Sun Java System Mobile Enterprise Platform 1.0 Deployment Guide

Sun Microsystems, Inc.
4150 Network Circle
Santa Clara, CA 95054
U.S.A.

Part No: 820–3752–10
July 2008

081007@21288

Contents

Preface

This guide explains how to deploy applications on Sun Java System Mobile Enterprise Platform 1.0 (MEP).

MEP is a comprehensive mobility solution that enables offline data access, data synchronization, and secure access to EIS/EAI applications, such as Siebel and SAP.

MEP is based entirely upon open standards, including the following:

- Java Platform, Mobile Edition (Java ME)
- Java Platform, Enterprise Edition (Java EE)
- The dominant industry standard OMA DS, formerly known as SyncML. The specifications for Open Mobile Alliance Data Synchronization V1.1.2 and V1.2.1 are available at `http://www.openmobilealliance.org/Technical/release_program/ds_v112.aspx` and `http://www.openmobilealliance.org/Technical/release_program/ds_v12.aspx`.

Who Should Use This Book

This guide is intended for users who will deploy the sample Siebel application.

Before You Read This Book

Before reading this guide, you should be familiar with the basic features of the Sun Java System Mobile Enterprise Platform 1.0 software, be knowledgeable about mobile device setup and configuration, especially for the BlackBerry and PalmTreo devices, and understand how to install and configure the Siebel back end. These users will also need some rudimentary knowledge about configuring Sun JCA Adapters from Java CAPS.

How This Book Is Organized

This book contains the following chapter:

- Chapter 1, "Setting Up and Running the Siebel Sample Application," explains how to install and configure the sample Siebel client application on a mobile device, configure the Application Server and MEP gateway, configure the Java CAPS Sun JCA Adapter for Siebel, and run the application end-to-end.

Mobile Enterprise Platform Documentation Set

The Mobile Enterprise Platform documentation set is available at `http://docs.sun.com/coll/1780.1`. To learn about Mobile Enterprise Platform, refer to the books listed in the following table.

TABLE P–1 Books in the Mobile Enterprise Platform Documentation Set

Book Title	Description
Sun Java System Mobile Enterprise Platform 1.0 Release Notes	Late-breaking information about the software and the documentation. Includes a comprehensive summary of the supported hardware, operating systems, application server, Java™ Development Kit (JDK™), databases, and EIS/EAI systems.
Sun Java System Mobile Enterprise Platform 1.0 Architectural Overview	Introduction to the architecture of Mobile Enterprise Platform.
Sun Java System Mobile Enterprise Platform 1.0 Installation Guide	Installing the software and its components, and running a simple application to verify that installation succeeded.
Sun Java System Mobile Enterprise Platform 1.0 Deployment Guide	Deployment of applications and application components to Mobile Enterprise Platform.
Sun Java System Mobile Enterprise Platform 1.0 Developer's Guide for Client Applications	Creating and implementing Java Platform, Mobile Edition (Java ME platform) applications for Mobile Enterprise Platform that run on mobile devices.
Sun Java System Mobile Enterprise Platform 1.0 Developer's Guide for Enterprise Connectors	Creating and implementing Enterprise Connectors for Mobile Enterprise Platform intended to run on Sun Java System Application Server.
Sun Java System Mobile Enterprise Platform 1.0 Administration Guide	System administration for Mobile Enterprise Platform, focusing on the use of the MEP Administration Console.

Application Server Documentation Set

When you install MEP, it is deployed to Sun Java System Application Server 9.1 Update 2.

The Application Server documentation set describes deployment planning and system installation. The Uniform Resource Locator (URL) for Application Server documentation is `http://docs.sun.com/coll/1343.5`. For an introduction to Application Server, refer to the books in the order in which they are listed in the following table.

TABLE P–2 Books in the Application Server Documentation Set

Book Title	Description
Documentation Center	Application Server documentation topics organized by task and subject.
Release Notes	Late-breaking information about the software and the documentation. Includes a comprehensive, table-based summary of the supported hardware, operating system, Java Development Kit (JDK), and database drivers.
Quick Start Guide	How to get started with the Application Server product.
Installation Guide	Installing the software and its components.
Deployment Planning Guide	Evaluating your system needs and enterprise to ensure that you deploy the Application Server in a manner that best suits your site. General issues and concerns that you must be aware of when deploying the server are also discussed.
Application Deployment Guide	Deployment of applications and application components to the Application Server. Includes information about deployment descriptors.
Developer's Guide	Creating and implementing Java Platform, Enterprise Edition (Java EE platform) applications intended to run on the Application Server that follow the open Java standards model for Java EE components and APIs. Includes information about developer tools, security, debugging, and creating lifecycle modules.
Java EE 5 Tutorial	Using Java EE 5 platform technologies and APIs to develop Java EE applications.
Java WSIT Tutorial	Developing web applications using the Web Service Interoperability Technologies (WSIT). Describes how, when, and why to use the WSIT technologies and the features and options that each technology supports.
Administration Guide	System administration for the Application Server, including configuration, monitoring, security, resource management, and web services management.
High Availability Administration Guide	Post-installation configuration and administration instructions for the high-availability database.
Administration Reference	Editing the Application Server configuration file, `domain.xml`.

