

Oracle® Retail Mobile Point-of-Service

Installation Guide

Release 13.0.4

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Oracle Retail Mobile Point-of-Service Installation Guide, Release 13.0.4

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Your feedback is important, and helps us to best meet your needs as a user of our products. For example:

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- Did you understand the context of the procedures?
- Did you find any errors in the information?
- Does the structure of the information help you with your tasks?
- Do you need different information or graphics? If so, where, and in what format?
- Are the examples correct? Do you need more examples?

If you find any errors or have any other suggestions for improvement, then please tell us your name, the name of the company who has licensed our products, the title and part number of the documentation and the chapter, section, and page number (if available).

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Preface

This Installation Guide describes the requirements and procedures to install this Oracle Retail Mobile Point-of-Service release.

Audience

This Installation Guide is written for the following audiences:

- Database Administrators (DBA)
- System analysts and designers
- Integrators and implementation staff

Related Documents

For more information, see the following document in the Oracle Retail Mobile Point-of-Service 13.0.4 documentation set or Oracle Retail Strategic Store Solutions 13.0.4 documentation set:

- *Oracle Retail Mobile Point-of-Service Release Notes*
- *Oracle Retail Strategic Store Solutions Licensing Information*

Customer Support

To contact Oracle Customer Support, access My Oracle Support at the following URL:

<https://support.oracle.com>

When contacting Customer Support, please provide the following:

- Product version and program/module name
- Functional and technical description of the problem (include business impact)
- Detailed step-by-step instructions to re-create
- Exact error message received
- Screen shots of each step you take

Review Patch Documentation

When you install the application for the first time, you install either a base release (for example, 13.0) or a later patch release (for example, 13.0.4). If you are installing the base release, additional patch, and bundled hot fix releases, read the documentation for all releases that have occurred since the base release before you begin installation. Documentation for patch and bundled hot fix releases can contain critical information related to the base release, as well as information about code changes since the base release.

Oracle Retail Documentation on the Oracle Technology Network

Documentation is packaged with each Oracle Retail product release. Oracle Retail product documentation is also available on the following Web site:

http://www.oracle.com/technology/documentation/oracle_retail.html

(Data Model documents are not available through Oracle Technology Network. These documents are packaged with released code, or you can obtain them through My Oracle Support.)

Documentation should be available on this Web site within a month after a product release.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
<code>monospace</code>	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Pre-Installation Tasks

Oracle Retail Mobile Point-of-Service provides wireless access to Oracle Retail Point-of-Service functions through the use of a handheld device. It is a separate product from Oracle Retail Point-of-Service. For information on installing Point-of-Service, see the *Oracle Retail Point-of-Service Installation Guide*.

Mobile Point-of-Service runs as a process that accesses resources on the N-Tier Store Server in the same way as Point-of-Service clients. The N-Tier Store Server is required by Mobile Point-of-Service. The server process passes Point-of-Service information to the wireless devices. The wireless devices run a web browser interface and connect to a specific URL to talk to the server process. The server process does not have a user interface. For more information, see the *Oracle Retail Point-of-Service Installation Guide*.

Mobile Point-of-Service transactions propagate the same way as Point-of-Service transactions. They are stored in a POSLog and can be sent to Oracle Retail Central Office in an xml file or by queue.

Note: The components required for the Oracle stack and IBM stack are listed in this chapter. For each component, the product and the version that were used for testing are included. While Mobile Point-of-Service may work in other configurations, these are the configurations that are supported for this release.

Check Hardware and Software Requirements

[Table 1-1](#) and [Table 1-2](#) list the general components required for hardware and software and the versions tested.

Table 1-1 Mobile Point-of-Service Server Component Versions

Component	Oracle Stack	IBM Stack
Operating System	Windows 2003 Server	IBM IRES version 2.1.5
Database	Oracle Database 11g Enterprise Edition version 11.1.0.7 (64-bit)	IBM DB2 version 9.1.0.5 (64-bit)
JDK	Sun JDK version 1.5.0	IBM version 1.5

Table 1–2 Mobile Point-of-Service Handheld Component Versions

Component	Oracle Stack and IBM Stack
Handheld wireless device	Symbol 8146
Printer	Zebra Cameo II
Operating System	Microsoft Windows Mobile 2003 version 4.2 using Pocket IE packaged with Pocket PC

Note: Testing is done with 128-bit WEP encryption turned on for the wireless network.

Check Java KeyStore Requirement

Oracle Retail Mobile Point-of-Service requires that a Java KeyStore is created prior to installation. Up to five jar files can be provided by the retailer to enable the connection between Oracle Retail Mobile Point-of-Service and the KeyStore.

Note: Do not store the KeyStore jar files at the system root directory. Place the jar files into a folder.

The installer does not correctly handle jar files stored at the system root directory.

Specific information for accessing the KeyStore is entered on the Security Setup: KeyStore installer screens.

WARNING: A simulated key management package is bundled with Oracle Retail Mobile Point-of-Service. It is not compliant with either the Visa Payment Applications Best Practices (PABP) or Payment Card Industry Data Security Standard (PCI-DSS). It is made available as a convenience for retailers and integrators. If you use the simulated key manager, you will not be PCI-DSS compliant. Therefore, the simulated key manager should be replaced with a compliant key manager.

If you use the simulated key management package bundled with Oracle Retail Mobile Point-of-Service, see [Figure A–15](#) in [Appendix A](#) for the location of the required `simkeystore.jar` file.

Installation on the Oracle Stack using Windows

This chapter provides information about the installation procedures for Oracle Retail Mobile Point-of-Service on the Oracle stack using Windows.

Expanding the Mobile Point-of-Service Distribution

To extract the Mobile Point-of-Service files:

1. Extract the ORMPOS-13.0.4.0.zip file from the Mobile Point-of-Service distribution.
2. Copy or upload ORMPOS-13.0.4.0.zip to the installation directory and extract its contents. In this installation guide, *<INSTALL_DIR>* is used for that directory.

Obtaining Third-Party Library Files Required by Mobile Point-of-Service

The Mobile Point-of-Service application uses JBoss specific files. You can download the jboss application server to get access to the required files. You can get the download at the website:

http://sourceforge.net/project/showfiles.php?group_id=22866&package_id=16942&release_id=312621

Extract the following files:

- jboss-4.0.2\lib\jboss-common.jar
- jboss-4.0.2\client\jboss-j2ee.jar
- jboss-4.0.2\client\jbossmq-client.jar

Note: Do not store the JBoss jar files at the system root directory. Place the jar files into a folder.

The installer does not correctly handle jar files stored at the system root directory.

Running the Mobile Point-of-Service Application Installer

This installer will configure and deploy the Mobile Point-of-Service application.

Note: To see details on every screen and field in the application installer, see [Appendix A](#).

1. Change to the `<INSTALL_DIR>` directory.
2. Set the `JAVA_HOME` environment variable. It should point to your jdk.
3. Run the `MPOS.exe` script. This will launch the installer. After installation is complete, a detailed installation log file is created at `<mpos_install_directory>\mpos_InstallLog.xml`

Resolving Errors Encountered During Application Installation

If the application installer encounters any errors, you can read them in the above mentioned log file.

For a list of common installation errors, see [Appendix B](#).

