Oracle® Database Lite

Release Notes

10*g* (10.2.0)

June 2005

The information in this release note pertains to items that did not make it into each book. The information is organized by the book to which it pertains, as follows:

1 General Subjects

The following subjects apply, in general, to the entire product:

1.1 New Features for Oracle Database Lite 10*g* Release 2

The following are the new features added to Oracle Database Lite 10*g* Release 2:

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1.1.1 Mobile Database Workbench

Mobile Database Workbench (MDW) is a tool which enables developers to easily define, create, and test their mobile database schema. From within the tool, developers can create snapshots on the Mobile device (running on any platform supported by Oracle Database Lite, including devices such as WinCE), test the synchronization, and inspect the Oracle Lite database.

> **Note:** MDW is available in the Windows Mobile Development Kit only

1.1.2 Reverse Proxy Support

The reverse proxy support enables Mobile clients to replicate over the public Internet with a Mobile Server, which is installed behind a firewall/gateway/reverse proxy.

Basic reverse proxy support was present in 5.0.2.10.0; this version adds functionality for SSL and reverse proxy authentication.

1.1.3 Data Collection Queues

Data Collection Queues were added to apply client changes to the base table during synchronization, and immediately resolve conflicts.

1.1.4 Documentation

The following guides were completely rewritten: The Oracle Database Lite Administration and Deployment Guide and the Oracle Database Lite Developer's Guide.

1.1.5 Oracle Database Lite EXPLAIN Plan

The EXPLAIN plan is the ability to view the SQL execution plan, similar to Oracle10g EXPLAIN plan. You can see the path that the optimizer takes and determine if you should add or remove indexes for performance enhancement.

1.1.6 Limit Clause

Limit The Number Of Records Returned, Independent Of The Where Clause.

1.1.7 Index Hint to Force an Index Usage on a Table.

The Index Hint enables you to force the optimizer to use a particular index when generating the result set. Thus, you can overrule the optimizer, which may take a wrong estimate in determining the best execution plan

1.1.8 Device Management Screens

Mobile Manager screens. Administrator can now set/modify device policy for each user/group (which controls things like upgrade). The administrator can modify INF files through a UI. The device manager commands now accept parameters.

1.1.9 OHJ Integration

Online, context sensitive help for:

- Packaging Wizard
- Mobile Database Workbench
- Mobile Manager
- Repository Wizard

1.1.10 ActiveSync-Based mSync for PocketPC

Synchronize Pocket PC against the Mobile Server using ActiveSync from PC. The client synchronization logic runs on the PC, not the device. Database pages are moved back and forth between the PC and device as needed. This makes the synchronization much faster because PC has more resources.

1.1.11 Device Management

Device management now supports delivery of device management commands over SMS and Broadbeam ExpressQ.

1.1.12 Security Enhancements

A number of security enhancements have been made, as follows:

- During installation, the SYSTEM password is no longer required.
- It is possible to restrict the database privileges for the MOBILEADMIN user, once the application has been published.
- External Authentication no longer requires a clear text password.
- Passwords for all default accounts can be chosen at install time.
- Remote HTTP access to the Mobile Client Web-to-Go has been disabled by default.
- The NT Service for the Multi-User listener runs under a restricted Windows user.

1.1.13 J2ME CDC

Oracle Database Lite for Windows CE now supports J2ME CDC based Java Virtual Machines. Developers can build Java/JDBC based applications on top of Oracle Database Lite and execute these applications on Windows CE devices using either the IBM J9 Java VM or CrEme 4.0 Java VM.

1.1.14 Linux Client

The Mobile Client and Mobile Client for WEB are now available for Redhat Linux.

1.2 Known Limitations

The supported Mobile Server configuration is certified to use with either Mobile Server standalone or using Mobile Server in combination with OracleAS 9.0.4.1 or 10.1.2.

1.3 Linux Support in Oracle Database Lite 10*g*R2

Oracle Database Lite 10*g* R2 includes a Mobile Development Kit for Linux, which is a stripped-down version of the Windows MDK.

Included support includes the following:

- Oracle Lite database

- Multi-User listener

- Utilities, such as `createdb`, `removedb`, `encyrpdb`, `decrypdb`, `olsv`, and `validatedb`

> **Note:** You can view the usage details for `olsv` by issuing the following:
>
> ```
> ./olsv --help
> ```

The Mobile Server installation includes the following Mobile Clients for Linux:

- Mobile Client for Linux

- Mobile Client for Web-to-Go (Linux)

> **Note:** The Device Manager agent (DMagent) must be running to successfully uninstall the Linux Client.

