SYBASE®

Administration Guide

# Unwired Accelerator

8.0

DOCUMENT ID: DC00227-01-0800-01

LAST REVISED: July 2006



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

# Contents

**About This Book** ..... **vii**

**CHAPTER 1** **Introduction** ..... **1**
- Architectural overview ..... 1
- Unwired Accelerator features ..... 3
  - Security features ..... 3
  - Administrator features ..... 4

**CHAPTER 2** **Getting Started** ..... **7**
- Starting and stopping Unwired Accelerator ..... 7
  - Starting and stopping the database ..... 8
  - Starting and stopping the Tomcat application server ..... 9
  - Starting and stopping MobiLink server ..... 9
- Accessing Mobile Web Studio ..... 10
- Accessing Portal Interface ..... 12
- Accessing the mobile device interface ..... 14

**CHAPTER 3** **Post-Installation Configuration** ..... **17**
- Overview ..... 17
- Configuring Unwired Accelerator mobile clients ..... 17
- Configuring data source connections ..... 18
  - Setting up a SAP connection ..... 18
  - Setting up a Domino connection ..... 21
- Configuring M-Business Anywhere ..... 25
  - Installing M-Business Anywhere server and client ..... 26
  - Configuring Unwired Accelerator for M-Business Anywhere ..... 29
  - Uninstalling M-Business Anywhere ..... 31
- Installing Answers Anywhere server ..... 32
  - Configuring global.properties.xml for Answers Anywhere ..... 32
  - Setting up Answers Anywhere for e-mail ..... 32
  - Setting up Answers Anywhere for Simplified Chinese ..... 35
  - Setting up Answers Anywhere for SMS ..... 36

**CHAPTER 4** **User Accounts ..... 43**
Overview ..... 43
Mobile Web Studio accounts ..... 44
Portal Interface accounts ..... 48
Unwired Accelerator client accounts ..... 49
Symbian/J2ME client accounts ..... 50
BlackBerry accounts ..... 53
M-Business Anywhere accounts ..... 55
M-Business user accounts (from Mobile Web Studio) ..... 57
About data source access ..... 59

**CHAPTER 5** **Resources ..... 61**
Overview ..... 61
Creating resources ..... 63
Adding resources ..... 64
Editing the cobrands.xml file ..... 65
Copying resource-specific files ..... 67
Editing resource-specific files ..... 67
Implementing resources ..... 68

**CHAPTER 6** **Managing Integrated Products ..... 69**
Overview ..... 69
Unwired Accelerator ..... 70
Architectural overview ..... 70
Administrative tasks ..... 76
Setting up a JNDI data source resource ..... 78
Setting up a JDBC connection cache ..... 80
Managing templates ..... 83
Managing Unwired Accelerator clients ..... 84
Managing synchronization ..... 85
BlackBerry client ..... 91
Architectural overview ..... 92
Administrative tasks ..... 93
Installing the UA offline client ..... 93
Customizing BlackBerry client device templates ..... 95
Symbian/J2ME client ..... 103
.NET container client ..... 104
M-Business Anywhere ..... 105
Architectural overview ..... 106
Administrative tasks ..... 106
Answers Anywhere and SMS ..... 110
Architectural overview ..... 110
Administrative tasks ..... 112

Configuring CMC and SMS features ..... 112
Loading a custom agent network ..... 113
Registering with SMS modems ..... 114
Monitoring SMS and CMC communications health ..... 114
CMC Admin GUI ..... 114

**CHAPTER 7 Security ..... 119**
Overview ..... 119
Understanding CSI ..... 120
Authentication ..... 121
Role-based authorization ..... 123
Fine-grained access control ..... 123
Data confidentiality and integrity ..... 125
Security and integrated products ..... 126
Managing role-based security ..... 130
Setting up a security manager account ..... 132
Administering roles ..... 133
Administering objects ..... 134
Working with secure applications ..... 136
Security utilities ..... 137
Using the csi-tool.jar utility ..... 137
Using execdbscript with PortalDB ..... 139
Auditing ..... 139
Configuring auditing ..... 140
Sample Audit Record ..... 142
Tightening portal security ..... 142

**CHAPTER 8 Performance and Tuning ..... 149**
Overview ..... 149
Tomcat connections ..... 149
ASA cache ..... 151
UA navigation ..... 151
Performance tuning parameters for UWP ..... 152
Data connections ..... 152
JVM Tuning ..... 153

**CHAPTER 9 Troubleshooting ..... 155**
Overview ..... 155
Unwired Accelerator log files ..... 156
Trace files ..... 156
CSI logging level ..... 157
Monitor connections (TCPMon) ..... 158

Unwired Accelerator setup ..... 161
Troubleshooting resource configuration ..... 163
Unwired Accelerator login problems ..... 164
M-Business Anywhere setup ..... 166
BlackBerry Enterprise Server setup ..... 166
MobiLink server setup ..... 167
Mobile device setup ..... 167
Answers Anywhere/SMS setup ..... 170
SAP, Domino, Remedy connection setup ..... 173
Mobile application development problems ..... 174
Production problems ..... 178

**CHAPTER 10 Configuring Global Properties ..... 181**
Overview ..... 181
Viewing global.properties.xml contents ..... 182
Global property group ..... 183
Audit property group ..... 193
Mobile Web Studio property group ..... 193
M-Business property group ..... 194
SAP property group ..... 194
Domino property group ..... 195
UWP property group ..... 196
Docservers property group ..... 199
ProductConfiguration property group ..... 200
Portal property group ..... 201
Agents property group ..... 201
Nav property group ..... 202
Capture logging properties ..... 204
Database property group ..... 205
Updating global properties ..... 205

**Glossary ..... 211**

**Index ..... 221**

# About This Book

**Audience**

This guide is for system administrator who manages Unwired Accelerator and its configuration, and who work with developers to configure Unwired Accelerator.