Fixing the Security in your JRE

To set up the security for the Mobile Point-of-Service application, do the following:

- Copy `<mpos_install_directory>\jre\lib\security\java.security.sun` to `$JAVA_HOME$\jre\lib\security\java.security`.
- Copy `<mpos_install_directory>\jre\lib\security\java.policy` to `$JAVA_HOME$\jre\lib\security\java.policy`.

Setting Register Accountability

The register accountability setting for each wireless device must be updated to enable register-authorized mode as opposed to cashier-authorized mode. Each device is treated as a register with a register number equal to the last three digits of its IP address.

Note: An example of a register IP address is 172.16.33.4. The actual IP address is 172.016.033.004, where 004 are the last three digits.

Execute the following SQL statement once for each device. In this example, 001 are the last three digits of the actual IP address of the device and 04241 is the store ID.

```
update as_ws set cd_act='0' where id_ws='001' and id_str_rt='04241'
```


Performing the Manual Integration

There following steps need to be completed manually to enable Mobile Point-of-Service to communicate with Back Office and Central Office. These steps enable Mobile Point-of-Service to receive parameter updates and to send EJournal data up to Central Office.

Setting the Class Path Entries

Add the following class path entries to the

`<mpos_install_directory>\mpos\bin\ulenv.bat` file:

```
SET CLASSPATH=%CLASSPATH%;%_360COMMON_PATH%\common\build\oc4j-internal.jar
SET CLASSPATH=%CLASSPATH%;%_360COMMON_PATH%\common\build\javax77.jar
SET CLASSPATH=%CLASSPATH%;%_360COMMON_PATH%\common\build\jms.jar
SET CLASSPATH=%CLASSPATH%;%_360COMMON_PATH%\common\build\optic.jar
```

Setting Up Files

To set up the .properties files:

1. If Back Office is installed, set up the file for Back Office. In the "ORACLE" section of the `<mpos_install_directory>\mpos\lib\config\backoffice.jndi.properties` file, uncomment the following commands:

```
java.naming.provider.url=ormi://localhost:12401
java.naming.factory.initial=
    com.evermind.server.rmi.RMIInitialContextFactory
java.naming.security.principal=oc4jadmin
java.naming.security.credentials=oc4jadmin
```

Note: If Oracle Retail Back Office is installed on a different host or Back Office does not use the default RMI port of 12401, change the URL to the correct value.

If Oracle Application Server does not use the default user ID and password, change the values for `principal` and `credentials` to the correct user ID and password.

2. In the "ORACLE" section of the `<mpos_install_directory>\mpos\bin\jndi.properties` file, uncomment the following commands:

```
java.naming.provider.url=ormi://localhost:12401
java.naming.factory.initial=
    com.evermind.server.rmi.RMIInitialContextFactory
java.naming.security.principal=oc4jadmin
java.naming.security.credentials=oc4jadmin
```

Note: If Oracle Retail Back Office is installed on a different host or Back Office does not use the default RMI port of 12401, change the URL to the correct value.

If Oracle Application Server does not use the default user ID and password, change the values for `principal` and `credentials` to the correct user ID and password.

3. Set up the `<mpos_install_directory>\mpos\bin\comm.properties` file. In the "ORACLE" section, uncomment the following commands:

```
comm.jms.topicConnectionFactory.name=jms/ApplicationTCF
comm.jms.queueConnectionFactory.name=jms/ApplicationQCF
comm.jms.topicConnectionFactory.name.backoffice=
   .jms/ApplicationTCF
com.jms.queueConnectionFactory.name.backoffice=
   .jms/ApplicationQCF
```

Note: If there are additional `comm.properties` files under `<mpos_install_directory>\mpos` directory, delete the files.

Enabling Parameter Updates

You can apply parameters to multiple registers by creating parameter sets in Back Office and then distributing the parameter sets. Parameter updates are sent to a specific Mobile Point-of-Service register. The updates are then shared by all Mobile Point-of-Service registers.

To distribute updated parameters from Back Office to Mobile Point-of-Service:

1. Specify a Mobile Point-of-Service register number.

To define the register number, set the `WorkstationID` parameter in the `<mpos_install_directory>\mpos\lib\config\applications.properties` file. Any valid Mobile Point-of-Service register can be used.

2. Edit the `<mpos_install_directory>\mpos\lib\com\extendyourstore\unleashed\services\main\ntierdispatcher.xml` file.

The `ParameterTechnician` section should look like the following example:

```
<TECHNICIAN name="ParameterTechnician" class = "ParameterTechnician"
    package = "com.extendyourstore.foundation.manager.parameter" export = "Y" >
<PROPERTY propname="paramScript" propvalue=
    "classpath://config/manager/PosParameterTechnician.xml"/>
<PROPERTY propname="JmsProviderTopicName" propvalue="jms/parameters"/>
<PROPERTY propname="listenForUpdates" propvalue="Y"/>
<PROPERTY propname="clientID" propvalue="reg001"/>
<PROPERTY propname="jmsID" propvalue="oc4jadmin"/>
<PROPERTY propname="jmsPassword" propvalue="oc4jadmin"/>
</TECHNICIAN>
```

If Oracle Application Server is not using the default user ID and password, change `jmsID` and `jmsPassword` shown in the previous example to the user ID and password being used.

Note: The value of `clientID` must match the `WorkstationID` specified in the `application.properties` file.

If Oracle Application Server does not use the default user ID and password, change the values for `principal` and `credentials` to the correct user ID and password.

Enabling Writing to the EJournal

Define whether Mobile Point-of-Service writes to the EJournal through the queue or the database or both.

To define how Mobile Point-of-Service writes to the EJournal:

1. Edit the `<mpos_install_directory>\mpos\lib\com\extendyourstore\unleashed\services\main\ntierdispatcher.xml` file in one of the following ways:
 - To write to the EJournal through the queue, uncomment the QueuedJournalManager section.
 - To write to the EJournal through the database, uncomment the DBJournalTech section.
 - To write to the EJournal through both the queue and the database, uncomment both the QueuedJournalManager and DBJournalTech sections.
2. Edit the `<mpos_install_directory>\mpos\lib\config\manager\PosJournalManager.xml` file. To write to the EJournal through the queue, uncomment the JMSJournalTech section.

Results of the Installation

The default root directory for the application is `c:\OracleRetailStore`. In this guide, these directories are referred to as `<mpos_install_directory>`. The subdirectories listed in [Table 2-1](#) are created.

Table 2-1 `<mpos_install_directory>` Subdirectories

Name	Contents
360common	Files shared by multiple Oracle Retail Strategic Store Solutions applications including 360Platform, Domain, and third-party jar files
jre	Java runtime environment security files
logs	Log files
mpos	Mobile Point-of-Service files
Uninstaller Data	Files for uninstalling Mobile Point-of-Service

Important subdirectories of the `\mpos` directory are shown in [Table 2-2](#).

Table 2-2 `<mpos_install_directory>\mpos` Subdirectories

Name	Description
bin	Startup batch files and shell scripts
lib	Mobile Point-of-Service application and resource .jar files
lib\config	XML configuration files, .properties files and .dat files
3rd party	Third-party source .jar files
logs	Log files (additional log files are in the bin directory)

Running Mobile Point-of-Service

Run the Mobile Point-of-Service system by executing batch files, found in your installation `bin` directory.