The Mobile Client stacks includes tools, such as `dmclient`, `msync`, `msql`. The tools that are not currently included are Packaging Wizard, Mobile Database Workbench, and the Web-to-Go SDK.

The Linux MDK contains the following samples:

- `/samples/jdbc/EMAIL.java`

- `/samples/jdbc/JDBCEX.java`

- `/samples/jdbc/PLSQLEX.java`

- `/samples/jdbc/INVENTORY.java`

- `/samples/odbc/odbctbl`

- `/samples/odbc/odbcview`

- `/samples/odbc/odbcfunc`

- `/samples/odbc/long`

If you install the MDK on Linux, you can only use the following msync command:

```
./msync username/password@server[:port][@proxy:port]
```

For example,

```
./msync john/john@testserver:8000
```

The other msync options, such as -save, -a, -password and -force will not result in a successful sync.

This is a limitation only for the MDK installation on Linux and not for a regular linux client installation through the ./setup "Oracle Lite Linux x86".

1.4 Using webtogo.exe to Start Mobile Server

You should no longer use the webtogo.exe to launch the standalone version of the Mobile Server. Instead, launch the Mobile Server by launching OC4J standalone. See the *Oracle Database Lite Getting Started Guide* for more information.

1.5 Supported Platforms for Windows

We do not support the Windows 98 or NT platforms for this release.

2 Modifications to the Getting Started Guide

The following subjects detail modifications that should be in the *Oracle Database Lite Getting Started Guide*.

- Section 2.1, "Understand Desupported Devices"
- Section 2.2, "Providing Enough Swap Space on the Linux Platform"
- Section 2.3, "Patch Required if Using Linux Redhat 3.0"
- Section 2.4, "Installing on RedHat Linux 3.0 with Japanese Local"
- Section 2.5, "Cannot Install Over Network With Windows 2003 Service Pack 1"
- Section 2.6, "Pre-Installation Step Required for Pocket PC 2005 Device"
- Section 2.7, "Error Message Received When Installing on Pocket PC Device"
- Section 2.8, "Executing mSync and DMAGENT on Linux"
- Section 2.9, "Configuring for Default Sync When Installing the Client"
- Section 2.10, "Executing Web-to-Go on Linux"
- Section 2.11, "Enabling UIX Dynamic Image Generation on UNIX to See Mobile Manager Buttons"
- Section 2.12, "Enabling Branch Office on Windows XP Service Pack 2"
- Section 2.13, "Upgrading Web-to-Go Applications"
- Section 2.14, "Migrating Oracle Database Lite from 10.0.1 to 10.2 Version"
- Section 2.15, "Re-Installing Sample Applications While Upgrading from 10g Release 1 to 10g Release 2"

2.1 Understand Desupported Devices

The following devices are not supported in Oracle Database Lite 10*g*:

- EPOC devices
- The following WinCE devices:

WinCE devices	WinCE devices	WinCE devices	WinCE devices
HPC_Pro\us\arm	HPC_Pro\us\sh3	HPC_Pro\us\sh4	HPC_Pro\us\mips
HPC_Pro\cn\arm	HPC_Pro\cn\sh3	HPC_Pro\cn\sh4	HPC_Pro\cn\mips
HPC_Pro\ja\arm	HPC_Pro\ja\sh3	HPC_Pro\ja\sh4	HPC_Pro\ja\mips
HPC_Pro\ka\arm	HPC_Pro\ka\sh3	HPC_Pro\ka\sh4	HPC_Pro\ka\mips
Pocket_PC\us\sh3	Pocket_PC\us\sh4	Pocket_PC\us\mips	Pocket_PC\cn\sh3
Pocket_PC\cn\sh4	Pocket_PC\cn\mips	Pocket_PC\ja\sh3	Pocket_PC\ja\sh4
Pocket_PC\ja\mips	Pocket_PC\ko\sh3	Pocket_PC\ko\sh4	Pocket_PC\ko\mips
Pocket_PC\ko\mips			

2.2 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.

2.3 Patch Required if Using Linux Redhat 3.0

If you install Oracle Database Lite 10*g* 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.

2.4 Installing on RedHat Linux 3.0 with Japanese Local

If you are installing Oracle Database Lite into the same Oracle home as the Oracle Database 10*g*R2 or *i*AS 10.1.2 on a host that uses Redhat Linux 3.0 with Japanese Local, then you will receive an error message and the Oracle Universal Installer is aborted.

