Server uses a middle-tier application server to communicate between the mobile clients and the back-end Oracle database.

Install the appropriate application server before installing Oracle Database Mobile Server, which can be Oracle Application Server 10.1.3.5.0, Oracle WebLogic Server 11g, Oracle WebLogic Server 12c, Oracle GlassFish 3.1 or Apache TomEE 1.5.

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

The following sections provide additional information when installing certain application servers:

- [Installing Oracle WebLogic Server 12c Release 1](#)
- [Installing Oracle GlassFish Server Version 3.1](#)
- [Installing OracleAS Version 10.1.3.5.0](#)
- [Installing Apache TomEE 1.5 Web Profile](#)

4.4.2.1 Installing Oracle WebLogic Server 12c Release 1

Make sure that you install Oracle WebLogic before installing Oracle Database Mobile Server.

Oracle WebLogic Server 12c Release 1 uses some updated Java APIs which are included in its own distribution. You must prepare the related jar files after installation of JRockit 1.6 and Oracle WebLogic Server 12c.

Follow the steps below before you deploy Oracle Database Mobile Server 11g Release 2 in WebLogic Server 12c.

1. create directory structure of `$JAVA_HOME/jre/lib/endorsed`, where `JAVA_HOME` is the directory in which JRockit was installed.
2. copy `$WL_HOME/endorsed/*.jar` to `$JAVA_HOME/jre/lib/endorsed`.

Note: If you fail to do the above preparation, the deployment of Mobile Server will run into an "Exception thrown by startServer: java.lang.reflect.InvocationTargetException" error. These steps are only required by WebLogic Server 12c.

4.4.2.2 Installing Oracle GlassFish Server Version 3.1

Make sure that you install Oracle GlassFish server before installing Oracle Database Mobile Server.

4.4.2.3 Installing OracleAS Version 10.1.3.5.0

Install OracleAS before installing Oracle Database Mobile Server. When installing OracleAS, choose the Integrated Web and J2EE Server installation option.

In the OracleAS version 10.1.3.5.0 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 the functionality that you need. Do not select

any of the other options, as then your OracleAS installation will be missing the functionality that is necessary for Oracle Database Mobile Server.

After the installation of Oracle Application Server 10.1.3.5.0 and before the installation of Oracle Database Mobile Server, follow Doc (ID 444462.1) to upgrade the Oracle Application Server embedded JDK 1.5 to JDK 1.6. The embedded JDK can be found at <ORACLE_HOME>/jdk. This is the minimum JDK version Oracle Database Mobile Server requires. Post the installation of Oracle Database Mobile Server, refer to Doc (ID 420303.1) to use the latest thin JDBC Driver with Oracle Database Mobile Server. Restart the Oracle Application Server before you start using the Oracle Database Mobile Server.

Find the related document from Oracle Internal Support website (<https://support.oracle.com> - Knowledge - Search by Doc ID).

4.4.2.4 Installing Apache TomEE 1.5 Web Profile

Make sure that you install Apache TomEE 1.5 web profile before installing Oracle Database Mobile Server.

4.5 Hardware Requirements for Mobile Server on Windows

Before you install the mobile server, you must check to see that you have the correct hardware necessary for your Windows machines that use Oracle Database Mobile Server.

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

Table 4–2 Hardware Requirements for Windows

Component	Hardware Requirements for this Component
Oracle Database Mobile Server	CPU: Pentium 4, 3 GHz Disk Space: 1 GB RAM: 1 GB Swap Space: 1535 MB
Oracle Database Mobile Server using OracleAS	See the OracleAS documentation for the OC4J container requirements. Swap Space: 1535 MB
Oracle Database Mobile Server using Oracle WebLogic Server	See the "Oracle Fusion Middleware System Requirements and Specifications" document for the specific release version in the Oracle Fusion Middleware documentation.
Oracle Database Mobile Server using Oracle GlassFish Server	See the "Hardware and Software Requirements in Oracle GlassFish Server 3.1 Release Notes" document in the Oracle Fusion Middleware documentation.
Mobile Development Kit	CPU: Pentium 4, 3 GHz 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.

4.6 System Requirements For UNIX Systems

Before you install, you must check to see that you have the correct hardware and software that satisfy the minimum and general system requirements for the Web server on the UNIX machines that use Oracle Database Mobile Server. See the Web server documentation for these requirements.

4.7 Recommended System Configuration For UNIX

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

- [Section 4.7.1, "Setting UNIX Environment Variables"](#)
- [Section 4.7.2, "Pre-Install Requirements Before Installing the MDK on LINUX"](#)
- [Section 4.7.3, "Creating UNIX Accounts and Groups"](#)
- [Section 4.7.4, "Configuring Kernel Parameters and Shell Limits for UNIX"](#)

4.7.1 Setting UNIX Environment Variables

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

- [Section 4.7.1.1, "ORACLE_HOME and MOBILE_HOME"](#)
- [Section 4.7.1.2, "JDK_HOME and PATH"](#)
- [Section 4.7.1.3, "DISPLAY"](#)
- [Section 4.7.1.4, "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 4-3](#) for the name of the library path environment variable for your platform.

[Table 4-3](#) lists the names of the library path environment variables for each platform.

Table 4-3 Library Path Environment Variable

Platform	Library Path Environment Variable
Linux	LD_LIBRARY_PATH
Solaris	LD_LIBRARY_PATH
AIX	LIBPATH

4.7.1.1 ORACLE_HOME and MOBILE_HOME

The Oracle home directory is the `root` directory in which Oracle software is installed. For Oracle Database Mobile Server, you can also use `MOBILE_HOME` environment variable to specify the root directory in which you want to install Mobile Server or Mobile Development Kit. 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 Mobile Server. 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.

4.7.1.2 JDK_HOME and PATH

The Linux, Solaris, AIX and HP-UX platforms require the *JDK_HOME* environment variable be set to the directory where the Java Development Kit has been installed. If the JDK has not been installed, install it before proceeding with the installation. For the appropriate JDK version, see [Section 4.3.2, "JDK Platform Support"](#).

Before installation of a Linux/Solaris/AIX/HP-UX mobile server and the Linux MDK, set *JDK_HOME* to the JDK home directory. [Table 4–4](#) provides examples for the location where the JDK could be installed on the system.

Table 4–4 *JDK_HOME Environment Variables*

Platform	Sample <i>JDK_HOME</i> Environment Variable
Linux	/opt/java1.6
AIX	/usr/java7_64

Initialize the *JDK_HOME* and *PATH* environment variables, as follows:

```
export JDK_HOME=/path/to/jdk
export PATH=$JDK_HOME/bin:$ORACLE_HOME/bin:$PATH
```

4.7.1.3 DISPLAY

Set the *DISPLAY* environment variable to refer to the X Server that will display the installer and Oracle Database Mobile Server. 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
```

Oracle Database Mobile Server 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://www.oracle.com/technetwork/documentation/index.html>) for further information about obtaining and installing XVFB or other virtual frame buffer solutions. Search OTN for "frame buffer".

4.7.1.3.1 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>

4.7.1.4 TMP and TMPDIR

During installation, Oracle Universal Installer uses a temporary directory for swap space. This directory must meet the requirements listed in [Section 4.6, "System Requirements For UNIX Systems"](#) before installing Oracle Database Mobile Server. 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>

4.7.2 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, set the following environment variables:

Table 4–5 Linux Environment Variable

Linux Environment Variable	Description
JDK_HOME	Point to the JDK installation directory
ORACLE_HOME	ORACLE_HOME point to the root folder of the Mobile Development Kit installation

4.7.3 Creating UNIX Accounts and Groups

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

- [Section 4.7.3.1, "UNIX Group Name For the Oracle Universal Installer Inventory"](#)
- [Section 4.7.3.2, "UNIX Account to Own Oracle Software"](#)

4.7.3.1 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.

4.7.3.2 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 4–6](#).

Table 4–6 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.

4.7.4 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 4.7.4.1, "Configuring Shell Limits and System Configuration Parameters on AIX"](#)
- [Section 4.7.4.2, "Configuring Kernel Parameters on HP-UX"](#)
- [Section 4.7.4.3, "Configuring the Kernel Parameters on Linux"](#)
- [Section 4.7.4.4, "Set Shell Limits for the User oracle"](#)

4.7.4.1 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.

4.7.4.1.1 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 4-7 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.

4.7.4.1.2 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
```

4.7.4.2 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 4-8 Kernel Parameters for HP-UX

Parameter	Recommended Formula or Value
<code>nfile</code>	3000
<code>nproc</code>	2048

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

1. 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
```

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

4.7.4.3 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 4–9 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:

1. 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
```

4.7.4.4 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 4–10 Shell Limits for Linux Systems

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

To increase the shell limits, do the following:

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


```
* -> -> soft -> nproc -> -> 2047
* -> -> hard -> nproc -> -> 16384
* -> -> soft -> nofile -> -> 2047
* -> -> hard -> nofile -> -> 16384
```
2. Add the following line to the `/etc/pam.d/login` file, if it does not already exist:


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

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

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

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

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

```
if ( $USER == "oracle" ) then
  limit maxproc 16384
  limit descriptors 16384
endif
```

4.8 System Requirements for Mobile Clients

The system requirements for either mobile client—Berkeley DB or SQLite—are covered in the *Oracle Database Mobile Server Mobile Client Guide*.

4.9 Setting Up Location of the Datafile on the Server

If you do not want to have the datafile for your Oracle Database Mobile Server 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 Mobile Server. Refer to your database administration guide for information on how to modify the `db_create_file_dest` parameter.

4.10 Defining Synchronization Tablespace

By default, the synchronization tablespace is `SYNCSEVER`, 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 more information on how to alter the synchronization tablespace, see Section 1.2.6, "Synchronization Tablespace Layout" in the *Oracle Database Mobile Server Troubleshooting and Tuning Guide*.

Installation of Oracle Database Mobile Server

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

- [Section 5.1, "Oracle Database Mobile Server Installation Considerations"](#)
- [Section 5.2, "Starting Oracle Universal Installer"](#)
- [Section 5.3, "Installing Oracle Database Mobile Server"](#)
- [Section 5.4, "Post-Installation Configuration Requirements"](#)
- [Section 5.5, "Starting and Stopping Mobile Server"](#)
- [Section 5.6, "Testing Your Mobile Server Installation"](#)
- [Section 5.7, "Removing Demo Applications"](#)
- [Section 5.8, "How to Uninstall Oracle Database Mobile Server"](#)

5.1 Oracle Database Mobile Server Installation Considerations

Note the following issues before you start your installation:

- [Section 5.1.1, "Installing Multiple Languages on a Single Solaris Machine"](#)
- [Section 5.1.2, "National Language Support for Chinese, Japanese, and Korean \(CJK\)"](#)
- [Section 5.1.3, "Mobile Server on a DHCP Server is Not Supported"](#)
- [Section 5.1.4, "Installing Mobile Server Using Multiple Languages"](#)

5.1.1 Installing Multiple Languages on a Single Solaris Machine

With Oracle Database Mobile Server 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.

5.1.2 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.

5.1.3 Mobile Server on a DHCP Server is Not Supported

The Oracle Database 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.

5.1.4 Installing Mobile Server Using Multiple Languages

The Oracle Database Mobile Server can be installed with different character sets. It is important to ensure that the Mobile Server and back-end Oracle database character sets are compatible. Failure to do this will result in unreadable content in the Mobile Manager.

5.2 Starting Oracle Universal Installer

Oracle Database Mobile Server 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 Mobile Server
- 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 Mobile Server
- Deinstalls products

The Oracle Universal Installer automatically checks your computer prior to installation to verify that your system meets operational requirements. [Table 5–1](#) lists the prerequisite checks that are performed.

Table 5–1 Oracle Universal Installer Automatic Prerequisite Checks

Prerequisite Checks	See Also
Check for enough disk space for installation	Section 4.7, "Recommended System Configuration For UNIX"
On UNIX systems, checks for <code>TMP</code> and <code>TMPDIR</code> variable and sufficient swap space	Section 4.7, "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 5.2.1, "Starting the Oracle Universal Installer on Windows"](#)
- [Section 5.2.2, "Starting Oracle Universal Installer on UNIX"](#)

5.2.1 Starting the Oracle Universal Installer on Windows

Follow the steps below:

- Log on as a member of the Administrators group for the computer on which you want to install Oracle Database Mobile Server.
- Insert the CD-ROM labeled Oracle Database Mobile Server.
- Execute `Disk1/install/win32/setup.exe` for Windows 32bit system or `Disk1/install/win64/setup.exe` for Windows 64bit system.

- The "Welcome" screen appears.

5.2.2 Starting Oracle Universal Installer on UNIX

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

1. Insert the CD into the CD-ROM drive. Mount the installation CD-ROM.
2. 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 commands:

```
On Linux 32bit system, prompt> mount_point/Disk1/install/linux/runInstaller
On Linux 64bit system, prompt> mount_
point/Disk1/install/linux64/runInstaller
On Solaris SPARC system, prompt> mount_
point/Disk1/install/solaris/runInstaller
On Solaris Intel system, prompt> mount_
point/Disk1/install/intelsolaris/runInstaller
On AIX system, prompt> mount_point/Disk1/install/aix/runInstaller
On HP-UX Itanium system, prompt> mount_
point/Disk1/install/hpia64/runInstaller
```

This launches Oracle Universal Installer, which installs Oracle Database Mobile Server.

5.2.2.1 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 5-2](#) for the location of the `oraInst.loc` file for your system.

The latest installation log file is stored in:

```
/your_base_directory/oraInventory/logs/installActionstodays_date_time.log
```

The `your_base_directory` identifier is the location for your installation files and `todays_date_time` is the date and time of installation. Log file names of previous installation sessions take the form `installActionstodays_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.