Before running Mobile Point-of-Service, the store server must be running. Also, the store must be open before transactions can be completed with Mobile Point-of-Service. If the store server is not running, use the following script:

```
<pos_install_directory>\pos\bin\StoreServerConduit.bat
```

To run Mobile Point-of-Service:

1. Start the Mobile Point-of-Service server. If it is not running, use the following script. This script also starts the Apache Tomcat web server.

```
<mpos_install_directory>\mpos\bin\ulremote.bat
```

2. Open a browser. Enter the following for the URL, where
<mpos-server-hostname> is the hostname or IP address of the machine running the store server and the Mobile Point-of-Service process:
`http:\\<mpos-server-hostname>\unleashed\WebServerCRFServlet`

Installation on the IBM Stack using Linux

This chapter provides information about the installation procedures for Oracle Retail Mobile Point-of-Service on the IBM stack using Linux.

Expanding the Mobile Point-of-Service Distribution

To extract the Mobile Point-of-Service files:

1. Extract the `ORMPOS-13.0.4.0.zip` file from the Mobile Point-of-Service distribution.
2. Copy or upload `ORMPOS-13.0.4.0.zip` to the installation directory and extract its contents. In this installation guide, `<INSTALL_DIR>` is used for that directory.

Obtaining Third-Party Library Files Required by Mobile Point-of-Service

The Mobile Point-of-Service application uses specific files from JBoss and WebSphere. To obtain the necessary files:

1. To get the required JBoss files, download the jboss application server. You can get the download at the website:

http://sourceforge.net/project/showfiles.php?group_id=22866&package_id=16942&release_id=312621

Extract the following files:

- `jboss-4.0.2/lib/jboss-common.jar`
- `jboss-4.0.2/client/jboss-j2ee.jar`
- `jboss-4.0.2/client/jbossmq-client.jar`

Note: Do not store the JBoss jar files at the system root directory. Place the jar files into a folder.

The installer does not correctly handle jar files stored at the system root directory.

2. Some WebSphere specific files are needed to make use of JMS. Extract the required files from the following locations:
 - `<WAS_INSTALL_DIR>/AppServer/plugins/com.ibm.ws.runtime_6.1.0.jar`

- `<WAS_INSTALL_DIR>/AppServer/runtimes/com.ibm.ws.admin.client_6.1.0.jar`
- `<MQ_INSTALL_DIR>/java/lib/jms.jar`
- `<WAS_INSTALL_DIR>/AppServer/lib/WMQ/java/lib/com.ibm.mqjms.jar`
- `<WAS_INSTALL_DIR>/AppServer/lib/WMQ/java/lib/com.ibm.mq.jar`
- `<WAS_INSTALL_DIR>/AppServer/lib/WMQ/java/lib/dhbc.jar`

Running the Mobile Point-of-Service Application Installer

This installer will configure and deploy the Mobile Point-of-Service application.

Note: To see details on every screen and field in the application installer, see [Appendix A](#).

1. Change to the `<INSTALL_DIR>` directory.
2. Set the `JAVA_HOME` environment variable. It should point to your jdk.
3. Change the mode of `MPOS.bin` to executable.
4. Run the `MPOS.bin` script. This will launch the installer. After installation is complete, a detailed installation log file is created at `<mpos_install_directory>/mpos_InstallLog.xml`

Resolving Errors Encountered During Application Installation

If the application installer encounters any errors, you can read them in the above mentioned log file.

For a list of common installation errors, see [Appendix B](#).

Fixing the Security in your JRE

To set up the security for the Mobile Point-of-Service application, do the following:

- Copy `<mpos_install_directory>/jre/lib/security/java.security.ibm` to `$JAVA_HOME$/jre/lib/security/java.security`.
- Copy `<mpos_install_directory>/jre/lib/security/java.policy` to `$JAVA_HOME$/jre/lib/security/java.policy`.

Setting Register Accountability

The register accountability setting for each wireless device must be updated to enable register-authorized mode as opposed to cashier-authorized mode. Each device is treated as a register with a register number equal to the last three digits of its IP address.

Note: An example of a register IP address is 172.16.33.4. The actual IP address is 172.016.033.004, where 004 are the last three digits.

Execute the following SQL statement once for each device. In this example, 001 are the last three digits of the actual IP address of the device and 04241 is the store ID.

```
update as_ws set cd_act='0' where id_ws='001' and id_str_rt='04241'
```

Performing the Manual Integration

The following steps need to be completed manually to enable Mobile Point-of-Service to communicate with Back Office and Central Office. These steps enable Mobile Point-of-Service to receive parameter updates and to send EJournal data to Central Office.

Configuring Files

To set up the .properties files:

1. Update the `/etc/hosts` file with the host names of the Back Office and Central Office servers and the IP address and host name where Point-of-Service is installed. This step is required for JMS messaging to work properly.

2. Add the following class path entries to the `<mpos_install_directory>/mpos/bin/ulenv.sh` file.

```
CP=$CP:<WAS_INSTALL_DIR>/AppServer/plugins/com.ibm.ws.runtime_6.1.0.jar
CP=$CP:<WAS_INSTALL_DIR>/AppServer/runtimes/com.ibm.ws.admin.client_6.1.0.jar
CP=$CP:<MQ_INSTALL_DIR>/java/lib/jms.jar
CP=$CP:<WAS_INSTALL_DIR>/AppServer/lib/WMQ/java/lib/com.ibm.mqjms.jar
CP=$CP:<WAS_INSTALL_DIR>/AppServer/lib/WMQ/java/lib/com.ibm.mq.jar
CP=$CP:<WAS_INSTALL_DIR>/AppServer/lib/WMQ/java/lib/dhbc.jar
```

3. If Back Office is installed, set up the file for Back Office. In the "WebSphere" section of the `<mpos_install_directory>/mpos/lib/config/backoffice.jndi.properties` file, uncomment the following commands:

```
java.naming.provider.url=corbaloc:iiop:<Back Office host name>:
<Back Office port number>
```

4. In the `<mpos_install_directory>/mpos/bin/jndi.properties` file, uncomment the following commands:

```
java.naming.provider.url=corbaloc:iiop:<Back Office host name>:
<Back Office port number>
```

5. Set up the `<mpos_install_directory>/mpos/bin/comm.properties` file. Uncomment the following commands:

```
comm.jms.topicConnectionFactory.name=jms/ApplicationTCF
comm.jms.queueConnectionFactory.name=jms/ApplicationQCF
comm.jms.topicConnectionFactory.name.backoffice=
   .jms/ApplicationTCF
comm.jms.queueConnectionFactory.name.backoffice=
   .jms/ApplicationQCF
```

Note: If there are additional `comm.properties` files under `<mpos_install_directory>/mpos` directory, delete the files.

Enabling Parameter Updates

You can apply parameters to multiple registers by creating parameter sets in Back Office and then distributing the parameter sets. Parameter updates are sent to a specific Mobile Point-of-Service register. The updates are then shared by all Mobile Point-of-Service registers.

To distribute updated parameters from Back Office to Mobile Point-of-Service:

1. Specify a Mobile Point-of-Service register number.

To define the register number, set the WorkstationID parameter in the `<mpos_install_directory>/mpos/lib/config/applications.properties` file. Any valid Mobile Point-of-Service register can be used.