TABLE P–2 Books in the Application Server Documentation Set *(Continued)*

Book Title	Description
Upgrade and Migration Guide	Upgrading from an older version of Application Server or migrating Java EE applications from competitive application servers. This guide also describes differences between adjacent product releases and configuration options that can result in incompatibility with the product specifications.
Performance Tuning Guide	Tuning the Application Server to improve performance.
Troubleshooting Guide	Solving Application Server problems.
Error Message Reference	Solving Application Server error messages.
Reference Manual	Utility commands available with the Application Server; written in man page style. Includes the `asadmin` command line interface.

Typographic Conventions

The following table describes the typographic changes that are used in this book.

TABLE P–3 Typographic Conventions

Typeface	Meaning	Example
`AaBbCc123`	The names of commands, files, and directories, and onscreen computer output	Edit your `.login` file. Use `ls -a` to list all files. `machine_name% you have mail.`
`AaBbCc123`	What you type, contrasted with onscreen computer output	`machine_name%` **`su`** `Password:`
AaBbCc123	A placeholder to be replaced with a real name or value	The command to remove a file is `rm` *filename*.
AaBbCc123	Book titles, new terms, and terms to be emphasized (note that some emphasized items appear bold online)	Read Chapter 6 in the *User's Guide*. A *cache* is a copy that is stored locally. Do *not* save the file.

Symbol Conventions

The following table explains symbols that might be used in this book.

TABLE P–4 Symbol Conventions

Symbol	Description	Example	Meaning
`[ ]`	Contains optional arguments and command options.	`ls [-l]`	The `-l` option is not required.
`{ | }`	Contains a set of choices for a required command option.	`-d {y|n}`	The `-d` option requires that you use either the `y` argument or the `n` argument.
`${ }`	Indicates a variable reference.	`${com.sun.javaRoot}`	References the value of the `com.sun.javaRoot` variable.
-	Joins simultaneous multiple keystrokes.	Control-A	Press the Control key while you press the A key.
+	Joins consecutive multiple keystrokes.	Ctrl+A+N	Press the Control key, release it, and then press the subsequent keys.
→	Indicates menu item selection in a graphical user interface.	File → New → Templates	From the File menu, choose New. From the New submenu, choose Templates.

Documentation, Support, and Training

The Sun web site provides information about the following additional resources:

- Documentation (`http://www.sun.com/documentation/`)
- Support (`http://www.sun.com/support/`)
- Training (`http://www.sun.com/training/`)

Searching Sun Product Documentation

Besides searching Sun product documentation from the docs.sun.com℠ web site, you can use a search engine by typing the following syntax in the search field:

search-term `site:docs.sun.com`

For example, to search for “broker,” type the following:

```
broker site:docs.sun.com
```

To include other Sun web sites in your search (for example, java.sun.com, www.sun.com, and developers.sun.com), use `sun.com` in place of `docs.sun.com` in the search field.

Third-Party Web Site References

Third-party URLs are referenced in this document and provide additional, related information.

Note – Sun is not responsible for the availability of third-party web sites mentioned in this document. Sun does not endorse and is not responsible or liable for any content, advertising, products, or other materials that are available on or through such sites or resources. Sun will not be responsible or liable for any actual or alleged damage or loss caused or alleged to be caused by or in connection with use of or reliance on any such content, goods, or services that are available on or through such sites or resources.

Sun Welcomes Your Comments

Sun is interested in improving its documentation and welcomes your comments and suggestions. To share your comments, go to `http://docs.sun.com` and click Send Comments. In the online form, provide the full document title and part number. The part number is a 7-digit or 9-digit number that can be found on the book's title page or in the document's URL. For example, the part number of this book is 820-3752.

◆ ◆ ◆ CHAPTER 1

Setting Up and Running the Siebel Sample Application

This document explains how to set up and run the end-to-end secure Siebel sample application in a two-tier environment. Before you perform these steps, follow the installation instructions in "Performing a Two-Tier Installation" in *Sun Java System Mobile Enterprise Platform 1.0 Installation Guide* and the security configuration instructions in Chapter 2, "Establishing Trust," in *Sun Java System Mobile Enterprise Platform 1.0 Installation Guide*. A two-tier installation is typical for most enterprise applications.

