SYBASE®

Installation Guide

Unwired Accelerator

7.0

Linux

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Sybase, Inc., One Sybase Drive, Dublin, CA 94568.

Contents

About This Book

Audience

This guide is for Sybase® system administrators and other professionals who are familiar with their system's environment, networks, disk resources, and media devices.

How to use this book

This book contains the following chapters:

- Chapter 1, "Overview," is the overview of the Unwired Accelerator installation.
- Chapter 2, "Installation Procedures," describes how to install Unwired Accelerator on your system, how to perform special installation and upgrade procedures, and how to uninstall Unwired Accelerator.
- Chapter 3, "Getting Started," describes how to start using Portal Interface and Mobile Web Studio, and how to stop and start system components.
- Chapter 4, "Troubleshooting," provides troubleshooting information for some common installation problems.
- Appendix A, "Installing Unwired Accelerator in EAServer 5.2," describes how to deploy Unwired Accelerator to EAServer.
- Appendix B, "Setting Up Authentication and Authorization," describes how to set up authentication and authorization using Tomcat or EAServer, and either the portal database or a Lightweight Directory Access Protocol (LDAP) server.

Related documents

Unwired Accelerator documentation The following Unwired Accelerator documents are available on the Getting Started with Unwired Accelerator CD:

- The Unwired Accelerator release bulletin for your platform contains up to date information not documented elsewhere.
- The Unwired Accelerator installation guide (this document) contains installation instructions.
- The *Unwired Accelerator Quick Start Guide* shows how to deploy a Web and database application to either a PDA or BlackBerry device.

Unwired Accelerator online documentation The following Unwired Accelerator documents are available on the SyBooks CD:

- The *Unwired Accelerator Developer's Guide* includes developer-related topics for Unwired Accelerator components, Portal Interface applications, and Java Template Framework pages.
- The *Unwired Accelerator Administration Guide* provides administration topics for Unwired Accelerator and its components.
- The *Portal Interface User's Guide* describes the Portal Interface user interface and how to use Portal Interface to build and manage your enterprise's portal.
- The *Mobile Application Development Tutorial* provides tutorials that provide examples of how you can use Mobile Web Studio to develop and deploy mobile applications.

jConnect™ for JDBC™ documents Unwired Accelerator 7.0 includes the jConnect for JDBC driver to allow JDBC access to Sybase database servers and gateways. The *Programmer's Reference jConnect for JDBC* is included on the SyBooks CD.

Adaptive Server® Anywhere documents Unwired Accelerator 7.0 includes the ASA database to store system information including security authentication and authorization information. The ASA document set is included on the SyBooks CD.

Other sources of information

Use the Sybase Getting Started CD, the SyBooks CD, and the Sybase Product Manuals Web site to learn more about your product:

- The Getting Started CD contains release bulletins and installation guides in PDF format, and may also contain other documents or updated information not included on the SyBooks CD. It is included with your software. To read or print documents on the Getting Started CD, you need Adobe Acrobat Reader, which you can download at no charge from the Adobe Web site using a link provided on the CD.
- The SyBooks CD contains product manuals and is included with your software. The Eclipse-based SyBooks browser allows you to access the manuals in an easy-to-use, HTML-based format.

  Some documentation may be provided in PDF format, which you can access through the PDF directory on the SyBooks CD. To read or print the PDF files, you need Adobe Acrobat Reader.

Refer to the *SyBooks Installation Guide* on the Getting Started CD, or the *README.txt* file on the SyBooks CD for instructions on installing and starting SyBooks.

- The Sybase Product Manuals Web site is an online version of the SyBooks CD that you can access using a standard Web browser. In addition to product manuals, you will find links to EBFs/Maintenance, Technical Documents, Case Management, Solved Cases, newsgroups, and the Sybase Developer Network.

  To access the Sybase Product Manuals Web site, go to Product Manuals at http://www.sybase.com/support/manuals/.

Sybase certifications on the Web

Technical documentation at the Sybase Web site is updated frequently.

❖ **Finding the latest information on product certifications**

1. Point your Web browser to Technical Documents at http://www.sybase.com/support/techdocs/.
2. Click Certification Report.
3. In the Certification Report filter select a product, platform, and timeframe and then click Go.
4. Click a Certification Report title to display the report.

❖ **Finding the latest information on component certifications**

1. Point your Web browser to Availability and Certification Reports at http://certification.sybase.com/.
2. Either select the product family and product under Search by Base Product; or select the platform and product under Search by Platform.
3. Select Search to display the availability and certification report for the selection.

❖ **Creating a personalized view of the Sybase Web site (including support pages)**

Set up a MySybase profile. MySybase is a free service that allows you to create a personalized view of Sybase Web pages.

1. Point your Web browser to Technical Documents at http://www.sybase.com/support/techdocs/.
2. Click MySybase and create a MySybase profile.

Sybase EBFs and software maintenance

❖ **Finding the latest information on EBFs and software maintenance**

1 Point your Web browser to the Sybase Support Page at http://www.sybase.com/support.

2 Select EBFs/Maintenance. If prompted, enter your MySybase user name and password.

3 Select a product.

4 Specify a time frame and click Go. A list of EBF/Maintenance releases is displayed.

Padlock icons indicate that you do not have download authorization for certain EBF/Maintenance releases because you are not registered as a Technical Support Contact. If you have not registered, but have valid information provided by your Sybase representative or through your support contract, click Edit Roles to add the "Technical Support Contact" role to your MySybase profile.

5 Click the Info icon to display the EBF/Maintenance report, or click the product description to download the software.

Conventions

The syntax conventions used in this manual are:

Key	Definition
commands and methods	Command names, command option names, utility names, utility flags, Java methods/classes/packages, and other keywords are in lowercase Arial font.
variable	Italic font indicates: • Program variables, such as *myServer* • Parts of input text that must be substituted, for example: `Server.log` • File names
$SYBASE	Variable used to represent the Sybase Unwired Accelerator installation directory on UNIX systems.
File | Save	Menu names and menu items are displayed in plain text. The vertical bar shows you how to navigate menu selections. For example, File | Save indicates "select Save from the File menu."

Key	Definition
`package 1`	Monospace font indicates: • Information that you enter in a GUI interface, a command line, or as program text • Sample program fragments • Sample output fragments

$JAGUAR refers to the EAServer installation directory (if you are running Unwired Accelerator in EAServer 5.2). This document assumes EAServer is installed in the same root directory as Adaptive Server® Anywhere and Tomcat, so $JAGUAR is equivalent to *$SYBASE/EAServer*.

Note The installation and postinstallation instructions frequently refer to the $SYBASE, $MBUSINESS_SERVER, $JAGUAR,$CATALINA_HOME, and $JAVA_HOME variables.

$SYBASE refers to the Unwired Accelerator installation directory; for example, */opt/sybase*.

$MBUSINESS_SERVER refers to the M-Business Anywhere server installation directory; for example, */opt/MBiz*.

$JAGUAR refers to the EAServer installation directory (if you are running Unwired Accelerator in EAServer 5.0). This document assumes EAServer is installed in the same root directory as Adaptive Server® Anywhere and Tomcat, so $JAGUAR is equivalent to *$SYBASE/EAServer*.

$CATALINA_HOME refers to the Apache Tomcat application server installation directory. Unwired Accelerator integrates the Tomcat in its installation directory, so $CATALINA_HOME is equivalent to *$SYBASE/UA70/tomcat*).

$JAVA_HOME refers to a valid JVM directory.

If you need help

Each Sybase installation that has purchased a support contract has one or more designated people who are authorized to contact Sybase Technical Support. If you cannot resolve a problem using the manuals or online help, please have the designated person contact Sybase Technical Support or the Sybase subsidiary in your area.

CHAPTER 1

Overview

This guide explains how to install, or upgrade, and configure Sybase Unwired Accelerator running in either Tomcat or EAServer.

Product summary

This installation guide is for Sybase Unwired Accelerator, which is compatible with these platform and operating system configurations:

- Red Hat Enterprise Linux Advanced Server 3.0
- Mobile device, online access:
  - PocketPC 2003 (Windows CE)
  - Motorola MPx200 (Windows Mobile OS)
  - HandSpring Treo 600 (PalmOne OS 600, 650)
  - RIM BlackBerry (including Proximus and Vodafone)
- Mobile device, offline access:
  - PocketPC
  - Palm
  - M-Business Anywhere Client
  - RIM BlackBerry (including Proximus and Vodafone)

Unwired Accelerator mobilizes enterprise applications and data, which allows users to be productive and effective inside or outside the office. They can access the same applications and tools anytime, anywhere on a mobile device.

Unwired Accelerator enables users to rapidly mobilize existing enterprise Web applications and data sources, such as databases and Web services for both online and offline Web access. Users need not rewrite or modify existing applications or infrastructure.

CHAPTER 2

Installation Procedures

This chapter describes how to install Unwired Accelerator on Linux.

System requirements

Table 2-1 lists system requirements.

Note Go to the Technical Library Product Manuals Web site at http://www.sybase.com/support/manuals, or see the release bulletin for your platform for components that require operating system patches.

Table 2-1: System requirements

Platform and OS	Release level	RAM	Disk space	Network protocol	Web browser
Red Hat Enterprise Linux	Advanced Server 3.0	512MB recommended	500MB minimum, 1G recommended	TCP	To access Portal Interface, use Internet Explorer 5.5+ or Netscape Navigator 7.01+. To access Mobile Web Studio, use Internet Explorer versions 5.5 and 6.0.

Sybase Unwired Accelerator installed on Red Hat Enterprise Linux Advanced Server is designed to act as the "server." Windows client browsers are used to access both the Portal Interface and Mobile Web Studio applications, so a PC running Windows is required.

Unwired Accelerator default values

Table 2-2 lists the default values for the user names, passwords, and port numbers for Unwired Accelerator.

Table 2-2: Unwired Accelerator default installation values

Component	Default values	Description
Local Host Machine		
Local host machine name	(demo)	The machine name; for example, "lab2k."
Unwired Accelerator port	4040 on Tomcat 8080 on EAServer	
Unwired Accelerator HTTPS port	4443	
Adaptive Server Anywhere 9.0		
ASA port number	4747	
ASA administrator user name	dba	This is the user name used to log in to Adaptive Server Anywhere.
ASA administrator password	SQL	This is the password used to log in to Adaptive Server Anywhere.
M-Business Anywhere 5.7		
Administrative user name	admin	Use this to log in to M-Business Server as an administrator.
Administrative password	none	
Administrative port	8091	
M-Business client port	8092	M-Business Anywhere "sync" server port.
JDBC connection port	8099	Default database port.
Mobile Web Studio 7.0		
User name/password (uses mobile application terms)	masuper/m8super	Created automatically during installation. If you are installing Unwired Accelerator, use this user account to see mobile application terminology.

Component	Default values	Description
User name/password (uses Enterprise Portal terms)	opsuper/0psuper (the first character is a zero)	Created automatically during installation. If you are upgrading from Enterprise Portal to Unwired Accelerator, use this user account to see EP terminology; for example, “portlets” instead of “applications.”

Note If you are using Netscape 7.0.*x* for Web browser access, and using HTTPS to protect passwords during login, you must use port 80 for the Unwired Accelerator HTTP port and 443 for the Unwired Accelerator HTTPS port.

Preinstallation tasks

Before you install Unwired Accelerator, you must:

- Verify that there is a “.” (dot) in the PATH environment variable.
- Verify the $JAVA_HOME environment variable points to a valid JVM directory.
- Verify that you have write permission on your login home directory, the directory where you install the software, and the */tmp/logs* directory. If the *logs* directory does not exist, one is automatically created during installation.
- Verify that you have 500MB free space in your temporary directory; otherwise, the installation fails.

  If you do not have enough space in your */tmp* directory, redirect the installer to use a different directory for temporary space.

  Note The temporary directory to which you are redirecting must exist before you set the environment variable.

  To redirect your temporary directory, enter:

  ```
  ./setupLinux.bin -is:tempdir /work/tmp
  ```

  where */work/tmp* is the directory of your choice.

- Know the domain name of the machine where you are installing Unwired Accelerator. To find your domain name, contact your system administrator, or at a command prompt, enter:

  ```
  domainname
  ```

  Your domain displays, for example, `sybase.com`.

- Install EAServer 5.2 EBF #12978 if you plan to install Unwired Accelerator in EAServer instead of Tomcat. See Appendix A, "Installing Unwired Accelerator in EAServer 5.2".

Installation tasks

This section discusses installing Unwired Accelerator in a network environment. Installation takes five to ten minutes, depending on the speed of your machine.

❖ **Installing Unwired Accelerator**

Typically you can use any account to install Unwired Accelerator in Tomcat. However, if you plan to use port 80 (HTTP) and port 443 (HTTPS), you must log in as root to install Unwired Accelerator.

1 Insert the Installation CD. Launch the installer by running *setupLinux.bin*. This may take a few moments.

2 Click Next. The End-User License window displays.

3 Select the license agreement appropriate for the country or region where you are installing the software, from the drop-down list. The license displays.

  Reade the license agreement and select "I agree to the terms of the Sybase license for the installation location selected." Click Next.

4 In the next window, accept the default installation directory, or enter the directory in which to install Unwired Accelerator. For example, enter */opt/sybase*. The installation directory is referred to as *$SYBASE* in this guide.

5 The Installer checks for available disk space. If there is not enough disk space, the Installer reports the problem and closes. You must free up disk space and start again.

6 In the next window, enter:

- Domain Name – enter the domain (and subdomain if used).