**How to use this book**

This book contains these chapters:

- Chapter 1, “Introduction” introduces Unwired Accelerator and its features.
- Chapter 2, “Getting Started” describes how to get started—starting up the Unwired Accelerator system and logging to the various Unwired Accelerator interfaces.
- Chapter 3, “Post-Installation Configuration” provides information for configuring additional functionality and connections to various data sources.
- Chapter 4, “User Accounts” describes how to set up and manage Unwired Accelerator accounts.
- Chapter 5, “Resources” describes how to set up and manage multiple Unwired Accelerator co-brands, or resources.
- Chapter 6, “Managing Integrated Products” provides information for managing various products that can be integrated with Unwired Accelerator.
- Chapter 7, “Security” provides information about Unwired Accelerator’s “native” security provisions.
- Chapter 8, “Performance and Tuning” provides useful information for tuning Unwired Accelerator for optimum performance in your environment.
- Chapter 9, “Troubleshooting” provides possible solutions to common Unwired Accelerator problems.
- Chapter 10, “Configuring Global Properties” provides information about configuration property settings in the *global.properties.xml* file.

## Related documents

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

- The Unwired Accelerator installation guide for your platform explains how to install the Unwired Accelerator software.
- The Unwired Accelerator release bulletin for your platform contains last-minute information not documented elsewhere.
- The *Unwired Accelerator Quick Start Guide* shows how to create mobile applications and deploy them to mobile devices.
- The *Mobile Application Development Tutorial* provides tutorials that help you get started using Mobile Web Studio to develop and deploy mobile applications.

**Unwired Accelerator online documentation** The Unwired Accelerator documentation set includes:

- The *Unwired Accelerator Developer's Guide* includes development topics for Unwired Accelerator components, Portal Interface applications, and Java Template Framework pages.
- The *Unwired Accelerator Administration Guide* (this document) provides administration topics for Unwired Accelerator and its configuration.
- 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.

**jConnect™ for JDBC™ documents** Unwired Accelerator 8.0 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 8.0 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 Select Products from the navigation bar on the left.

3 Select a product name from the product list and click Go.

4 Select the Certification Report filter, specify a time frame, and click Go.

5 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 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 formatting conventions used in this manual are:

| Formatting example | To indicate |
|---|---|
| commands and methods | When used in descriptive text, this font indicates keywords such as:<br>• Command names<br>• C++ and Java method or class names |

| Formatting example | To indicate |
| --- | --- |
| *variable*, *package*, or *component* | Italic font indicates:<br>• Program variables, such as *myCounter*<br>• Parts of input text that must be substituted, for example:<br>*Server*.log<br>• File names |
| *SYBASE* | The variable in this manual used to represent the Sybase installation directory. In this guide, forward slashes are used for all path names, regardless of platform, unless an alternate location is used for another platform. For example, *SYBASE\UA80* would be used for both Windows and Linux. |
| 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." |
| `package 1` | Monospace font indicates:<br>• Information that you enter in Mobile Web Studio, on a command line, or as program text<br>• Example program fragments<br>• Example output fragments |

Environment variables associated with Unwired Accelerator include:

- SYBASE refers to the Unwired Accelerator installation directory; for example, *C:\Sybase\UA80*.
- MBUSINESS_SERVER refers to the M-Business Anywhere server installation directory; for example, *C:\MBiz*. M-Business Anywhere is optional.
- RIM refers to the Research in Motion installation directory; for example, *C:\Program Files\Research In Motion* or *C:\RIM*.
- CATALINA_HOME refers to the Apache Tomcat application server installation directory. Unwired Accelerator integrates the Tomcat server in its installation directory (*SYBASE\tomcat*).
- WorkRoot refers to the base working directory for Unwired Accelerator log files, trace files, and so forth; typically, *x:\tmp\logs*.
- 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

# Introduction

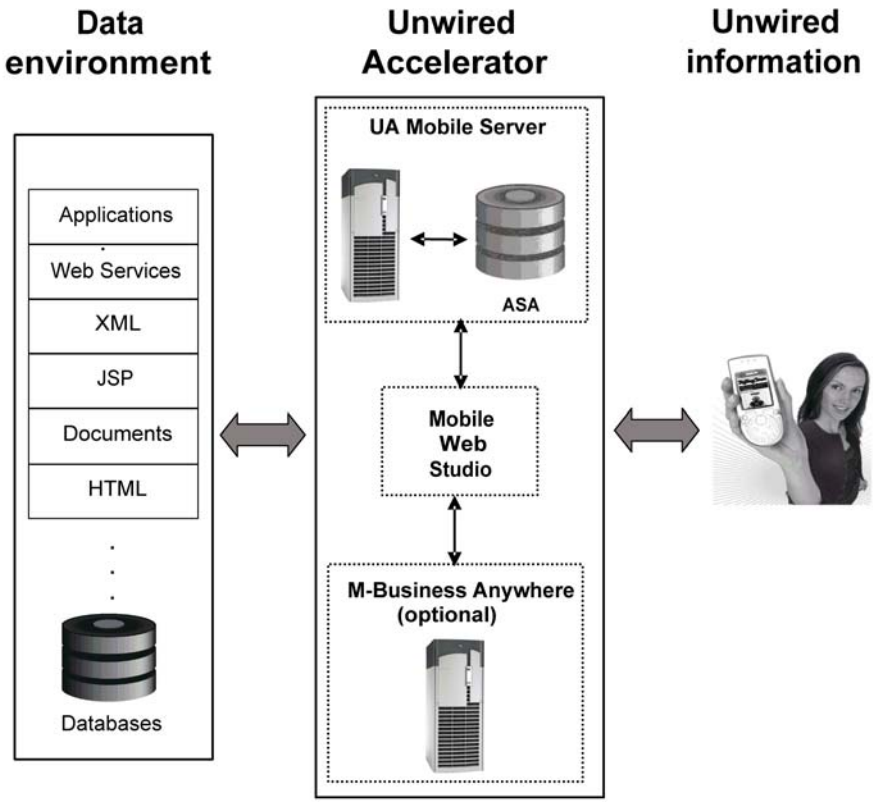
This guide provides instructions for the system administrator who configures and manages Unwired Accelerator.


| Topic | Page |
|---|---|
| Architectural overview | 1 |
| Unwired Accelerator features | 3 |


## Architectural overview

The Sybase Unwired Accelerator solution includes several proven technologies: the Mobile Web Studio, a powerful visual development tool; the UA Mobile Server, a scalable mobile server; Content Capture, Sybase patented technology for repurposing online applications, and Web applications and content without programming, and M-Business Anywhere, an optional component for delivering content in an occasionally connected model. With these integrated products, you can create secure, enterprise-wide, mobile applications.