2. Edit the `<mpos_install_directory>/mpos/lib/com/extendyourstore/unleashed/services/main/ntierdispatcher.xml` file.

Update the ParameterTechnician section. Comment out the entries in the "Oracle" section and uncomment the entries in the "WebSphere" section.

The ParameterTechnician section should look like the following example:

```
<TECHNICIAN name="ParameterTechnician" class = "ParameterTechnician"
    package = "com.extendyourstore.foundation.manager.parameter" export = "Y" >
<PROPERTY propname="paramScript" propvalue=
    "classpath://config/manager/PosParameterTechnician.xml"/>
<PROPERTY propname="JmsProviderTopicName" propvalue="jms/parameters"/>
<PROPERTY propname="listenForUpdates" propvalue="Y"/>
<PROPERTY propname="clientID" propvalue="reg001"/>
<PROPERTY propname="jmsID" propvalue="<UNIX user>"/>
<PROPERTY propname="jmsPassword" propvalue="<password>"/>
</TECHNICIAN>
```

Note: The value of `clientID` must match the WorkstationID specified in the `application.properties` file.

Note: You must create a UNIX user on the host where Back Office is installed and add that user to the `mqm` group. The values for `jmsID` and `jmsPassword` specified in the Password Technician definition must match the values for the UNIX user and password.

Enabling Writing to the EJournal

Define whether Mobile Point-of-Service writes to the EJournal through the queue or the database or both.

To define how Mobile Point-of-Service writes to the EJournal:

1. Edit the `<mpos_install_directory>/mpos/lib/com/extendyourstore/unleashed/services/main/ntierdispatcher.xml` file in one of the following ways:
 - To write to the EJournal through the queue, uncomment the QueuedJournalManager section.
 - To write to the EJournal through the database, uncomment the DBJournalTech section.

- To write to the EJournal through both the queue and the database, uncomment both the QueuedJournalManager and DBJournalTech sections.
2. Edit the `<mpos_install_directory>/mpos/lib/config/manager/PosJournalManager.xml` file. To write to the EJournal through the queue, uncomment the JMSJournalTech section.

Results of the Installation

The default root directory for the application is `/opt/OracleRetailStore`. In this guide, these directories are referred to as `<mpos_install_directory>`. The subdirectories listed in [Table 3–1](#) are created.

Table 3–1 `<mpos_install_directory>` Subdirectories

Name	Contents
360common	Files shared by multiple Oracle Retail Strategic Store Solutions applications including 360Platform, Domain, and third-party jar files
jre	Java runtime environment security files
logs	Log files
mpos	Mobile Point-of-Service files
Uninstaller Data	Files for uninstalling Mobile Point-of-Service

Important subdirectories of the `/mpos` directory are shown in [Table 3–2](#).

Table 3–2 `<mpos_install_directory>/mpos` Subdirectories

Name	Description
bin	Startup batch files and shell scripts
lib	Mobile Point-of-Service application and resource <code>.jar</code> files
lib/config	XML configuration files, <code>.properties</code> files and <code>.dat</code> files
3rd party	Third-party source <code>.jar</code> files
logs	Log files (additional log files are in the bin directory)

Running Mobile Point-of-Service

Run the Mobile Point-of-Service system by executing shell scripts, found in your installation `bin` directory.

Before running Mobile Point-of-Service, the store server must be running. Also, the store must be open before transactions can be completed with Mobile Point-of-Service. If the store server is not running, use the following script.

```
<pos_install_directory>/pos/bin/StoreServerConduit.sh
```

To run Mobile Point-of-Service:

1. Start the Mobile Point-of-Service server. If it is not running, use the following script. This script also starts the Apache Tomcat web server.

```
<mpos_install_directory>/mpos/bin/ulremote.sh
```

2. Open a browser. Enter the following for the URL, where
<mpos-server-hostname> is the hostname or IP address of the machine
running the store server and the Mobile Point-of-Service process:
`http://<mpos-server-hostname>/unleashed/WebServerCRFServlet`

Appendix: Mobile Point-of-Service Application Installer Screens

You need the following details about your environment for the installer to successfully install the Mobile Point-of-Service application. Depending on the options you select, you may not see some screens or fields.

For each field on a screen, a table is included in this appendix that describes the field. If you want to document any specific information about your environment for any field, a Notes row is provided in each table for saving that information.