5.2.2.2 Location of Files on UNIX

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

Table 5–2 File Locations for Each Platform

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

5.3 Installing Oracle Database Mobile Server

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

- [Section 5.3.1, "GUI Install of the Mobile Server and MDK Components"](#)
- [Section 5.3.2, "Silent Install of Mobile Server and MDK Components"](#)
- [Section 5.3.3, "Providing High Availability with a Farm of Multiple Mobile Servers"](#)
- [Section 5.3.4, "Install Oracle Database Mobile Server on Linux"](#)
- [Section 5.3.5, "Mobile Client Install"](#)
- [Section 5.3.6, "Custom Install"](#)

5.3.1 GUI Install of the Mobile Server and MDK Components

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

1. On the Welcome screen, click **Next**.
2. 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 Mobile Server. The custom option is for advanced users only. Each of these Install options is discussed in the following sections:

- [Section 5.3.1.1, "Installation of the Mobile Server"](#)
- [Section 5.3.1.2, "Installation of Mobile Development Kit"](#)

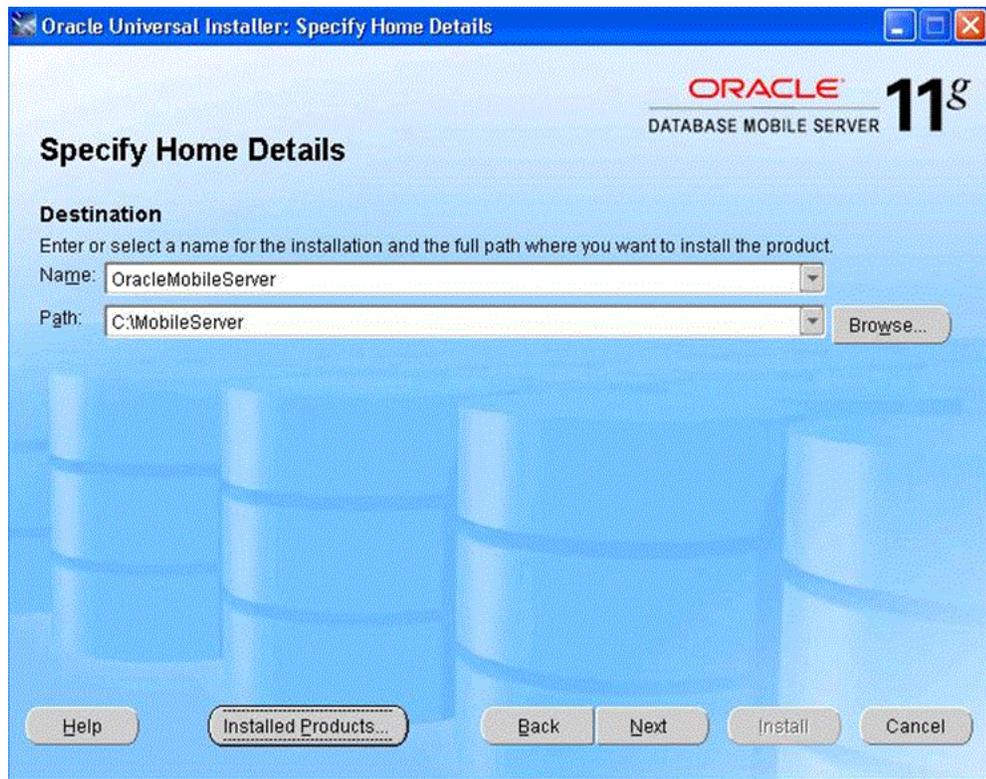
5.3.1.1 Installation of the Mobile Server

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

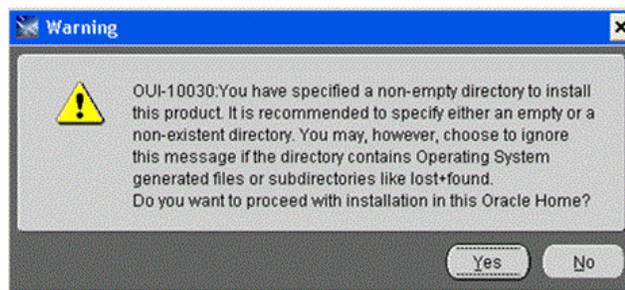
1. Choose **Mobile Server** and click **Next** (see, [Figure 5–1](#)).

Figure 5–1 Select Mobile Server

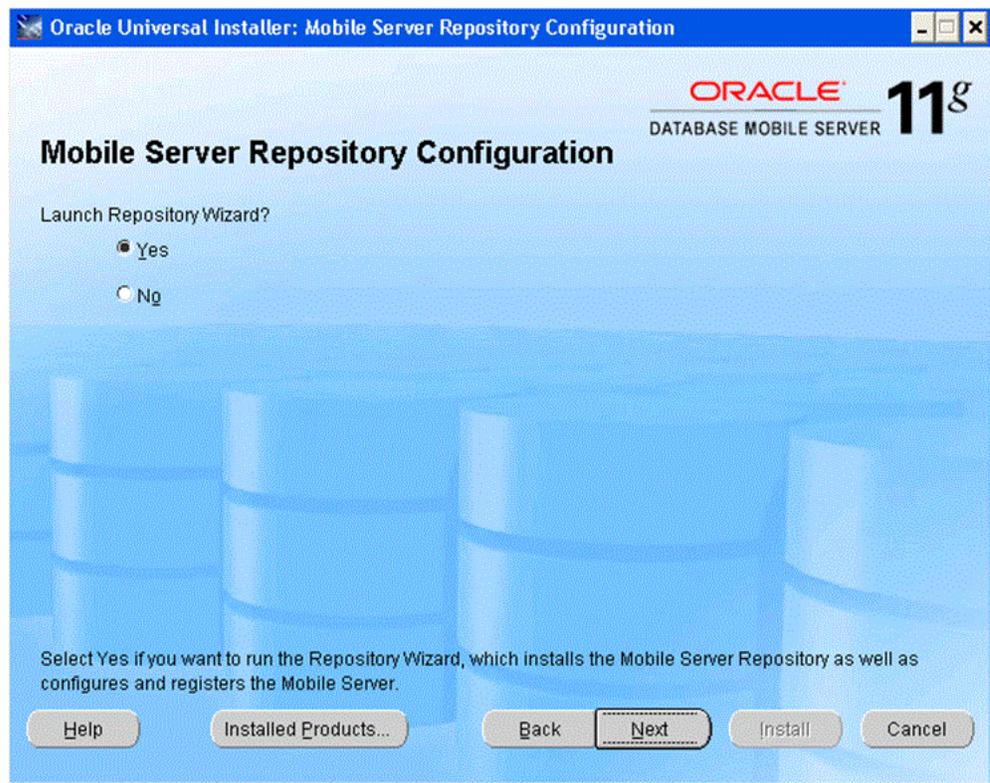
2. On the "Specify Home" screen, as seen in [Figure 5–2](#), enter the name for your mobile server installation, and path where you want to install Oracle Database Mobile Server, both fields cannot include any spaces. The path you specified is known as Oracle Home.

Figure 5–2 Specify Home Details

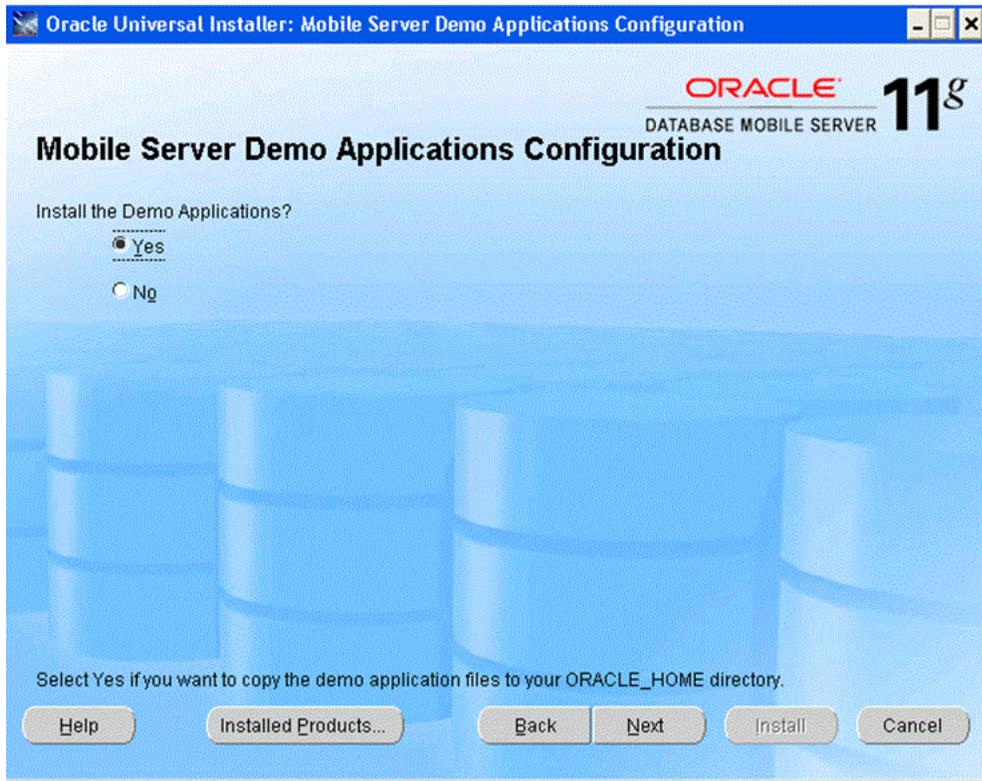
3. We recommend you choose an empty directory to install Mobile Server. If the installation location you specified is not empty, you will get the warning as shown in [Figure 5–3](#), you can ignore this warning.

Figure 5–3 OUI Check

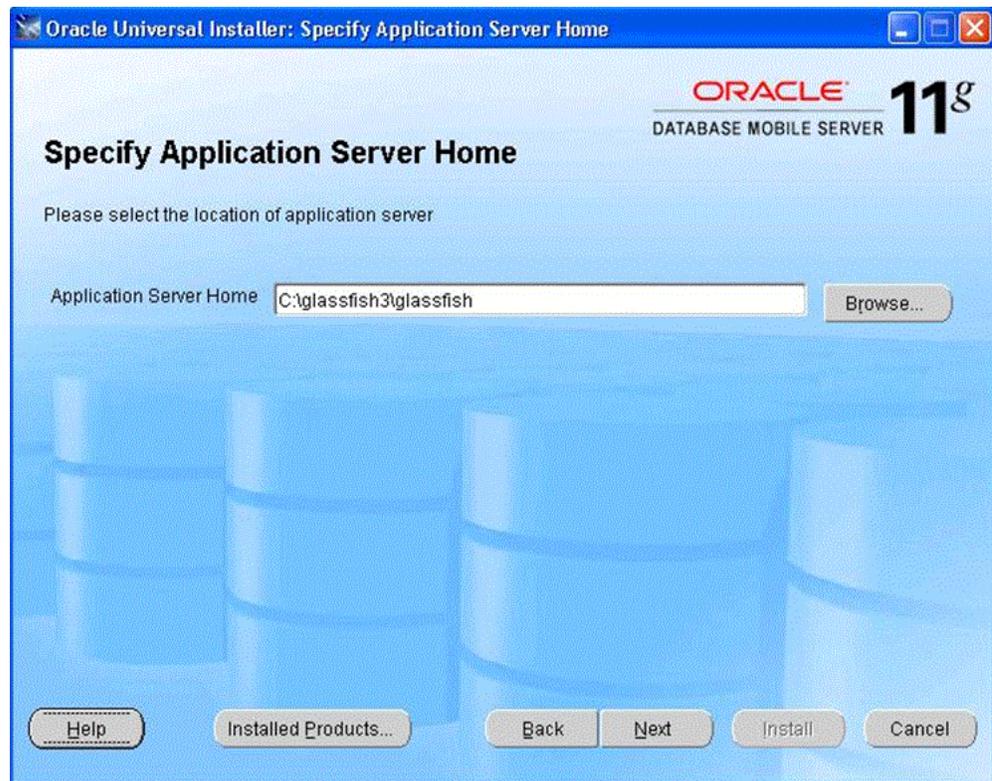
4. Click **Yes** to install the mobile server repository. For this option, always click **Yes** to install the repository—even if one has already been created. If you are installing a mobile server on another host that shares an existing repository, selecting **yes** updates the repository with the shared mobile server information. You only select **No** if instructed to for a certain environment. Click **Next**.

Figure 5-4 Mobile Server Repository Configuration

5. Click **Yes** or **No** indicating if you want the demo applications installed on the server. Click **Next**.

Figure 5-5 Mobile Server Demo Application Configuration

6. On the "Specify Application Server Home" screen, select the installation directory of your application server.
 - If you choose WebLogic as application server, specify WL_HOME as Application Server Home, where WL_HOME is the top-level installation directory for WebLogic Server.
 - If you choose GlassFish as application server, specify **as-install** as Application Server Home, where **as-install** is the base installation directory for GlassFish Server.
 - If you choose TomEE as application server, specify CATALINA_HOME as Application Server Home, where CATALINA_HOME is the installation directory of TomEE Server.
 - If you choose Oracle Application Server as application server, specify **as-install** as the Application Server Home, where **as-install** is the base installation directory for the Oracle Application Server.

Figure 5–6 Specify Application Server Home

7. On the "Specify JDK Home" screen, select a JDK installed on your machine. For more information, refer to [Section 4.3.2, "JDK Platform Support"](#). If your application server is WebLogic server, choose the same JDK you use for the WebLogic server. The JDK should be the version as described in [Table 4-1](#), otherwise, Mobile server will use the JDK for your WebLogic server, and not the one you specify in this screen.

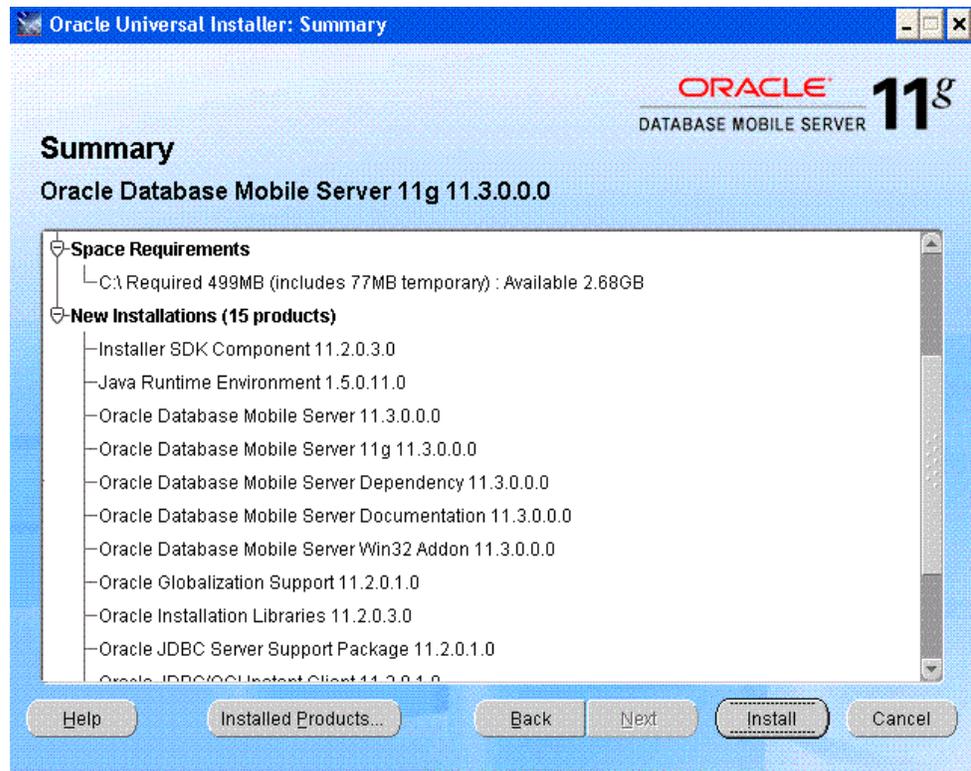
Figure 5-7 Specify JDK Home



8. 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.