***Figure 1-1: Architectural overview***




| | |
|---|---|
| Mobile Web Studio | Mobile Web Studio is a Web-based rapid development tool that uses patented technology for creating powerful and interactive mobile Web applications or for mobilizing existing Web applications or data sources like databases, XML, Web Services, HTML, JavaServer Pages (JSPs), and Active Server Pages (ASPs). Mobile Web Studio is a visual development tool with simple-to-use point-and-click functionality. |
| UA Mobile Server | UA Mobile Server delivers Web applications and content in a connected or disconnected environment, coordinating the communication between M-Business Anywhere and legacy back-end systems in an occasionally connected environment. Based on a scalable and distributed architecture, the UA Mobile Server runs in the J2EE-compliant Web container, such as Tomcat. |
| M-Business Anywhere (optional) | M-Business Anywhere is a reliable, scalable, and secure platform for delivering Web-based applications and content to mobile devices in an occasionally connected model. |

Content Capture

Content Capture is a Sybase-patented technology for repurposing Web-based applications and content using an object-oriented scripting language. The Sybase capture engine analyzes Web content and stores the feature definition, or signature. At runtime, the Content Capture engine uses pattern matching to locate the same signature. Therefore, even if content has moved or changed, the engine is still likely to find the information.

# Unwired Accelerator features

Unwired Accelerator accelerates the mobilization of enterprise Web applications and data sources for continuous access, which means you can access the same information whether you are connected, disconnected, or occasionally connected to the network.

Unwired Accelerator provides rapid development tools to mobilize existing Web applications, or to create new mobile applications based on your enterprise's data sources without programming.

Unwired Accelerator is the best strategy for getting the most value possible out of your current information infrastructure by providing timely information on the correct device to the most valuable individuals in your enterprise. Mobilization extends the information contained in these systems to new channels, with anytime, anywhere access. Unwired Accelerator leverages your existing infrastructure to create new mobile business opportunities.

## Security features

Unwired Accelerator security features include:

- Authentication
- Role-based authorization
- Data confidentiality and integrity
- Define access to functions using roles
- Auditing

See Chapter 7, "Security" for information about these features.

## Administrator features

Unwired Accelerator makes traditional system administration activities and tasks that control the behavior, content, and appearance of portals easy with features that include:

- Web-based access
  - User and role management.
  - M-Business server functions management.
  - Page management.
  - Point-and-click deployment.
  - The ability to import and export objects. See the *Unwired Accelerator Developer's Guide* for information.
- Online application and data source access
  - Access applications already used in the enterprise, such as Business Objects, Domino, SAP, Crystal Reports, and Remedy, to create mobile applications
  - Access data sources available in the enterprise, such as databases, files, and Microsoft Excel spreadsheets
  - Manage online and data source access through Mobile Web Studio
  - Support PIM data types like phone numbers and e-mail addresses
- Synchronization
  - Manage and monitor synchronization between Unwired Accelerator and mobile devices, implementing SMS, e-mail, or both
  - Schedule automatic downloads to mobile devices
  - Push downloads to mobile devices
  - Support smart (differential) synchronization on various mobile device types
  - Support insert, update, and delete for users with authorization
  - Monitor mobile devices, applications, and mobile users participating in synchronization through Mobile Web Studio
- Alerts
  - Create alerts based on content or errors

- Adapters – SMS, e-mail, database, file system, and so on

See the *Unwired Accelerator Developer's Guide* for information.

- Customization
  - Customize the look of the BlackBerry client (graphics, text, branding, localization and so forth) for each resource, and manage UA client distribution from Mobile Web Studio
  - Customize the look of the .NET container client from a desktop, and manage distribution to mobile device users.

    Users can further customize the .NET container client from the mobile device.
  - Create a custom UA client using the .NET client development API
  - Optimize applications for display on various device types (screen dimensions and orientation, column widths, list and detail selections, menu options, and so on)
- Scalable and distributed architecture

CHAPTER 2

# Getting Started

This chapter provides instructions for starting and stopping Unwired Accelerator, and accessing Mobile Web Studio and the portal interfaces. The chapter also provides some basic information about the user interface to help with administering Unwired Accelerator.


| Topic | Page |
|---|---|
| Starting and stopping Unwired Accelerator | 7 |
| Accessing Mobile Web Studio | 10 |
| Accessing Portal Interface | 12 |
| Accessing the mobile device interface | 14 |


## Starting and stopping Unwired Accelerator

To start Unwired Accelerator, you must start both the Tomcat application server, and the Adaptive Server Anywhere (ASA) database, and to stop UA you must stop both ASA and the Tomcat server.

❖ **Starting Unwired Accelerator**

1 Select Start | Programs | Sybase | Unwired Accelerator | Start UA. This starts the ASA database, the Tomcat application server, and the MobiLink server if you installed it.

When the database starts, you see the icon for the Sybase ASA database in your taskbar.

If you configured MobiLink, when the local MobiLink server starts, you see the icon for MobiLink in your task bar.

When Tomcat starts, you see the Tomcat window. You can minimize the Tomcat window (do not close the window).

**Note** You can check the *datamanager.log*, located in *x:\tmp\logs*, for start up information.

2 Select Start | Programs | Sybase | Unwired Accelerator | Start UA Studio. This starts an Internet Explorer window.

3 From the Internet Explorer window, you can log in to Mobile Web Studio as described in “Accessing Mobile Web Studio” on page 10.

❖ **Stopping Unwired Accelerator**

1 Log out of Mobile Web Studio and close the Internet Explorer window.

2 Select Start | Programs | Sybase | Unwired Accelerator | Stop Unwired Accelerator Studio. This stops the Tomcat application server, the ASA database, and the MobiLink server if you installed it.