  Note The UA configuration file uses sybase.com as the default domain name.

- Host Name – enter the name of the machine on which you are installing Unwired Accelerator; for example, `lab2k`. The UA configuration files use *demo* as the default host.
- Database Port – by default, the Installer inserts `4747` for the ASA database (see Table 2-2 on page 4). Accept the default or provide a new value.
- M-Business Anywhere Database Host – enter the name of the machine on which you are installing UA, for example `lab2K`.

  Note The Installer does not install the M-Business server, you must enter these parameters to configure UA to work with M-Business.

- M-Business Anywhere Database Port – by default the Installer inserts `8099` for the AGDB database port (see Table 2-2 on page 4). Accept the default or provide a new value.
- Application Server – select either:
  - Install Apache Tomcat, or
  - Existing Sybase EAServer

Click Next.

7 If you selected Sybase EAServer, see Appendix A, “Installing Unwired Accelerator in EAServer 5.2” for instructions.

If you selected Apache Tomcat as the application server, the Tomcat Parameters window displays. Enter the values for these parameters or accept the defaults.

- HTTP Port – by default, the Installer inserts `4040` for the Unwired Accelerator HTTP port (see Table 2-2 on page 4). Accept the default or provide a new value. Note that UA configuration files use *4040* as the default Unwired Accelerator HTTP port.

  Note If you are using Netscape 7.0.*x* for Web browser access, and using HTTPS to protect passwords during login, you must use port *80* for the Unwired Accelerator HTTP port.

- HTTPS Port – by default, the Installer inserts `4443` for the Unwired Accelerator HTTP port (see Table 2-2 on page 4). Accept the default or provide a new value.

  Note Before accepting the default, keep in mind:

  - If you are using Netscape 7.0.*x* for Web browser access, and using HTTPS to protect passwords during login, you must use port *443* for the Unwired Accelerator HTTPS port.
  - If you have M-Business Anywhere server installed on the same machine you are installing Tomcat on, there is a conflict with port 4443, so you must use a different port for HTTPS.

8 Click Next. The Installation Progress window displays. During installation, these files are updated with the configuration information you supplied:

- *global.properties.xml* – changes the default host name and domain name to the machine name and domain name detected in the Windows registry, or to those that you provided. The *global.properties.xml* file is located in *$SYBASE/UnwiredAccelerator70/tomcat/webapps/onepage*.
- *domain.js* – changes the default domain name to the name you provided. The *domain.js* file is located in *$SYBASE/UnwiredAccelerator70/tomcat/webapps/onepage/javascript*.
- *server.xml* – changes the default port number to the number you provided. The *server.xml* file is located in *$SYBASE/UA70/tomcat/conf/*.

The Installation Summary window displays and reports success or failure of the installation.

9 Click Finish.

10 In the terminal window, from *$SYBASE/UnwiredAccelerator70*, enter `startdb.sh`.

This starts the Adaptive Server Anywhere database. When the database starts, you see “Ping server successful.”

11 In the terminal window, from *$SYBASE/UnwiredAccelerator70*, enter `starttomcat.sh`. This starts the Tomcat application server.

When Tomcat starts, you see a series of messages in the Tomcat window, including the following:

```
Using CATALINA_BASE:   $SYBASE/infoedition/tomcat
Using CATALINA_HOME:   $SYBASE/infoedition/tomcat
Using CATALINA_TMPDIR: $SYBASE/infoedition/tomcat
                       /temp
Using JAVA_HOME:       ./jdk1.4
```

12 The Unwired Accelerator installation is complete. See “Verifying the installation” on page 10 to verify the network installation works correctly

If you cannot connect to the application, go to *$SYBASE/UnwiredAccelerator70/tomcat/logs* and check the *catalina.out* file for errors.

Postinstallation tasks

This section describes postinstallation tasks. Only perform the procedures for the features needed in your installation.

- Verifying the installation
- Configuring for a proxy server
- Updating digital certificates
- Installing M-Business Anywhere server and client software
- Installing RIM BlackBerry server and client software
- Installing Answers Anywhere server software
- Setting up a SAP connection
- Configuring Tomcat for LDAP

Note In this section, the Tomcat version of path names is used, such as *$SYBASE/UnwiredAccelerator70/tomcat/webapps/onepage*. If you are using EAServer, the comparable path name is *$JAGUAR/Repository/WebApplication/onepage*.

Verifying the installation

Verify your Unwired Accelerator installation by checking the Portal Interface and Mobile Web Studio installations.

❖ **Checking the installations**

1 To verify the Portal Interface installation, in the open Internet Explorer browser window, enter the Unwired Accelerator address in the following format:

```
http://hostname.domain:port/onepage/mpindex.jsp
```

where:

- *hostname* – is the name of the machine where you installed Unwired Accelerator; for example, "lab2k."
- *domain* – is the domain name where the installation is located; for example, "sybase.com."
- *port* – is the Unwired Accelerator port number (the default is 4040 for Tomcat and 8080 for EAServer).

For example:

```
http://lab2k.sybase.com:4040/onepage/mpindex.jsp
```

The Portal Interface Welcome window displays.

2 Click Join Now to set up a new user profile. Select the PortalUser role. See "Getting started with Portal Interface" on page 39.

3 To verify the Mobile Web Studio installation, open another browser window and navigate to:

```
http://hostname.domain:port/onepage/loader.html
```

For example, if your machine's name is "lab2k," your portal domain is "sybase.com," and your HTTP port number is "4040," enter:

```
http://lab2k.sybase.com:4040/onepage/loader.html
```

Note Mobile Web Studio is accessible only through Microsoft Internet Explorer 5.5 and 6.0.

The Mobile Web Studio window opens. (If a window with a Close button opens, minimize the window, but do not close it).

If the Mobile Web Studio window does not display, see Table 4-1 on page 48 for information.

4 In Mobile Web Studio, log in using `masuper` as the user name, and `m8super` as the password. See "Getting started with Mobile Web Studio" on page 41.

Setting the mail.host property

When you create a new user in Mobile Web Studio, a verification e-mail with the user's password is sent to you. You must change the mail.host property in the *global.properties.xml* file to your SMTP host.

1 Navigate to *$SYBASE/UnwiredAccelerator70/tomcat/webapps/onepage/config*, and open the *global.properties.xml* file with a text editor.

2 Locate the `Property name="mail.host" value="xx.xx.xx.xxx"` line and change the value to the IP address of the SMTP host of your mail server.

Configuring for a proxy server

If you are using a proxy server, you must configure Unwired Accelerator with the appropriate proxy settings. Make changes in the *global.properties.xml* file, located in *$SYBASE/UnwiredAccelerator70/tomcat/webapps/onepage/config*. The settings include:

- proxy – enables a proxy server, if a squid type HTTP proxy is available.
- proxy.host – identifies the proxy server name or IP address.
- proxy.port – identifies the proxy server port number.
- proxy.bypass_list – identifies a list of IP addresses or host names that should bypass the proxy server.

Note See the *Unwired Accelerator Administration Guide* for more information about the *global.properties.xml* file and setting up a proxy server.

❖ **Using Unwired Accelerator behind a proxy server**

1 Navigate to *$SYBASE/UnwiredAccelerator70/tomcat/webapps/onepage/config*.

2 In a text editor, open *global.properties.xml* and change the proxy value to "on." For example:

```
Property name="proxy" value="on"
description="(on/off). on ONLY if a http proxy
server is installed/available" menugroup="10"/
```

3 Change the proxy.host value to the IP address or host name of the proxy server. For example, if your proxy server host name is "proxy.hostname.com," the line looks like this:

```
Property name="proxy.host"
value="proxy.hostname.com"
description="(127.0.0.1). configure only if
proxy=on. IP of the http proxy server"
menugroup="100"/
```

4 Change the proxy.port value to the port number on which the proxy server is running. For example, if the port is 3128, the line looks like this:

```
Property name ="proxy.port" value="3128"
description= "(3128). configure only if proxy=on.
port where http proxy server is running"
menugroup="100"/
```

5 To the proxy.bypass_list value, add the IP addresses or host names that should bypass the proxy server. You must keep the loopback address and local host in the bypass list. For example, if you want requests for URLs that end with "sybase.com" or start with "syberspace" to bypass the proxy server, enter:

```
Property name="proxy.bypass_list" value
="127.0.0.1|localhost" description="(host1|host2).
please read HTTPConnection javadocs for info on
dontProxyFor() method for more info"
menugroup="100"/
```

Updating digital certificates

User authentication for the portal uses HTTPS, which uses Secure Sockets Layer (SSL) for posting the user names and passwords that users enter in an encrypted form over a secure channel. SSL and HTTPS rely on the usage of digital certificates, which are typically verified and signed by third-party trusted authorities.

Unwired Accelerator uses a certificate that is created using the keytool utility that ships with Java Development Kit (JDK) 1.4.*x*. This certificate is not signed by any trusted authority; therefore, you see the Security Alert pop-up when you sign in with your user name and password. Replace the *.keystore* file in the product folder with your certificate file of the same name.

Installing M-Business Anywhere server and client software

Unwired Accelerator integrates Mobile Web Studio and M-Business Anywhere development environments. This enables you to quickly develop mobile applications and deploy them to both the Web and mobile devices, and to manage applications, group applications, channels, groups, and users through Mobile Web Studio.

Note Skip this section if you plan to use RIM's BlackBerry Enterprise Server (BES) to deploy applications to BlackBerry devices instead of M-Business Anywhere. See "Installing RIM BlackBerry server and client software" on page 21.

This section describes the following topics:

- Installing:
  - M-Business Anywhere server and client software
  - Mobile device software (Palm OS and Pocket PC)
- Configuring connections
- Uninstalling M-Business Anywhere software

Unwired Accelerator includes five developer licenses for M-Business Anywhere. You can download M-Business Anywhere Server and M-Business Client from the Web. To deploy applications to M-Business Anywhere, you must purchase a deployment license.

When you purchase Unwired Accelerator, you receive an order-confirmation e-mail that includes:

- M-Business Anywhere URL – you need this URL to download the M-Business Anywhere software.
- Password – you may be prompted to supply this password when you access the M-Business Anywhere URL to download the software.

- License key – you must supply the license key when you install the M-Business Anywhere software.

Installing M-Business Anywhere server and client

This section describes how to install M-Business Anywhere server and client software, and to integrate M-Business Anywhere with Unwired Accelerator.

Typically, M-Business Anywhere is installed on the same machine as Unwired Accelerator, but you can install it on any supported machine or platform. If you install on different machines, you must make additional configuration changes.

Note Mobile applications deployed through M-Business Anywhere require database PODs to run on mobile devices. PODs are binary files compiled from C code to access the Client Extension API. PODs are installed automatically during installation, and enable you to run applications even when the mobile devices are not connected to the server.

For more POD information, see *Administrator Guide for M-Business Server* (located at http://*hostname*:8091/enterprise_doc/Admin_MBiz.pdf, where *hostname* is the machine on which the M-Business Anywhere server is installed).

❖ Installing M-Business Anywhere server software on Linux

In this step, download and install the M-Business Anywhere server software on Linux. In later steps, you will install the M-Business Anywhere client software on a Windows platform and make configuration changes.

1 Before you begin, stop the Tomcat application server and the Unwired Accelerator ASA database using the instructions in "Starting and stopping the system" on page 44.

Note If the ASA database is running, you will not be able to configure the M-Business Anywhere server and start its processes successfully.

---

2 Create an installation directory in which to install M-Business Anywhere server; for example, */opt/MBiz*. This directory is referred to as $MBUSINESS_SERVER in this guide.

3 Download the M-Business Anywhere server software to $MBUSINESS_SERVER using the URL and password that was sent to you in the order-confirmation e-mail when you purchased Unwired Accelerator.

Select M-Business Anywhere Developer Edition, and follow the online instructions for downloading.

4 Log on as root.

5 Using a zip utility, extract the *MBAnywhereL.tar.gz* file into $MBUSINESS_SERVER. The command for extracting the file depends on the utility you are using.

Note Make sure the zip utility allows the archive to create new folders in the location where you unzip it.

Use one of the following commands to unzip:

```
tar -zxvf MBAnywhereL.tar.gz

gunzip -c MBAnywhereL.tar.gz | tar xvf -
```

6 Navigate to *$MBUSINESS_SERVER/avantgoserver/conf*.

Enter the following to launch the installation script:

```
./installAvantGoServer
```

Keep in mind the following when using the installation script:

- When prompted for a license key, enter the license key that was sent to you in the order-confirmation e-mail when you purchased Unwired Accelerator.
- When prompted for a user, accept the default.
- When prompted for "sync server port," enter 8092 (to prevent port conflicts with port 80, which is used by many Web servers). If port 8092 is in use, select another port number.
- Accept the machine name, such as "lab2k," as the machine name.

The installation script:

- Starts the following services: httpd, ASA, sync, and soap.
- Creates the *avantgoserver* directory.

Note If you encounter problems starting the services, the Unwired Accelerator ASA database is probably running. Stop the ASA database and restart the *installAvantGoServer* script.

Table 2-3 provides several useful M-Business Anywhere server commands for this phase of the installation. Issue all commands from *$MBUSINESS_SERVER/avantgoserver/conf*. See the *Administrator Guide for M-Business Server* for additional information (located at http://*machine*:8091/enterprise_doc/Admin_MBiz.pdf, where *machine* is the machine on which the M-Business Anywhere server is installed).