Figure 5–8 Installation of Mobile Server



9. 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. This is shown in [Figure 5–9](#)
 - 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 5–10](#).

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 5–9 Provide Repository Database Information

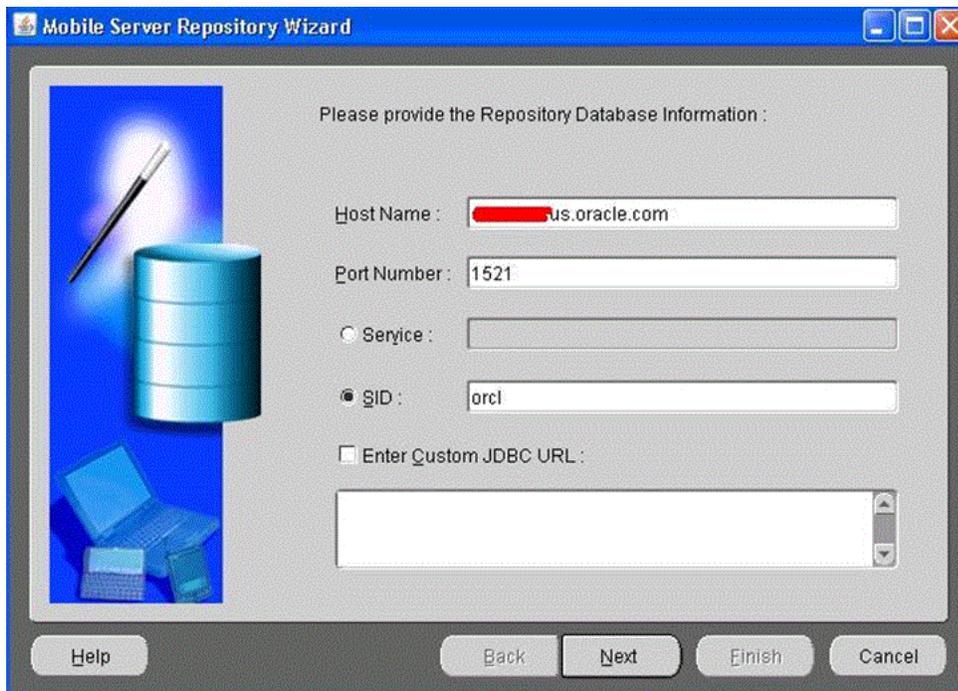
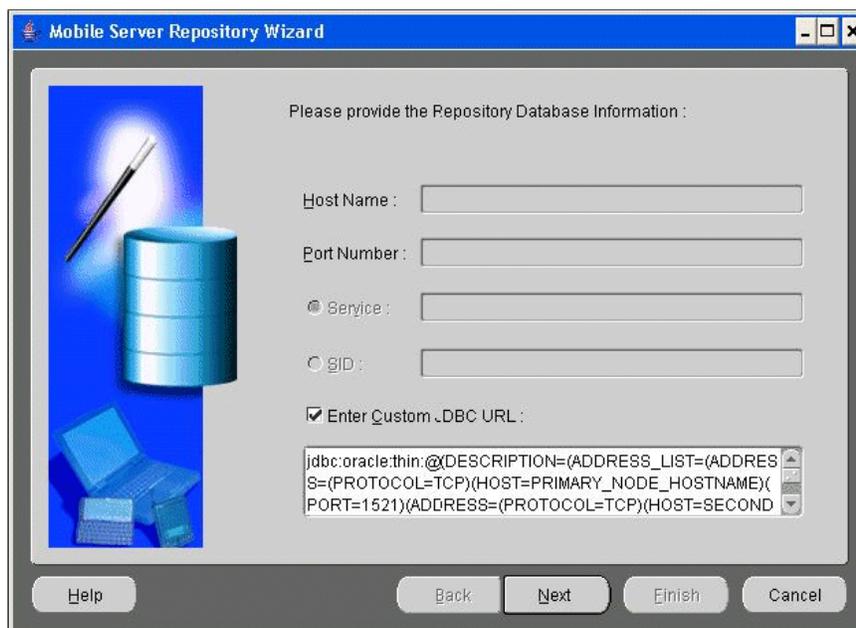


Figure 5–10 Enter JDBC URL for Back-End Database in Repository Wizard



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:

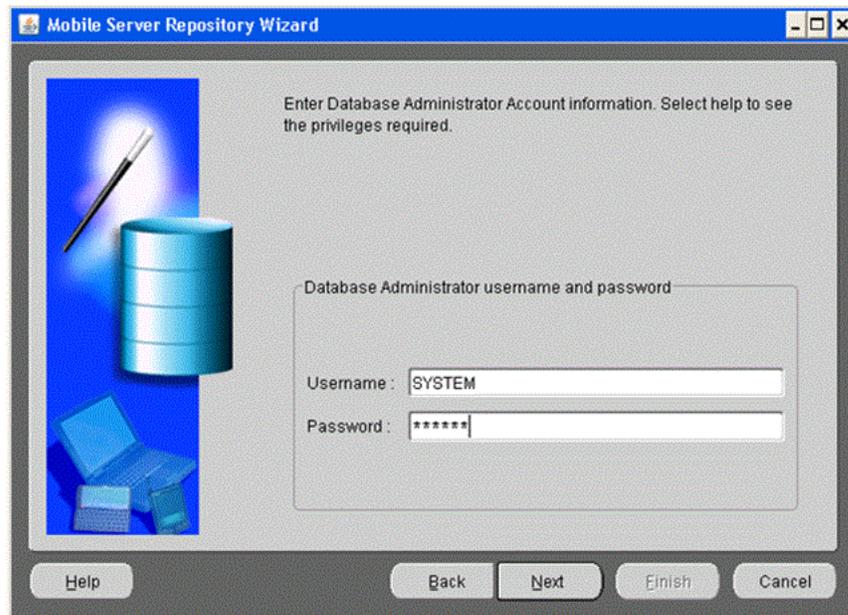
```
select instance_name from v$instance;
```

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

Click **Next**.

10. 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.

Figure 5–11 Specify Username/Password



When the mobile server accesses the repository, it uses the repository **user name/password**. This defaults to the user `MOBILEADMIN` and the password is set during install.

Before you provide the **user name**, 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 3.7, "Set DBA or Operational Privileges for the Mobile Server" in the *Oracle Database Mobile Server Developer's Guide*.

Click **Next**.

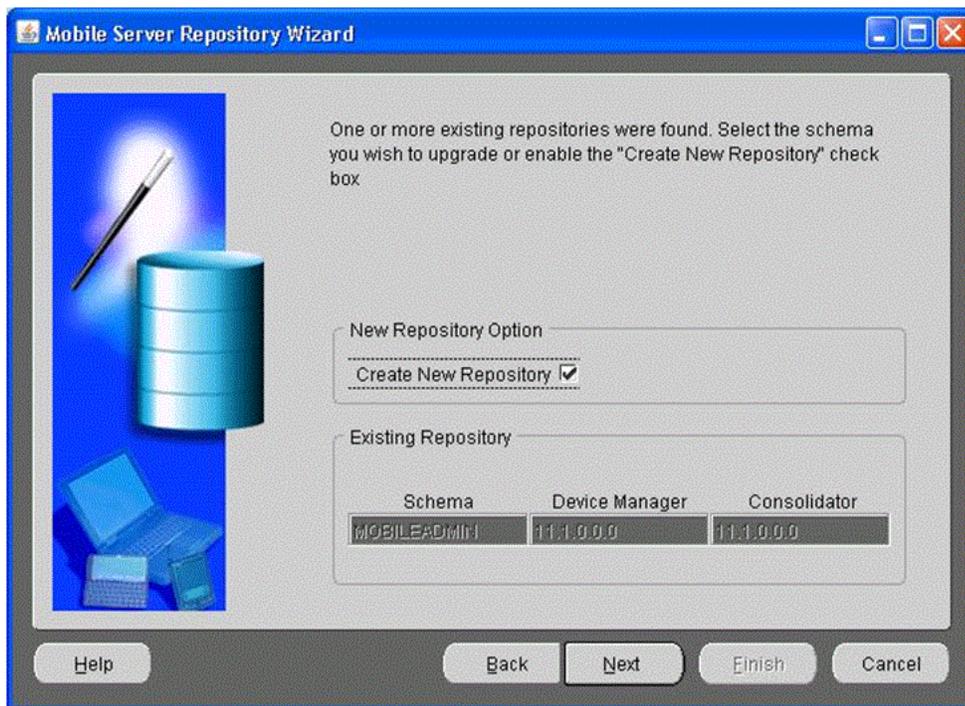
11. If this is a new repository, the following message is displayed:

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

Otherwise, the following message is displayed (shown in [Figure 5-12](#)):

One or more existing repositories were found. Select the schema you wish to upgrade or enable the "Create New Repository" check box.

Figure 5-12 Create a New Repository or Upgrade an Existing Repository



Click **Next**.

12. Enter the **user name** and **password** for the mobile server repository. The default name is MOBILEADMIN. This schema contains all database objects used by the mobile server. Also, check whether you want to install sample applications or not. Click **Next**.

Note: If you choose to install the samples, then the following mobile server user accounts will be created: S11U1, JOHN, JANE, JACK, and JUNE.

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.

Figure 5–13 Enter Password for Mobile Server Repository

13. Enter the **mobile server user name and password** that you will use to log into the Mobile Manager.

Figure 5–14 Mobile Server Administrator

14. Enter the **Schema Name and Password** (in "**Samples Schema Name and Password**" panel) 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 user name and password before access is provided to the user data. Enter the **Password** for the sample users in "**Samples Clients Password**" panel.

Note: If you choose to install the samples, then the following Mobile Server user accounts will be created: S11U1, JOHN, JANE, JACK, and JUNE. The password of the users is the one you specified in "Samples Clients Password".

Figure 5–15 Enter Username and Password for the Demo Schema

15. Complete the required information to deploy the Mobile Server on a WebLogic, GlassFish or TomEE Server in the **Deploy Mobile Server** page of the **Mobile Server Repository Wizard**.

To deploy the Mobile Server on a WebLogic Server or GlassFish Server in a new domain, follow the instructions below:

- Choose **Yes** for **Create a New Domain for the Mobile Server** option.
- Specify a **Domain Name** for the new domain.
- Select **Administration Server** (in **Server Type**) if deploying the Mobile Server on a WebLogic Administration Server, or select **Managed Server** if deploying the Mobile Server on a WebLogic Managed Server. The "**Server Type**" is only required if you are deploying the Mobile Server on a WebLogic Server.
- Specify a name for the WebLogic Managed Server in **Managed Server Name**. The "**Managed Server Name**" is only required if you are deploying the Mobile Server on a WebLogic Managed Server.
- In **Admin Port**:
 - Specify an "**Administrative Server**" port for WebLogic. This is required for both - that is, if you are deploying the Mobile Server on a WebLogic Administration Server or on a Managed Server.
 - Specify an "**Administration Port**" for GlassFish.

Ensure the port you specified is available.
- In **Server Port**:

- Specify a "**Managed Server**" port for WebLogic. The "**Server Port**" is only required if you are deploying the Mobile Server on a WebLogic Managed Server.
- Specify a "**Server Port**" for GlassFish.

Ensure the port you specified is available.

- Specify a name for the domain administrator in **Admin Username**. If you are deploying the Mobile Server on a WebLogic Server, the administrator name is set to **weblogic**.
- Specify a password for the domain administrator in **Admin Password**. The WebLogic Server requires that the password is at least eight characters in length and contains at least one non-alphabetic character; otherwise, you will receive the following error: "*The value for Admin Password is not valid.*"

Note: The WebLogic domain directory is created by default as %APP_SERVER_HOME%\..\user_projects\domains\%Domain Name%; the GlassFish domain directory is created as % APP_SERVER_HOME%\domains\%Domain Name%. For example:

If WebLogic is installed at C:\Oracle\Middleware\wlserver_10.3, and you specify 'mobileserver' as the new domain name, then C:\Oracle\Middleware\user_projects\domains\mobileserver will be created and domain configuration files are stored at that directory.

If GlassFish is installed at C:\glassfish3\glassfish, and you specify 'mobileserver' as the new domain name, then C:\glassfish3\glassfish\domains\mobileserver will be created and domain configuration files are stored at that directory.

Figure 5–16 Deploy the Mobile Server on a New WebLogic Server Domain

Mobile Server Repository Wizard

Please provide information to deploy Mobile Server on your web application server

Deploy Mobile Server

Create a new domain for Mobile Server? Yes No

Please specify properties for a new domain

Domain Name :

Server Type : Administration Server Managed Server

Managed Server Name :

Admin Port :

Server Port :

Admin Username :

Admin Password :

Re-Enter Password :

Help < Back Next > Finish Cancel

Figure 5–17 Deploy the Mobile Server on a New GlassFish Server Domain

Mobile Server Repository Wizard

Please provide information to deploy Mobile Server on your web application server

Deploy Mobile Server

Create a new domain for Mobile Server? Yes No

Please specify properties for a new domain

Domain Name :

Admin Port :

Server Port :

Admin Username :

Admin Password :

Re-Enter Password :

Help < Back Next > Finish Cancel

To deploy the mobile server on **an existing domain under WebLogic and GlassFish**, follow the instructions:

- Choose **No** for the **Create a new domain for the Mobile Server** option.
- Specify a name for the existing domain in **Domain Name**. The "**Domain Name**" is only required if you are deploying the Mobile Server on a GlassFish Server.
- Specify the **Domain Directory** for the existing domain.

Note: For WebLogic, set the domain directory to the folder where your domain configuration files are stored; for GlassFish, set the domain directory to the parent of the folder where your domain configuration files are stored. For example:

If you want to deploy mobile server on an existing WebLogic domain called 'msDomain', and the domain configuration files are stored at C:\Oracle\Middleware\user_projects\domains\msDomain, then you should specify 'C:\Oracle\Middleware\user_projects\domains\msDomain' as the Domain Directory.

If you want to deploy mobile server on an existing GlassFish domain called 'msDomain', and the domain configuration files are stored at C:\glassfish3\glassfish\domains\msDomain, then you should specify 'C:\glassfish3\glassfish\domains' as the Domain Directory.

- Select **Administration Server** (in **Server Type**) if you are deploying the Mobile Server on a WebLogic Administration Server, or select **Managed Server** if you are deploying the Mobile Server on a WebLogic Managed Server. The "**Server Type**" is only required if deploying the Mobile Server on a WebLogic Server.