Figure A-1 Introduction

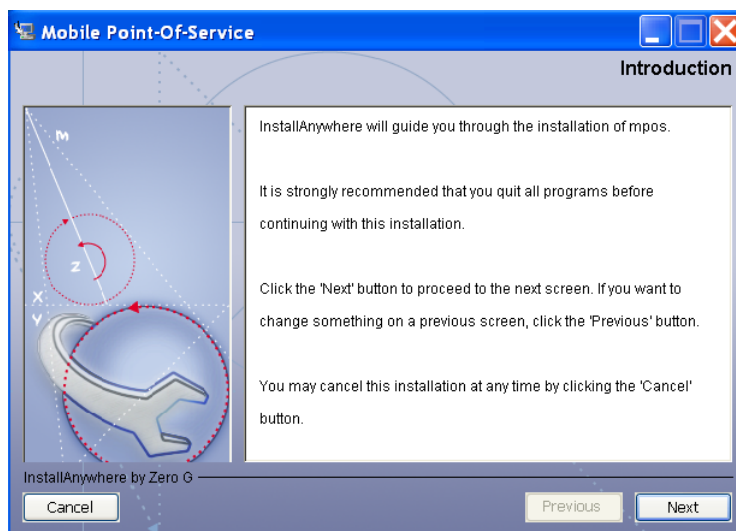


Figure A–2 Previous MPOS Install

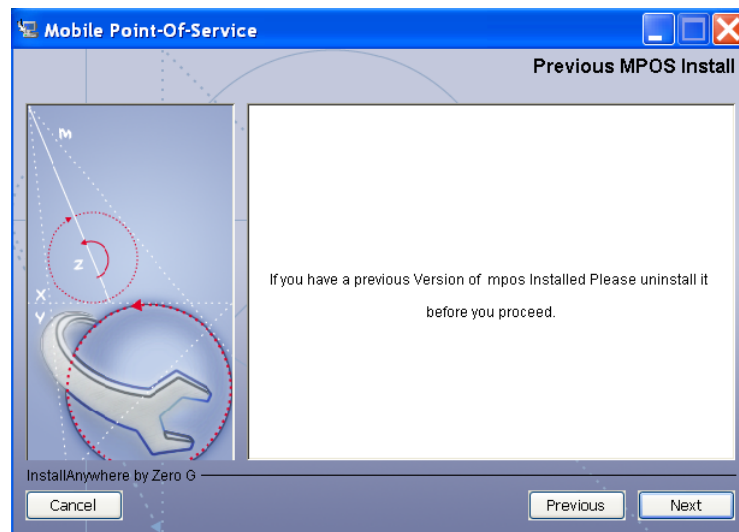
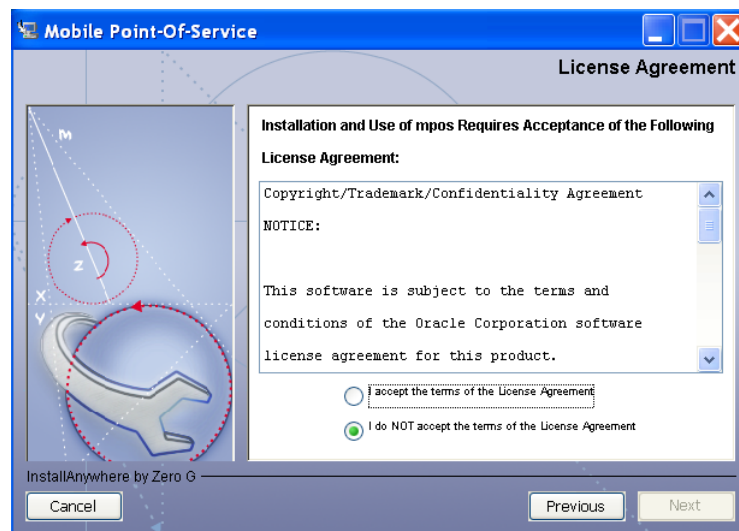
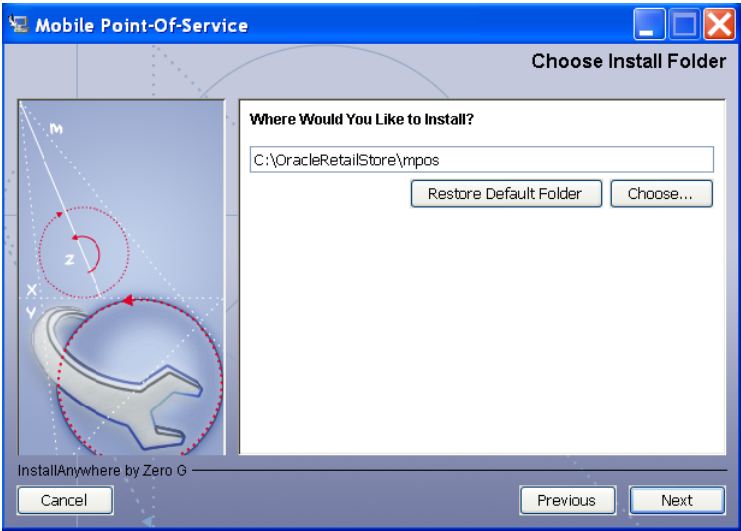


Figure A–3 License Agreement



Note: You must choose to accept the terms of the license agreement in order for the installation to continue.

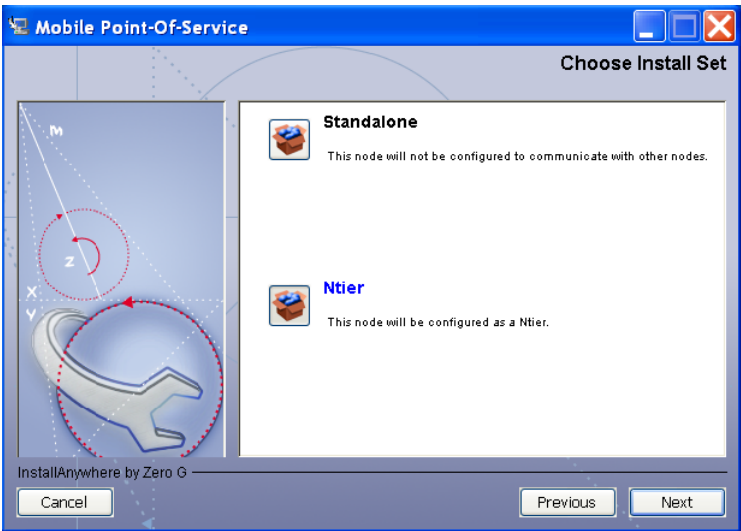
Figure A-4 Choose Install Folder



The field on this screen is described in the following table.

Field Title	Where Would You Like to Install?
Field Description	<p>The directory into which the Mobile Point-of-Service files are copied. The default for the first directory in the path is <code>OracleRetailStore</code>. This directory should be the same for all Oracle Retail Strategic Store Solutions products.</p> <p>In this guide, <code><mpos_install_directory></code> refers to the selected installation directory.</p> <p>Files specific to Mobile Point-of-Service are copied to the <code>/mpos</code> subdirectory of <code><mpos_install_directory></code>.</p>
Example	<code>C:\OracleRetailStore</code>
Notes	

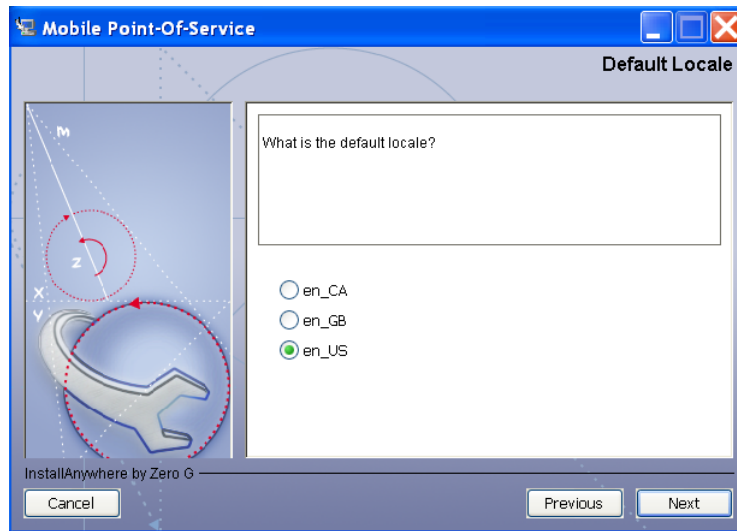
Figure A-5 Choose Install Set



The field on this screen is described in the following table.

Field Title	Server Tier Type
Field Description	Choose the server tier type for this installation. <ul style="list-style-type: none">■ To run the N-tier version, choose N-Tier. Note: Standalone is not supported.
Example	N-Tier
Notes	

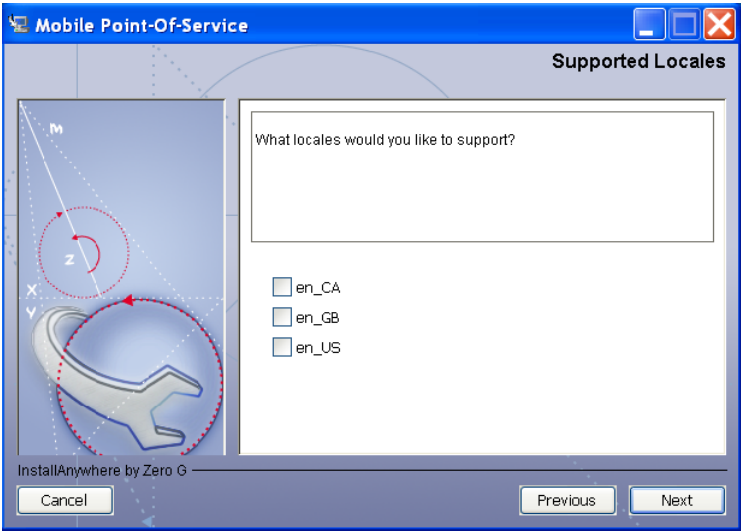
Figure A–6 *Default Locale*



The field on this screen is described in the following table.