Table 2-3: M-Business Anywhere server toolbox

Command	Description
`./agserver status`	Check the status of the M-Business Anywhere services, including httpd, ASA, sync, and soap.
`./agserver stop all`	Stops all M-Business Anywhere services in the correct order.
`./agserver start all`	Starts all M-Business Anywhere services in the correct order.
`./installAvantGoServer`	Restarts the installation script, and starts up M-Business Anywhere services.

7 When the httpd, ASA, sync, and soap services are running successfully, log off as root.

8 Restart the Unwired Accelerator ASA database and the Tomcat application server using instructions in "Starting and stopping the system" on page 44.

❖ **Installing M-Business Anywhere client software**

In this step, download and install client software for Windows, and for your mobile device.

1 Download the M-Business Anywhere client software for Windows, using the URL and password that was sent to you in the order-confirmation e-mail when you purchased Unwired Accelerator.

2 Install M-Business Anywhere client software on Windows.

3 Open a Web browser and enter the M-Business Anywhere server URL:

```
http://machine:8091
```

Where *machine* is the machine on which the M-Business Anywhere server software is installed.

The M-Business Anywhere login screen displays.

Note You can access the *M-Business Client User Guide* from the login screen, or at http://*machine*:8091/enterprise_doc/Admin_MBiz.pdf.

4 From the M-Business Anywhere login screen, download the M-Business Anywhere client software for your mobile device:

a Select "Download Client Software Only."

b Select the language.

c Select the client software to download for your mobile device.

- PalmOS – install Palm Desktop 4.*x* with HotSync.
- Microsoft PocketPC 2003 – install ActiveSync 3.7.*x*.

Note For other mobile devices, obtain client software from the manufacturer.

d Install the software on your mobile device.

❖ **Connecting M-Business Anywhere and M-Business Client software**

In this step, create a connection from the M-Business Client software to the M-Business Anywhere server for each user created.

1 From the desktop or mobile device, select Start | Programs | M-Business Client | M-Business Connect.

For some mobile devices, if you have synchronized before, use Start | Programs | M-Business Client | Tools | Server Options.

2 On the M-Business Connect window, select Properties.

3 On Edit Server Profile window, specify the connection information:

- Hostname – specify your machine name, for example `lab2k`.
- Port – specify the port number, for example `8092`. This is the M-Business Client port (or "sync port") described in Table 2-2 on page 4.
- Your account – enter the M-Business user name and password. See "Self-registration" on page 19 for user account information.
- Connection options – select "Connect to this server during device synchronizations," and "Refresh all content at next sync."

4 Optionally, select Test to test the client-to-server connection. If the test fails, make sure you entered the connection values correctly. Close the Test Server window.

5 Click OK to save the changes.

6 Close the M-Business Connect window.

Configuring M-Business Anywhere

This section describes configuration settings needed for:

- M-Business Anywhere server and client communication
- M-Business Anywhere and Unwired Accelerator integration

Make configuration changes in the *global.properties.xml* file.

Configuring *global.properties.xml for M-Business Anywhere*

This section describes settings in the *global.properties.xml* file used to integrate M-Business Anywhere and Mobile Web Studio. The settings include:

- alwaysValidateSession – enables personal channels to work properly on mobile devices.
- MB.Enabled – enables connection from Mobile Web Studio to the M-Business Anywhere database, AGDB.
- MB.AutoRegistration – determines how user accounts are handled between Mobile Web Studio and M-Business Anywhere. See "Self-registration" on page 19 for information.

Note See the *Unwired Accelerator Administration Guide* for more information about the *global.properties.xml* file.

❖ **Modifying the *global.properties.xml* file for M-Business Anywhere**

1 In a text editor, open *global.properties.xml* (located in *$SYBASE/UnwiredAccelerator70/tomcat/webapps/onepage/config*).

2 Search the file for: `<Property name="alwaysValidateSession".`

Set alwaysValidateSession to “false” to enable personal channels to work on a mobile device or Portal Interface. Otherwise, you see a message similar to “Your submission has been recorded and will be sent during the next Synchronization” when you try to access an application on the PDA or mobile device.

```
<Property name="alwaysValidateSession" value="false"
    description="When this is 'true' the users
    portal session is validated on every request.
    There is a slight performance penalty for this.
    When set to 'false' the session is only checked
    when security configuration requires an explicit
    authorization." menugroup="10" />
</PropertyGroup>
```

3 Search the file for: `<Property name="MB.Enabled".`

Set MB.Enabled to “true” to integrate M-Business Anywhere with Portal Interface and Mobile Web Studio.

```
<Property name="MB.Enabled" value="true"
    description="(true/false) true to enable
    MBusinessintegration Portal and Studio.
    false to disable it." menugroup="10"/>
</PropertyGroup>
```

4 Search the file for: `<Property name="MB.AutoRegistration".`

By default, MB.AutoRegistration is set to “false” as shown below. Use the information in “Self-registration” on page 19 to determine whether to change the MB.AutoRegistration parameter value.

```
<Property name="MB.AutoRegistration" value="false"
    description="(true/false) true to enable auto
    MBusiness user registration when a user is created
    in EP. false to disable it." menugroup="10" />
</PropertyGroup>
```

5 Save the file and close it.

Self-registration

The *global.properties.xml* property, MB.AutoRegistration, determines how user accounts are handled when Unwired Accelerator and M-Business Anywhere are integrated.

- If MB.AutoRegistration is set to “true,” when a user joins the Portal Interface, or a user is added to Mobile Web Studio, the user automatically joins the M-Business Anywhere server with the same user name and password.
- If MB.AutoRegistration is set to “false,” Mobile Web Studio does not self-register to M-Business Anywhere. After setting up a user in Mobile Web Studio, the StudioAdmin user, such as `masuper`, must also register the user in M-Business Anywhere, using M-Business | User/Roles, and selecting “Create M-Business user.”

If a Mobile Web Studio user already exists, but does not have an account in M-Business Anywhere, the M-Business Anywhere administrator can create an account for the user, or the Mobile Web Studio user can self-register in M-Business server or in Mobile Web Studio.

Note The user names in Mobile Web Studio and M-Business Anywhere server must match. If you create a user in M-Business Anywhere, an account is not created for the user in Mobile Web Studio.

Uninstalling M-Business Anywhere

Uninstalling on Linux removes the M-Business Anywhere server and the database of user, group, and channel information. To preserve the database, move the *$MBUSINESS_SERVER/avantgoserver/ASA/data/* directory to a new location before uninstalling.

❖ **Uninstalling the M-Business Anywhere server on Linux**

1 Log in as root.

2 Stop the sync process by entering:

```
./agserver stop sync
```

3 Navigate to $MBUSINESS_SERVER.

4 Remove the *avantgoserver* directory by entering:

```
rm -fr avantgoserver
```

For information about uninstalling the M-Business Client, see the *M-Business User Guide*.

Installing RIM BlackBerry server and client software

This section provides the following information for setting up Research In Motion's (RIM) BlackBerry server and client software:

- Guidelines for setting up the RIM BlackBerry server and client software, if you are using RIM's BlackBerry Enterprise Server (BES) to deploy applications.
- Procedures for setting up the Unwired Accelerator offline client software for the RIM BlackBerry mobile device or device simulator.
- Procedures for setting up an Unwired Accelerator user on the BlackBerry device.

Guidelines for installing BlackBerry server and client software

Skip this section if you plan to use M-Business Anywhere server to deploy applications to mobile devices, instead of the RIM's BlackBerry Enterprise Server (BES). The BES serves as a centralized link between a company's enterprise infrastructure and messaging platform with the company's mobile wireless users.

If you plan to use BES to deploy applications to BlackBerry devices instead of using M-Business Anywhere server, you must make sure of the following before you install the offline client on the BlackBerry device:

- The RIM BES software is installed and configured correctly, using RIM's installation documentation.
- The RIM BlackBerry Desktop Manager software is installed and configured correctly. Unwired Accelerator's minimum requirement for the BlackBerry Desktop Manager software is version 3.6 SP3a.
- The BlackBerry device has connectivity with BES that you can synchronize between BES and the BlackBerry device.

Note If you do not have a BlackBerry device, a simulator is available for download from RIM at http://www.blackberry.net/developers. Select the Download link under "What's New;" and look for the BlackBerry Handheld Simulators section. (For simulator documentation, access the Developer's window; select the Developer Documentation link under "Development Questions;" and scroll down to the Simulator section).

Guidelines for setting up BlackBerry users

This section provides information for helping BlackBerry mobile device users to get set up to use Unwired Accelerator. For each user, set up a user account through Mobile Web Studio, and supply the following information to the user:

- Location of UA offline client – each user must install the UA offline client on the BlackBerry device. You will need to develop a process for making the *Uabbapp.alx* and *Uabbapp.cod* files available to users.
- User name – the user account you created through Mobile Web Studio.
- Password (generated when you created the Mobile Web Studio account; such as `Kp17kjo5`).
- Resource ID, such as `21`.
- UA server name, such as `lab2k.sybase.com`.
- UA HTTP port number, such as `4040`.

Installing offline client on BlackBerry device

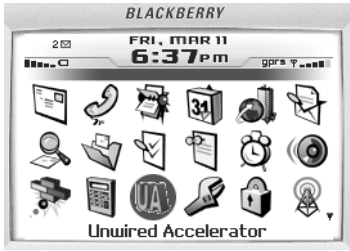
This section shows how to install the Unwired Accelerator offline client application on a BlackBerry device. The offline client enables you to use the applications you create through Unwired Accelerator on your BlackBerry device in offline mode.

Information is also provided for setting up the offline client on the BlackBerry simulator, which is available for download from Research in Motion.

❖ **Installing an Unwired Accelerator offline client**

1. Connect the BlackBerry device to the computer that contains your *Uabbapp.alx* and *Uabbapp.cod* files (Unwired Accelerator).
2. Run the BlackBerry Desktop Manager using RIM's documentation.
3. Click Application Loader to start the wizard, then click Next. The Application Loader wizard displays.
4. Click Add, navigate to and select the *UAbbapp.alx* file.
5. Click Open. The application is listed on the Application Loader wizard.
6. Click Next to continue. The application is installed on your BlackBerry device.
7. Access your BlackBerry device. You see the Unwired Accelerator (UA) icon.

Figure 2-1: UA icon



8 To run the Unwired Accelerator offline client, use the trackwheel to highlight the Unwired Accelerator (UA) icon, and open it. The Unwired Accelerator screen displays. The message starting with `Currently there are no synchronized applications available` displays.

9 Set up a user on the BlackBerry device as described in "Setting up an Unwired Accelerator user on the BlackBerry device" on page 24.

Installing offline client on the BlackBerry simulator

This section shows how to install an Unwired Accelerator offline client application on a BlackBerry simulator. See "Guidelines for installing BlackBerry server and client software" on page 21 for information about downloading the simulator from RIM to your desktop.

❖ Installing a UA offline client on the simulator

This procedure is for BlackBerry 3.7.

1 Navigate to *$SYBASE/UnwiredAccelerator70/tomcat/webapps/onepage/Blackberry*.

2 Copy the *UAbbapp.alx* and *UAbbapp.cod* files into your BlackBerry simulator installation directory:

%RIM%\Research In Motion\BlackBerry JDE 3.7\simulator

3 Select Start | Programs | Research In Motion | BlackBerry Java Development Environment 3.7 | MDS Simulator to start the BES simulator. You can minimize the Java.exe window.

4 Select Start | Programs | Research In Motion | BlackBerry Java Development Environment 3.7 | Device Simulator to start the BlackBerry device simulator. You can minimize the Device Simulator and Radio Simulation Control Panel windows.

5 Access the BlackBerry Handheld Simulator window. You see the Unwired Accelerator (UA) icon.

6 To run the UA offline client, highlight the Unwired Accelerator icon, and open it. The Unwired Accelerator screen displays. The message starting with `Currently there are no synchronized applications available` displays.

7 Set up a user on the BlackBerry simulator as described in "Setting up an Unwired Accelerator user on the BlackBerry device" on page 24.

Setting up an Unwired Accelerator user on the BlackBerry device

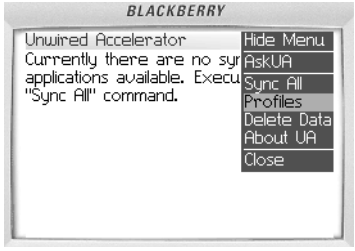
This describes how to set up a user on the BlackBerry device or simulator.

❖ **Setting up a UA user on BlackBerry**

1 Make sure the BlackBerry offline client is running on the device. You should see the Unwired Accelerator icon in the application menu.

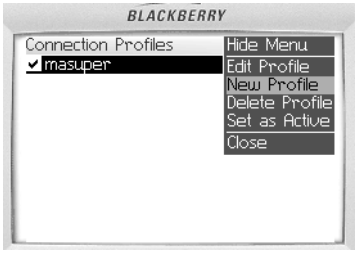
2 Select the Profiles option on the trackwheel menu.

Figure 2-2: Profiles option



3 From Connection Profiles, select the New Profile option from the trackwheel menu.

Figure 2-3: New Profile option



4 On the New Profile window, enter your profile name, username, password, resource id, server name and domain, and port number. This example creates a second `masuper`/`m8super` account, `mwsAdmin`.

- Profile Name – the profile name for the account, such as `mwsAdmin`.

- Username – the account user name, such as `masuper`.
- Password – the account password, such as `m8super`.
- Resource id – the default resource identifier (RID) for the account, such as `21` for Unwired Accelerator.
- Server name – the server and domain on which Unwired Accelerator is running, such as `lab2k.sybase.com`.
- Port number – the port used to access Unwired Accelerator, such as `4040`.