- Specify the administration port (in **Admin Port**) of the existing GlassFish Server domain. The "**Admin Port**" is only required if you are deploying the Mobile Server on a GlassFish Server.
- Specify the **Server Port** of the existing GlassFish Server domain. The "**Server Port**" is only required if you are deploying the Mobile Server on a GlassFish Server.
- In **Admin Username**, specify the administrator name of the existing domain.
- In **Admin Password**, specify the password of the domain administrator.

Figure 5–18 Deploy the Mobile Server on an Existing WebLogic Server Domain

The screenshot shows the 'Mobile Server Repository Wizard' window. The title bar reads 'Mobile Server Repository Wizard'. The main text says 'Please provide information to deploy Mobile Server on your web application server'. On the left, there is a graphic of a database cylinder and a laptop. The 'Deploy Mobile Server' section has two radio buttons: 'Yes' (unselected) and 'No' (selected). Below this, it says 'Please specify properties for an existing domain'. The 'Domain Directory' field contains 'C:\Oracle\weblogic12c\user_projects\domains\mobileserver' with a 'Browse' button. The 'Server Type' section has 'Administration Server' (unselected) and 'Managed Server' (selected). The 'Managed Server Name' field contains 'managedServer'. The 'Admin Username' field contains 'weblogic'. The 'Admin Password' field contains '*****'. At the bottom, there are 'Help', '< Back', 'Next >', 'Finish', and 'Cancel' buttons.

Figure 5–19 Deploy the Mobile Server on an Existing GlassFish Server Domain

The screenshot shows the 'Mobile Server Repository Wizard' window. The title bar reads 'Mobile Server Repository Wizard'. The main text says 'Please provide information to deploy Mobile Server on your web application server'. On the left, there is a graphic of a database cylinder and a laptop. The 'Deploy Mobile Server' section has two radio buttons: 'Yes' (unselected) and 'No' (selected). Below this, it says 'Please specify properties for an existing domain'. The 'Domain Name' field contains 'mobileserver'. The 'Domain Directory' field contains 'C:\glassfish3\glassfish\domains' with a 'Browse' button. The 'Admin Port' field contains '8091'. The 'Server Port' field contains '8090'. The 'Admin Username' field contains 'admin'. The 'Admin Password' field contains '*****'. At the bottom, there are 'Help', '< Back', 'Next >', 'Finish', and 'Cancel' buttons.

To deploy the mobile server **under TomEE**, follow the instructions:

- Specify the **Server Port** value with HTTP connector port value in default Service named "Catalina" of TomEE server.

Ensure the port you specified is available.

Note: You can look for the HTTP connector port value in %CATALINA_HOME%\conf\server.xml, where CATALINA_HOME is the installation directory of TomEE server.

For example, the following is part of a content from %CATALINA_HOME%\conf\server.xml. In this example, the HTTP connector port value in default Service named "Catalina" is 8080.

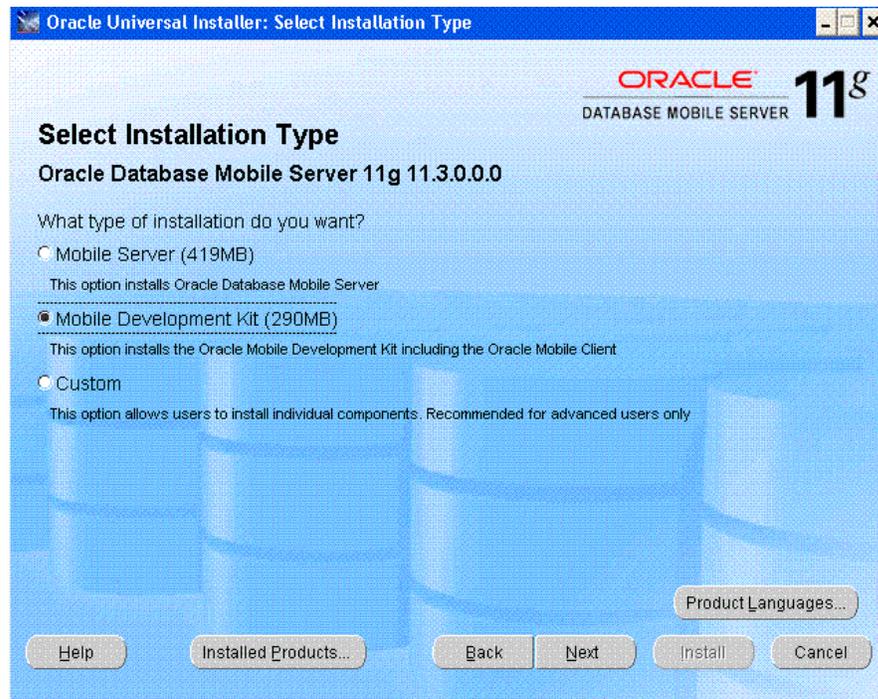
```
<Service name="Catalina">
<Connector port="8080" protocol="HTTP/1.1"
connectionTimeout="20000"
redirectPort="8443" />
```

16. A summary screen appears informing you if a repository is installed or not. Click **Next**.
17. The installation screen appears. Wait until the install is completed. Click **Next**.
18. Once the repository wizard is finished, click **Finish** to leave the wizard.
19. Click **Exit** to complete the installation.
20. 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.
21. 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, "Manage Mobile Server Farms" in the *Oracle Database Mobile Server Administration and Deployment Guide*.
22. If you are installing on top of any version of the application server, then **restart** the application server.

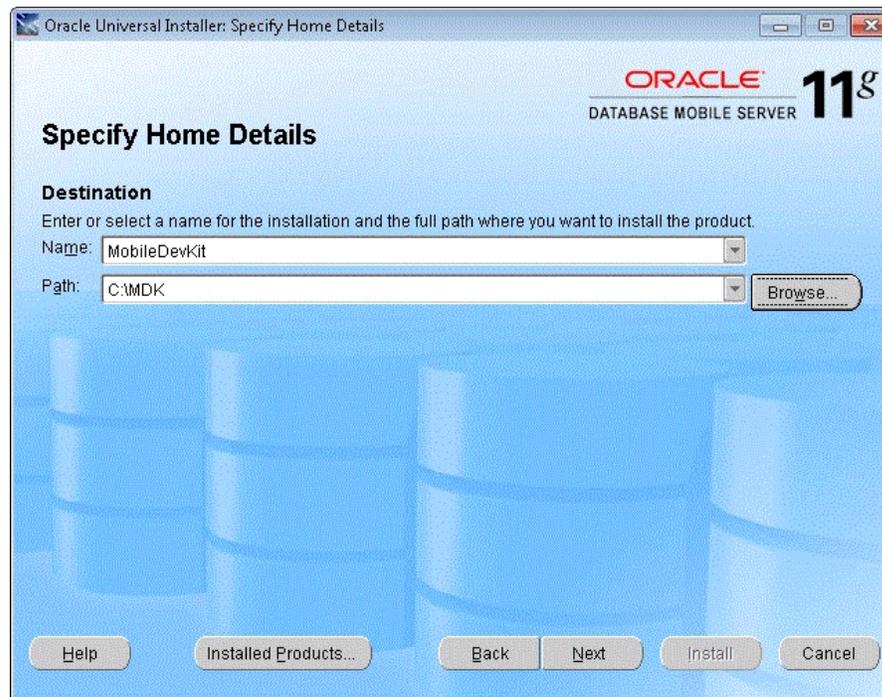
5.3.1.2 Installation of Mobile Development Kit

Install Mobile Development Kit from the Installation Types screen by performing the following:

1. Choose the Mobile Development Kit and clicking **Next**.

Figure 5–20 Select Mobile Development Kit

2. On the **Specify Home Details** screen, enter the name and path where you want to install Mobile Development Kit, which cannot include any spaces.

Figure 5–21 Specify Home Details

3. On the "Summary" screen, click **Install**. Click **Exit** to return to the installation screen.

You have now installed the Mobile Development Kit.

5.3.2 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 5.3.2.1, "Silent Install for Mobile Server or Mobile Development Kit on Windows"](#)
- [Section 5.3.2.2, "Silent Install Mobile Server or the Mobile Development Kit on UNIX"](#)
- [Section 5.3.2.3, "Configuration File for Deploying Mobile Serve"](#)

5.3.2.1 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.mobile.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 5.3.2.1.1, "Response File for Mobile Server Install"](#)
- [Section 5.3.2.1.2, "Response File for MDK Install"](#)

5.3.2.1.1 Response File for Mobile Server Install Variables to be filled for silent install in the response file `oracle.mobile.install_type_2.rsp` to install Oracle Database Mobile Server are as follows:

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


```
ORACLE_HOME="C:\MobileServer"
```
- Define the name for your Oracle Home, as follows:


```
ORACLE_HOME_NAME="MobileServer"
```
- 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=true
```
- Provide the database system user name and password, as follows:


```
s_db_admin_name="myuser"
s_db_admin_pwd="mypwd"
```
- Provide the mobile server schema name and password, as follows:


```
s_mobile_schema_name="myschema"
s_mobile_schema_pwd="myschemapwd"
```

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

```
s_demo_schema_name="demoschema"
s_demo_schema_pwd="demoschemapwd"
```

- Provide the mobile server administrator user name and password, as follows:

```
s_mobileserver_admin_name="adminuser"
s_mobileserver_admin_pwd="adminpwd"
```

- Specify true or false to indicate whether the samples are to be installed, as follows:

```
b_mobile_samples=true
```

- Specify application server home, as follows:

```
s_appserver_home="/path/to/appserver"
```

Refer to Step 7 in [Section 5.3.1.1, "Installation of the Mobile Server"](#) for how to set application server home.

- Specify the configuration file for mobile server deploy. For more information, refer to [Section 5.3.2.3, "Configuration File for Deploying Mobile Serve"](#). Note that `b_repository` must set to true if you want to deploy mobile server:

```
s_dep_conf_file="/path/to/mobileserver_config.ini"
```

- Specify JDK home, as follows:

```
oracle.mobile.server:java_path="/path/to/jdk"
```

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

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

```
ORACLE_HOME="C:\MDK"
```

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

```
ORACLE_HOME_NAME="MDK"
```

- Specify JDK home, as follows:

```
oracle.mobile.windows_mdk:java_path="/path/to/jdk"
```

5.3.2.2 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.

5.3.2.2.1 Response File for Mobile Server Install The response file for installing the mobile server is `oracle.mobile.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="/home/user/mobileserver"
```

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

```
ORACLE_HOME_NAME="MobileServer"
```

- 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=true
```

- Provide the database SYSTEM user name and password, as follows:

```
s_db_admin_name="myuser"
```

```
s_db_admin_pwd="mypwd"
```

- Provide the mobile server schema name and password, as follows:

```
s_mobile_schema_name="myschema"
```

```
s_mobile_schema_pwd="myschemapwd"
```

- Provide the mobile server demo schema user name and password, as follows:

```
s_demo_schema_name="demoschema"
```

```
s_demo_schema_pwd="demoschemapwd"
```

- Provide the mobile server admin user name and password, as follows:

```
s_mobileserver_admin_name="adminuser"
```

```
s_mobileserver_admin_pwd="adminpwd"
```

- Specify true or false to indicate whether the samples are to be installed, as follows:

```
b_mobile_samples=true
```

- Specify application server home, as follows:

```
s_appserver_home="/path/to/appserver"
```

Refer to Step 7 in [Section 5.3.1.1, "Installation of the Mobile Server"](#) for how to set application server home.

- Specify the configuration file for mobile server deploy. Refer to [Section 5.3.2.3, "Configuration File for Deploying Mobile Serve"](#) for more information.

Note that `b_repository` must set to true if you want to deploy mobile server.

```
s_dep_conf_file="/path/to/mobileserver_config.ini"
```

- Specify JDK home, as follows:

```
oracle.mobile.server:java_path="/path/to/jdk"
```

5.3.2.2.2 Response File for MDK Install The response file for installing the MDK is `oracle.mobile.install_type_1.rsp`. You can define the variables in this file for your install as follows:

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

```
ORACLE_HOME="/home/user/mdk"
```

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

```
ORACLE_HOME_NAME="MDK"
```

- Specify JDK home, as follows:

```
oracle.mobile.linux_mdk:java_path="/path/to/jdk"
```

5.3.2.2.3 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.mobile.install_type_2.rsp
    -silent -nowelcome
```

where the options for this command are as follows:

Table 5–3 The runInstaller Command Options

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

5.3.2.3 Configuration File for Deploying Mobile Serve

The configuration file specified in `s_dep_conf_file` variable is used to specify the required information to deploy mobile server. The file must be an INI format file. You can find the sample configuration file at `%ORACLE_HOME%\Mobile\Server\admin\mobileserver_config.ini`.

Refer to [Table 5–4, "Configuration File for Deploying Mobile Server on WebLogic, GlassFish and and TomEE Servers"](#) and [Table 5–5, "Sample Configuration File"](#) for information on specifying the configuration to deploy mobile server:

Table 5–4 Configuration File for Deploying Mobile Server on WebLogic, GlassFish and and TomEE Servers

Parameters	Description
<code>domain_name</code>	String type, required for WebLogic and GlassFish. Name of the WebLogic Server domain or GlassFish Server domain. If deploying the Mobile Server on a WebLogic Server and 'create_new_domain=false', this parameter is not required.
<code>domain_dir</code>	String type, required for WebLogic and GlassFish. Domain directory. Refer to Step 16 in Section 5.3.1.1, "Installation of the Mobile Server" for how to set the domain directory.
<code>admin_user</code>	String type, required for WebLogic and GlassFish. Name of the domain administrator. Note: Use 'weblogic' as the administrator user name if you are creating a new domain for WebLogic Server.

Table 5–4 (Cont.) Configuration File for Deploying Mobile Server on WebLogic, GlassFish and TomEE Servers

Parameters	Description
admin_password	String type, required for WebLogic and GlassFish. Password of the domain administrator, please change the password after deployment. Note: WebLogic Server requires that the password is at least eight characters in length and contains at least one non-alphabetic character.
server_port	Integer type, required for GlassFish, TomEE and WebLogic Managed Server. <ul style="list-style-type: none"> Set it to the server port for GlassFish and TomEE. If deploying the Mobile Server on a WebLogic Managed Server and 'create_new_domain=true', this parameter is required, set it to the Managed Server port
admin_port	Integer type, required for WebLogic and GlassFish. <ul style="list-style-type: none"> Set it to domain administration port for GlassFish. If deploying the Mobile Server on either a WebLogic Administration Server or a Managed Server, and 'create_new_domain=true', this parameter is required. Set it to Administration Server port for WebLogic.
create_new_domain	Boolean type, optional. Set to 'true' to create a new domain, or set to 'false' to use an existing domain, default value is 'true'.
force_deploy	Boolean type, optional. If set to 'true', redeploy the Mobile Server even if it has already been deployed or already exists, default value is 'false'.
managed_server_name	String type, required for WebLogic if deploying the Mobile Server on a WebLogic Managed Server. Managed Server name.
target_server_type	String type, required for WebLogic. <ul style="list-style-type: none"> Set to 'A' if deploying the Mobile Server on a WebLogic Administration Server. Set to 'M' if deploying the Mobile Server on a WebLogic Managed Server.