Typically, you leave the application server and database running, but you may need to stop and start the application server or database to modify the system or initialize a configuration change. If you need to stop and start the ASA database or Tomcat server independently, keep the following in mind:

- Start the components in this order:
  a ASA database (or Adaptive Server Enterprise)
  b Application server
- Stop the components in this order:
  a Application server
  b ASA database (or Adaptive Server Enterprise)

The sections that follow describe how to start and stop the ASA (or Adaptive Server Enterprise) database and Tomcat application server independently.

## Starting and stopping the database

This section describes how to start and stop the Adaptive Server Anywhere database. Unwired Accelerator uses ASA for persistent storage of system data. The security provider—portaldatabase (or PortalDB)—is included with ASA as a default.

---

**Note** Typically Adaptive Server Enterprise is left running. If you need to stop and start Adaptive Server Enterprise, see the Adaptive Server Enterprise documentation for instructions

---

❖ **Starting the ASA database (Windows)**

1 From a Command Prompt window, navigate to *SYBASE*.

2 Enter `startdb`, or double-click the file name in Windows Explorer.

This starts the Adaptive Server Anywhere database. When the database starts, the icon for the Sybase ASA database appears in your task bar.

❖ **Shutting down the ASA database (Windows)**

1 From a Command Prompt window, navigate to *SYBASE*.

2 Enter `stopdb`, or double-click the file name in Windows Explorer.

Alternatively, make sure Tomcat has been stopped, double-click the Adaptive Server Anywhere icon in the task bar, then select Shutdown. Close any open browser windows.

## Starting and stopping the Tomcat application server

This section describes how to start and stop the Tomcat application server.

❖ **Starting the Tomcat application server (Windows)**

1 From a Command Prompt window, navigate to *SYBASE*.

2 Enter `starttomcat`, or double-click the file name in Windows Explorer.

When Tomcat starts, you see the Tomcat Window. Minimize the Tomcat window (do not close it).

Check the *datamanager.log* file, located in *x:\tmp\logs* for startup information.

❖ **Shutting down the Tomcat application server (Windows)**

1 From a Command Prompt window, navigate to *SYBASE*.

2 Enter `stoptomcat`, or double-click the file name in Windows Explorer.

## Starting and stopping MobiLink server

Typically the MobilLink server should remain running to ensure communication between Mobile Web Studio and mobile devices running the MobiLink client (UltraLite).

To stop the MobiLink server, double-click the MobilLink icon and stop the server.

To restart the MobilLink server, select Start | Programs | Sybase | Unwired Accelerator | Start MobiLink.

# Accessing Mobile Web Studio

Mobile Web Studio is a Web-based rapid development tool for creating mobile applications from existing Web applications or from data sources like databases, XML, Web Services, HTML, and JSPs/ASPs.

Mobile Web Studio also provides access to system administration tools for managing Unwired Accelerator user accounts, roles and permission, and resources; and M-Business Anywhere channels, groups, and user accounts. Use Internet Explorer to access Mobile Web Studio.

### ❖ Logging in to the Mobile Web Studio

When logging in to Mobile Web Studio as a system administrator, use an account with the StudioAdmin role. Unwired Accelerator provides a default StudioAdmin account called `masuper` (the password is `m8super`). Use this account to get started, then set up your own roles, permissions, and accounts as described in Chapter 7, “Security.”

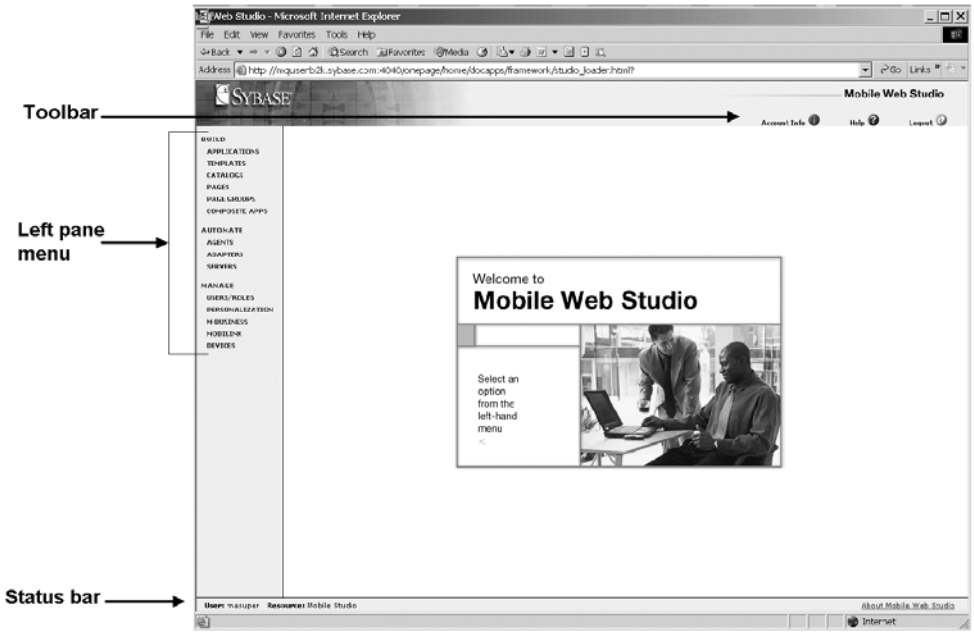
1 After you start the Mobile Web Studio, the login window displays.

2 Log in with the user name `masuper` and password `m8super`, and click Login. These are the default entries for the Mobile Web Studio account with administrative privileges.

You see the Mobile Web Studio Welcome window shown in Figure 2-1.

**Note** If your browser session expires, you see `Session has expired. You need to re-authenticate`. Click OK to close the message window, start a new browser session, log in, and close the windows of the old session.

***Figure 2-1: Mobile Web Studio Welcome window***




The Welcome window displays the:

- Left pane menu – select from menu groupings that allow you to:
  - Build – create, edit, and manage applications, templates, catalogs, pages, page groups, and composite applications.
  - Automate – create agents to automatically process application content, or use adapters to write application content to an e-mail message, database, or file system.
  - Manage – manage Mobile Web Studio resources and create predefined application input fields or drop-down lists, which users can later personalize with their own values. Deploy applications to the M-Business Anywhere server or MobiLink server, and manage how applications display on various mobile devices (such as display dimensions, list and detail display values, column width, and so forth).
- Status bar – always shows the user name of the person logged in to Mobile Web Studio (User), and the group of application pages available to this user (Resource).