5 Select Save from the trackwheel menu, and save the settings.

6 Highlight the new profile, and select Set as Active from the trackwheel menu to make the profile active.

7 Select Close from the trackwheel menut ot return to the Unwired Accelerator screen.

Once you use Mobile Web Studio to create mobile applications, and synchronize, you will see the applications on the mobile device. To create mobile applications, see these Unwired Accelerator documents:

- *Quick Start Guide*
- *Mobile Application Development Tutorial*

Installing Answers Anywhere server software

This section describes how to configure Answers Anywhere server software for the natural language search feature. Unwired Accelerator is integrated with Answers Anywhere software, which enables users to send simple text-based queries, or natural language requests to Unwired Accelerator and receive text or HTML responses (such as “get employee list for Bob”).

The search feature is available through various client interfaces, including e-mail, SMS, mobile device, and Web browser. The Answers Anywhere server software listens for SMS and e-mail messages and processes them.

The Answers Anywhere software uses a preconfigured agent network, which includes general search commands and parameters, to search mobile applications. You cannot customize the agent network, but you can load an existing agent network if you have one (see the *Unwired Accelerator Administration Guide* for information).

You can also adjust the synonyms for the Execute and Send commands (call.synonym for Execute and send.synonym for Send), and you can create search synonyms for the applications you create through Unwired Accelerator. See the *Unwired Accelerator Developer's Guide* and the *Mobile Application Development Tutorial* for information.

Note The agent network is English-only for BlackBerry devices; a simplified Chinese version of the agent network is available for PDAs such as PalmOS and PocketPC.

Setting up Answers Anywhere for e-mail

This section describes how to enable users to query Unwired Accelerator applications using an e-mail client.

1 Create a dedicated e-mail account, such as "askua," on your mail system for Unwired Accelerator to check. Your e-mail system must provide POP3 access to this e-mail account.

2 Make a note of the following values:

- Outbound e-mail server (smtp.host) – for example "smtp.pacbell.yahoo.com."
- Inbound e-mail server (pop.host) – for example "lab2k.sybase.com."
- E-mail account name – for example "askua."
- E-mail password – for example, "ua."
- Unwired Accelerator host name – for example, "localhost" or "lab2k."
- Unwired Accelerator port – the default port is 4040 if you are using Tomcat, 8080 if you are using EAServer.
- Unwired Accelerator rid – the default resource identifier is "21."

3 Navigate to:

$SYBASE/UnwiredAccelerator70/tomcat/webapps/dejima /WEB-INF/classes

4 Open the *uadejima.properties* file in a text editor and set the property files for your environment, using information in Table 2-4.

Table 2-4: uadejima.properties file settings

Property name	Description
smtp.host	Identifies the outbound e-mail server.
pop.host	Identifies the inbound e-mail server.
smtp.auth	Indicates whether to authenticate outgoing e-mail. true – authenticates outgoing e-mail. If your SMTP host requires authentication for sending e-mails, set this to "true." false – does not authenticate outgoing e-mail. This is the default setting.
email.id	Identifies the user account for Unwired Accelerator to use on the inbound e-mail server to access the inbound mailbox. The default is "ua."
email.pwd	Identifies the password for Unwired Accelerator to use to access the inbound mailbox. The default is "ua."
ua.host	Identifies the host and domain name of the machine where Unwired Accelerator is installed. For example, if the machine name is "lab2k" and the domain is "sybase.com," enter: `lab2k.sybase.com` The default is "localhost."
ua.port	Identifies the port on which UA is running. The default is `4040` for Tomcat and `8080` for EAServer.
ua.rid	Identifies the resource ID used for Answers Anywhere integration. The default is 21.
ua.reg.uri	Indicates the Uniform Resource Identifier for Unwired Accelerator access to Answers Anywhere. The default is: `/onepage/mpindex.jsp`.
default.opal	The location of the Answers Anywhere agent network. The default setting is: `/dbdsUnwired/wired.opal`. To use the Simplified Chinese agent network on PDAs, set this value to: `/dbdsUnwired_zh/wired.opal`. See "Setting up Answers Anywhere for Simplified Chinese" on page 29 for additional configuration information.
role.check	Indicates whether to use role verification for Answers Anywhere. Set to "true" to use role verification. Set to "false" if role verification is not needed.
application/ msword	
application/ x-msexcel	
application/pdf	
text/html	
text/plain	
image/jpg	
image/giff	

Following is an example file:

```
smtp.host=out_mailserver.sybase.com
```

```
smtp.auth=false
pop.host=in_mailserver.sybase.com
email.id=ua
email.pwd=ua
ua.host=localhost
ua.port=4040
ua.rid=21
ua.reg.uri=/onepage/mpindex.jsp
default.opal=/dbdsUnwired/wired.opal
role.check=false

application/msword=doc
application/x-msexcel=xls
application/pdf=pdf
text/html=html
text/plain=txt
image/jpg=jpg
image/giff=gif
```

5 Save and close the file.

6 Restart the Tomcat application server as described in "Starting and stopping the Tomcat application server" on page 45.

7 If you are using Tomcat, open a Web browser window, enter the following, and click Add:

`http://`*hostname.domain*`:`*port*`/dejima/mail.jsp`

Substitute your information, such as:

```
http://lab2k.sybase.com:4040/dejima/mail.jsp
```

Click Start. This starts the process that handles e-mail queries.

If you are using EAServer, open a Command Prompt window and navigate to *$SYBASE/UnwiredAccelerator70/scripts*. At the command line, enter:

```
checkmail eas
```

8 To test the configuration, send an e-mail to the dedicated e-mail account, such as "askua." Include the query on the subject line of the e-mail. See the *Unwired Accelerator Developer's Guide* and the *Mobile Application Development Tutorial* for information.

Setting up Answers Anywhere for Simplified Chinese

Answers Anywhere supports full query for English, but does not support full query for multi-byte languages, such as Chinese. A Simplified Chinese query agent is available for PDAs such as PalmOS and PocketPC, but not for BlackBerry devices.

Keep in mind the following guidelines for setting up the Simplified Chinese agent:

- In *uadejima.properties*, set the default.opal value to `/dbdsUnwired_zh/wired.opal`, as described in Table 2-4 on page 27.
- Install the language pack on your Windows computer, so you can see the Chinese characters on your English operating system.
- Set the preferred language to Chinese (simplified) on your Internet Explorer browser. This sets the character set to UTF-8.

Setting up Answers Anywhere for SMS

Answers Anywhere uses CellularModemController (CMC) software to communicate with your SMS provider. CMC acts as an interface between the SMS service and Unwired Accelerator. The CMC software can be located on the same machine as Unwired Accelerator, or can be moved to a different machine.

To configure CMC, modify the *CMCConfig.properties* file, using command line options. To run the configuration file, use the run command, and to list available commands, use the run -help command.

The *CMCConfig.properties* file is located in:

$SYBASE/UnwiredAccelerator70/cmc/classes/com/sybase/cellmodem

If you want to move the CMC software to another machine, copy the *CMCConfig.properties* file to the new location.

Note If you set up multiple resources (RIDs) in Unwired Accelerator, you must configure a different instance of CMC for each resource. See the *Unwired Accelerator Administration Guide* for information about setting up resources.

❖ **Configuring the CMC at the command line**

This section describes how to configure the CMC at the command line.

1 Configure CMC by entering commands and the command line in the following format:

-optionName optionValue

For example:

```
-baudrate 9600
```

See Table 2-5 for a partial list of commands. Use the run -help command to see a complete list of properties. See the *Unwired Accelerator Administration Guide* for more information and additional commands.

Table 2-5: CMCConfig.properties file settings

Option name	Description	Default value
accessLog.File	Name of the file where access log data is kept.	None. If no file is specified, no access log is maintained.
blacklistFile	List of telephone numbers that are excluded from SMS service. When this list is specified and contains values, each message received is checked against the list. If the number is on the list, the message is not processed.	None. The file should have at least one telephone number if used.
databaseDriver	Fully qualified class name of a java.sql.Driver implementation for connecting to a database.	com.sybase.jdbc2.jdbc.SybDriver
databasePwd	Password to use when connecting to the database.	SQL
databaseURL	JDBC URL to the database containing tables used by CMC.	None. If this option is not specified, CMC does not attempt to connect to, or use any database.
databaseUser	User name to use when connecting to the database.	dba
httpAuthenticationURL	When roleBasedAccess is true, and a user is trying to register their cell phone, Unwired Accelerator tests the user name and password against this URL.	http://localhost:4040/dejima/protected/protected.jsp

Option name	Description	Default value
httpURL	This is the HTTP URL that the HTTPClientMessageHandler class sends requests to with the request body message. This is the access point for Answers Anywhere processing. The sms.jsp page looks for an optional RID=<*N*> query parameter, where <*N*> is the rid number. For example, http://machine.sybase.com:4040/dejima/sms.jsp?rid=211. If this is not specified, the default RID configured in *uadejima.properties* is used.	http://localhost:4040/dejima.sms.jsp
instanceName	This is the name by which this instance of the CMC process and its modem are known. When you have more than one CMC, you must give each a distinct name, so the configuration data is kept separate and the respective access logs can be distinguished. When CMC is using a database, this name is used in searches and inserts.	DefaultName
logLevel	This determines the minimum severity level of messages that are placed in the logFile. Valid values are described in java.util.logging.Level.	WARNING
roleBasedAccess	This is a Boolean property. true – CMC attempts to match a sender's phone number to a registered cell number in the user.cell_phone column of the portal database. If a match is found, the login_name for that user is passed as a parameter to the HTTPUrl for the Web application to use in applying access control. false – role based access is not used.	false
serialPort	The name of the serial port to which the modem is connected.	com1
simPin	If the Subscriber Information Module (SIM) card in the modem requires a PIN to unlock it for use, specify that PIN with this property	none
smscPhone	Usually a SIM card stores its own telephone number for the SMS Service Center it contacts to send SMS messages. To override this telephone number, enter it here.	none

Option name	Description	Default value
whitelistFile	List of telephone numbers that are allowed to use this SMS service. When this list is specified and contains values, each message received is checked against the list. If the number is not on the list, the message is not processed.	None. The file should have at least one telephone number per line if used.

2 Use the run.bat file, located in *$SYBASE/UnwiredAccelerator70/cmc/*, to execute the program from a Command Prompt window.

3 Check your configuration to make sure everything is set up correctly using this command from a Command Prompt window:

```
run -logLevel FINEST
```

The FINEST flag ensures you get the most output.

You can also look in the *CMC0.log* file, located in *$SYBASE/UnwiredAccelerator70/cmc/*, to see if the software is communicating with your cell modem properly.

Common configuration problems include:

- Not specifying the correct serial Port (if your modem is not hooked up to COM1.
- Not specifying the correct baudrate that your device supports.

❖ **Configuring the CMC from the Admin GUI**

An unsupported administrative graphical interface is also available for configuring CMC.

1 To access the interface, open a Web Browser and enter this URL:

```
http://hostname.domain:port/dejima/admin/home.jsp
```

where:

- *hostname* – is the name of the machine where you installed Unwired Accelerator; for example, “lab2k.”
- *domain* – is the domain name where the installation is located; for example, “sybase.com.”
- *port* – is the Unwired Accelerator port number (the default for Tomcat is 4040 and the default for EAServer is 8080). Use the port number you configured for UA.

For example:

```
http://lab2k.sybase.com:4040/dejima/admin/home.jsp
```

2 Log in using `masuper/m8super`.

3 Configure the parameters, whitelist, and blacklist for your configuration. See Table 2-5 on page 30 for values.

4 Save your configuration.

See the *Unwired Accelerator Administration Guide* for more information about the Admin GUI.

❖ **Setting up CMC as a Windows service**

This section describes how to set up CMC as a Windows service, so it runs automatically.

1 Navigate to:

$SYBASE/UnwiredAccelerator70/cmc/conf

2 Open the *wrapper.conf* file in a text editor.

3 Search for the wrapper.java.command property, and modify the path to point to your Java installation. For example, if you installed Unwired Accelerator in *$SYBASE/UnwiredAccelerator70*, set the property to:

```
wrapper.java.command=$SYBASE/UnwiredAccelerator/jdk1.4/jre/bin/java
```

4 Save and close the *wrapper.conf* file.

5 Navigate to:

$SYBASE/UnwiredAccelerator/cmc/bin

6 Execute the InstallCMC script. This creates a Windows service named SMSCellModemController that starts automatically when you reboot Windows.

7 Execute the command `net start SMSCellModemController` to start the service, or use the Services console from Windows Explorer.

❖ **Registering the SMS modem with Unwired Accelerator**

Each user must register the SMS modem number with Unwired Accelerator, by sending an SMS text message that includes user name and password to the SMS modem number. To do so:

1 Obtain the SMS modem number.

2 Send an SMS text message with these three lines to the SMS modem number, substituting your Unwired Accelerator user name and password:

```
Register
<user name>
<password>
```

The user name and password values are entered in the portaldatabase table "users," and the SMS modem number is entered in the "cell_phone_number" column.

If role-based access is used (see Table 2-5 on page 30 for information about the roleBasedAccess property), the CMC software checks the request to see whether the phone number for the requesting user is registered. If the number is not registered, the user is prompted to register it.

Setting up a SAP connection

This section describes how to set up a SAP connection, if you plan to develop mobile applications using the SAP framework.