Table 5–5 Sample Configuration File

Server Type	Sample Configuration
WebLogic Server configuration	Specify the configuration parameters in [WLS] section [WLS] domain_name=mobileserver_wls domain_dir=C:\Oracle\Middleware\user_projects\domains\mobileserver_wls admin_user=weblogic admin_password=welcome1 admin_port=7001 server_port=7009 managed_server_name=ManagedServer target_server_type=M create_new_domain=true force_deploy=true

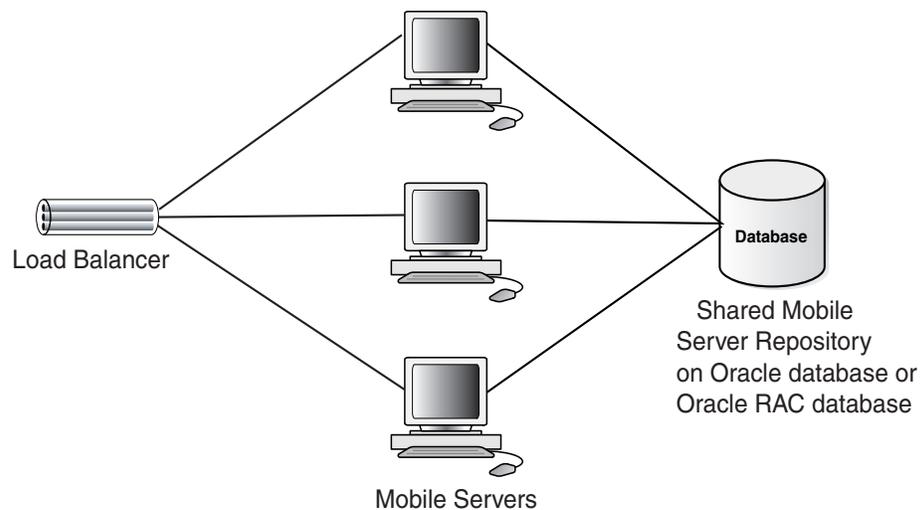
Table 5–5 (Cont.) Sample Configuration File

Server Type	Sample Configuration
GlassFish Server configuration	Specify the configuration parameters in [GFS] section [GFS] domain_name=mobileserver_gfs domain_dir=C:\glassfish3\glassfish\domains admin_user=admin admin_password=welcome1 server_port=8090 admin_port=8089 create_new_domain=true force_deploy=true
TomEE Server configuration	Specify the configuration parameters in [TOMEE] section [TOMEE] server_port=8080 force_deploy=true

5.3.3 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 5–22](#) shows, if you wanted to load balance your mobile clients across multiple mobile servers, you could add a load balancer—such as Oracle WebLogic Server Clusters or the GlassFish Cluster Server Instance—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 Mobile Server Farm.

Figure 5–22 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 Mobile Server certifies WebLogic Server Clusters or the GlassFish Cluster Server Instance 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 5.3.1.1, "Installation of the Mobile Server"](#).

Note: Each mobile server in the farm must use GlassFish or WebLogic Server.