- Toolbar – this is the Mobile Web Studio static toolbar. From this toolbar, you can view your account information, or log out of Mobile Web Studio. Once you make a selection from the left pane, an option-specific toolbar displays.

❖ **Starting Mobile Web Studio manually**

Alternatively you can access Mobile Web Studio manually.

1 Open a browser window and enter the following URL:

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

For example, if your machine name is labxp, your domain is sybase.com, and your port number is 4040, enter:

```
http://labxp.sybase.com:4040/onepage/index.html
```

4040 is the default port number is you are using Tomcat as your application server.

**Note** In a development environment, your port number may be different, and in a production system, the port number may not be necessary at all if you are using port 80.

2 When the Mobile Web Studio Login window displays, log in with the user name `masuper` and password `m8super`, and click Login. You see the Mobile Web Studio Welcome window shown in Figure 2-1.

# Accessing Portal Interface

Portal Interface is a Web portal platform, that can also be used for creating personal Web applications. Applications developed through Mobile Web Studio can be deployed to the Portal Interface and accessed using a desktop browser, such as Internet Explorer. Portal Interface is a useful tool for testing mobile applications.

❖ **Logging in to Portal Interface**

1 Open 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 if you are using Tomcat).

For example, enter:

```
http://labxp.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.

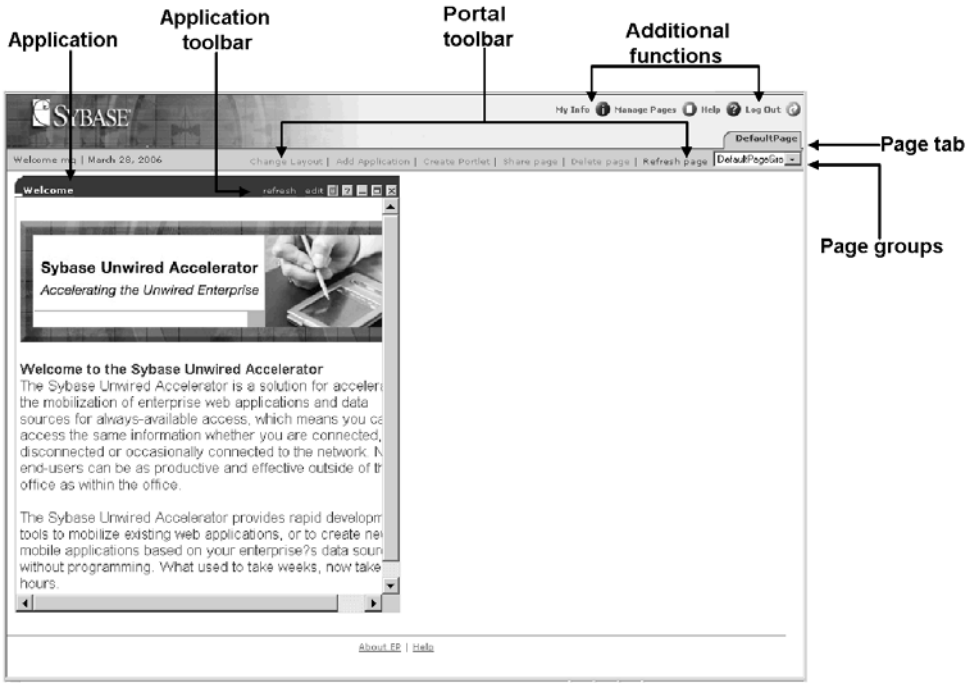
8 Select the PortalUser role.

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

The Portal Interface window displays with the default page group, as shown in Figure 2-2. The default page group is created on Mobile Web Studio, and deployed to the Portal Interface.

For detailed information about using the interface, see the *Portal Interface User's Guide*. For detailed information about creating and deploying other page groups, see the *Unwired Accelerator Developer's Guide.*

***Figure 2-2: Portal Interface window***




# Accessing the mobile device interface

Unwired Accelerator provides browser access to the mobile device interface.

Running applications in connected mode

You can access mobile applications any time using your PDA or BlackBerry device. The URL for accessing mobile applications is:

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

For example, if the name of the machine where Unwired Accelerator is installed is named “ua,” and your domain is “sybase.com,” enter:

```
http://ua.sybase.com:4040/onepage/mp.jsp
```

Each resource corresponds to an Unwired Accelerator co-brand. The index JSP (*mpindex.jsp*) accesses resource ID (RID) rid=21 from desktop browsers such as Internet Explorer. For more information about resource IDs, see Chapter 5, "Resources." Users can switch to other resources.

In the Welcome window, enter your mobile portal user name and password. The next window (the home page) displays the navigation tree with mobile applications displayed as links. The navigation tree shows the names of the page groups, pages, and applications. Only those page groups that support the navigation style of the requesting device are listed in the home page. See the *Unwired Accelerator Developer's Guide* for information about navigation styles. To see the content of an application, click the appropriate link in the home page.

In disconnected mode

You can run applications in disconnected (offline) mode with the Unwired Accelerator .NET container client for Windows, or with the M-Business Anywhere client 6.0 for Symbian P900, PocketPC, and Palm devices. Install the .NET container client or the M-Business Anywhere client, and configure the server for sync operations. See the *Unwired Accelerator Developer's Guide* for information about the .NET container client, and see "Configuring M-Business Anywhere" on page 25 and your M-Business Anywhere documentation for M-Business Anywhere information.

---

**Note** The only types of disconnected mode applications that you can use on the P900 are spidered Web-based applications. Spidered applications include data and link access as part of the capture definition.

---

❖ **Logging in to the mobile device interface**

1 On your browser or mobile device, enter this URL in your device's browser:

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

For example, if your machine name is labxp, your portal domain is sybase.com, and your port number is 4040, enter:

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

2 Enter a mobile portal user name and password, and click Login.

The home page displays the navigation tree with the names of the mobile applications as links.

**Note** You can run applications in disconnected mode with the BlackBerry or Symbian/J2ME online client as well. See Chapter 3, “Post-Installation Configuration” for information about installing client software.

CHAPTER 3

# Post-Installation Configuration

This chapter describes how to configure additional Unwired Accelerator functionality.


| Topic | Page |
|---|---|
| Overview | 17 |
| Configuring Unwired Accelerator mobile clients | 17 |
| Configuring data source connections | 18 |
| Configuring M-Business Anywhere | 25 |
| Installing Answers Anywhere server | 32 |


## Overview

This chapter assumes you have completed the installation and post-installation tasks in the *Unwired Accelerator Installation Guide*, and have verified the installation and connectivity works.

---

**Note** In this section, the Tomcat version of path names is used.

*SYBASE\UA80\tomcat\webapps\onepage*.

---

## Configuring Unwired Accelerator mobile clients

This section describes how to install and configure the UA Symbian/J2ME mobile client software. For information about installing other clients see:

- For the BlackBerry client, the *Unwired Accelerator Installation Guide*.

- For the .NET container client, see the *Unwired Accelerator Developer's Guide* for information.
- For M-Business Anywhere, "Configuring M-Business Anywhere" on page 25.

# Configuring data source connections

This section describes how to set up various data source connections, including:

- Setting up a SAP connection
- Setting up a Domino connection

data source connections enable you to create mobile applications from existing online enterprise applications, and to download data and upload updated data, subject to data source security You can also use Web services and WSDL files to connect to a data source, such as SAP Business One and Remedy.

## 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. This enables you to create a SAP element

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, a SAP element can be created 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, currently:

```
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 Service Marketplace window displays.

4 Select the SAP Java Connector link, and follow the installation instructions provided by SAP. When prompted, copy the *.jar* and *.dll* files to these locations:

- Copy *sapjco.jar* to *SYBASE\UA80\tomcat\webapps\onepage \WEB-INF\lib*.
- Copy *librfc32.dll* and *sapjcorfc.dll* to *SYBASE\UA80\jdk1.5.x\jre\bin.*

5 Close the Web browser.

6 Change to the *SYBASE\UA80\tomcat\webapps\onepage \WEB-INF\classes* directory.

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

8 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).

9 Save and close the file.

❖ **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.”
- DefaultConnectionPoolName – identifies the connection pool to use for the default SAP connection. The default connection pool user must have sufficient SAP permission to access SAP metadata.

1 In a text editor, open *global.properties.xml*, located in *SYBASE\UA80\tomcat\webapps\onepage\config*.

2 Search the file for `SAPGroup`.

3 Look for: `<Property name="ConnectionPools"`. By default, ConnectionPools is set to “sapjco.” The default ConnectionPool “sapjco” has a corresponding property file *sapjco.properties* in which SAP connection properties are defined. Each ConnectionPool name in the list must have its own property file, as described in “Creating ConnectionPool property files.”

   Identify the ConnectionPools you need for SAP connection, using SAP documentation, and change the value as necessary.

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

   By default, DefaultConnectionPoolName is set to “sapjco.”

   Determine which ConnectionPool to use as the default SAP connection from the list, and change the value as necessary. The default connection pool user must have certain SAP permissions in order to access SAP metadata. See “SAP property group” on page 194 for information about the permissions needed.

5 Save and close the file.

❖ **Creating ConnectionPool property files**

For each ConnectionPool listed in the *global.properties.xml* file, there should be a *poolname.properties* file in *SYBASE\UA80\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\UA80\tomcat\webapps\onepage\WEB-INF\classes*).

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 and close the file.

## Setting up a Domino connection

This section describes how to set up a Domino server connection, if you plan to develop mobile applications using Domino Business Objects.

To set up the Domino connection you must:

- Verify you have “document creation” and “document deletion” rights on the Domino database. See Chapter 7, “Security” for information.
- Set up the Domino agents.

**Note** Verify you have sufficient permissions to execute Domino agents from UA.

- Modify the *global.properties.xml* file to specify the ConnectionType to be used for the Domino connection. The values can be one of the following:
  - NRPC – Notes Remote Procedure Call. The user must provide an ID file for authentication. This connection type requires the Notes client be installed on the same machine as the UA server, and is the default.
  - DIIOP – Domino Internet Inter-ORB Protocol (CORBA). This connection type requires a DIIOP port.
  - Websession – this connection type requires that the Domino server is installed on the same machine as the UA server.

- Create a property file for each ConnectionPool, and configure connection properties.
- If you want the ability to capture Domino database files, see "Configuring Domino database files" on page 23.

Details for each of these steps are provided in the procedures that follow. Once this is done, a Domino element can be created 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 Domino Business Object element.

## Product requirements for setting up a Domino connection

This section assumes the following products are installed:

- Domino Server 6.5 or later
- Domino Designer 6.5 or later
- Domino Administrator 6.5 or later
- Lotus Notes Client 6.5 or later

**Note** For NRPC type connection, Lotus Notes Client must be installed on the machine where the UA server is running. For WebSession type connection, Domino Server must be installed on the same machine where UA server is running.

You can download the products at http://www-128.ibm.com/developerworks/lotus/downloads/.

## Setting up the Domino agents

The UA server depends upon Domino agents to perform application specific tasks. The two required Domino agents are:

- An agent that validates the values set in the agent providing the XML.

- An agent that validates and updates/inserts data.

**Note** To set up the Domino agents, you must have Domino access to the database. See the *Unwired Accelerator Developer's Guide* for additional information about developing Domino agents for use with Unwired Accelerator, including example code.

## Configuring Domino database files

If you want to capture Domino database files (*.nsf* files), you must put the database file in either of these two locations:

- The local data directory (works only for Default Connection Type, such as NRPC), for example *%NotesClientHomeDirectory%\lotus\notes\data*. This is the Notes Client's data folder.
- The server data directory, for example *%DominoServerHomeDirectory%\Domino\Data*. This is the Domino Server's data folder, and it is referred to as the machine name (by default), or the name assigned by the Domino administrator.