This document contains the following sections:

Overview of the Sample Application

The Siebel sample application enables the mobile client application to use Sun Java System Mobile Enterprise Platform to synchronize Siebel account data on the mobile client device with a Siebel CRM system.

To run the Siebel sample application, you must have the following items:

- Secure Siebel sample client application installed on your mobile device (Blackberry or Palm Treo)
- A Siebel 8 CRM system set up with the following workflows:
  - `SEEBEYOND_HTTP_UPDATE`, with operation "upsert" (update/insert)
  - `SEEBEYOND_HTTP_DELETE`, with operation "delete"
  - `SEEBEYOND_HTTP_QUERY` , with operation "execute"
- MEP server-side software installed and configured

shows a typical MEP two-tier installation, to which the sample application is deployed.

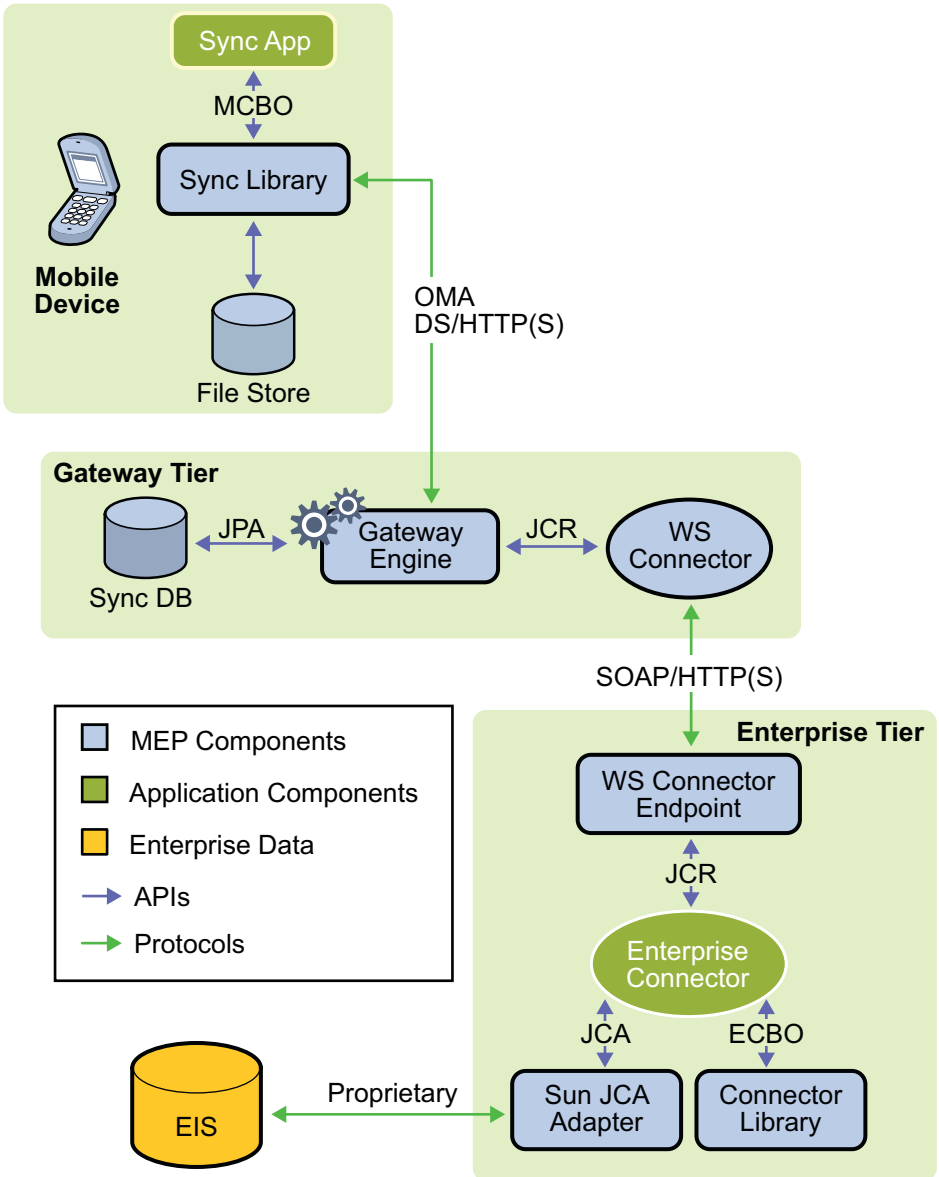

FIGURE 1–1 MEP Two-tier Installation

The sample application allows you to retrieve and update Siebel account information from the Siebel CRM system to the client, or from the client to the Siebel system. On the client, you can add, edit, delete, and list accounts and save them locally prior to synchronizing them with the Siebel system.