To set up the SAP connection you must:

- Configure the SAP connection using the SAP Java Connector (SAP JCo). SAP JCo is a toolkit that allows a Java application to communicate with any SAP system. The SAP Java Connector can be downloaded from the SAP Service Marketplace Web site by a registered SAP customer.
- Modify the *global.properties.xml* file to enable SAP and identify ConnectionPools.
- Create a property file for each ConnectionPool, and configure connection properties.

Details for each of these steps are provided in the procedures that follow. Once this is done, you can create a SAP element in Mobile Web Studio's Application Builder. See the *Mobile Application Development Tutorial* and the *Unwired Accelerator Developer's Guide* for information about using the SAP element.

❖ **Configuring the SAP Java connector**

1 Open a Web browser window and enter the SAP Marketplace URL, which currently is:

```
https://websmp204.sap-ag.de/swdc
```

The Client Authentication window displays.

2 Select the certificate to use when connecting, and click OK. The Enter Network Password window displays.

3 Enter your registered SAP customer user name and password in the User Name and Password fields, and click OK. The SAP Software Distribution Center window displays.

4 In the You Are Here navigation bar on the left side of the page, navigate to Download | SAP Connectors | SAP Java Connector | Tools and Services. Click the link for SAP JCo Release 2.0.12 to download the SAP Java Connector.

5 Follow the installation instructions provided by SAP. When prompted, copy the *.jar* and *.dll* files to these locations:

- Copy *sapjco.jar* to:

  Tomcat

  $SYBASE/UnwiredAccelerator70/sapjco

  EAServer

  $JAGUAR/EAServer/Repository\WebApplication/onepage /WEB-INF/lib

- Copy *librfccm.so* and *libsapjcorfc.so* to:

  Tomcat

  $SYBASE/UnwiredAccelerator70/sapjco

  EAServer

  $JAGUAR/shared/jdk1.4.2_06/jre/lib/i386

6 Close the Web browser.

7 Change to the following directory:

  Tomcat

  $SYBASE/UnwiredAccelerator70/tomcat/webapps/onepage /WEB-INF/classes

  EAServer

  $JAGUAR/EAServer/Repository/WebApplication/onepage /WEB-INF/classes

8 As a backup, save a copy of the *sapjco.properties* file to a name such as *template.sapjco.properties*.

9 Using a text editor, open the *sapjco.properties* file and edit it for your environment. The SAP wizard uses information in the *sapjco.properties* file to connect to your SAP system.

   Check the documentation that comes with the JCO package for information about the 30-40 properties you can set to define a SAP connection. Specifically see the Javadocs for the JCO.createClient (java.util.Properties) method. The six most commonly used properties are included in the file as a sample (for example, jco.client.client=400).

10 Save the file and close it.

❖ **Modifying the *global.properties.xml* file for SAP**

Modify the SAP-related properties in *global.properties.xml*.

- ConnectionPools – a comma-separated list of connection pool names. Each connection pool must have a *poolname.properties* file defined as described in "Creating ConnectionPool property files" on page 37.
- DefaultConnectionPoolName – identifies the connection pool to use for the default SAP connection.

1 In a text editor, open *global.properties.xml*, located in *$SYBASE/UnwiredAccelerator70/tomcat/webapps/onepage/config* if you are using Tomcat and *$JAGUAR/EAServer/Repository/WebApplication/Onepage/config* if you are using EAServer.

2 Search the file for `SAPGroup`.

3 Look for: `<Property name="DefaultConnection PoolName".`

   By default, DefaultConnectionPoolName is set to "sapjco."

```
<Property name="DefaultConnectionPoolName"
value="sapjco"
     description="connection pool name for the default
     SAP connection" menugroup="100" />
</PropertyGroup>
```

   Determine which ConnectionPool to use as the default SAP connection from the list, and change the value as necessary.

4 Save the file and close it.

❖ **Creating ConnectionPool property files**

For each ConnectionPool listed in the *global.properties.xml* file, there should be a *poolname.properties* file in *$SYBASE/UnwiredAccelerator70/tomcat/onepage/WEB-INF/classes*. Use the *sapjco.properties* file (or *template.sapjco.properties* file) as a base, and modify the ConnectionPool connection properties, using information in the JCO package Javadocs as a guide.

1 In a text editor, open *sapjco.properties* (located in *$SYBASE/UnwiredAccelerator70/tomcat/webapps/onepage/config*).

2 Save the file in the same directory, using the following naming format:

```
poolname.properties
```

Substitute one of the ConnectionPool names you established in the *global.properties.xml* file for *poolname*.

3 Modify the file by setting up the connection properties for the SAP connection. The following properties are included in the file as an example. Check the Javadocs for information about these properties, and many more.

```
jco.client.client=400
jco.client.user=sap
jco.client.passwd=1sap
jco.client.lang=EN
jco.client.ashost=sap.try.sybase.com
jco.client.sysnr=00
```

4 Save the file and close it.

Configuring Tomcat for LDAP

Tomcat comes preconfigured with Common Security Infrastructure (CSI) and PortalDB security provider. To configure Tomcat to use the Lightweight Directory Access Protocol (LDAP) security provider, see Appendix B, “Setting Up Authentication and Authorization.”

Currently, a user created in LDAP server must log in to the Portal Interface to activate their profile (see the release bulletin for information about CR #359766). The instructions are the same as EAServer instructions used to configure the CSI files to use LDAP.

See the *Unwired Accelerator Administration Guide* for information about CSI and its security features.

Uninstalling Unwired Accelerator from Tomcat

This section provides instructions for uninstalling UA from Tomcat. If you are uninstalling Unwired Accelerator from EAServer, use the instructions in "Uninstalling Unwired Accelerator from EAServer" on page 61.

❖ **Removing Unwired Accelerator**

1. Shut down the Tomcat server and the Adaptive Server Anywhere database.

   To shut down Tomcat, open a terminal window, navigate to *$SYBASE/UnwiredAccelerator70*, and enter `stoptomcat.sh`.

   To shut down Adaptive Server Anywhere, open a terminal window, navigate to *$SYBASE/UnwiredAccelerator70*, and enter `stopdb.sh`.

2. Delete the *$SYBASE/UnwiredAccelerator70* directory.

3. Delete the directory used for log files (for example, */tmp/logs*).

CHAPTER 3

Getting Started

This chapter describes how to start using the Portal Interface and Mobile Web Studio.

Getting started with Portal Interface

This section provides a quick tutorial for using Portal Interface. In this tutorial, create a basic application using an existing Web application. For detailed information, see the *Portal Interface User's Guide*.

❖ **Logging in to Portal Interface**

1 From a browser window, and enter:

```
http://hostname.domain:port/onepage/mpindex.jsp
```

where:

- *hostname* –is the name of the machine where you installed Unwired Accelerator.
- *domain* – is the domain name where the installation is located.
- *port* – is the port number (the default is 4040 for Tomcat, 8080 for EAServer).

For example, enter:

```
http://lab2k.sybase.com:4040/onepage/mpindex.jsp
```

2 Click Join Now.

❖ **Entering your profile information**

1 Enter your first name.

2 Enter your last name.

3 Enter your e-mail address.

4 Enter your telephone number.

5 Choose a member name.

6 Choose a password.

7 Confirm your password.

8 Select the PortalUser role.

9 Read the terms and conditions. If you agree, select the "I agree to the terms and conditions" box and click Done.

You see the Portal Interface Welcome window. This initial window is the Default Page Group. To add pages and portlets, you must first add a new page group.

❖ **Creating new page groups**

1 Click Manage Pages.

2 In the Manage Pages window, click Add Page Group.

3 In the Add Page Group window, enter a name for the page group, such as `myTest`.

4 For navigation styles, select the PocketPC/PDA and M-Business Client/PDA devices from the Available list, then click the right arrow to move them to the Assigned list. The navigation style allows you to specify how you navigate pages based on your operating system and browser.

Note To remove a navigation style from the Assigned list, select the style and click the left arrow to move it back to the Available list.

5 Click Done.

You see the first page of the page group you just created. The first page of the new group is automatically assigned the same name as the page group.

The new page group now appears in the page group as a tab and as a selection in the toolbar drop-down list.

❖ **Creating new pages**

1 Select the page group `myTest`, and click Add Page at the top of the window.

2 Select “Add new page,” and enter `myTest2`. Page names must be unique; if the page name already exists within the current page group, you cannot create the new page.

3 Select the Page Layout 30/70, and click Done.

Your new page name appears in the page tabs, at the far right. You can change the order of the page tabs using the Manage Pages option at the top of the window and editing the page group.

❖ **Creating a portlet**

1 With the `myTest` tab selected, click Create Portlet.

2 In the Create Portlet wizard URL field, enter:

```
www.sybase.com
```

3 Click Go.

4 Click Press, which is listed under Communities.

5 In the left pane, click the New Releases link under Press Releases.

6 Click Next in the upper-right corner.

7 After the preview refreshes, click the first press release (the first link) under Press in the middle pane. The cursor flag gives instructions.

8 After the preview refreshes, click the second Add button (you can close any pop-up windows). The Sybase press release list is added to your page.

9 You can click a link to access the press release, and then close the window.

10 Either log out, or minimize the window. If the browser session expires, you must log in again when prompted.

Getting started with Mobile Web Studio

This section provides a quick tutorial for using the Mobile Web Studio. In this tutorial, create an interactive application using an existing Web application. For detailed information, see the *Unwired Accelerator Developer's Guide*, and the *Mobile Application Development Tutorial*.

Note You must use Internet Explorer 6.0 to access Mobile Web Studio.

❖ **Logging in to Mobile Web Studio**

1 From a new browser window, enter:

`http://hostname.domain:port/onepage/loader.html`

where:

- *hostname* – is the name of the machine where you installed Unwired Accelerator.
- *domain* – is the domain name where the installation is located.
- *port* – is the port number (the default is 4040 for Tomcat, 8080 for EAServer).

For example, enter:

```
http://lab2k.sybase.com:4040/onepage/loader.html
```

The log in window displays.

2 In the User Name field, enter:

`masuper`

3 In the Password field, enter:

`m8super`

The Mobile Web Studio window displays. (You can minimize the second window that includes the Close button).

Note If the Mobile Web Studio window does not display, see Table 4-1 on page 48 for information.

❖ **Creating an interactive application (stock quote)**

1 Select Applications in the left pane.

2 Select New from the Application Manager Status menu, and click the New button to open Application Builder.

3 Select the down-arrow next to Add, and select Web Element from the drop-down list, or click Add to open the Web Element wizard.

4 In the Location field, enter `cbs.marketwatch.com`, and click Find or press Enter.

5 If necessary, click the “Direct to cbs.marketwatch.com” link to bypass the ads.

6 In the Enter Symbols field in the left pane, enter `SY`, and click the Quote/News arrow.

7 Click Next in the upper-right corner.

8 After the preview refreshes, click the word “Last” in the quote table. The cursor flag provides instructions.

9 After the preview refreshes, click Select next to the option that displays the entire quote table (typically the fourth one). You can scroll up and down to view other presentation formats.

Click Next in the upper-right corner.

10 In the Configure Parameters window, click the Variable box that is next to the “symb” parameter. The parameter “jumps” to the bottom of the list.

11 In the Display Name field, enter `Symbol`, and in all other fields, accept the defaults.

Click Next in the upper-right corner.

12 After the preview refreshes, enter `Quote` in the Element Name field.

Click Next.

13 In the Continuous Capture window, click Finish to close the Application Builder wizard. (You can close any pop-up windows).

14 In the Application Builder preview pane, test the application by entering `IBM` in the Symbol field, and clicking Update.

❖ **Saving the application**

1 In Application Builder, click Save in the upper-left corner.

2 In the Finish window, make these changes (accept all other defaults):

Content tab Enter `StockQuote` (no space) in the Name field, and click In Context.

Administration tab From the Category and Subcategory drop-down lists, select Business and Investing.

3 Click Finish in the upper-right corner.

4 In the confirmation pop-up, click OK.

5 Click Close in the upper-right corner to close the Application Builder.

❖ **Approving the application**

1 Click Applications in the left pane, and click New in the Application Manager Status menu. The new application loads in the detail pane.

2 Right-click the StockQuote application in the detail pane, and select Approval Status | Approved.

3 In the confirmation pop-up, click OK. The application is now listed under the Approved Status menu.

4 To confirm, click Applications in the left pane, and click Approved in the Application Manager Status menu. The approved Stock Quote application displays in the detail pane.

❖ **Previewing the application**

1 Click Applications in the left pane, and click Approved in the Application Manager Status menu.

2 In the detail pane, click the StockQuote application and click the Preview button.

3 In the preview window, enter `ORCL` in the Symbol field and click OK. Information for Oracle Corporation displays.

4 Close the preview window.

5 Either log out, or minimize the browser window. If the browser session expires, you must log in again when prompted.

Starting and stopping the system

This section describes how to start and stop the Adaptive Server Anywhere database and the Tomcat application server.

Stop the applications in this order:

1 Application server (Tomcat or EAServer)

2 ASA database

Start the applications in this order:

1 ASA database

2 Application server (Tomcat or EAServer)

Starting and stopping the database

This section describes how to start and stop the Adaptive Server Anywhere database.

❖ **Starting the ASA database**

1 From a terminal window, navigate to *$SYBASE/UnwiredAccelerator70*.

2 Enter `startdb.sh`.

This starts the Adaptive Server Anywhere database. You may see several "Ping server failed – Database server not found" messages. You can disregard these messages.