For Default type* of connections, in order to log in to the Domino database, UA must be able to access the user ID file. The user ID file should be shared on the network so that the UA server can access it. You can specify the user ID file path as *//Machinename/Directory/my.id*, where *Machinename* is the name of the machine where the user ID file is residing, *Directory* is the directory where the User ID file is located, and *my.id* is the name of the user ID file

For DIIOP type connections, the Domino server should be configured with DIIOP option.

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

1 In a text editor, open *global.properties.xml*, located in *SYBASE\UA80\tomcat\webapps\onepage\config*

2 Search the file for DominoGroup

3 Look for: `<Property name="ConnectionPools"`. By default, ConnectionPools is set to "defaultdomino." The default ConnectionPool "defaultdomino" has a corresponding property file *defaultdomino.properties* in which Domino connection properties are defined. Each ConnectionPool name in the list must have its own property file, as described in "Creating ConnectionPool property files for Domino."

Identify the ConnectionPools you need for Domino connection, using Domino documentation, and change the value as necessary.

4 Look for: `<Property name="ConnectionType"`. By default, ConnectionType is set to "nrpc." Keep the default or change to either "diiop", or "websession."

5 Save and close the file.

❖ **Creating ConnectionPool property files for Domino**

For each ConnectionPool listed in the *global.properties.xml* file, there should be a *poolname.properties* file in *SYBASE\UA80\tomcat\onepage\WEB-INF\classes*. Use the *defaultdomino.properties* file as a base, and modify the ConnectionPool connection properties.

1 In a text editor, open *defaultdomino.properties* (located in *SYBASE\UA80\tomcat\webapps\onepage\WEB-INF\classes*).

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 Domino connection based on the connection type set in the *global.properties.xml* file. The following properties are included in the file as an example.

For NRPC:

```
server=
database_path=
user_ID_file=
password=
password_encrypted=false
```

For DIIOP:

```
server=
diiop_port=63148
database_path=
username=
password=
password_encrypted=false
```

For WebSession:

```
database_path=
username=
```

```
password=
password_encrypted=false
```

4 Save and close the file.

5 Copy the *NCSO.jar* and *Notes.jar* files located in *%NotesClientHomeDir%\Notes* (for example *C:\Program Files\Lotus\Notes*) to SYBASE\UA80\tomcat\webapps\onepage\WEB-INF\lib.

**Note** The *NCSO.jar* is required for DIIOP connections, and the *Notes.jar* is required for NRPC, and WebSession connections.

❖ **Setting the environment variables for Domino**

1 In the System Properties window, click Advanced.

2 Click Environment Variables.

3 Under System Variables, select Path and click Edit.

4 For NRPC connections, in Variable Value, append the Lotus Notes client's path to the end of the variable value, and click OK.

For WebSession connections, in Variable Value, append the Domino server's path to the end of the variable value and click OK. Note that in this case, Domino server's path must precede Notes Client's path, if set.

5 In the Environment Variables window, under System Variables, select Lib, click Edit, and follow the same procedure as mentioned in step 4.

6 In Variable Value, append the Lotus Notes client's path to the end of the variable value, and click OK.

# Configuring M-Business Anywhere

An alternative way to deploy mobile applications from Unwired Accelerator to PocketPC and Palm OS PDAs is through M-Business Anywhere 6.0. Mobile applications you create in Mobile Web Studio are packaged in pages and page groups or channels, and deployed to mobile devices in offline mode.

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 users through Mobile Web Studio.

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

**Note** The M-Business Anywhere installation directory is referred to as MBUSINESS_SERVER in this document.

## 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.

You can download M-Business Anywhere Server and M-Business Client from the Web. You must purchase M-Business development and deployment licenses separately.

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.

❖ **Installing M-Business Anywhere server on Windows**

In this step, download and install the M-Business Anywhere server software on Windows.

1 Before you begin, select Start | Programs | Sybase | UnwiredAccelerator | Stop UA to stop the Tomcat application server and the Unwired Accelerator ASA database.

**Note** If the ASA database is running, you cannot configure the M-Business Anywhere server and start its processes successfully.

2 Download the M-Business Anywhere development software using the URL and password that was sent to you in the order-confirmation e-mail.

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

3 Install M-Business Server using M-Business Anywhere documentation. Keep the following in mind:

- When prompted for a license key, enter the license key that was sent to you in the order-confirmation e-mail when you purchased M-Business Anywhere.
- When prompted for "sync server port," enter `8092` (see the "Requirements" section in the *Installation Guide*), to prevent port conflicts with port 80, which is used by many Web servers).

**Note** The M-Business Anywhere installation directory is referred to as *MBUSINESS_SERVER* in this document.

4 Proceed to "Installing M-Business Client on Windows."

❖ **Installing M-Business Client on Windows**

In this step, download and install the M-Business Client software on Windows, and mobile device software.

1 Download the M-Business Client software for your mobile device, using the URL and password that was sent to you in the order-confirmation e-mail.

2 Install the M-Business Client software.

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

```
http://hostname:8091
```

Where *hostname* is the machine on which the M-Business Anywhere server software is installed; for example:

```
http://labxp:8091
```

The M-Business Anywhere login screen displays.

**Note** The administrative login is "admin," with no password, but you do not have to log in at this time. You can view the *M-Business Client User Guide* from the login screen, or at http://*hostname*:8091/enterprise_doc/Admin_MBiz.pdf.

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

   a Select "Download Client Software."

   b Select the language.

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

   - PalmOS – install Palm Desktop 4.*x* with HotSync.
   - Pocket PC – install Pocket PC with ActiveSync (3.0 for Windows CE devices, 3.1 for Pocket PCs).
   - M-Business client – install on your hard drive or mobile device.

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

   d In the download window, use the online help for the selected device to download, install, configure, and synchronize the software for your mobile device. See "Connecting M-Business Anywhere and M-Business Client software" or M-Business Connect procedures.

   **Note** When performing synchronizations on applications, the character set of the application must match the Windows environment. For example, if you are synchronizing a double-byte application, your Windows environment must also be set to a double-byte character set.