In the OUI log file, and XMLParse and "NullPointerException" errors are written.

Instead, rename the ORACLE_HOME\inventory\clone folder to any other name and restart the installer again. Once renamed, then the installation completes successfully.

2.5 Cannot Install Over Network With Windows 2003 Service Pack 1

While running the setup.exe through a network drive on Windows 2003 SP1 machine, you will receive a Windows security alert. In order to overcome this and run the setup.exe you need to do one of the following:

- Execute the setup.exe command locally with the Oracle Database Lite CD.
- Copy the contents for Oracle Database Lite on to the local disk.

■ Refer to the Microsoft Web site on how to add the Oracle Database Lite files to the list of the reliable files.

2.6 Pre-Installation Step Required for Pocket PC 2005 Device

Before installing the Oracle Database Lite CAB file on a Pocket PC 2005 (Windows CE 5.0) device, pre-create the \OraCE directory in the Pocket PC device. This step is not required when you download Oracle Database Lite setup program (setup.exe) directly into the Pocket PC device to install Oracle Database Lite.

2.7 Error Message Received When Installing on Pocket PC Device

When you install Oracle Database Lite on a Pocket PC device with 'Microsoft Pocket PC 2003 (Windows Mobile) Second Edition' operating system, you may get the following warning.

```
"The program you have installed may not display properly because it is
designed for a previous version of Windows Mobile software."
```

Ignore the message. Oracle Database Lite works as expected.

2.8 Executing mSync and DMAGENT on Linux

The mSync GUI tool is not available on Linux. Instead, you can execute mSync using the command line. The following are instructions for installing and running mSync on Linux:

WARNING: If you are testing Oracle Database Lite on Suse Linux, you must do the following before installation:

```
ln -s /usr/lib/libssl.so.0.9.7 /usr/lib/libssl.so.4
ln -s /usr/lib/libcrypto.so.0.9.7 /usr/lib/libcrypto.so.4
```

Once the installation is complete, perform your tests and then remove the soft links, as these may cause problems with other programs you have installed on your machine. This instruction is only for testing and should not be a permanent option.

---

1. Set the following environment variables:

   ■ Set OLITE_HOME to where Oracle Lite is installed, such as /home/<user>/olite

   ■ Set JAVA_HOME to the JDK 1.4 Java installation directory

   ■ Add the following to the LD_LIBRARY_PATH
     $JAVA_HOME/jre/lib/i386
     $JAVA_HOME/jre/lib/i386/server
     $OLITE_HOME/bin

   ■ Add $OLITE_HOME/bin to the PATH

2. Download the mSync setup executable by clicking the "Oracle Lite Linux x86" link on the Mobile Server setup page.

3. After the download is complete, set execution permissions on the setup executable with `chmod 755 setup`.

4. Execute the `setup` command, as follows:

```
./setup "Oracle Lite Linux x86;US" http://server_
url/webtogo/devmgr/install username password install_directory LINUX_x86_
US_OLITE
```

For example, a Mobile Server running on the `testsrvr` server on port 8000 for user/password `john/john`, the setup command is as follows:

```
./setup "Oracle Lite Linux x86;US"
http://testsrvr:8000/webtogo/devmgr/install john john $OLITE_HOME LINUX_
x86_US_OLITE
```

5. To start mSync, do the following:

```
cd $OLITE_HOME/bin
./msync
```

The usage details are displayed.

To uninstall mSync and remove the database files, do the following:

```
cd $OLITE_HOME
./uninst /deletedb
```

The `dmagent` is automatically launched in a daemon mode when setup is executed. However if you want to restart it, first kill the current process and then perform the following:

```
cd $OLITE_HOME/bin
./dmagent /b http://server_url/webtogo username password
```

For example, a Mobile Server running on the `testsrvr` server on port 8000 for user/password `john/john`, the `dmagent` command is as follows:

```
./dmagent /b http://testsrvr:8000/webtogo john john
```

2.9 Configuring for Default Sync When Installing the Client

In the default configuration, all Mobile Clients do not automatically Sync after you install the client. However, you can modify your configuration to automatically sync each client after it is installed, as follows:

1. Logon to the Mobile Server as an Administrator and launch the Mobile Manager tool.

2. Click on Mobile Devices, followed by Administration.

3. Click on Command Management.

4. Edit the Command Device Info (Retrieve device information).

5. Insert 'Synchronize' as a Selected Command and click Apply to accept the changes.

2.10 Executing Web-to-Go on Linux

On Linux, Web-to-Go can use only a Mozilla browser.