When the database starts, you see "Ping server successful."

❖ **Shutting down the ASA database**

1 From a terminal window, navigate to *$SYBASE/UnwiredAccelerator70*.

2 Enter `stopdb.sh`.

Starting and stopping the Tomcat application server

This section describes how to start and stop the Tomcat application server. If you are running Unwired Accelerator in EAServer, see the EAServer documentation for procedures to start and stop the application server.

❖ **Starting the Tomcat application server**

1 From a terminal window, navigate to *$SYBASE/UnwiredAccelerator70*.

2 Enter `starttomcat.sh`.

When Tomcat starts, you see:

```
Using CATALINA_BASE:   $SYBASE/infoedition/tomcat
Using CATALINA_HOME:   $SYBASE/infoedition/tomcat
Using CATALINA_TMPDIR: $SYBASE/infoedition/tomcat
                       /temp
Using JAVA_HOME:       ./jdk1.4
```

❖ **Shutting down the Tomcat application server**

1 From a terminal window, navigate to *$SYBASE/UnwiredAccelerator70*.

2 Enter `stoptomcat.sh`.

CHAPTER 4

Troubleshooting

This chapter describes how to troubleshoot Unwired Accelerator and M-Business Anywhere installation and configuration problems.

Overview

Use the following resources to help troubleshoot installation and configuration problems:

- Viewing log files, typically found in *x:\tmp\logs*
- Viewing error messages
- Checking port numbers
- Checking configuration files (especially *global.properties.xml*, *server.xml*)
- Testing connections
- Running the Portal Interface and Mobile Web Studio
- Running the M-Business Anywhere server and client
- Running mobile device applications

Unwired Accelerator setup

Table 4-1 identifies common Unwired Accelerator configuration problems and provides useful troubleshooting information.

Table 4-1: Troubleshooting Unwired Accelerator problems

Problem	Try this
Cannot start ASA database: `Connection error: Unable to initialize requested communication links`	If you receive this error when trying to start the ASA database using `startdb.sh`, check the *global.properties.xml* and *server.xml* files to make sure you changed the ASA port number to the correct value. The default is 4747
Cannot start the application server	This can happen if you are using ports 80 (HTTP) and 443 (HTTPS) with Netscape, and you did not install Unwired Accelerator as root. Root is required to start these ports in the production system. • Check the *catalina.out* file, located in *$SYBASE/UnwiredAccelerator70/tomcat/logs*, for errors. Try uninstalling and then reinstalling Unwired Accelerator. Be sure to log in as root as described in "Installation tasks" on page 6 (Tomcat application server), or "Installing Unwired Accelerator (EAServer)" on page 55 (EAServer).
Cannot start the Portal Interface: File Not Found 404 error	If you receive this error when trying to start Portal Interface: • Check to make sure you ran *config.sh* to change *localhost* to your machine name (such as `lab2k`) and to set other values as described in "Installation tasks" on page 6 (or "Installing Unwired Accelerator (EAServer)" on page 55). • Check to make sure you entered the URL correctly to access Portal Interface as described in "Verifying the installation" on page 10. • Check to make sure you are using the correct port number; for example, 4040 when running in Tomcat, and 8080 (required) when running in EAServer. • Check the *catalina.out* file, located in *$SYBASE/UnwiredAccelerator70/tomcat/logs*, for errors.
Cannot start Mobile Web Studio	If you cannot start Mobile Web Studio: • Verify that you are using Internet Explorer and not Netscape. • Verify that you are using the correct version of Internet Explorer as described in Table 2-1 on page 3. • Verify that you are using the correct port number, for example, 4040 when running in Tomcat, and 8080 (required) when running in EAServer.

BlackBerry Enterprise Server setup

Table 4-2 identifies common BlackBerry Enterprise Server (BES) setup problems and provides useful troubleshooting information.

Table 4-2: Troubleshooting Unwired Accelerator problems

Problem	Try this
port *xxxx* already in use	If you receive this error when running the installAvantGoServer script, the port number you specified is already in use by another service. Select a port that is not being used.
sync service does not start	If M-Business Server is installed on the same Linux server as Unwired Accelerator, then Unwired Accelerator must be shut down before installing and starting M-Business Server. Once M-Business Server has been started, restart Unwired Accelerator. Stop Unwired Accelerator using instructions in "Starting and stopping the system" on page 44, then restart the installAvantGoServer script as described in "Installing M-Business Anywhere server and client" on page 14.
M-Business Anywhere and Unwired Accelerator are not communicating	If you installed M-Business Anywhere server on a different Linux server than Unwired Accelerator: • Verify that you modified *gridlayout1.jsp* correctly. • Verify that you modified *server.xml* correctly. See "Configuring M-Business Anywhere" on page 18 for correct settings.
Cannot use the Manage M-Business option from Mobile Web Studio	This most likely stems from a configuration problem. Check the following: • Check the *server.xml* file to make sure the jdbc/agdb JNDI Datasource is configured properly for the container. • Make sure M-Business Anywhere is running using the commands described in Table 2-3 on page 16. If not, restart it.

Mobile device setup

Table 4-3 identifies common mobile device configuration problems and provides useful troubleshooting information.

Table 4-3: Troubleshooting Unwired Accelerator problems

Problem	Try this
Cannot create a personal channel	Check the *global.properties.xml* file to make sure the alwaysValidateSession parameter is set to "false." See "Configuring global.properties.xml for M-Business Anywhere" on page 18.
Cannot access mobile application: `Your submission has been recorded and will be sent during the next Synchronization`	If you see this message when trying to access an application on a mobile device, check the alwaysValidateSession parameter in the *global.properties.xml* file. The parameter is probably set to "true," but should be set to "false" to enable personal channels to work. See "Configuring global.properties.xml for M-Business Anywhere" on page 18.
Cannot use mobile application: `avantgo.db is not installed, please install the db pod`	This message indicates the M-Business Anywhere client requires one or more database PODs to authenticate mobile applications.
Mobile application does not appear on the mobile device	Verify that: • The mobile application is deployed to the group. In Mobile Web Studio, select Manage | M-Business | Groups, and check the groups. • The M-Business Anywhere user name/password and server properties are set correctly in M-Business Client. M-Business Clients use M-Business users, not Mobile Web Studio users. See "Connecting M-Business Anywhere and M-Business Client software" on page 17. • The user belongs to the group that contains the mobile application. • For BlackBerry devices, make sure the Offline BlackBerry option is selected for the application, and that the application is in a grid/table format.
The UA logo does not appear on the BlackBerry device	Check to make sure that you installed the offline client on the BlackBerry device (or BlackBerry simulator), as described in "Installing offline client on BlackBerry device" on page 22 (or "Installing offline client on the BlackBerry simulator" on page 23).

Answers Anywhere/SMS setup

Table 4-4 identifies common Answers Anywhere, and Answers Anywhere with SMS setup problems and provides troubleshooting information.

Table 4-4: Troubleshooting Unwired Accelerator problems

Problem	Try this
port *xxxx* already in use	If you receive this error when running the installAvantGoServer script, the port number you specified is already in use by another service. Select a port that is not being used.
sync service does not start	If M-Business Server is installed on the same Linux server as Unwired Accelerator, then Unwired Accelerator must be shut down before installing and starting M-Business Server. Once M-Business Server has been started, restart Unwired Accelerator. Stop Unwired Accelerator using instructions in "Starting and stopping the system" on page 44, then restart the installAvantGoServer script as described in "Installing M-Business Anywhere server and client" on page 14.
M-Business Anywhere and Unwired Accelerator are not communicating	If you installed M-Business Anywhere server on a different Linux server than Unwired Accelerator: • Verify that you modified *gridlayout1.jsp* correctly. • Verify that you modified *server.xml* correctly. See "Configuring M-Business Anywhere" on page 18 for correct settings.
Cannot use the Manage M-Business option from Mobile Web Studio	This most likely stems from a configuration problem. Check the following: • Check the *server.xml* file to make sure the jdbc/agdb JNDI Datasource is configured properly for the container. • Make sure M-Business Anywhere is running using the commands described in Table 2-3 on page 16. If not, restart it.

Problem	Try this
Receive exception in thread “main” java.lang.RuntimeException: `Error opening “/dev/ttySO” Permission denied at com.sun.comm.LinuxDriver.getCommPort(LinuxDriver.java:66) at javax.comm.CommPortIdentifier.open(CommPortIdentifier.java:368) at TestEnumeration.getAvailableSerialPorts(TestEnumeration.java:63) at TestEnumeration.main(TestEnumeration.java:19`	At the command line, enter: `chmod a+rw /dev/ttySO`

Receive error:
`javax.comm: Error loading javax.comm.properties! null`
	Verify the modem is connected to the correct serial port and that it is specified in the javax.comm.properties and is being passed as command line to the script.
	If you still have a problem, install software minicom by entering:
	`rpm -vv -i ftp://fr2.rpmfind.net/linux/fedora/core/3/i386/os/Fedora/RPMS/minicom-2.00.0-19.i386.rpm`
	`minicom -s`
	This sets up the defaults.
	Change the device from /dev/modem to /dev/ttyS0, or /dev/ttyS1, depending on which port the modem is connected to, and save the default. When the device attempts to connect to the modem, you should see `AT` commands being sent and `OK` being returned.
	Run the script with arguments the -serialPort /dev/ttyS0 or any /dev/ttyS1 based on which port the modem is connected to.

SAP setup

Table 4-5 identifies common SAP connection problems and provides useful troubleshooting information.

Table 4-5: Troubleshooting Unwired Accelerator problems

Problem	Try this
port *xxxx* already in use	If you receive this error when running the installAvantGoServer script, the port number you specified is already in use by another service. Select a port that is not being used.
sync service does not start	If M-Business Server is installed on the same Linux server as Unwired Accelerator, then Unwired Accelerator must be shut down before installing and starting M-Business Server. Once M-Business Server has been started, restart Unwired Accelerator. Stop Unwired Accelerator using instructions in "Starting and stopping the system" on page 44, then restart the installAvantGoServer script as described in "Installing M-Business Anywhere server and client" on page 14.
M-Business Anywhere and Unwired Accelerator are not communicating	If you installed M-Business Anywhere server on a different Linux server than Unwired Accelerator: • Verify that you modified *gridlayout1.jsp* correctly. • Verify that you modified *server.xml* correctly. See "Configuring M-Business Anywhere" on page 18 for correct settings.
Cannot use the Manage M-Business option from Mobile Web Studio	This most likely stems from a configuration problem. Check the following: • Check the *server.xml* file to make sure the jdbc/agdb JNDI Datasource is configured properly for the container. • Make sure M-Business Anywhere is running using the commands described in Table 2-3 on page 16. If not, restart it.

APPENDIX A

Installing Unwired Accelerator in EAServer 5.2

This appendix provides information for installing and configuring Unwired Accelerator in an EAServer 5.2 environment.

Overview

This appendix describes how to install Unwired Accelerator 7.0 in an EAServer environment instead of a Tomcat environment, and how to uninstall Unwired Accelerator 7.0 from EAServer.

In this section, $JAGUAR is defined as *$SYBASE/EAServer*, and $JAVA_HOME points to a valid JVM directory.

Installing Unwired Accelerator (EAServer)

If you plan to install Unwired Accelerator in EAServer, instead of Tomcat, you must use EAServer 5.2, and you must install EAServer 5.2 before you install Unwired Accelerator. If you already have EAServer 5.0 installed, upgrade to EAServer 5.2, and then install Unwired Accelerator.

Note If you have EAServer 4.2.2, you must upgrade to EAServer 5.0 or 5.1 before upgrading to EAServer 5.2.

To install EAServer, use the EAServer automated Install Shield package and follow EAServer installation documentation. If you have problems or questions, see the EAServer installation documentation.

Before you install Unwired Accelerator:

- Install EAServer 5.2 EBF #12978. See the Release Bulletin for information about required EAServer patches or EBFs.
- Verify that JDK 1.4 is installed
- Verify you are running EAServer in normal mode (not debug mode).

❖ **Installing Unwired Accelerator in EAServer**

Typically you can use any account to install Unwired Accelerator in EAServer. However, if you plan to use port 80 (HTTP) and port 443 (HTTPS), you must log in as root to install Unwired Accelerator.

1 If you plan to use ports 80 (HTTP) and 443 (HTTPS), log in as root. Otherwise, skip this step.

2 Make sure EAServer is running in normal mode before you proceed. Note the following requirements:

   - Server name – must be `Jaguar`
   - Default HTTP port – `8080`
   - Default HTTPS port – `8081`

3 Make sure that EAserver has been started with JDK version 1.4 (*$JAGUAR*`/bin/serverstart -jdk14`), by checking the *Jaguar.log* for the following:

```
Jul 20 13:27:58 2004: 180389-Java virtual machine
initialized: javaversion 1.4.2_06

Jul 20 13:27:58 2004: 180389-Java virtual machine
initialized: Java HotSpot(TM
Client VM (version 1.4.2_06-b03, mixed mode)
```

4 Make sure no other Adaptive Server Anywhere instance is using port 4747.

5 From a terminal window, make sure the $SYBASE, $JAGUAR, and $JAVA_HOME environment variables are set. If not, set them; for example:

```
setenv SYBASE /opt/sybase
setenv JAGUAR $SYBASE/EAServer
```

```
setenv JAVA_HOME $SYBASE/shared/jdk1.4.0
```

Note The $SYBASE environment variable is set to the parent directory of $JAGUAR if $SYBASE is not set. You can also set $JAVA_HOME to a JDK 1.4 installation, otherwise it is set to the JDK 1.4 version that is used by EAServer.