In the sample, an account has the following fields:

- Name (required field)
- Location (required field)
- Description
- Phone
- Fax
- Potential volume
- Current volume

The client application provides the following menu items:

- *Accounts*: Allows you to list, create, edit, and delete accounts.
- *Synchronize*: Performs a synchronization. You need to set the Server Settings and the Sync Type before you choose this menu item.
- *Server settings*: Allows you to set or edit the server URL, user name, and password.

  The username is matched with the email address of a user created by using the MEP Administration Console.
- *Sync Type*: Allows you to select one of the six synchronization types supported by MEP.

Configuring Resources for the Siebel Sample Application

Configuration for the sample application must be performed on the second tier of the two-tier installation. The tier2 system is the system where the Sun JCA Adapter that interacts directly with the Siebel back-end system has been installed and configured. Complete the following steps to prepare the tier2 system to run the Siebel sample application.

1. Create the `siebelpool` connection pool.
   a. In a browser, go to `http://`*`hostname_of_2nd_tier`*`:4848/admin` and log in to the Application Server Admin Console as `admin`. The default password is `adminpass`.
   b. In the tree view, expand Resources, then Connectors, and then select Connector Connection Pools.
   c. Click New.

      The New Connector Connection Pool panel appears.
   d. Type `siebelpool` in the Name field.
   e. Select `sun-siebeleai-adapter` from the Resource Adapter drop-down list.
   f. Click Next.

g. Click Finish.

2. Create the `jcaps/siebel` connector resource.
   a. In the tree view, expand Resources, then Connectors, and then select Connector Resources.
   b. Click New.

      The New Connector Resource panel appears.
   c. Type `jcaps/siebel` in the JNDI Name field.
   d. Select `siebelpool` from the Pool Name drop-down list.
   e. Click OK.
3. Modify the settings for the `siebelpool` connection pool.
   a. In the tree view, expand CAPS, then expand Connector Connection Pools.
   b. Click `siebelpool`.

      If the `siebelpool` connector connection pool does not appear in the tree view, expand another node, then expand Connector Connection Pools once again. You should now see `siebelpool`.
   c. Under Siebel EAI, set both the User Name and Password fields. For example, you could set both fields to `siebeladmin`.
   d. Under HTTP Settings, set the URL field to the URL of the Siebel server you plan to use to run the sample Siebel application.
   e. Under Proxy Configuration, delete the contents of all the fields.
   f. Click Save.
4. Optionally, use the Enterprise Tier Administration Console to create an Enterprise Connector user to which the Gateway user is mapped. This mapping enhances security by enabling a Gateway username/password that is different from the username/password of the ERP/EAI system.
   a. In a browser window, open `http://`*`hostname_of_2nd_tier`*`:8080/sync/admin`.

      The Enterprise Tier Administration Console login screen appears.
   b. Log in using the user name `admin` and password `syncpass`.

      The console appears.
   c. Click the Users tab, then click the Create User tab.
   d. In the Gateway Username field, type the Enterprise Connector username specified when the Gateway account was created.
   e. In the Enterprise Connector Username field, type the new Enterprise Connector username to which the Gateway username is mapped.
   f. In the Enterprise Connector Password field, type the password for the new Enterprise Connector username to which the Gateway username is mapped.

g. Click Register.

h. Click the Edit User tab to verify that the user was created.

5. Create a MEP Gateway user for the secure Siebel sample application using the Gateway Administration Console.

   a. In a browser window, open `http://`*hostname_of_1st_tier*`:8080/sync/admin`.

      The Gateway Administration Console login screen appears.

   b. Log in using the user name `admin` and password `syncpass`.

      The console appears.

   c. Click the Users tab, then click the Create User tab.

   d. In the Email Address field, type the email address of the Gateway user.

   e. In the Password field, type the password for the Gateway user.

   f. In the Username field, type the username of the Gateway user.

   g. In the Phone Number field, type the phone number of your mobile device.

   h. Select Siebel Remote from the Enterprise Connector drop-down list.

   i. Click Register.

   j. Click the Edit User tab to verify that the user was created.

Deploying the Secure Siebel Client Application on Mobile Devices

The following sections describe how to install the secure sample Siebel client application on a BlackBerry smartphone or on a Palm Treo device running the Palm OS or Windows Mobile software.