3. Install additional mobile servers. For each subsequent mobile server, follow the instructions in [Section 5.3.1.1, "Installation of the 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 `mobile.ora` configuration file, as follows:

```
[MOBILE]
REVERSE_PROXY=http://<load_balancer_hostname>:<port_number>/mobile
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, "Manage Mobile Server Farms"](#) in the *Oracle Database Mobile Server Administration and Deployment Guide*.

5.3.4 Install Oracle Database Mobile Server on Linux

Oracle Database Mobile Server includes a Mobile Development Kit for Linux.

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

- [Section 5.3.4.1, "Patch Required if Using Linux Redhat 3.0"](#)

- [Section 5.3.4.2, "Providing Enough Swap Space on the Linux Platform"](#)

5.3.4.1 Patch Required if Using Linux Redhat 3.0

If you install Oracle Database Mobile Server 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.

5.3.4.2 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`.

5.3.5 Mobile Client Install

The mobile client can use either the Berkeley DB or SQLite database. If you have the Berkeley DB or SQLite database installed on your mobile device, install the appropriate mobile client, which downloads the Sync Engine. For instructions on how to install the mobile client, see Chapter 2, "Installing the Mobile Client" in the *Oracle Database Mobile Server Mobile Client Guide*.

5.3.6 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.

5.4 Post-Installation Configuration Requirements

The following describes any post-installation requirements:

- [Section 5.4.1, "User Name and Password for OracleAS Instance"](#)

5.4.1 User Name and Password for OracleAS Instance

When installing the Mobile Server on Oracle Application Server, a new OC4J instance called `mobileserver` is created. The default administrator username for the instance is `oc4jadmin` and the password is set to the mobile repository schema password which is specified by you during install.

You can log into the Oracle Application Server Control with the username and password for administration tasks.

5.5 Starting and Stopping Mobile Server

The following describes how to start and stop the mobile server on the windows machine and on the UNIX machine:

- [Section 5.5.1, "Starting Mobile Server"](#)
- [Section 5.5.2, "Stopping Mobile Server"](#)

5.5.1 Starting Mobile Server

- To start the Mobile Server on a Windows machine, use one of the options below:
 - On the Windows Start Menu, navigate to *All Programs -> Oracle Database Mobile Server 11g -> Mobile Server*. Click on *Mobile Server* item to start the Mobile Server (Right-click and use *Run as Administrator* on Windows 7 or later version).
 - Open a command prompt (use *Run as Administrator* on Windows 7 or later version), change the directory to %MOBILE_HOME%\Mobile\Server\bin, and run the script runmobileserver.bat.
 - Start the Application Server on which the Mobile Server is deployed. The Mobile Server then automatically starts.
- To start the Mobile Server on a UNIX machine, use one of the options below:
 - Open a shell, change the directory to \$MOBILE_HOME/mobile/server/bin and run the script runmobileserver.
 - Start the Application Server on which the Mobile Server is deployed. The Mobile Server then automatically starts.

5.5.2 Stopping Mobile Server

- To stop the Mobile Server on a Windows machine, use one of the options below:
 - Open a command prompt (use *Run as Administrator* on Windows 7 or later version), change the directory to %MOBILE_HOME%\Mobile\Server\bin, and run the script stopmobileserver.bat.
 - Stop the Application Server on which the Mobile Server is deployed. The Mobile Server then automatically stops.
- To stop the Mobile Server on a UNIX machine, use one of the options below:
 - Open a shell, change the directory to \$MOBILE_HOME/mobile/server/bin and run the script stopmobileserver.
 - Stop the Application Server on which the Mobile Server is deployed. The Mobile Server then automatically stops.

Note:

- The `runmobileserver` and `stopmobileserver` scripts contain the default Java flags. If you want to modify the flags for how Mobile Server is started or stopped, you can modify the scripts as appropriate.
- On WebLogic Server release 12.1.2, if the Derby Server is installed, it is automatically started when WebLogic Server starts. If you do not want to start the Derby Server, pass `noderby` as an argument to the `startWebLogic` command. For example, in the `runmobileserver.bat` script, call `%WLS_DOMAIN_DIR%\bin\startWebLogic.cmd noderby`.
- If the Mobile Server is deployed on a WebLogic Managed Server, and you are starting the Mobile Server for the first time, ensure the Administration Server is running in the same domain. To start the Administration Server, call the script:
 - `%WLS_DOMAIN_DIR%\bin\startWebLogic.cmd` (Windows)
 - `$WLS_DOMAIN_DIR/bin/startWebLogic.sh` (UNIX)

The `WLS_DOMAIN_DIR` is the WebLogic Server domain directory. For more information, see <http://docs.oracle.com/middleware/1212/wls/START/overview.htm#i1070184> (*Starting an Administration Server with a Startup Script*)

5.6 Testing Your Mobile Server Installation

To test whether your mobile server was installed correctly, test your mobile server through a browser with the following URL:

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

5.7 Removing Demo Applications

Before you use Oracle Database Mobile Server 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
<code>-install</code> or <code>-uninstall</code>	<code>-install</code> : install the demos <code>-uninstall</code> : remove the demos

Option	Description
<sys_user> <sys_pwd>	Provide the system user name and password that are used to drop the schema in which the demos are installed.
<mobile_user> <mobile_pwd>	Provide the mobile server log on user name 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.

5.8 How to Uninstall Oracle Database Mobile Server

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

1. Delete the following directories:
 - *ORACLE_HOME*\Mobile
 - If you are using WebLogic, delete the *<app_server_deployment_dir>*\mobile directory.
 - If you are using OracleAS, 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 Mobile Server

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

- [Section 6.1, "Upgrade Oracle Database Lite 10.3.0.3.0 to Oracle Database Mobile Server 11g"](#)
- [Section 6.2, "Upgrade Oracle Database Mobile Server 11.1.0 or 11.2.0 to 11.3.0"](#)
- [Section 6.3, "Upgrade Oracle Database Mobile Server 11.1.0 to 11.2.0"](#)
- [Section 6.4, "Upgrade Oracle Database Lite from 10g Release 1 or 2 to 10g Release 3"](#)

6.1 Upgrade Oracle Database Lite 10.3.0.3.0 to Oracle Database Mobile Server 11g

Oracle Database Mobile Server 11g contains most of the components of the previous Oracle Database Lite product, with a few exceptions. The Oracle Lite client is no longer supported. Instead, all synchronization originates from either a Berkeley DB or SQLite client. Thus, if you have been using Oracle Database Lite in the past, all Oracle Database Lite Mobile Clients will need to be migrated to either of these supported mobile clients. In addition, your Mobile Server needs to be upgraded to the 11g version of the mobile server. You can either upgrade your Mobile Server from 10.3.0.3.0 to 11.1.0, 11.2.0 and 11.3.0 gradually or from 10.3.0.3.0 to 11.3.0 directly.

The following sections detail how you can upgrade Oracle Database Lite 10.3.0.3.0 to Oracle Database Mobile Server 11g for both your existing mobile server and mobile client.

- [Section 6.1.1, "Pre-Upgrade Instructions"](#)
- [Section 6.1.2, "Upgrade Mobile Server"](#)
- [Section 6.1.3, "Mobile Server Farm Upgrade"](#)
- [Section 6.1.4, "Upgrade Mobile Client"](#)

Note: "Oracle Database Mobile Server 11g" mentioned in this chapter refers to Oracle Database Mobile Server 11.1.0, 11.2.0 and 11.3.0.

6.1.1 Pre-Upgrade Instructions

You can only upgrade an Oracle Database Lite version 10.3.0.3.0 to Oracle Database Mobile Server 11g. Therefore, if your current version of Oracle Database Lite is previous to version 10.3.0.3.0, this must first be upgraded to Oracle Database Lite

10.3.0.3.0 and all patches applied before upgrading to Oracle Database Mobile Server 11g. Details for upgrading Oracle Database Lite versions 10.1 and 10.2 to Oracle Database Lite version 10.3 is described in [Section 6.4, "Upgrade Oracle Database Lite from 10g Release 1 or 2 to 10g Release 3"](#).

6.1.2 Upgrade Mobile Server

Upgrading Oracle Database Lite 10.3.0.3.0 to Oracle Database Mobile Server 11g can be performed on an installation in the same ORACLE_HOME or in a separate ORACLE_HOME. [Table 6–1](#) shows what version of Oracle Database Lite 10.3.0.3.0 and application server installation can be upgraded to Oracle Database Mobile Server 11.1.0.

Table 6–1 Upgrading Oracle Database Lite 10.3.0.3.0 to Oracle Database Mobile Server 11.1.0

From Oracle Database Lite 10.3.0.3.0	To Oracle Database Mobile Server 11.1.0 Base	Same Oracle Home	Separate Oracle Home
Oracle Database Lite 10.3.0.3.0 Standalone	Oracle WebLogic Server 11g Release 1	Not Supported	Supported
	GlassFish 3.1	Not Supported	Supported
	Oracle iAS 10.1.3.5.0	Not Supported	Supported
Oracle Database Lite 10.3.0.3.0 with WebLogic 11g Release 1	Oracle WebLogic Server 11g Release 1	Supported	Supported
	GlassFish 3.1	Not Supported	Supported
	Oracle iAS 10.1.3.5.0	Not Supported	Supported
Oracle Database Lite 10.3.0.3.0 with Oracle iAS 10.1.3.5.0	Oracle WebLogic Server 11g Release 1	Not Supported	Supported
	GlassFish 3.1	Not Supported	Supported
	Oracle iAS 10.1.3.5.0	Supported	Supported

[Table 6–2](#) shows what version of Oracle Database Lite 10.3.0.3.0 and application server installation can be upgraded to Oracle Database Mobile Server 11.2.0 or 11.3.0

Table 6–2 Upgrading Oracle Database Lite 10.3.0.3.0 to Oracle Database Mobile Server 11.2.0 or 11.3.0

From Oracle Database Lite 10.3.0.3.0	To Oracle Database Mobile Server 11.2.0 or 11.3.0 Base	Same Oracle Home	Separate Oracle Home
Oracle Database Lite 10.3.0.3.0 Standalone	Oracle WebLogic Server 11g Release 1, Oracle WebLogic Server 12c	Supported	Supported
	GlassFish 3.1	Supported	Supported
	Oracle iAS 10.1.3.5.0	Supported	Supported
	Apache TomEE 1.0	Supported	Supported
Oracle Database Lite 10.3.0.3.0 with WebLogic 11g Release 1	Oracle WebLogic Server 11g Release 1, Oracle WebLogic Server 12c	Supported	Supported
	GlassFish 3.1	Supported	Supported
	Oracle iAS 10.1.3.5.0	Supported	Supported
	Apache TomEE 1.0	Supported	Supported

Table 6–2 (Cont.) Upgrading Oracle Database Lite 10.3.0.3.0 to Oracle Database Mobile Server 11.2.0 or

From Oracle Database Lite 10.3.0.3.0	To Oracle Database Mobile Server 11.2.0 or 11.3.0 Base	Same Oracle Home	Separate Oracle Home
Oracle Database Lite 10.3.0.3.0 with Oracle iAS 10.1.3.5.0	Oracle WebLogic Server 11g Release 1, Oracle WebLogic Server 12c	Supported	Supported
	GlassFish 3.1	Supported	Supported
	Oracle iAS 10.1.3.5.0	Supported	Supported
	Apache TomEE 1.0	Supported	Supported

Upgrade OID

If you use OID 10.1.2 to manage user information for Oracle Database Lite 10.3.0.3.0, upgrade to OID version 10.1.4 or 11.1.1.5.

Note: If you are not currently using OID, but would like to use OID with Oracle Database Mobile Server 11g, follow instructions in [Section 6.1.2.5, "Migrate Your Users from the Mobile Server Repository to Oracle Internet Directory \(OID\)"](#).

[Table 6–3](#) shows supported OID versions when upgrading from Oracle Database Lite 10.3.0.3.0 to Oracle Database Mobile Server 11g. Refer to *Oracle Fusion Middleware Upgrade Guide for Oracle Identity Management 11g Release 1 (11.1.1)* for detailed instructions on how to upgrade OID.

Table 6–3 Upgrading OID

Installed Application Server and OID Version	Upgrade To OID Version
Oracle iAS 10.1.3.5.0 with OID 10.1.2	Oracle iAS 10.1.3.5.0 with OID 10.1.4 or OID 11.1.1.5
Oracle iAS 10.1.3.5.0 with OID 10.1.4	You can continue using Oracle iAS 10.1.3.5.0 with OID 10.1.4 or upgrade to OID 11.1.1.5
WebLogic 11g Release 1 with OID 10.1.4	You can continue using WebLogic 11g Release 1 with OID 10.1.4 or upgrade to OID 11.1.1.5

General Guideline

1. If you are using Oracle Database Lite 10.3.0.3.0 Mobile Server Standalone, migrate to one of the supported application servers on a separate ORACLE_HOME: Apache TomEE, OracleAS, WebLogic, or GlassFish. See [Section 4.3.3, "Certified Application Server Configurations"](#) for details on supported application servers.
2. If you are currently using WebLogic or OracleAS, you can do one of the following:
 - You can continue to use the installed application server as your application server as long as the version is a supported version.
 - If you plan to upgrade Oracle Database Lite 10.3.0.3.0 to Oracle Database Mobile Server 11.1.0, and switch to a different application server, you must install Mobile Server in a separate ORACLE_HOME.

- If you plan to upgrade Oracle Database Lite 10.3.0.3.0 to Oracle Database Mobile Server 11.2.0 or 11.3.0, and switch to a different application server, you can install Mobile Server either in the same ORACLE_HOME or in a separate ORACLE_HOME. See [Section 6.2.1.1, "Upgrading in the Same ORACLE_HOME"](#) and [Section 6.2.1.2, "Upgrading in a Separate ORACLE_HOME"](#) for additional information.
3. If you have OracleAS installed as the application server, but you want to migrate to WebLogic Server, refer to Oracle WebLogic SmartUpgrade directions on the following site:
<http://www.oracle.com/technetwork/middleware/downloads/smartupgrade-085160.html>

You must apply all patches before upgrading from Oracle Database Lite 10.3.0.3.0 to Oracle Database Mobile Server 11g.

6.1.2.1 Upgrade in the same ORACLE_HOME

Refer to [Table 6-1](#) and [Table 6-2](#) for the supported cases for upgrading Oracle Database Lite 10.3.0.3.0 to Oracle Database Mobile Server 11g in the same ORACLE_HOME.

1. Install Oracle Database Mobile Server 11g in ORACLE_HOME.
 - Launch Oracle Universal Installer. On **Select Installation Type** page, select **Mobile Server**.
 - On **Specify Home Details** page, choose the same ORACLE_HOME as your previous installation.
 - Follow the instructions to complete the install.
2. Execute the Repository Wizard to upgrade the repository.
 - If you choose to run Repository Wizard during install, the Repository Wizard launches automatically.
 - Alternatively, you can launch Repository Wizard after installation. Refer to [Section 6.2.1.3, "Upgrade Your Mobile Server Repository"](#).
3. Execute the application upgrade assistant to upgrade user applications to the new repository. For more information, refer to [Section 6.2.1.4, "Upgrade Your Existing Applications"](#).

6.1.2.2 Upgrade in a separate ORACLE_HOME

Refer to [Table 6-1](#) and [Table 6-2](#) for the supported cases for upgrading Oracle Database Lite 10.3.0.3.0 to Oracle Database Mobile Server 11g in a separate ORACLE_HOME.

1. Install Oracle Database Mobile Server 11g in a new ORACLE_HOME.
 - Launch Oracle Universal Installer. On **Select Installation Type** page, select **Mobile Server**.
 - On **Specify Home Details** page, choose the same ORACLE_HOME that is different from your previous installation.
 - Follow the instructions to complete the install.
2. Execute the Repository Wizard to upgrade the repository.
 - If you choose to run Repository Wizard during install, the Repository Wizard launches automatically.

- Alternatively, you can launch the Repository Wizard after installation. Refer to [Section 6.2.1.3, "Upgrade Your Mobile Server Repository"](#).
- 3. Execute the application upgrade assistant to upgrade user applications to the new repository. For more information, refer to [Section 6.2.1.4, "Upgrade Your Existing Applications"](#).
- 4. Uninstall the previous mobile server version from the old ORACLE_HOME.
 - Launch Oracle Universal Installer, click **Deinstall Products**.
 - Choose the previous mobile server that you want to uninstall, and click **Remove**.

6.1.2.3 Upgrade Your Mobile Server Repository

During installation of Oracle Database Mobile Server, the Repository Wizard detects if Oracle Database Lite 10.3.0.3.0 is installed and initiates the upgrade process, as follows:

Note: If you need to start the Repository Wizard independent of the install process, execute one of the following:

- Windows: `%ORACLE_HOME%\Mobile\Server\admin\repwizard.bat`
 - Unix: `$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 and click **YES** to install the sample applications. Click **Next**.
4. A summary screen appears. Click **Next**.
5. After the repository is upgraded, click **Finish**.

In Oracle Database Mobile Server 11g, the repository location is set to `%ORACLE_HOME%\Mobile\Server\admin\repository` directory by default, which is different from Oracle Database Lite 10.3.0.3.0.

6.1.2.4 Upgrade Your Existing Applications

You can upgrade all existing applications with the Application Upgrade Assistant. Since the Oracle Database Mobile Server 11g repository is in a new location, the Application Upgrade Assistant moves applications from the old repository location to the new one.

The Application Upgrade Assistant is located as follows:

- On Windows: `%ORACLE_HOME%\Mobile\Server\admin\ApplicationUpgradeAssistant.bat`
- On Unix: `$ORACLE_HOME/mobile/server/admin/ApplicationUpgradeAssistant.sh`

On the command-line, supply the following:

- Mobile server repository name and password
- The ORACLE_HOME for the old mobile server repository

For example, on a Windows system, where the repository schema name is **mobileadmin**, password is **manager**, the old ORACLE_HOME is **C:\Oracle\ora10gR3**, execute the Application Upgrade Assistant as follows:
ApplicationUpgradeAssistant.bat mobileadmin manager C:\Oracle\ora10gR3

The Application Upgrade Assistant will not upgrade applications for de-supported platforms, as follows:

- Applications deployed on de-supported platforms such as Oracle Lite, Web-to-Go, OC4J and BC4J platforms will not be upgraded.
- The default system folders and default application files for previous releases will not be upgraded, which includes admin-web, msadmin, olsetup, devmgr, META-INF, plugins, setup, and webtogo.
- In Oracle Database Mobile Server 11g, the Mobile Manager application is named 'mobile'. If you deployed an application with the same name in Oracle Database Lite 10.3.0.3.0, the Application Upgrade Assistant will not upgrade it due to a name conflict. You will need to manually change your application name and redeploy it on the new Mobile Server.

6.1.2.5 Migrate Your Users from the Mobile Server Repository to 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. For more information, refer to Section 4.3.1.6 "Managing OID Users in the Mobile Server" in the *Oracle Database Mobile Server Administration and Deployment Guide*.

6.1.3 Mobile Server Farm Upgrade

If you have multiple mobile servers in a farm that use the same mobile server repository on a back-end Oracle database, perform the following:

1. Shut down all mobile servers before you start the upgrade.
2. Upgrade one of these mobile servers and the mobile server repository.
3. Upgrade each additional mobile server that uses the repository.
4. Restart all mobile servers.

6.1.4 Upgrade Mobile Client

Berkeley DB and SQLite Mobile Clients installed with the Oracle Database Lite Mobile Server version 10.3.0.3.0 can be upgraded to Oracle Database Mobile Server 11g.

Table 6–4 shows what mobile client platforms can be upgraded to the Oracle Database Mobile Server 11g.

Table 6–4 Upgrading Mobile Clients

Client Device Platform	Upgrade Instructions
SQLite or Berkeley DB Mobile Clients on Win32	Run <code>update.exe</code> or <code>msync.exe</code> , which launches <code>update.exe</code> after the synchronization completes.
SQLite or Berkeley DB Mobile Clients on Pocket PC 6.0, 6.5	Run <code>update.exe</code> or <code>msync.exe</code> , which launches <code>update.exe</code> after the synchronization completes.

Table 6–4 (Cont.) Upgrading Mobile Clients

Client Device Platform	Upgrade Instructions
SQLite or Berkeley DB Mobile Clients on Pocket PC 5.0	Run <code>update.exe</code> or <code>msync.exe</code> , which launches <code>update.exe</code> after the synchronization completes. Only supported in upgrading to 11.2.0 or 11.3.0.
SQLite or Berkeley DB Mobile Clients on Linux	Run <code>update</code> or <code>msync</code> , which launches <code>update</code> after synchronization completes.
SQLite Mobile Client on Android	Run <code>update</code> .
SQLite Mobile Client on Blackberry	De-install the previous client version and install the appropriate 11g mobile client

To upgrade mobile client on Android, if server port is changed after server upgrade, modify `SERVER_URL` parameter in `[NETWORK]` section in `devmgr.ini` before running `update`. Usually you can find `devmgr.ini` at `/mnt/sdcard/oracle.mobileclient`.

To upgrade mobile clients on Win32, Windows Mobile and Linux platforms, follow the instructions below:

1. Shutdown your applications.
2. Check available software update and install it. Ensure that your device is enabled to receive software updates from the Mobile Server. You can either run `update.exe` or `msync.exe`, which automatically launches `update.exe` after the synchronization completes.

`Update.exe` might not work if the server port is changed after Mobile Server upgrade. In this case follow the instructions below to run `msync.exe`:

- Write `OSE.FILES=YES` in `[DEFAULT]` section in `ose.ini`. You can set `OSE.FILES=NO` if you want to disable `OSE.FILES` option after the client upgrade process completes.
 - Launch `msync.exe` and specify the new server URL in 'Server URL' field, click 'Sync' to perform synchronization. After synchronization completes, `update.exe` launches automatically and is able to connect to Mobile Server with the new server URL. `Update.exe` should find available software updates on the server and display the options for you to install the update.
3. After you update your mobile client, check if `NAME` and `TYPE` parameters are written in `[DMC]` section in `devmgr.ini`. If they are missing, copy them from the old configuration file `polite.ini`.
 4. If you are upgrading SQLite client, the client upgrade process is completed. If you are using the Berkeley DB client, double check if the old Berkeley DB environment files are removed during client upgrade. If not, follow the instructions to finish the upgrade process:
 - Shutdown your applications and `SyncAgent` if it is running.
 - Backup the Berkeley DB databases.
 - Remove environment files `__db.xxx` (`xxx` stands for 3 digits) in `*.db-journal` folders from where Berkeley DB databases are stored.
 - Restart your application and `SyncAgent` if needed.

6.1.4.1 Upgrade Oracle Mobile Clients from De-Supported Mobile Client Platforms

For Web-to-Go, OC4J, BC4J, and Branch Office Mobile Client platforms, there are no upgrade options since these client device platforms are no longer supported in Oracle Database Mobile Server 11g.

Table 6–5 shows how to migrate de-supported Mobile client platforms to available platforms in Oracle Database Mobile Server 11g Release 3.

Note: Do not cancel in the middle of the upgrade process.

Table 6–5 Upgrading from De-Supported Mobile Client Platforms

De-Supported Mobile Client Platform	Upgrade to the Available Platform
SQLite Mobile Client on Pocket PC 2003	
SQLite or Berkeley DB Mobile Clients on Pocket PC 5.0	SQLite or Berkeley DB Mobile Clients on Pocket PC 6.0

Note: SQLite and Berkeley DB Mobile Clients on Pocket PC 5.0 are supported in Oracle Database Mobile Server 11.2.0 and 11.3.0, but not supported in 11.1.0.

If your device is Windows Mobile 6.0 or later, you must perform the following after the CAB files are downloaded to the device:

1. Click on the CAB files to extract the files to the device.
2. Start the update by executing `update.exe`, which detects available upgrade options and prompts the user to upgrade.

If you do not upgrade mobile client devices for de-supported platforms, you can still synchronize data and perform administration duties with the following restrictions:

- You can continue to administer de-supported client platforms, and they will appear in the platform tabs in the Mobile Manager. However, these platforms will not be available on 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 execute as expected. You may also apply any patches for the application. However, you cannot deploy any new applications to that platform.
- If you do upgrade the client platform, you must re-package and re-publish each application as a new application for the new client platform.

6.2 Upgrade Oracle Database Mobile Server 11.1.0 or 11.2.0 to 11.3.0

The following sections describe the steps for upgrading your software:

- [Section 6.2.1, "Upgrade Mobile Server"](#)
- [Section 6.2.2, "Upgrade Mobile Client"](#)
- [Section 6.2.3, "Mobile Server Farm Upgrade"](#)

6.2.1 Upgrade Mobile Server

Upgrading Oracle Database Mobile Server 11.1.0 or 11.2.0 to Oracle Database Mobile Server 11.3.0 can be performed on an installation in the same ORACLE_HOME or in a separate ORACLE_HOME. You must apply all patches before upgrading from Oracle Database Mobile Server 11.1.0 or 11.2.0 to 11.3.0. Table 5-6 shows what version of Oracle Database Mobile Server 11.1.0/11.2.0 and application server installation can be upgraded to Oracle Database Mobile Server 11.3.0.

The following sections describe how to perform the upgrade:

- [Section 6.2.1.1, "Upgrading in the Same ORACLE_HOME"](#)
- [Section 6.2.1.2, "Upgrading in a Separate ORACLE_HOME"](#)
- [Section 6.2.1.3, "Upgrade Your Mobile Server Repository"](#)
- [Section 6.2.1.4, "Upgrade Your Existing Applications"](#)
- [Section 6.2.1.5, "Migrate Your Users from the Mobile Server Repository to Oracle Internet Directory \(OID\)"](#)

Table 6–6 Upgrading Oracle Database Mobile Server 11.1.0 or 11.2.0 to 11.3.0

From Oracle Database Mobile Server 11.1.0 or 11.2.0	To Oracle Database Mobile Server 11.3.0 Base	Same Oracle Home	Separate Oracle Home
Mobile Server 11.1.0 or 11.2.0 with Oracle WebLogic Server 11g Release 1, Mobile Server 11.2.0 with Oracle WebLogic Server 12c	Oracle WebLogic Server 11g Release 1, Oracle WebLogic Server 12c	Supported	Supported
	GlassFish 3.1	Supported	Supported
	Oracle iAS 10.1.3.5.0	Supported	Supported
	Apache TomEE 1.0	Supported	Supported
Mobile Server 11.1.0 or 11.2.0 with GlassFish 3.1	Oracle WebLogic Server 11g Release 1, Oracle WebLogic Server 12c	Supported	Supported
	GlassFish 3.1	Supported	Supported
	Oracle iAS 10.1.3.5.0	Supported	Supported
	Apache TomEE 1.0	Supported	Supported
Mobile Server 11.2.0 with Apache TomEE 1.0	Oracle WebLogic Server 11g Release 1, Oracle WebLogic Server 12c	Supported	Supported
	GlassFish 3.1	Supported	Supported
	Oracle iAS 10.1.3.5.0	Supported	Supported
	Apache TomEE 1.0	Supported	Supported

6.2.1.1 Upgrading in the Same ORACLE_HOME

Refer to [Section 6.1.2.1, "Upgrade in the same ORACLE_HOME"](#).

6.2.1.2 Upgrading in a Separate ORACLE_HOME

Refer to [Section 6.1.2.2, "Upgrade in a separate ORACLE_HOME"](#).

6.2.1.3 Upgrade Your Mobile Server Repository

Refer to [Section 6.1.2.3, "Upgrade Your Mobile Server Repository"](#).

6.2.1.4 Upgrade Your Existing Applications

You can upgrade all existing applications with the Application Upgrade Assistant.

The Application Upgrade Assistant is located as follows:

- On Windows: %ORACLE_
HOME%\Mobile\Server\admin\ApplicationUpgradeAssistant.bat
- On Unix: \$ORACLE_
HOME/mobile/server/admin/ApplicationUpgradeAssistant.sh

On the command-line, supply the following:

- Mobile server repository name and password
- The ORACLE_HOME for the old mobile server repository

For example, on a Windows system, where the repository schema name is **mobileadmin**, password is **manager**, the old ORACLE_HOME is **C:\Oracle\MobileServer11g**, execute the Application Upgrade Assistant as follows:
ApplicationUpgradeAssistant.bat mobileadmin manager C:\Oracle\MobileServer11g

6.2.1.5 Migrate Your Users from the Mobile Server Repository to Oracle Internet Directory (OID)

Refer to [Section 6.1.2.5, "Migrate Your Users from the Mobile Server Repository to Oracle Internet Directory \(OID\)"](#).

6.2.2 Upgrade Mobile Client

Berkeley DB and SQLite Mobile Clients installed with the Oracle Database Mobile Server 11.1.0 or 11.2.0 can be upgraded to version 11.3.0. [Table 6–7](#) shows what mobile client platforms can be upgraded to the Oracle Database Mobile Server 11.3.

Table 6–7 Upgrading Mobile Clients

Client Device Platform	Upgrade Instructions
SQLite or Berkeley DB Mobile Clients on Win32	Run <code>update.exe</code> or <code>msync.exe</code> , which launches <code>update.exe</code> after the synchronization completes.
SQLite or Berkeley DB Mobile Clients on Pocket PC 5.0, 6.0, 6.5	Run <code>update.exe</code> or <code>msync.exe</code> , which launches <code>update.exe</code> after the synchronization completes.
SQLite or Berkeley DB Mobile Clients on Linux	Run <code>update</code> or <code>msync</code> , which launches <code>update</code> after synchronization completes.
SQLite Mobile Client on Android	Run <code>update</code> .
SQLite Mobile Client on Blackberry	De-install the previous client version and install the latest version.

Refer to [Section 6.1.4, "Upgrade Mobile Client"](#) for the detailed upgrade instructions.

The following section provides information on upgrading Berkeley DB mobile client to 11.3.0:

- [Section 6.2.2.1, "Upgrade Berkeley DB Mobile Client to 11.3.0"](#)

6.2.2.1 Upgrade Berkeley DB Mobile Client to 11.3.0

In Oracle Database Mobile Server 11.3.0, Berkeley DB SQL libraries are upgraded to version 6.0, and bundled with Berkeley DB Mobile Client 11.3.0. Since the binary format of Berkeley DB 6.0 is not compatible with that of previous Berkeley DB releases, a direct upgrade of Berkeley DB databases would not work. Hence, there are two options to upgrade Berkeley DB databases:

- Backup and dump Berkeley DB databases before upgrade and re-create Berkeley DB 6.0 databases after upgrade.

For this option, follow the steps below:

1. Dump old Berkeley DB databases (*.db) stored under data directory before Berkeley DB Mobile Client upgrade. For example, if you have 4 databases under data directory, use .dump command of old dbsql to dump the databases into SQL text files as follows:

```
prompt>dbsql.exe ..\bdb\data\JOHN\test.db .dump > test.sql
prompt>dbsql.exe ..\bdb\data\JOHN\default.db .dump > default.sql
prompt>dbsql.exe ..\bdb\data\JOHN\OSE$test.db .dump > OSE$test.sql
prompt>dbsql.exe ..\bdb\data\JOHN\OSE$default.db .dump > OSE$default.sql
```

You may run out of space of the mobile device where BDB Mobile Client is installed. In this case, you can copy old Berkeley DB databases, dbsql tool and Berkeley DB libraries to a separate system (maybe call it dump system for example) and do Step 1 in dump system.

2. Remove all the files under data directory, including *.db and *.db-journal. In this example, remove all files under bdb\data\JOHN.
3. Upgrade Mobile Server and Berkeley DB Mobile Client to 11.3.0.
4. Re-create Berkeley DB databases from the SQL text files with dbsql 6.0.

```
prompt>dbsql.exe ..\bdb\data\JOHN\test.db < test.sql
prompt>dbsql.exe ..\bdb\data\JOHN\default.db < default.sql
prompt>dbsql.exe ..\bdb\data\JOHN\OSE$test.db < OSE$test.sql
prompt>dbsql.exe ..\bdb\data\JOHN\OSE$default.db < OSE$default.sql
```

If you do Step 1 and Step 4 in a dump system, you need to copy the new Berkeley DB databases back to the data directory of Berkeley DB Mobile Client in the mobile device.

- Use Mobile Server repository for data backup.

For this option, follow the steps below:

1. Before the upgrade, synchronize Berkeley DB Mobile Client with Mobile Server to ensure that all client data is saved in the Mobile Server repository.
2. Uninstall old Berkeley DB Mobile Client. You can either uninstall the Mobile Client manually, or send the 'uninstall' command from Mobile Server to uninstall Mobile Client on Win32, Windows Mobile and Linux platforms automatically.
3. Upgrade Mobile Server to 11.3.0 and install Berkeley DB Mobile Client 11.3.0.
4. Do a sync with the new Berkeley DB Mobile Client. Berkeley DB 6.0 databases will be created under data directory.

6.2.3 Mobile Server Farm Upgrade

Refer to [Section 6.1.3, "Mobile Server Farm Upgrade"](#).

6.3 Upgrade Oracle Database Mobile Server 11.1.0 to 11.2.0

The upgrade from Oracle Database Mobile Server 11g Release 1 to 11g Release 2 is straightforward. You can upgrade Oracle Database Mobile Server either in the same ORACLE_HOME or in a separate ORACLE_HOME. [Table 6–8](#) shows what software is supported when upgrade from an Oracle Database Mobile Server 11g Release 1 and its installed application server to Oracle Database Mobile Server 11g Release 2 and supported application servers.

Table 6–8 Upgrading Oracle Database Mobile Server 11.1.0.0.0 to 11.2.0.0.0

From Oracle Database Mobile Server 11g Release 1	To Oracle Database Mobile Server 11g Release 2	Same Oracle Home	Separate Oracle Home
Oracle Database Mobile Server 11.1.0.0.0 with GlassFish 3.1	Oracle WebLogic Server 11g Release 1, Oracle WebLogic Server 12c	Supported	Supported
	GlassFish 3.1	Supported	Supported
	Oracle iAS 10.1.3.5.0	Supported	Supported
	Apache TomEE 1.0	Supported	Supported
Oracle Database Mobile Server 11.1.0.0.0 with WebLogic 11g Release 1	Oracle WebLogic Server 11g Release 1, Oracle WebLogic Server 12c	Supported	Supported
	GlassFish 3.1	Supported	Supported
	Oracle iAS 10.1.3.5.0	Supported	Supported
	Apache TomEE 1.0	Supported	Supported
Oracle Database Mobile Server 11.1 or 11.2 with Oracle iAS 10.1.3.5.0	Oracle WebLogic Server 11g Release 1, Oracle WebLogic Server 12c	Supported	Supported
	GlassFish 3.1	Supported	Supported
	Oracle iAS 10.1.3.5.0	Supported	Supported
	Apache TomEE 1.5	Supported	Supported
Oracle Database Mobile Server 11.1.0.0.0 with Oracle iAS 10.1.3.5.0	Oracle WebLogic Server 11g Release 1, Oracle WebLogic Server 12c	Supported	Supported
	GlassFish 3.1	Supported	Supported
	Oracle iAS 10.1.3.5.0	Supported	Supported
	Apache TomEE 1.0	Supported	Supported

6.3.1 Mobile Server Farm Upgrade

Refer to [Section 6.1.3, "Mobile Server Farm Upgrade"](#) for instructions on how to upgrade Mobile Server in a farm.

6.3.2 Upgrade Oracle Database Mobile Server 11.1.0.0.0 to 11.2.0.0.0

The following sections describe how to upgrade from Oracle Database Mobile Server 11.1 or 11.2 to Oracle Database Mobile Server 11.2.0.0.0:

- [Section 6.3.2.1, "Upgrade in the Same or a Separate ORACLE_HOME"](#)
- [Section 6.3.2.2, "Upgrade Your Mobile Server Repository"](#)

6.3.2.1 Upgrade in the Same or a Separate ORACLE_HOME

Upgrading Oracle Database Mobile Server 11.1.0.0.0 to 11.2.0.0.0 is supported in the same or in a separate ORACLE_HOME. For more information, see:

- [Section 6.3.2.1.1, "Upgrading in the Same ORACLE_HOME"](#)
- [Section 6.3.2.1.2, "Upgrading in a Separate ORACLE_HOME"](#)

6.3.2.1.1 Upgrading in the Same ORACLE_HOME

Refer to [Table 6–8](#) for the supported cases for upgrading Oracle Database Mobile Server 11.1.0.0.0 to 11.2.0.0.0 in the same ORACLE_HOME.

1. Install Oracle Database Mobile Server 11.2.0.0.0 in the same ORACLE_HOME.
 - Launch Oracle Universal Installer. On Select Installation page, select **"Mobile Server"**.
 - On the **"Specify Home Details"** page, choose the same ORACLE_HOME as your previous installation.
 - Follow the instructions to complete the install.
2. Execute the Repository Wizard to upgrade the repository.
 - If you choose to run Repository Wizard during install, the Repository Wizard launches automatically.
 - Alternatively, you can launch the Repository Wizard after installation. Refer to [Section 6.1.2.3, "Upgrade Your Mobile Server Repository"](#).

6.3.2.1.2 Upgrading in a Separate ORACLE_HOME

Refer to [Table 6–8](#) for the supported cases for upgrading Oracle Database Mobile Server 11.1.0.0.0 to 11.2.0.0.0 in a separate ORACLE_HOME.

1. Install Oracle Database Mobile Server 11.2.0.0.0 in a new ORACLE_HOME.
 - Launch Oracle Universal Installer, on Select Installation Type page, select **"Mobile Server"**.
 - On the **"Specify Home Details"** page, choose a new ORACLE_HOME that is different from your previous installation.
 - Follow the instructions to complete the install.
2. Execute the Repository Wizard to upgrade the repository.
 - If you choose to run Repository Wizard during install, the Repository Wizard launches automatically.
 - Alternatively, you can launch Repository Wizard after installation. Refer to [Section 6.1.2.3, "Upgrade Your Mobile Server Repository"](#).
3. Execute the application upgrade assistant to upgrade user applications to the new repository. For more information, refer to [Section 6.3.3, "Upgrade Your Existing Applications"](#).
4. Uninstall the previous Mobile Server from the old ORACLE_HOME.
 - Launch Oracle Universal Installer, click **"Deinstall Products"**.
 - Choose the previous mobile server that you want to uninstall, and click **"Remove"**.

6.3.2 Upgrade Your Mobile Server Repository

For information on upgrading the mobile server repository, refer to [Section 6.1.2.3, "Upgrade Your Mobile Server Repository"](#).

6.3.3 Upgrade Your Existing Applications

For information on upgrading existing applications, refer to [Section 6.3.3, "Upgrade Your Existing Applications"](#). update.exe or msync.exe

6.3.4 Upgrade Mobile Clients

Berkeley DB and SQLite Mobile Clients installed with the Oracle Database Mobile Server 11.1.0.0.0 can be upgraded to 11.2.0.0.0. [Table 6–9](#) shows the mobile client platforms that can be upgraded to 11.2.0.0.0.

Table 6–9 Upgrading Mobile Clients

Client Device Platform	Upgrade Instructions
SQLite or Berkeley DB Mobile Clients on Win32	Run update.exe or msync.exe, which launches update.exe after the synchronization completes.
SQLite or Berkeley DB Mobile Clients on Pocket PC 6.0, 6.5	Run update.exe or msync.exe, which launches update.exe after the synchronization completes.
SQLite or Berkeley DB Mobile Clients on Linux	Run update or msync, which launches update after the synchronization completes.
SQLite Mobile Clients on Android	Run update.
SQLite Mobile Clients on BlackBerry	De-install the previous client version and install the 11.2 mobile client.

To upgrade mobile client on Android, if server port is changed after server upgrade, please modify SERVER_URL parameter in [NETWORK] section in devmgr.ini before running update. Usually you can find **devmgr.ini at /mnt/sdcard/oracle.mobileclient**

To upgrade mobile clients on Win32, Windows Mobile and Linux platforms, follow the instructions below:

1. Shutdown your applications.
2. Check available software update. Ensure that your device is enabled to receive software updates from the Mobile Server. You can either run update.exe or msync.exe, which automatically launches update.exe after the synchronization completes.

Update.exe might not work if the server port is changed after Mobile Server upgrade. In this case follow the instructions below to run msync.exe:

- Run msync.exe and specify the new server URL in '**Server URL**' field, so that the update.exe is able to connect to Mobile Server with the new server URL.
The update.exe will find the available software updates on the server and display the option for you to install the update.
3. Install the software update. A new mobile client would be downloaded and installed.
 4. Restart you applications.

6.4 Upgrade 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 6.4.1, "Supported Versions for Upgrading Oracle Database Lite"](#)
- [Section 6.4.2, "Pre-Upgrade Instructions"](#)
- [Section 6.4.3, "Upgrade Your Mobile Server Repository"](#)
- [Section 6.4.4, "Upgrade Your Existing Applications"](#)
- [Section 6.4.5, "Installing Sample Applications"](#)
- [Section 6.4.6, "Migrate Your Users From the Mobile Server Repository to the Oracle Internet Directory \(OID\)"](#)
- [Section 6.4.7, "Remove the 10g Release 1 or 2 Installation"](#)
- [Section 6.4.8, "Remove Duplicate Mobile Server IDs from the Repository"](#)

6.4.1 Supported Versions for Upgrading 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.

The following sections describe how to perform the upgrade:

- [Section 6.4.1.1, "Upgrading in the Same ORACLE_HOME"](#)
- [Section 6.4.1.2, "Upgrading in a Separate ORACLE_HOME"](#)
- [Section 6.4.1.3, "Supported Oracle Database Lite Versions for Upgrade"](#)

6.4.1.1 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.

6.4.1.2 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*.

6.4.1.3 Supported Oracle Database Lite Versions for Upgrade

[Table 6–10](#) details what versions of Oracle Database Lite and OracleAS installation can be upgraded to Oracle Database Lite 10.3.0.3

Table 6–10 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	Separate Oracle Home
10g R1 Standalone	Oracle iAS 10.1.3.5.0	Not Supported	Supported
	Oracle WebLogic Server 11g Rel 1, Oracle WebLogic Server 12c	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	Oracle iAS 10.1.3.5.0	Not Supported	Supported
	Oracle WebLogic Server 11g Rel 1, Oracle WebLogic Server 12c	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 6–11 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	Separate Oracle Home
10g R2 Standalone	Oracle iAS 10.1.3.5.0	Not Supported	Supported
	Oracle WebLogic Server 11g Rel 1, Oracle WebLogic Server 12c	Not Supported	Supported
10g R2 with Oracle iAS 9.0.4	Oracle iAS 10.1.3.5.0	Not Supported	Not Supported
	Oracle WebLogic Server 11g Rel 1, Oracle WebLogic Server 12c	Not Supported	Not Supported
10g R2 with Oracle iAS 10.1.2 with patch 5723922	Oracle iAS 10.1.3.5.0	Not Supported	Supported
	Oracle WebLogic Server 11g Rel 1, Oracle WebLogic Server 12c	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 6–12 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	Separate Oracle Home
10.3.0.1 Standalone	Oracle <i>iAS</i> 10.1.3.5.0	Not Supported	Supported
	Oracle WebLogic Server 11g Rel 1, Oracle WebLogic Server 12c	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	Oracle <i>iAS</i> 10.1.3.5.0	Supported	Supported
	Oracle WebLogic Server 11g Rel 1, Oracle WebLogic Server 12c	Supported	Supported
10.3.0.1 with Oracle <i>iAS</i> 10.1.3.1	Oracle <i>iAS</i> 10.1.3.5.0	Supported	Supported
	Oracle WebLogic Server 11g Rel 1, Oracle WebLogic Server 12c	Supported	Supported

Table 6–13 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 <i>iAS</i> 9.0.2	Any	Not Supported
10.0.0	Oracle <i>iAS</i> 9.0.2	Any	Not Supported
	Oracle <i>iAS</i> 9.0.3	Any	Not Supported
	Oracle <i>iAS</i> 9.0.4	Any	Not Supported
	Oracle <i>iAS</i> 10.1.2.	Oracle <i>iAS</i> 10.1.2 with OID 10.1.2	Supported
	Oracle <i>iAS</i> 10.1.2.	Oracle <i>iAS</i> 10.1.3.5.0 with OID 10.1.4	Supported
10.2.0.2	Oracle <i>iAS</i> 9.0.4	Any	Not Supported
	Oracle <i>iAS</i> 10.1.2 with OID 10.1.2	Oracle <i>iAS</i> 10.1.2.0.2 with OID 10.1.2	Supported
10.3.0.1	Oracle <i>iAS</i> 10.1.2 with OID 10.1.2	Oracle <i>iAS</i> 10.1.2 with OID 10.1.2	Supported
	Oracle <i>iAS</i> 10.1.3.1 with OID 10.1.4	Oracle <i>iAS</i> 10.1.3.x with OID 10.1.4	Supported

6.4.2 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 5, "Installation of Oracle Database Mobile Server"](#) for instructions on how to install Oracle Database Lite. When the Repository Wizard is executed, see [Chapter 6.4.3, "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 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.

6.4.3 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 6.1.1, "Pre-Upgrade Instructions"](#).

6.4.4 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 and 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
```