Perform the following to install and run Web-to-Go on Linux.

> **WARNING:** If you are testing the Oracle Database Lite on Suse Linux, you must do the following before installation:
>
> ```
> ln -s /usr/lib/libssl.so.0.9.7 /usr/lib/libssl.so.4
> ln -s /usr/lib/libcrypto.so.0.9.7 /usr/lib/libcrypto.so.4
> ```
>
> **Once the installation is complete, perform your tests and then remove the soft links, as these may cause problems with other programs you have installed on your machine. This instruction is only for testing and should not be a permanent option.**

1. Set the following environment variables:

   - Set `OLITE_HOME` to where Oracle Database Lite is installed, such as `/home/<user>/olite`

   - Set `JAVA_HOME` to the Java installation directory

   - Add the following to the `LD_LIBRARY_PATH`
     `$JAVA_HOME/jre/lib/i386`
     `$JAVA_HOME/jre/lib/i386/server`
     `$OLITE_HOME/bin`

   - Add `$OLITE_HOME/bin` to the `PATH`

2. Download the Web-to-Go setup executable by clicking the "Oracle Lite Linux WEB" link on the Mobile Server setup page.

3. After the download is complete, set execution permissions on the setup executable with `chmod 755 setup`.

4. Execute the setup command, as follows:

   > **Note:** User can optionally provide port number for the webtogo client. This is especially necessary when the default port 80 is in use on the client machine.

   ```
   ./setup "Oracle Lite Linux WEB;US" http://server_
   url/webtogo/devmgr/install username password install_directory
   LINUX_x86_US_WTG [port=port_number]
   ```

   For example, a Mobile Server running on the `testsrvr` server on port 8080 for user/password `john/john`, the setup command is as follows:

   ```
   ./setup "Oracle Lite Linux WEB;US"
   http://testsrvr:8000/webtogo/devmgr/install john john $OLITE_HOME LINUX_
   x86_US_WTG port=8080
   ```

5. To start Web-to-Go in the debug mode, do the following:

   ```
   cd $OLITE_HOME/bin
   ./webtogo -d0
   ```

   To start Web-to-Go in the daemon mode, do the following:

   ```
   cd $OLITE_HOME/bin
   ./webtogo
   ```

To kill Web-to-Go, which is in the daemon mode, do the following:

```
cd $OLITE_HOME/bin
./webtogo -k
```

To uninstall Web-to-Go and delete the database files, perform the following:

```
cd $OLITE_HOME
./uninst /deletedb
```

The `dmagent` is automatically launched in a daemon mode when setup is executed. However if you want to restart it, first kill the current process and then perform the following:

```
cd $OLITE_HOME/bin
./dmagent /b http://server_url/webtogo username password
```

For example, a Mobile Server running on the `testsrvr` server on port 8000 for user/password `john/john`, the dmagent command is as follows:

```
./dmagent /b http://testsrvr:8000/webtogo john john
```

2.11 Enabling UIX Dynamic Image Generation on UNIX to See Mobile Manager Buttons

UIX generates images dynamically. On UNIX systems, this requires headless Java to be enabled or access to an X server to be enabled for the JVM. If you do not configure one of the following, then you will not see the buttons in the Mobile Manager.

- Section 2.11.1, "Headless Java"
- Section 2.11.2, "X Server Access"

2.11.1 Headless Java

Headless Java is only supported in Java 2 version 1.4 and later. In order to avoid X server configuration issues, enable headless operation by setting the Java option: `java.awt.headless` to `true`.

In Mobile Server standalone mode, set the parameter when you start the Mobile Server by modifying the `runmobileserver` script to include the following:

```
java -Djava.awt.headless=true -jar oc4j.jar
```

When deploying to an OC4J instance within the application server, the Java option must be specified within the `opmn.xml` file, as follows:

```
<oc4j instanceName="OC4J_Demos" gid="OC4J_Demos">
  <!-- OC4J configuration information here... -->
  <java-option value="-Djava.awt.headless=true "/>
</oc4j>
```

After modification, restart OC4J.

2.11.2 X Server Access

An accessible X server must be running at the same time as the Mobile Server. To make an X server accessible to the Mobile Server, the X server host grants access to the Mobile Server host through commands, such as `xhost +`. The Mobile

Server host configures the DISPLAY environment variable to point to the X server, as follows:

```
set DISPLAY=<X server machine name>:<X server number>.<screen number>
```

In Mobile Server standalone mode, set the DISPLAY environment variable before starting the Mobile Server.