6 Optionally, set the $JAGTOOL and $JAGTOOLARGS environment variables, which are supported by the *setupsetup.sh* file. For example, if you are using a non-default IIOP port in EAServer, you can set the environment to:

```
setenv JAGTOOL $JAGUAR/bin/jagtool
setenv JAGTOOLARGS "-n 9100"
```

7 If you plan to use ports 80 (HTTP) and 443 (HTTPS), log in as root. Otherwise, skip this step.

8 Insert the Installation CD. If AutoStart is enabled, the InstallShield wizard starts and the Welcome window displays. If AutoStart is disabled, launch the Installer from the CD by double-clicking *ua70setup.bin*. The Welcome window displays.

9 Click Next. The Installer window displays.

10 Select the license agreement appropriate for the country or region where the software is being installed, from the drop-down list. The license displays.

11 Select the license agreement appropriate for the country or region where you are installing the software, from the drop-down list. The license displays.

Reade the license agreement and select “I agree to the terms of the Sybase license for the installation location selected.” Click Next.

12 In the next window, accept the default installation directory, or enter the directory in which to install Unwired Accelerator. For example, enter */opt/sybase*. The installation directory is referred to as *$SYBASE* in this guide.

13 Click Next.

The Installer checks for available disk space. If there is not enough disk space, the Installer reports the problem and closes. You must free up disk space and start again.

14 On the IP Parameters and Ports window, supply values for these fields:

- Domain name – enter the domain (and subdomain if used). Note that UA configuration files use *sybase.com* as the default domain.
- Host name – enter the name of the machine on which Unwired Accelerator is installed; for example, `lab2k`. Note that UA configuration files use *demo* as the default host.
- UA database port – by default, the Installer inserts `4747` for the ASA database (see Table 2-2 on page 4). Accept the default or provide a new value.
- M-Business AGDB Host – enter the machine name, for example `lab2K`.
- M-Business AGDB port – by default the Installer inserts `8099` for the AGDB database port (see Table 2-2 on page 4). Accept the default or provide a new value.
- Application server – select Existing Sybase EAServer.

15 Click Next. The EAServer connection window displays.

16 On the EAServer connection window, supply values for these fields:

- EAS Directory – defaults to null. Enter a valid directory.
- EAS Hostname – enter the name of the machine on which EAServer is installed.
- EAS IIOP port – defaults to 9000.
- EAS User name – defaults to jagadmin.
- EAS password – defaults to blank.
- UA HTTP Port – the default is 8080.
- UA HTTPS Port – the default is 8081.

17 Click Next. The Installer tries to open a connection to EAServer using the given parameters. You can proceed to the next window only when the connection succeeds. Messages indicate any problems with the parameters supplied. The Installation Summary window reports success or failure of the installation.

18 Click Next. The Installation Progress window shows the installation progress. During installation, these files are updated with the configuration information you supplied:

- *global.properties.xml* – changes the default host name and domain name to the machine name and domain name detected in the Windows registry, or that you provided. The *global properties.xml* file is located in *$SYBASE/UnwiredAccelerator70/tomcat/webapps/onepage/config* and contains many system settings.

  The *Unwired Accelerator Administration Guide* provides additional information about the *global.properties.xml* file.

- *domain.js* – changes the default domain name to the name you provided. The *domain.js* file is located in *$JAGUAR/Repository/WebApplication/onepage/javascript*.

- *server.xml* – changes the default port number to the number you provided. The *server.xml* file is located in *$SYBASE/UnwiredAccelerator70/tomcat/conf/*

The Installation Summary window displays and reports success or failure of the installation.

19 Click Finish.

20 Verify that EAserver restarted with JDK version 1.4 by checking the *Jaguar.log* for the following:

```
Jul 20 13:27:58 2004: 180389-Java virtual machine
initialized: javaversion 1.4.
2_03

Jul 20 13:27:58 2004: 180389-Java virtual machine
initialized: Java HotSpot(TM)
Client VM (version 1.4.2_03-b02, mixed mode)
```

If not, stop EAServer, then restart it by using `JAGUAR\bin\serverstart -jdk14$JAGUAR/bin/serverstart.sh -jdk14`.

21 Verify that Adaptive Server Anywhere started correctly.

Note You can select Start | Programs | Sybase | UnwiredAccelerator | Start UnwiredAccelerator and Start | Programs | Sybase | UnwiredAccelerator | Stop UnwiredAccelerator to start and stop ASA and Internet Explorer.

Alternatively, you can use the start and stop scripts, which are located in *$SYBASE/UnwiredAccelerator70*, for Sybase ASA:

- `startdb.sh` – starts the ASA portaldatabase on port 4747
- `stopddb.sh` – stops the ASA portaldatabase

22 The Unwired Accelerator installation is complete. Verify the Unwired Accelerator installation by accessing Mobile Web Studio from a Web browser window:

`http://`*HOSTNAME.PORTALDOMAIN*`:`*port*`/onepage/loader.html`

For example:

```
http://lab2k.sybase.com:8080/onepage/index.html
```

Note Be sure to use port 8080 when running Unwired Accelerator from EAServer.

See "Verifying the installation" on page 10 to make sure the network installation works correctly. See "Getting started with Portal Interface" on page 39 and "Getting started with Mobile Web Studio" on page 41 for information.

If you are setting up a SAP connection, see "Setting up a SAP connection" on page 34.

Integrating M-Business Anywhere

M-Business Anywhere integration in EAServer may vary from the Tomcat integration described in "Installing M-Business Anywhere server and client software" on page 13. If M-Business Anywhere is in a separate system, you must use EAServer Manager to change the ConnectionCache for the AGDB. (See the EAServer Manager documentation). Also, the directory specifications for EAServer are different from the standard Tomcat installation.

Note For the Tomcat version of a path name, such as *$SYBASE/UnwiredAccelerator70/tomcat/webapps/onepage*, substitute the EAServer version of the path name, which is *$JAGUAR/Repository/WebApplication/onepage*.

Integrating BlackBerry

If you install BlackBerry with EAServer, you must change the BlackBerry Web Server listener port from the default 8080 used by EAServer to a different port. See the user documentation for BlackBerry for instructions on how to change the BlackBerry Web Server listener port.

Configuring LDAP for EAServer

Tomcat comes preconfigured with a CSI and PortalDB provider. To configure Tomcat to use LDAP, see Appendix B, "Setting Up Authentication and Authorization." The instructions are the same as EAServer instructions used to configure the CSI files to use LDAP.

Uninstalling Unwired Accelerator from EAServer

This section describes the procedure for uninstalling Unwired Accelerator from EAServer.

Note EAServer must be running when you perform the uninstallation.

❖ **Removing Unwired Accelerator**

Verify that EAServer is running before beginning the installation..

1 To shut down Adaptive Server Anywhere, open a terminal window, navigate to *$SYBASE/UnwiredAccelerator70*, and enter `stopdb.sh`.

2 Execute the *uninstall.sh* file, located in *$SYBASE/UnwiredAccelerator70/scripts*.

```
uninstall.sh
```

Note If you receive a `line 32:fg: no job control` message, you can ignore it.

This removes the Web applications and EAServer package.

3 Delete the *$SYBASE/UnwiredAccelerator70* directory.

4 Delete the directory used for log files (for example, */tmp/logs*).

5 After uninstalling Unwired Accelerator, you must reconnect to EAServer Manager and remove UA roles. Connect to EAServer Manager and select Roles, then select and delete each of these roles:

   - PortalAdmin
   - PortalGues
   - PortalUser
   - StudioAdmin
   - manager
   - superuser

6 Right-click Jaguar and select Properties.

7 In the Server Properties window, select Advanced, and delete csi-easerver/CSIAuthService from com. sybase.jaguar.server.authservice.

8 Restart EAServer.

APPENDIX B

Setting Up Authentication and Authorization

This chapter describes how to set up authentication and authorization for Unwired Accelerator 7.0, using either Tomcat or EAServer, and either the portal database or a Lightweight Directory Access Protocol (LDAP) server security provider.

Preconfigured for PortalDB This version of Unwired Accelerator is preconfigured to support authentication and authorization using the PortalDB security provider. If you plan to use Tomcat and PortalDB, you need not perform any of the configuration steps described in this chapter.

Overview

In this version of Unwired Accelerator, a Common Security Infrastructure (CSI) realm works together with a security provider, either PortalDB or LDAP, to support authentication and authorization. The CSI realm is a component that plugs in to a Tomcat 4.1.29 Web application container or an EAServer 5.7 application server. To support authentication and authorization, the PortalDB provider uses the Unwired Accelerator database portaldatabase; the LDAP provider uses an LDAP server.

A CSI realm is an abstract interface to security information such as user names, passwords, and role membership. When a user logs in to Unwired Accelerator, the user's name and password are verified against the data server, and if valid, role information is retrieved to provide Tomcat or EAServer with a list of the user's roles.

To use a combination of components other than Tomcat and the PortalDB security provider:

If your system components are	Perform these steps
Tomcat and the LDAP provider	• Configuring the LDAP provider
EAServer and the PortalDB provider	• Configuring the EAServer realm
EAServer and the LDAP provider	1 Configuring the EAServer realm 2 Configuring the LDAP provider

You can also use both security providers at the same time. If your system is configured to use both the LDAP provider and the PortalDB provider, a user's name and password are first passed to the LDAP provider for authentication, then they are passed to the PortalDB provider. If authentication succeeds with either provider, the user is authenticated. If the user cannot be authenticated with either the LDAP or PortalDB provider, the user is not authenticated. Similarly, when performing authorization role checks, both providers are queried to see whether either of them grants the specified role to the user.

Note For development, you may want to use the preconfigured PortalDB provider, as it can simplify debugging.

Configuring the CSI realm

Unwired Accelerator supports authentication and authorization for the Tomcat Web application container and the EAServer application server. UA 7.0 is preconfigured to use Tomcat. To use EAServer, see "Configuring the EAServer realm" on page 65.

Configuring the Tomcat realm

The Tomcat CSI realm plugs in to a Tomcat 4.1.29 Web application container. Its purpose is to delegate authentication and authorization checks to the security provider.

To enable debugging in the Tomcat CSI realm, create a file called *log4j.properties* in *$CATALINA_HOME/server/classes*, where $CATALINA_HOME represents the Tomcat root installation directory, and insert the following text:

```
# sample log4j.properties
# SecurityAppender for security packages only
log4j.appender.SecurityAppender=org.apache.log4j.DailyRollingFileAppender
log4j.appender.SecurityAppender.DatePattern='.'yyyy-MM-dd
log4j.appender.SecurityAppender.File=/opt/sybase/UA70/tomcat/logs/
   security_debug.log
log4j.appender.SecurityAppender.layout=org.apache.log4j.PatternLayout
log4j.appender.SecurityAppender.layout.ConversionPattern=%d{ISO8601}
   %-5p %-25c{1} %x - %m%n
log4j.category.com.sybase.security=DEBUG, SecurityAppender

# make sure security messages stay in the security log
log4j.additivity.com.sybase.security=false

# other packages go to the root appender
log4j.appender.RootAppender=org.apache.log4j.ConsoleAppender
log4j.appender.RootAppender.layout=org.apache.log4j.PatternLayout
log4j.appender.RootAppender.layout.ConversionPattern=%d{ISO8601}
   %-5p %-25c{1} %x - %m%n
log4j.rootCategory=INFO, RootAppender
```

The debugging output is written to the file whose name and location are specified by the log4j.appender.SecurityAppender.File property; in the example above, */opt/sybase/UA70/tomcat/logs/security_debug.log*.

Initially, the Tomcat CSI realm is configured to use the PortalDB provider. To use the LDAP provider, see “Configuring the LDAP provider” on page 67.

Configuring the EAServer realm

The EAServer CSI realm plugs in to an EAServer application server. Its purpose is to delegate authentication and authorization checks to the security provider.

❖ **Setting up the EAServer realm**

1 To debug the CSI realm, create a file called *log4j.properties* in *$JAGUAR\java\classes*, where JAGUAR is the EAServer installation directory, and insert the following text, which causes debug and log messages to be written to *$JAGUAR\bin\Jaguar.log*:

```
log4j.appender.RootAppender=org.apache.log4j.ConsoleAppender
log4j.appender.RootAppender.layout=org.apache.log4j.PatternLayout
log4j.appender.RootAppender.layout.ConversionPattern=%d{ISO8601}
   %-5p %-25c{1} %x - %m%n
log4j.rootCategory=WARN, RootAppender
log4j.category.com.sybase.security=DEBUG
```

2 To use the PortalDB security provider only, skip to step 4.

If you are using the LDAP security provider, the EAServer CSI realm does not validate the LDAP provider's XML configuration file against the schema. To validate the XML configuration file:

a Verify that the JVM supports Java API for XML Processing (JAXP) 1.2 or higher.

b Configure the XML validation property:

1 In EAServer Manager, expand the Servers folder, highlight Jaguar, and select File | Properties. The Server Properties dialog box displays.

2 On the Advanced tab, click Add, then enter `com.sybase.security.core.XmlConfiguration.XmlValidation` as the property name, and "true" as the property value.

Click OK.