Field Title	What is the default locale?
Field Description	Limited locale support in Mobile Point-of-Service enables the date, time, and currency to be displayed in the format for the selected default locale. <ul style="list-style-type: none">■ To select the locale for Canada, choose en_CA.■ To select the locale for Great Britain, choose en_GB.■ To select the local for the United States, choose en_US. Note: The only language currently supported is United States English.
Example	en_US
Notes	

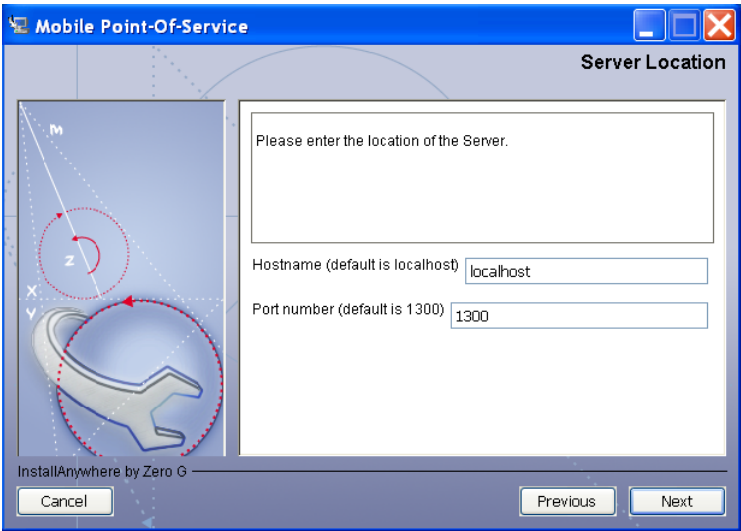
Figure A-7 Supported Locales



The field on this screen is described in the following table.

Field Title	What locales would you like to support?
Field Description	<p>In addition to the default locale, additional locales can be supported. Limited locale support in Mobile Point-of-Service enables the date, time, and currency to be displayed in the format for the selected locale.</p> <ul style="list-style-type: none">■ To select the locale for Canada, choose en_CA.■ To select the locale for Great Britain, choose en_GB.■ To select the local for the United States, choose en_US. <p>Note: The only language currently supported is United States English.</p>
Example	en_US
Notes	

Figure A-8 Server Location

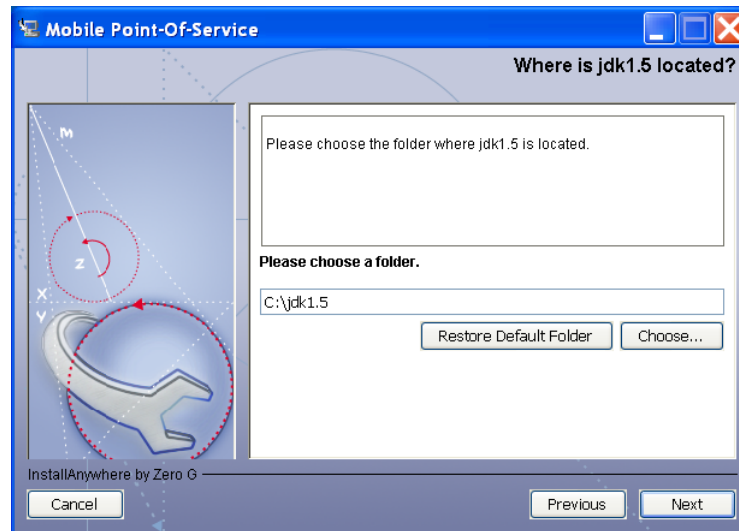


The fields on this screen are described in the following tables.

Field Title	Hostname
Field Description	Host name of the store server.
Example	localhost
Notes	

Field Title	Port
Field Description	Port number of the store server used for the communication between the store server and the host computer.
Example	1300
Notes	

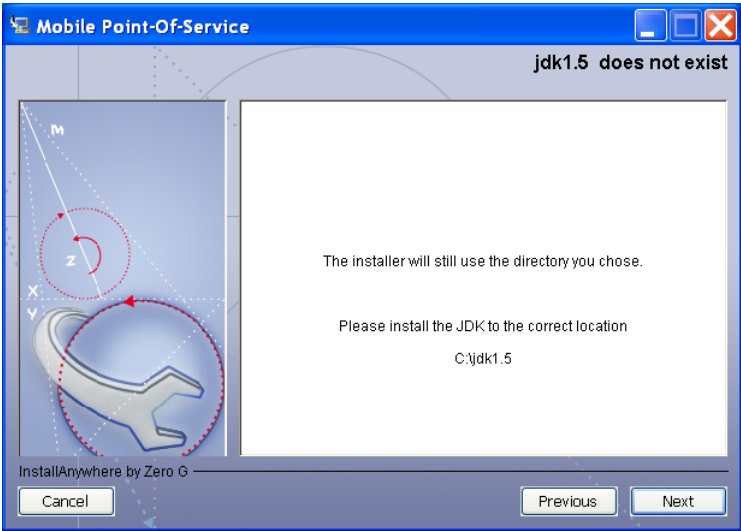
Figure A–9 *Where is jdk1.5 located?*



The field on this screen is described in the following table.

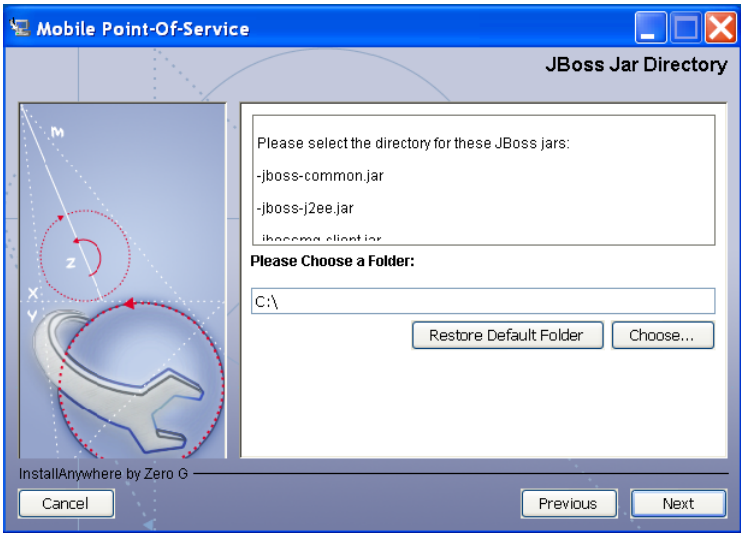
Field Title	Folder
Field Description	Choose the location of JDK 1.5.
Example	C:\jdk1.5
Notes	

Figure A-10 *jdk1.5 does not exist*



Installation of jdk1.5 is required.

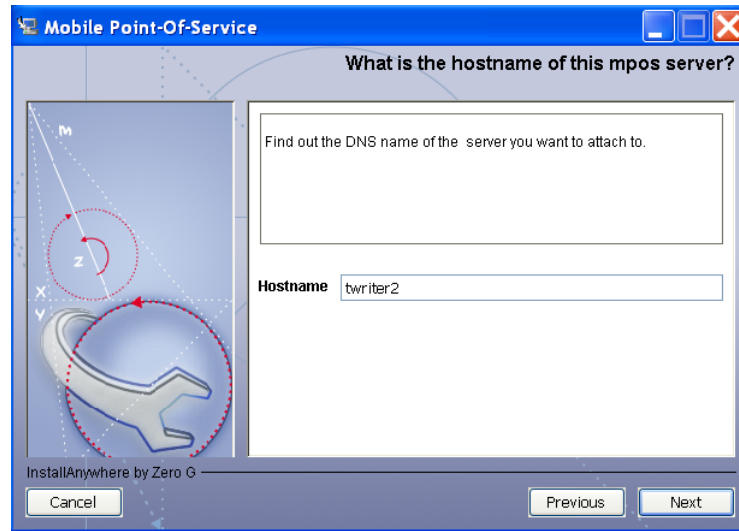
Figure A-11 *JBoss Jar Directory*



The field on this screen is described in the following table.