When deploying to an OC4J instance within the application server, the DISPLAY must be specified within the opmn.xml file, as follows:

```
<oc4j instanceName="OC4J_Demos" gid="OC4J_Demos">
  <!-- OC4J configuration information here... -->
  <environment>
    <prop name="DISPLAY" value="machinename:0.0"/>
  </environment>
</oc4j>
```

where value is <machine name or IP address of the XServer>:<display number>

After modification, restart OC4J.

2.12 Enabling Branch Office on Windows XP Service Pack 2

When you install Windows XP Service Pack 2, the Internet Connection Firewall (ICF) defaults to ON. In order for the Branch Office Server to work properly, you either need to turn the ICF OFF or enable port 100 within the ICF. To enable port 100, go to the Windows Firewall control on your Windows machine. Select the Exception tab. Click **Add Port**. Add port 100 with any name.

2.13 Upgrading Web-to-Go Applications

Web-to-Go Applications that upgrade from 5.0.2 to 10**g** R2 that have no associated snapshots will not display on the Mobile Server workspace.

2.14 Migrating Oracle Database Lite from 10.0.1 to 10.2 Version

If you migrate a both the 10.0.1 Mobile Server and 10.0.1 Mobile clients to the 10.2 version, and the upgraded Mobile client wants to use SEND_ONLY flag to prepare upload data, then the client must change the password before using this flag in one of the following ways:

- The Mobile client calls OCAPI and pass in a new password.

- The Mobile client logs into the Mobile Server and changes the password online.

2.15 Re-Installing Sample Applications While Upgrading from 10*g* Release 1 to 10*g* Release 2

If you have installed the sample user S11U1 on a device prior to the 10*g*R2 upgrade, and you decide to re-install the sample applications, then the user will no longer be able to synchronize. You must uninstall the client and then re-install before the sample user S11U1 will work again.

2.16 Problems with Multi-Byte Characters on Bookmarks Page in Mobile Workspace

There is a multi-byte character issue in the New Bookmarks page in the online workspace. If the value of bookmark Site name and bookmark Comment fields are entered in multi-byte characters, then these values can be returned as garbage.

3 Modifications to the Administration and Deployment Guide

The following subjects detail modifications that should be in the *Oracle Database Lite Administration and Deployment Guide*.

- Section 3.1, "Location of the POLITE.INI and ODBC.INI Files"

- Section 3.2, "Limitations of the Web-to-Go Client on Linux"

- Section 3.3, "Multiple JDK Versions Installed Causing Packaging Wizard and Web-to-Go Client Errors"

- Section 3.4, "Synchronization Error After Modifying Client Password"

- Section 3.5, "Errors When Using VALIDATEDB On WEBTOGO.ODB"

- Section 3.6, "String Overlap in Packaging Wizard UI for Windows 2003 Server"

3.1 Location of the POLITE.INI and ODBC.INI Files

The `POLITE.INI` and `ODBC.INI` files are available in Windows under `%WINDIR%` and in Linux under `$OLITE_HOME/bin`. For the Linux platform, you must have write permissions on the directory where these are located to be able to modify them.

3.2 Limitations of the Web-to-Go Client on Linux

The JDK is not installed if not present on the client machine.

3.3 Multiple JDK Versions Installed Causing Packaging Wizard and Web-to-Go Client Errors

If you have both the JDK 1.3 and JDK 1.4 installed in the same machine, then both the packaging wizard and the Web-to-Go client will fail. In addition, the samples will not install when you install the client.

In this case, re-install the JDK 1.4. You do not have to remove the JDK 1.3.

3.4 Synchronization Error After Modifying Client Password

If you have an active client and change its password on the server, then the client cannot synchronize. Return the password back to its original value on the server and retry the synchronization.

3.5 Errors When Using VALIDATEDB On WEBTOGO.ODB

If you execute the `VALIDATEDB` on `webtogo.odb`, you will receive errors. Ignore the errors.

3.6 String Overlap in Packaging Wizard UI for Windows 2003 Server

If the Packaging Wizard is running on a Windows 2003 machine, then, in some cases, the label on the platform screen may overlap with the dropdown control. This is a JDK bug specific to the Windows 2003 Platform. Increase the size of the Packaging Wizard window to fix the overlap issue.