6.4.5 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
```

6.4.6 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 6.4.6.1, "Mobile Server Installed On Oracle Application Server 10.1.2.0.0"](#)
- [Section 6.4.6.2, "Mobile Server Installed on Oracle Application Server 10.1.3.1.0 or Higher"](#)

6.4.6.1 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.

6.4.6.2 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.

6.4.7 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**.

6.4.8 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:

- The syntax for `unregistermobileserver` utility prior to Oracle Database Mobile Server 11.3.0.1 release is:

```
unregistermobileserver [Repository_Name] [Repository_Password] [MobileServer_  
id]
```

- The syntax for `unregistermobileserver` utility since Oracle Database Mobile Server 11.3.0.1 release is:

```
unregistermobileserver [Repository_Name]/[Repository_Password] [MobileServer_id]
```

To get the old `MobileServer_id` that needs to be removed:

- Connect to the Mobile Server repository with `Repository_Name` and `Repository_Password`.
- Execute the SQL script to find out the old Mobile Server id:

```
Select id from mobileserver_instances where version <> 'new_version';
```

The `new_version` is the Mobile Server version you are running after the upgrade, for example, 11.3.0.0.0.

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
```

Migrating from Oracle Lite Client Database to Berkeley DB

The Oracle Lite Client Database is no longer supported as of Oracle Database Mobile Server 11g. Oracle recommends replacing the Oracle Lite Client Database (OLite) with Oracle Berkeley DB: a fast, highly scalable, ACID compliant database. For those users using the Oracle Lite Client Database to synchronize with the backend to an Oracle Database through Oracle Database Mobile Server, the following [Section 7.1, "Migration Guideline"](#) provides helpful information and steps to migrate from OLite to Berkeley DB.

7.1 Migration Guideline

The recommended migration paths for the common OLite use cases are:

1. If you deploy OLite on mobile devices, and the Mobile Server is used to synchronize data between mobile devices and an Oracle database, then it is recommended to replace OLite with Berkeley DB.
2. If you are using Web-to-Go on the client side to run JAVA Servlets, and OLite as the client data store, you need to replace Web-to-Go with a Servlet container and replace OLite with Berkeley DB.
3. If you are using Branch Office, which consists of OLite and a Multi-User Listener as a database service for multiple users and applications, there is no identical functionality in Oracle Database Mobile Server 11g. Contact Oracle sales to design an appropriate solution.

In scenarios 1 and 2 above, you may want to migrate the data stored in OLite to Berkeley DB and modify your applications because of the differences in APIs, SQL syntax, database drivers, etc.

The following sections provide you step by step instructions on how to migrate client side application data from OLite to Berkeley DB.

- [Section 7.1.1, "Backup OLite Database"](#)
- [Section 7.1.2, "Upgrade Oracle Lite Mobile Client"](#)
- [Section 7.1.3, "Export Oracle Lite Database"](#)
- [Section 7.1.4, "Migrate OLite Publication"](#)
- [Section 7.1.5, "Upgrade Oracle Database Lite Mobile Server 10.3.0.3.0 to Oracle Database Mobile Server 11g"](#)
- [Section 7.1.6, "Create Berkeley DB-based Publication and Application"](#)

- [Section 7.1.7, "Install Berkeley DB Mobile Client"](#)
- [Section 7.1.8, "Import Data to Berkeley DB"](#)

After migration, you can synchronize your application data in the backend Oracle Database through Oracle Database Mobile Server.

7.1.1 Backup OLite Database

Before you start migration, backup your OLite database on your mobile devices. You can backup the OLite database either by using the **backupdb** utility or by copying the database files to a safe location. Before any files can be copied, stop all applications that access the OLite database and shut down the multi-user service if it is running. Once completed, execute the **backupdb** utility. To backup OLite database, use the syntax:

```
BACKUPDB DSN DBName backup_filename [DB_password]
```

Refer to Oracle® Database Lite Oracle Lite Client Guide Release 10.3 for the usages of backupdb utility.

7.1.2 Upgrade Oracle Lite Mobile Client

Download and apply the latest patch for Oracle Database Lite Mobile Server 10.3.0.3.0 to support exporting OLite database. After you apply the patch, restart the Mobile Server and execute "Update" from Oracle Lite Mobile Client.

A new version of Oracle Lite Mobile Client will be downloaded and installed which enables you to export OLite database.

7.1.3 Export Oracle Lite Database

The newly installed Oracle Lite Mobile Client supports exporting OLite database to binary files using File-based Sync. You can either export data in graphical mode using msync or programmatically using OSE Synchronization API. The steps for exporting data using msync are as follows:

1. Enable OLite data export

Modify polite.ini, write the following in [SYNC] section:

```
OSE_EXPORT_PLUGIN=explite
```

This step could be automated by adding <ini> section to the patch file:

- a. In the patch files:

```
<ORACLE_
HOME>/mobile/server/admin/repository/setup/dmc/[win32 | linux/x86 |
wince/ppc60]/patch_[win32 | linux-x86 | ppc60]_bug#.inf
```

After

```
<action msg_i='$FILE_I$' msg='$FILE_U$'>ini</action>
```

Add

```
<action msg_i='$INI_I$' msg='$INI_U$'>ini</action>
```

Then, add <ini> element after </file>

```
<ini>
```

```
<item name='POLITE.INI' section='SYNC'>
```

```
<item name='OSE_EXPORT_PLUGIN'>explite</item>
</item>
</ini>
```

- b. The same should be done for patch files in the


```
<ORACLE_HOME>/mobile_
oc4j/j2ee/mobileserver/applications/mobileserver/setup_HOME
```

2. Export OLite data

- a. Export data to the default location. Launch msync. The "Server URL" field should show "N/A(Export Mode)". Click "Sync" button to export data. By default it will export data into the following file:

```
$(USER_DIR)\ose_exports\ose_export_$(SYNC_USER).bin
```

USER_DIR is the user home directory on the machine; SYNC_USER is the sync user name. For example: C:\Users\Jack\ose_exports\ose_export_jack.bin

- b. Export data to a customized location

You can also customize the export file name and location as follows:

Launch msync, go to "Tools" - "File Sync Options" menu, check the "File Based Sync", set the mode to "Send" and enter the file location in the "File" field.

Click "Sync" to export data. (Do not click "Apply" button because there is a known issue with the msync UI that if you check "File Based Sync" option and click "Apply" button, msync UI will crash.) Then after export is done, you will get the exported data in the location you specified.

- c. After the export is done, you should see the following message in the msync result window:

```
"The database data has been exported. Please proceed with client upgrade."
```

Now you can uninstall Oracle Lite Mobile Client.

If you want to export OLite data programmatically using OSE Synchronization API, refer to Oracle® Database Mobile Server Developer's Guide on how to use File-based Sync.

7.1.4 Migrate OLite Publication

The existing OLite publications require migration to support Berkeley DB clients. You can migrate the OLite publications before upgrading 10.3.0.3.0 to 11g by running the migration tool MigrateOlitePublication.bat (or MigrateOlitePublication.sh) located at <ORACLE_HOME>/mobile/server/bin to migrate your OLite publications.

You can also write a Java program to migrate the OLite publications by a Consolidator Java API call: addBDDBSQLiteDevFlg(String name).

String name is the OLite publication name.

7.1.5 Upgrade Oracle Database Lite Mobile Server 10.3.0.3.0 to Oracle Database Mobile Server 11g

Refer to Oracle Database Mobile Server Documentation Release 11.3.0 on how to upgrade the Mobile Server.

7.1.6 Create Berkeley DB-based Publication and Application

Creation of a new Berkeley DB publication is only required if the OLite publication has not been migrated by the method described in [Section 7.1.4, "Migrate OLite Publication"](#). You can either use Mobile Development Kit (MDK) or write a program using Consolidator Java API to create Berkeley DB publications if needed.

Create a new application or modify the existing application and deploy it to the Mobile Server.

1. Create or modify the application

There are some differences between OLite and Berkeley DB that you need to pay attention to:

- OLite supports Oracle SQL extensions and Berkeley DB does not.
- OLite and Berkeley DB both support SQL-92, but in some cases, modifications will be required.
- OLite and Berkeley DB both support ADO.NET, ODBC, JDBC APIs, but the drivers and usages of these APIs are different.
- Berkeley DB does not support OKAPI, SODA and SODASQL.

Refer to Berkeley DB documentation on how to write applications with Berkeley DB.

2. Deploy the application to Mobile Server

Deploy your application to Mobile Server either using Packaging Wizard or programmatically using Mobile Server APIs. You have two choices:

- Delete the old OLite application and publish the new Berkeley DB application, then re-assign existing users to the new application.
- Modify the existing OLite application. This approach does not require to re-assign existing users to the modified application

7.1.7 Install Berkeley DB Mobile Client

Download Berkeley DB Mobile Client from Oracle Database Mobile Server 11g to your mobile device and install it.

7.1.8 Import Data to Berkeley DB

After installing Berkeley DB Mobile Client, you are ready to import the data that you exported from OLite database to Berkeley DB.

1. Import data with default option

After you install Berkeley DB Mobile Client, if there is an export .bin file in the default location (`$(USER_DIR)\ose_exports\ose_export_$(SYNC_USER).bin`), data migration will happen automatically. The first sync will be setup sync and the next sync will import sync.

2. Customizing data import

Alternatively, if you want the export file to be in a different (non-default) location and name, follow the instructions:

- a. Put the following in [DEFAULT] section in ose.ini to enable setup sync:

```
OSE.SETUP_SYNC=TRUE
```

- b.** Launch msync, click “Sync” button to start setup sync. You will see the following message in msync result window after setup sync is done:

"The client databases have been set up. Please sync again to import the data from the binary file generated during the export stage. If you would like to specify custom location for this file, please use the File sync options."

- c.** The next sync will automatically be import sync.

Go to “Tools” -> “File Sync Options” menu, check the “File Based Sync”, set the mode to “Receive” and enter the file location in the “File” field. Click “Sync” to start import sync and you will see sync progress dialog. After import sync is done the following message will be displayed:

"The client data has been imported. This concludes the client upgrade."

Now data migration is done.

If you want to import OLite data to Berkeley DB programmatically using OSE Synchronization API, refer to Oracle® Database Mobile Server Developer's Guide on how to use File-based Sync.

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