3 Configure the security provider—see "Configuring the security provider" on page 66.

4 Restart EAServer. In EAServer Manager, highlight Jaguar, and select File | Shutdown and Start.

Configuring the security provider

Unwired Accelerator includes two security providers, the PortalDB provider and the LDAP provider. Initially, Unwired Accelerator is configured to use the PortalDB provider. You can use the LDAP provider instead of the PortalDB provider, or you can use both providers concurrently. To configure a security provider, see:

- "Configuring the LDAP provider" below, or
- "Restore the PortalDB provider configuration" on page 74.

Configuring the LDAP provider

Unwired Accelerator LDAP support includes authentication, attribution, and authorization services. The LDAP provider authenticates users when they log in using credentials that can be validated on the LDAP server.

1 To use both the LDAP provider and the PortalDB provider, go to step 2.

   To use only the LDAP provider:

   a Change to the location of the *global.properties.xml* file:

      - Tomcat – *$SYBASE/UnwiredAccelerator70/tomcat/webapps/onepage/config*, where SYBASE is the installation directory of your Sybase software.
      - EAServer – *$JAGUAR/Repository/WebApplication/onepage/config*, where *$JAGUAR* is the EAServer installation directory.

   b Using a text editor, open *global.propeties.xml*, and change the value of the AuthenticationUsing property to "CSI".

2 Change to the location of the *csi.xml* file:

   - Tomcat – *$CATALINA_HOME/conf*, where *$CATALINA_HOME* represents the Tomcat root installation directory.
   - EAServer – *$JAGUAR/Repository/Component/csi-easerver*

3 Using a text editor, open *csi.xml*, and edit the values appropriate for your system.

   The sample *csi.xml* file that is installed with Unwired Accelerator contains the following LDAP provider definitions, which are commented out. Remove the comment delimiters:

```
<!--

<config:authenticationProvider
   name="com.sybase.security.ldap.LDAPLoginModule"
   controlFlag="optional">

   <config:options name="ServerType" value="sunone5" />
   <config:options name="ProviderURL" value="ldap://localhost:389" />
   <config:options name="DefaultSearchBase" value="dc=sybase,dc=com" />
</config:authenticationProvider>

-->
```

```
<!-- LDAP attributer - commented out
   <config:provider name="com.sybase.security.ldap.LDAPAttributer"
     type="attributer" />
-->
```

4 Comment out the following PortalDBAttributer definition. To comment out the definition, insert "<!--" at the beginning of the definition, and "-->" at the end of the definition.

```
<config:provider name="com.sybase.security.portaldb.PortalDBAttributer"
   type="attributer" />
```

Table B-1 defines the complete list of options that you can use to configure the authentication provider. You can enable any of the options by adding the option name and value to *csi.xml*, using the same syntax as illustrated in step 3. You must add new option definitions within the authenticationProvider definition; that is, between the following two lines:

```
<config:authenticationProvider
   name="com.sybase.security.ldap.LDAPLoginModule">
...
</config:authenticationProvider>
```

Table B-1: LDAP configuration options

Configuration option	Default value	Definition
AuthenticationFilter	Most LDAP servers: (&(uid={uid}) (objectclass=personal) Microsoft ActiveDirectory: (&(userPrincipalName={uid}) (objectclass=user))	The filter to use when authenticating users. When performing a user name/password-based authentication, this filter is used to determine the LDAP entry that matches the supplied user name. The string "{uid}" in the filter is replaced with the user name.
AuthenticationMethod	simple	The authentication method to use for all LDAP authentication requests. The supported methods are: • "simple" – clear text authentication. • "DIGEST-MD5" – more secure, hashed password authentication. Passwords must be stored in plain text on your LDAP server, and you must use JRE 1.4 or higher.
AuthenticationScope	onelevel	Can be set to either "onelevel" or "subtree." If set to "onelevel," only the AuthenticationSearchBase is searched used to search for user records; if set to "subtree," the AuthenticationSearchBase and its subtree are searched.

Configuration option	Default value	Definition
AuthenticationSearchBase		The location of user records. If not specified, the DefaultSearchBase is used.
BindDN		The DN to bind to when creating the initial LDAP connection. This DN must identify a user who has read capability on all records that are accessed when users authenticate using the login module. This property also defines the credentials that are used to perform anonymous attribution operations when LDAP authentication has not occurred. If this property is not specified, anonymous binding is used, which works on most servers.
BindPassword		The password to bind to when creating the initial LDAP connection. You must specify this only when the BindDN property is specified.

DefaultSearchBase		The search base that is used if no other LDAP search base is specified for authentication, roles, or attribution. Use either of the following two syntax options, and verify that the syntax you choose matches what is configured on the LDAP server:
		dc=<*domain_name*>,dc=<*top_level_domain*>
		o=<*company_name*>,c=<*country_code*>
		For a machine in the Sybase organization, the previous two syntax options map to:
		`dc=sybase,dc=com`
		`o=Sybase,c=us`

InitialContextFactory	com.sun.jndi.ldap.LdapCtxFactory	Specifies the JNDI provider to use. If you are using a Sun Java VM version 1.3 or higher, the default value should work. If you are using an IBM or other third-party VM, adjust this value accordingly.
ProviderURL	ldap://localhost:389	The URL to connect to the LDAP server. The default value should work if the LDAP server is located on the same machine as the portal and listens on port 389.

Configuration option	Default value	Definition
RoleFilter	SunONE: (&(objectclass=ldapsubentry) (objectclass=nsroledefinition)) Netscape Directory Server: (|(objectclass=groupofnames) (objectclass=groupofuniquenames)) Microsoft ActiveDirectory: (|(objectclass=groupofnames) (objectclass=group))	The role filter, which when used with the RoleSearchBase and RoleScope, returns the complete list of roles from the LDAP server.
RoleMemberAttributes	Netscape Directory Server: member,uniquemember	A comma-delimited list of one or more role attributes that define the DNs for users who have the role. The DNs are used to determine which roles the user has. This property may be helpful if you use LDAP groups as placeholders for roles. **Note** The default value applies only to Netscape Directory Server; no default exists for other servers.
RoleNameAttribute	cn	The attribute that identifies the common names of roles. If a role name value is "dn," the role name is assumed to be the full DN of the role.
RoleScope	onelevel	Can be set to either "onelevel" or "subtree." If set to "onelevel," only the RoleSearchBase is used to search for roles; if set to "subtree," the RoleSearchBase and its subtree are searched.
RoleSearchBase		The search base used to retrieve a list of roles. If not specified, the DefaultSearchBase is used.

Configuration option	Default value	Definition
ServerType		The type of LDAP server you are connecting to; supported server types are: • "msad2k" – Microsoft ActiveDirectory. Windows 2000—see "Caveats when using Microsoft ActiveDirectory LDAP servers" on page 73. • "nsds4" – Netscape Directory Server 4. • "sunone5" – SunONE Directory Server 5. This value is not required, but if provided, establishes default values for the following configuration properties: • AuthenticationFilter • RoleFilter • RoleMembershipAttributes • UserRoleMembershipAttributes
UserFreeformRole MembershipAttributes		The "free-form" role membership attribute list. Users who have attributes in this comma-delimited list are automatically granted access to roles whose names match the attribute value. For example, if the value of this property is "department" and the user's LDAP record has the values "sales" and "consulting" for the department attribute, then the user is granted roles whose names are "sales" and "consulting." If you are using a SunONE Directory Server 5: 1 From the LDAP Administration console's Generic Editor, add a multivalue attribute called "department" for the user. 2 Highlight "department," click Add Value, and enter "sales." 3 Click Add Value again, and enter "consulting."
UserRoleMembership Attributes	SunONE: nsRoleDN Microsoft ActiveDirectory: memberOf	Defines a user attribute to store the list of role DNs for all the roles a user has been granted. These role DNs are cross-referenced against the roles retrieved using the RoleSearchBase and RoleFilter to get a complete list of a user's roles. **Note** For servers other than SunONE and Microsoft ActiveDirectory, there is no default value.

Role computation

Role computation techniques are used to list roles for both authenticated and unauthenticated users. The LDAP provider performs access control using roles, and supports three types of role constructs; each may be used independently, or all three may be used at the same time:

- User-level role attributes – this is the most efficient role definition format, and is supported by SunONE and ActiveDirectory. Using this technique, a user's roles are enumerated by a read-only attribute in the user's LDAP record, which is managed by a directory server. The advantages of this technique are the efficiency with which role memberships can be queried, and the ease with which they can be managed using the native LDAP server's management tools. To use this option, configure the following LDAP properties, which are described in Table B-1 on page 68:
  - RoleFilter
  - RoleNameAttribute
  - RoleSearchBase
  - RoleScope
  - UserRoleMembershipAttributes
- LDAP group role definitions – supported by almost all LDAP servers and a common construct in older LDAP servers. This technique may be useful if you want to use the same LDAP schema across multiple LDAP server types. Unlike the user-level role attributes, LDAP group memberships are stored and checked on a group-by-group basis. Each defined group has an attribute that lists all the members in the group. Groups are typically in one of two object classes, either groupofnames or groupofuniquenames.

  To use this option, configure the following properties in the *csi.xml* file:
  - RoleFilter
  - RoleMemberAttributes
  - RoleNameAttribute
  - RoleScope
  - RoleSearchBase

See Table B-1 on page 68 for more information. The value of RoleMemberAttributes is a comma-delimited list of attributes, each of which defines members of the group. An example value for this property is "uniquemember,member," which represents the membership attributes in the groupofnames and groupofuniquenames object classes.

- Free-form role definitions – unique in that the role itself does not have an entry in the LDAP data store. To create a free-form role definition, begin by defining one or more user-level attributes. When roles are calculated for a user, the collective values of the attributes—which can have multiple values—are added as roles of which the user is a member. This technique requires less administrative overhead than either of the two previously described techniques.

  As an example, assign a free-form role definition that is equivalent to the department number of a user. A role check performed on a specific department number is satisfied only by users who have the appropriate department number attribute value. To use free-form role definitions, configure the UserFreeformRoleMembershipAttributes property—see Table B-1 on page 68.

Caveats when using Microsoft ActiveDirectory LDAP servers

If you are using the Microsoft ActiveDirectory Windows 2000 server, the following restrictions apply:

- The DIGEST-MD5 authentication mode is not supported.
- The value of DefaultSearchBase must match exactly the value set for the directory server, including case.
- If you set the value of DefaultSearchBase to "DC=epstg,DC=com," you must set the values of both AuthenticationSearchBase and RoleSearchBase to "CN=Users,DC=epstg,DC=com."
- Anonymous binding is not permitted. You must specify a BindDN/BindPassword that identifies a user who can view all other users and groups; for example, specify "mtester@epstg.com" as the BindDN and "secure123" as the BindPassword.
- From the ActiveDirectory Users and Computers console, you must create users and groups, then add users to the groups so they are authorized to perform tasks in Unwired Accelerator. Create the following groups, then add users to these groups:
  - everybody

- PortalAdmin
- PortalGuest
- PortalUser
- StudioAdmin
- superuser

Restore the PortalDB provider configuration

Initially, Unwired Accelerator is configured to use the PortalDB security provider. If your system was changed to use the LDAP security provider, you can restore the PortalDB configuration using the following procedure.

1 Change to the location of the *global.properties.xml* file:

   - Tomcat – *$SYBASE/UnwiredAccelerator70/tomcat/webapps/onepage/config*, where SYBASE is the root installation directory of your Sybase software.
   - EAServer – *$JAGUAR/Repository/WebApplication/onepage /config*, where JAGUAR is the EAServer root installation directory.

2 Using a text editor, open *global.propeties.xml*, and set the value of the AuthenticationUsing property to "Database".

3 Change to the location of the *csi.xml* file:

   - Tomcat – *$CATALINA_HOME/conf*, where *$CATALINA_HOME* represents the Tomcat root installation directory.
   - EAServer – *$JAGUAR/Repository/Component/csi-easerver*

4 Open *csi.xml*, and verify that the PortalDB provider definitions are not commented out. The sample *csi.xml* file that is installed with Unwired Accelerator contains the following PortalDB provider definitions:

```
<config:authenticationProvider
   name="com.sybase.security.portaldb.PortalDBLoginModule"
   controlFlag="optional">

   <config:options name="DatasourceName"
      value="java:comp/env/jdbc/portaldb" />

</config:authenticationProvider>
```

```
<config:provider name="com.sybase.security.portaldb.PortalDBAttributer"
   type="attributer" />
```

The value of DatasourceName defines the name that is passed to the javax.naming.InitialContext().lookup(*datasourceName*) method to retrieve a connection to the portaldatabase. The default value is "java:comp/env/jdbc/portaldb," and Unwired Accelerator creates this JNDI name automatically during deployment. If the DatasourceName configuration option is missing, the default value is used.

5 To use the PortalDB provider only, comment out the LDAP provider definition in *csi.xml*. To comment out the definition, insert "<!--" at the beginning of the definition, and "-->" at the end of the definition. In the following example, the LDAP provider definition is commented out:

```
<!--
<authenticationProvider
name="com.sybase.security.ldap.LDAPLoginModule">
   <options name="ServerType" value="sunone5"/>
   <options name="DefaultSearchBase" value=""/>
   <options name="ProviderURL" value="ldap://localhost:389"/>
   <options name="AuthenticationMethod" value="simple"/>
   <options name="AuthenticationScope" value="subtree"/>
   <options name="AuthenticationSearchBase" value=""/>
   <options name="RoleScope" value="subtree"/>
   <options name="RoleSearchBase" value=""/>
</authenticationProvider>
-->
```

To use both the PortalDB provider and the LDAP provider, verify that neither of the provider definitions is commented out.

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