3.7 User Password Encryption Impacts Using Older Version Database Binaries

Oracle Database Lite encrypts the user password with a one-way encryption algorithm before storing it in the database. With the change in password encryption, any database upgraded from an older version is not accessible using the old binaries.

4 Modifications to the Developer's Guide

The following subjects detail modifications that should be in the *Oracle Database Lite Developer's Guide*.

- Section 4.1, "Enable Registry Support for Web Applications"
- Section 4.2, "J2ME Support on Windows CE"
- Section 4.3, "Starting Multi-User Service on Linux Platform"
- Section 4.4, "Accessing Branch Office or the Multi-User Service"

4.1 Enable Registry Support for Web Applications

The registry entry is deprecated for the Web applications in this release. To enable the registry support for Web applications, add the following parameter in the `[WEBTOGO]` section of `webtogo.ora` file of Mobile Server and Mobile Development Kit installation. This enables Registry tabs in both the Packaging Wizard and Mobile Manager.

```
REGISTRY_TAB  = YES
```

4.2 J2ME Support on Windows CE

Oracle Database Lite 10*g* Release 2 is certified with the following JVMs on Windows Mobile 2003 Second Edition:

- IBM J9 Websphere Everyplace Micro Environment for Windows Mobile 2003 ARM Personal Profile
- CrE-ME JVM 4.0 from `http://www.nsicom.com`. CrE-ME 4.0 Beta was certified for this release, which does not have the `javax.sql.DataSource` interface.

4.2.1 Using IBM J9

When using IBM J9, use the `DataSource` class to connect to an Oracle Lite database.

For example, use the following:

```
POLJDBCDataSource dsPolite = new POLJDBCDataSource();
 dsPolite.setUrl(DSN);
```

```
 dsPolite.setUser(UserName);
 dsPolite.setPassword(Password)
 politeConnection = dsPolite.getConnection();
```

To run a sample class `ExampleClass`, part of `ExamplePackage.jar`, use the
following command:

```
j9 -jclppro10 -Xbootclasspath:path\classes.zip;path\jdbc.jar -cp
\orace\olitejdbc40.jar;\orace\msync.jar;\ExamplePackage.jar ExampleClass
```

where `jdbc.jar` contains the optional JDBC definitions (see Section 4.2.3, "JSR
169: JDBC Optional Package").

> **Note:** Make sure you replace path with the correct path to the
> required JAR and ZIP files.

4.2.2 Using CrE-ME 4.0

When using the CrE-ME 4.0 JVM, use the `DriverManager` class to connect to an
Oracle Lite Database.

For example, use the following:

```
politeConnection = DriverManager.getConnection(DSN,UserName,Password);
```

To run a sample class `ExampleClass`, part of `ExamplePackage.jar`, use the
following command at the CrE-ME command prompt:

```
-Of -classpath \orace\olitejdbc40.jar;\orace\msync.jar;\ExamplePackage.jar
ExampleClass
```

4.2.3 JSR 169: JDBC Optional Package

The JDBC definition classes (`java.sql.*`) are an optional package for
CDC/Foundation profile based JVMs, as defined by the Javasoft JSR 169
specification. You should obtain these classes from your JVM vendor. In case
your JVM vendor does not supply these classes, you can use the sample
implementation provided with Oracle Database Lite 10*g* Release 2. The sample
implementation can be found in *<ORACLE_
HOME>*`\Mobile\Sdk\Samples\j2me\ jdbcjsr169.jar`.

4.3 Starting Multi-User Service on Linux Platform

The `olsv` executable is used to start the Multi-User Service on the Linux
Platform.

You can view the usage details for `olsv` by issuing the following:

```
./olsv --help
```

4.4 Accessing Branch Office or the Multi-User Service

In order to access a Branch Office or the Multi-User Service—using either the
ODBC or JDBC drivers—the Branch Office or Multi-User Service host where
these reside must define a DSN for the host within the `ODBC.INI` file. This DSN
is used by the remote clients to access the Branch Office or Multi-User service.

On the client, you can define the host where the Branch Office or Multi-User service resides in the URL with either the following:

- Specify the DSN name in the URL.

- If you specify `NONE` as the name of the DSN, then specify the `Database` and `DataDirectory` in the connection string where the values are the same as one of the DSNs in the `ODBC.INI` file.

- If you have specified the `Database` or `DataDirectory` attributes in the connection string for type 2 or type 4 driver, then the value for either of the two attributes must be the same as the one defined in the `ODBC.INI` file, otherwise, the connection is rejected.

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