Deploying the Secure Siebel Client Application on a BlackBerry Smartphone

Complete the following steps to install and deploy the secure Siebel client application to a BlackBerry smartphone.

1. Install the BlackBerry Desktop Manager from the User Tools CD to a PC.
2. Unzip the `sjsmep-client-1_0_02-fcs.zip` bundle and extract the files to your PC.
3. Ensure that your BlackBerry smartphone is connected to the PC's USB interface.

4. Select Start→All Programs→BlackBerry→Desktop Manager.

   The BlackBerry Desktop Manager is displayed

5. Double-click the Application Loader icon.

   The Application Loader Wizard is displayed.

6. Click Next at the Welcome screen.

   The Add Application screen is displayed.

7. Select Add.
8. Browse to and select the `secure-siebel.alx` file.
9. Click OK.

   The screen shows the secure Siebel client application that you selected and indicates that the next operation to be performed is to install that client application on your mobile device.

10. Click Next until the client application is installed on your BlackBerry device.
11. Click Finish when you are done.

Deploying the Secure Siebel Client Application on a Palm Treo Smartphone

If you are using Windows Mobile, you can either load the client files onto your device using the Microsoft ActiveSync software and a USB cable or load them over the air. If you are using PalmOS, you must load the files over the air.

Complete the following steps to install and deploy the sample Siebel client on a Palm Treo smartphone running the Palm OS or Windows Mobile software.

1. Ensure that your mobile device's software (Palm installation CDs for PalmOS or Windows Mobile) has been installed on a PC.
2. Ensure that the J9 Virtual Machine (VM) software has been installed on your mobile device.

   You can get the J9 VM software from IBM.

3. If you are loading the client files over the air, follow these steps:
   a. Unzip the `sjsmep-client-1_0_02-fcs.zip` bundle, extracting the files to a web server that you can access from your mobile device.

      The clients are in the *install-dir*`/samples` directory, where *install-dir* is the directory where you unzipped the bundle.

   b. Click the IBM Java icon on your mobile device to start the J9 emulator.
   c. Click Install.
   d. In the URL field, type the path to the `secure-siebel.jad` file on the web server that you unzipped in step a.

e. Click OK.

4. If you are using a USB cable to load the client files, follow these steps:
   a. Unzip the `sjsmep-client-1_0_02-fcs.zip` bundle, extracting the files to the ActiveSync Folder for J9 on your PC Desktop.
   b. Connect the cable from the device to the PC where you extracted the client files.
   c. Bring up ActiveSync on the PC.
   d. Click Sync.

      The files are transferred.

Running the Secure Siebel Client Application

Complete the following steps to run the secure Siebel client application:

1. Set up your client device.
   a. Turn on your mobile device.
   b. Locate and click the Sun Siebel Client icon.

      The Sync ML Client screen appears, showing the Siebel Account Demo.
   c. Click Menu and select Server Settings.

      The Edit Sync Profile Screen appears.
   d. Type `http://`*tier1-system*`/sync` in the Server field, where *tier1–system* is the name of the system where you installed the MEP gateway (tier1).
   e. In the Username field, type the user name provided to you by Sun (the one you specified in step 4e of "Configuring Resources for the Siebel Sample Application" on page 13.
   f. In the Password field, type the password provided to you by Sun (the one you specified in step 4f of "Configuring Resources for the Siebel Sample Application" on page 13.
   g. Click Menu and select Save when you finish.
2. Create a new account.
   a. Click Menu and select Accounts.

      The Select Account screen appears.
   b. Click Menu and select New.

      The Edit Account screen appears.
   c. Type data in the fields, click Menu, then select Done.

      The Select Account screen appears.
   d. Select Done.

      The Siebel Account Demo screen appears.
3. Synchronize the data with the Siebel back end.

a. Click Menu and select Sync Type.

   The Edit Sync Type screen appears.

b. Select Two Way Sync (the default).

   This synchronization will send all new user data on the client device to the back end, and will send all the user's new back end data to the client device.

c. Click OK.

d. Click Menu, then select Synchronize.

The data on your client device and the data on the Siebel back end are now synchronized.

4. Verify that your account data has been uploaded to the back end by removing the new account from the client and then fetching the data from the server.

   a. Click Menu and select Accounts.

   b. Find and select the account you created, then click Menu.

   c. Select Delete from the drop-down list.

      The account is removed from the list.

   d. Click Done.

   e. Click Menu and select Sync Type.

   f. Select Slow Sync, then click OK.

   g. Click Menu and select Synchronize.

      The data from the server, including the account you deleted locally, will be downloaded to the client device.

   h. Select Accounts.

   i. Scroll through the accounts and verify that the account you deleted is present.