Field Title	Folder
Field Description	Choose the location of the directory that contains the JBoss jar files. Note: The JBoss jar files cannot be stored at the system root directory. The jar files must be placed into a folder. The installer does not correctly handle jar files stored at the system root directory.
Example	C:\jboss-4.0.2\lib
Notes	

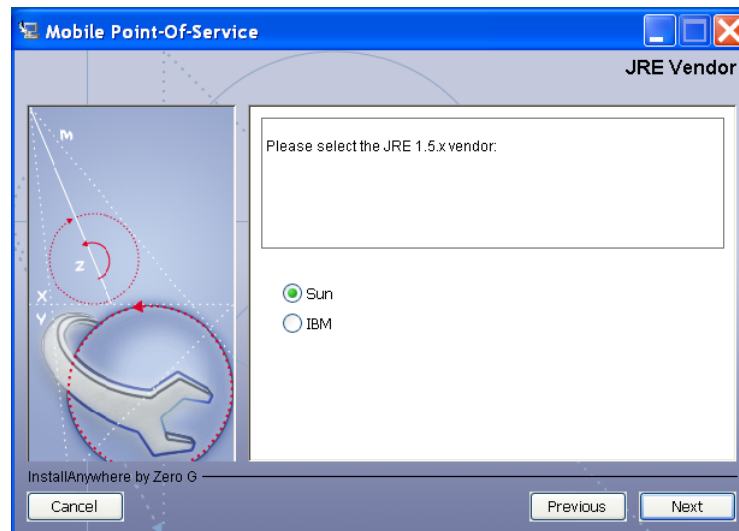
Figure A–12 What is the hostname of this mpos server?



The field on this screen is described in the following table.

Field Title	Corporate Server Name
Field Description	Enter the host name for the Mobile Point-of-Service server.
Example	twriter2
Notes	

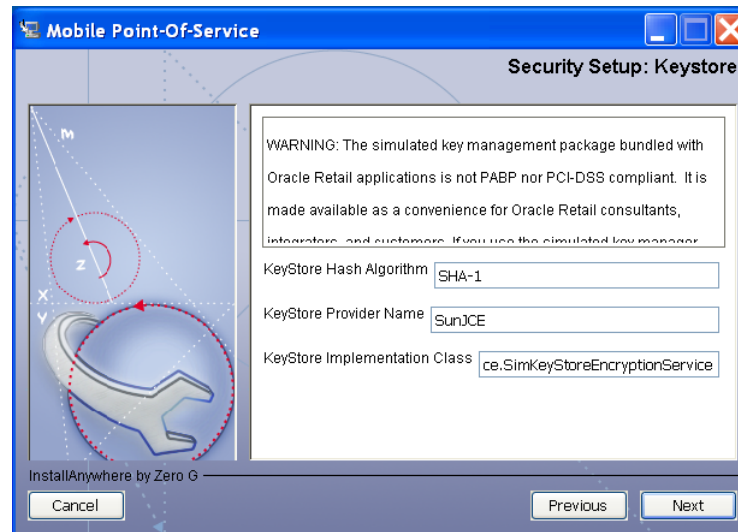
Figure A–13 JRE Vendor



The field on this screen is described in the following table.

Field Title	JRE Vendor
Field Description	Select the vendor for the JRE entered on the JRE Location screen: <ul style="list-style-type: none"> ■ Sun ■ IBM
Example	Sun
Notes	

Figure A-14 Security Setup:Keystore



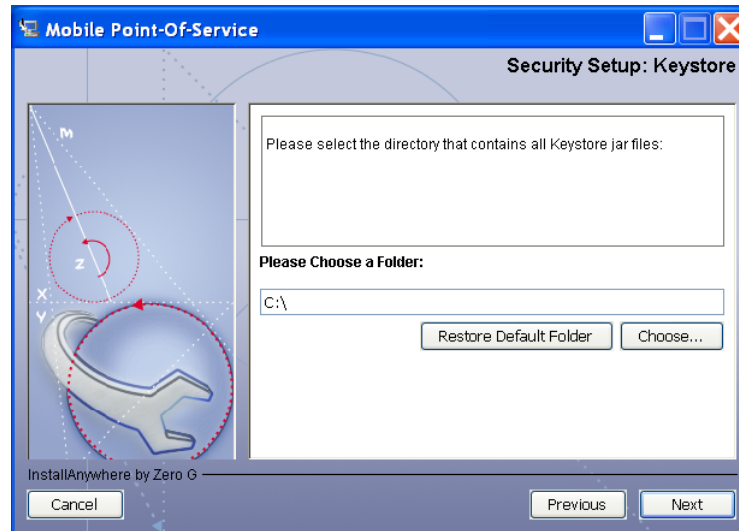
The fields on this screen are described in the following tables.

Field Title	KeyStore Hash Algorithm
Field Description	Enter the name of the algorithm used by the KeyStore to hash sensitive data.
Example	SHA-1
Notes	

Field Title	KeyStore Provider Name
Field Description	Enter the provider for the KeyStore.
Example	SunJCE
Notes	

Field Title	KeyStore Implementation Class
Field Description	Enter the class that enables Point-of-Service to access the KeyStore.
Example	oracle.retail.stores.simkeystore.siminterface.SimKeyStoreEncryptionService
Notes	

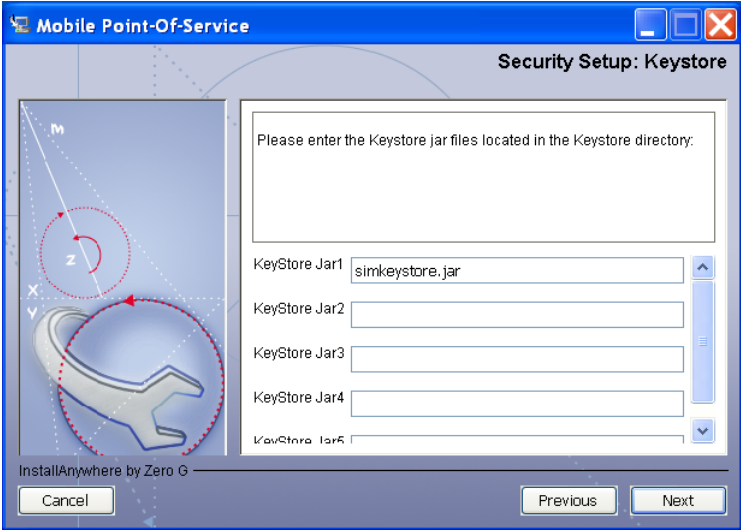
Figure A–15 Security Setup:Keystore



The field on this screen is described in the following table.

Field Title	Folder
Field Description	<p>Choose the location of the KeyStore jar files.</p> <p>Note: If you are using the simulated key management package bundled with Point-of-Service, the KeyStore jar file is found in the <code><mpos_install_directory>\360common\lib</code> directory. <code><mpos_install_directory></code> is the name of the directory you chose on the Choose Install Folder screen. Enter this path for the folder.</p> <p>Note: The KeyStore jar files cannot be stored at the system root directory. The jar files must be placed into a folder. The installer does not correctly handle jar files stored at the system root directory.</p>
Example	<code>c:\simkeystore</code>
Notes	

Figure A-16 Security Setup:Keystore



The fields on this screen are described in the following tables. Up to five KeyStore jar files may be entered.

Field Title	KeyStore JAR 1
Field Description	Enter the name of a KeyStore jar file. Note: If you are using the simulated key management package bundled with Point-of-Service, enter <code>simkeystore.jar</code> .
Example	<code>simkeystore.jar</code>
Notes	

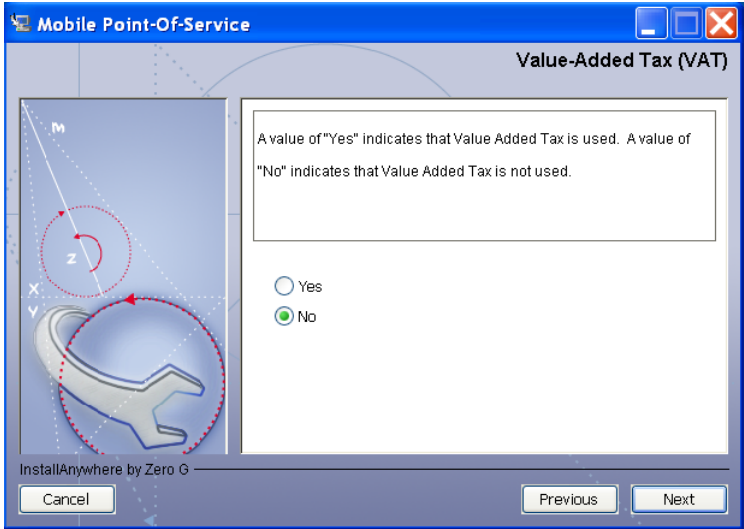
Field Title	KeyStore JAR 2
Field Description	Enter the name of a KeyStore jar file.
Example	<code>keystoreconnector.jar</code>
Notes	

Field Title	KeyStore JAR 3
Field Description	Enter the name of a KeyStore jar file.
Example	<code>encryptionclient.jar</code>
Notes	

Field Title	KeyStore JAR 4
Field Description	Enter the name of a KeyStore jar file.
Example	<code>simkeystore4.jar</code>
Notes	

Field Title	KeyStore JAR 5
Field Description	Enter the name of a KeyStore jar file.
Example	simkeystore5.jar
Notes	

Figure A-17 Value-Added Tax (VAT)



The field on this screen is described in the following table.

Field Title	Value-Added Tax
Field Description	Choose whether Value Added Tax is used.
Example	No
Notes	

Figure A-18 Pre-Installation Summary

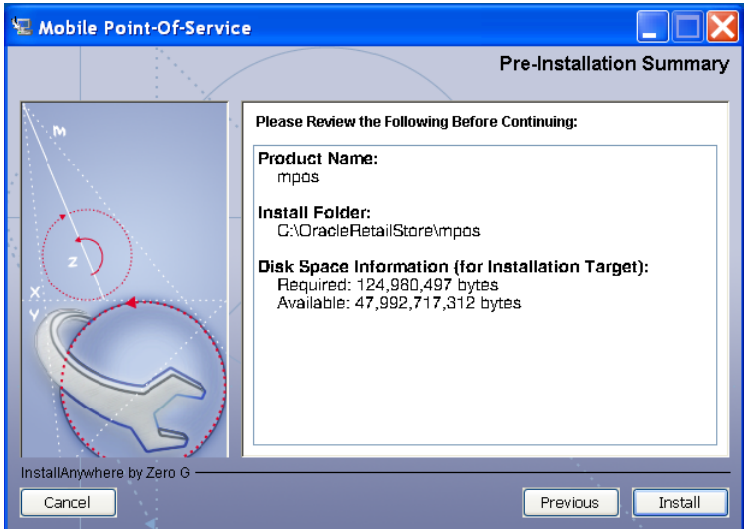
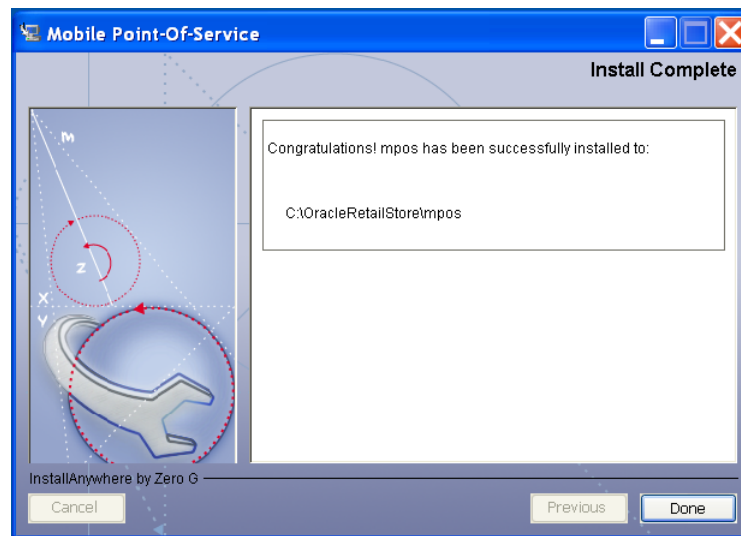


Figure A-19 Install Complete



Appendix: Common Installation Errors

This appendix describes some common errors encountered during installation of Mobile Point-of-Service.

"Mpos installer finished with errors"

If you see this error message, there could be some settings incorrectly set or problems with the installer itself. For more information, check the `OracleRetailStore/mpos/logs/installer_log.txt` file.

"Dispatcher.main, Exception: java.security.AccessControlException: access denied (java.util.PropertyPermission * read,write)"

Symptom:

The application dies when starting up:

```
[java] Dispatcher.main, Exception: java.security.AccessControlException: access
denied (java.util.PropertyPermission * read,write)
[java] java.security.AccessControlException: access denied
(java.util.PropertyPermission * read,write)
[java]     at java.security.AccessControlContext.checkPermission(Unknown
Source)
[java]     at java.security.AccessController.checkPermission(Unknown Source)
[java]     at java.lang.SecurityManager.checkPermission(Unknown Source)
[java]     at java.lang.SecurityManager.checkPropertiesAccess(Unknown Source)
[java]     at java.lang.System.getProperties(Unknown Source)
[java]     at
com.extendyourstore.foundation.tour.conduit.Dispatcher.<init>(Dispatcher.java:461)
[java]     at
com.extendyourstore.foundation.tour.conduit.Dispatcher.getDispatcher(Dispatcher.ja
va:1301)
[java]     at
com.extendyourstore.foundation.tour.conduit.Dispatcher.main(Dispatcher.java:2439)
[java]     at
com.extendyourstore.foundation.config.TierLoader.main(TierLoader.java:359)
```

Solution:

This error usually occurs because the JRE that you are pointing to does not contain the updated `java.security` and `java.policy` files.

"Dispatcher.main, Exception: java.security.AccessControlException: access denied (java.util.PropertyPermission * read,write)"