   Once you create mobile applications with Mobile Web Studio, and synchronize, you will see the applications on the mobile device. To create mobile applications, see these *Unwired Accelerator Developer's Guide*.

5 Select Start | Programs | Sybase | Unwired Accelerator | Start UA to restart the ASA database and Tomcat application server.

❖ **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, such as `labxp`.
- Port – specify the port number, such as `8092`. This is the M-Business Client port (or "sync port") described in the *Installation Guide*.
- Your account – enter the M-Business user name and password. See the "Self-registration" section in "Configuring global.properties.xml for M-Business Anywhere" on page 29 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 Unwired Accelerator for 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" for information.

---

**Note** See the Chapter 10, "Configuring Global Properties" 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\UA80\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.

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.

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

By default, MB.AutoRegistration is set to "false." Use the information in "Self-registration" to determine whether to change the MB.AutoRegistration parameter value.

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 M-Business Anywhere on Windows removes the M-Business Anywhere server and the database of user, group, and channel information. Optionally, you can preserve your settings in the AGDB database by moving the *MBUSINESS_SERVER\avantgoserver\ASA\data* directory to a new location before uninstalling.

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

1 Select Start | Programs | Sybase | UnwiredAccelerator | Stop UA to shut down the Tomcat application server and the Unwired Accelerator ASA database.

2 Optionally, preserve the AGDB database by moving the *MBUSINESS_SERVER\avantgoserver\ASA\data* directory to a new location before uninstalling.

3 Select Start | Settings | Control Panel | Add/Remove Programs.

4 Remove M-Business Anywhere server and client software.

5 Select Start | Programs | Sybase | UnwiredAccelerator | Start UA to restart the Tomcat application server and the ASA database.

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

# Installing Answers Anywhere server

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 “Answers Anywhere and SMS” on page 110 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* 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.

---

## Configuring *global.properties.xml for Answers Anywhere*

This section describes the AA.CustomAgentNetwork setting in the *global.properties.xml* file, which is used to enable Answers Anywhere.

---

**Note** See the Chapter 10, “Configuring Global Properties” for more information about the *global.properties.xml* file.

---

## 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 “labxp.sybase.com.”
- E-mail account name – for example “askua.”
- E-mail password – for example, “ua.”
- Unwired Accelerator host name – for example, “localhost.”
- Unwired Accelerator port – the default port is 4040 if you are using Tomcat.
- Unwired Accelerator rid – the default resource identifier is “21.”

3 Navigate to:

*SYBASE\UA80\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 3-1.

***Table 3-1: 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.<br>true – authenticates outgoing e-mail. If your SMTP host requires authentication for sending e-mails, set this to “true.”<br>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 “labxp” and the domain is “sybase.com,” enter:<br>`labxp.sybase.com`<br>The default is “localhost.” |
| ua.port | Identifies the port on which UA is running. The default is `4040` for Tomcat. |

| Property name | Description |
|---|---|
| ua.rid | Identifies the resource ID used for Answers Anywhere integration. The default is 21. See Chapter 5, “Resources” for information about resources. |
| 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`.<br>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 35 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 the file and close it.

6 Restart the Tomcat application server as described in “Starting and stopping the Tomcat application server” on page 9.

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://labxp.sybase.com:4040/dejima/mail.jsp
```

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

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* 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 3-1 on page 33.
- 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\UA80\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 Chapter 5, “Resources” 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 3-2 for a partial list of commands. Use the run -help command to see a complete list of properties.

***Table 3-2: CMCConfig.properties file settings***

| Option name | Description | Default value |
|---|---|---|
| accessChecker | Fully qualified class name that implements the interface: com.sybase.cellmodem.AccessChecker | com.sybase.cellmodem.BlackWhite ListChecker |
| accessLog.File | Name of the file where access log data is kept. | None. If no file is specified, no access log is maintained. |

| Option name | Description | Default value |
|---|---|---|
| accessLog.Request | Boolean valued property (true or false). If true, the request body from each message received will be recorded in the access log. | true |
| accessLog.Response | Boolean valued property (true or false). If true, the response body sent back to uses is included in the access log. | true |
| accessLogger | Full qualified class name that implements the com.sybase.cellmodem.AccessLogger interface. | com.sybase.cellmodem.AccessLoggerImpl |
| baudrate | Integer valued property. Specifies the bits per second communication rate to use with the serial port to which the modem is connected. | 9600 |
| 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. |
| config | Name of a ResourceBundle or a java.util.Properties formatted file containing any of the command line options defined in this table. Any options specified explicitly on the command line take precedence over values contained in this file. | com.sybase.cellmodem.CMCConfig<br>The default package includes com/sybase/cellmodem/CMCConfig.properties file with default command line options. This file is packaged in the sybcmc.jar from which this entire package comes. |
| 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.<br>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 if you are using Tomcat. |

| 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.<br>The sms.jsp page looks for an optional RID=<*N*> query parameter, where <*N*> is the resource ID 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 if you are using Tomcat. |
| initDatabase | Boolean property (true or false).<br>If set to true and the databaseURL is specified, CMC tries to create the tables it uses in the database. This command line option is generally used only once to initialize the database. | false |
| 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.<br>When CMC is using a database, this name is used in searches and inserts. | DefaultName |
| interval | Integer valued property. Specifies in milliseconds how frequently CMC checks for new messages from the modem, and processes responses to return to users. | 15000 (every 15 seconds) |
| logFile | Name of the error log for the CMC process. The name can have a pattern, as described in java.util.logging.FileHandler constructors. | CMC%g.log |
| logLevel | This determines the minimum severity level of messages that are placed in the log file. Valid values are described in java.util.logging.Level. | WARNING |
| messageHandler | Fully qualified class name that implements the com.sybase.cellmodem.MessageHandler interface. | com.sybase.cellmodem.HTTPClient MessageHandler |

| Option name | Description | Default value |
|---|---|---|
| modemDriver | Fully qualified class name that implements com.sybase.cellmodem.CellModem interface. | com.sybase.cellmodem.CService Wrapper |
| roleBasedAccess | Boolean property (true or false).<br>true – CMC attempts to match a sender's phone number to a registered cell number in the user.cell_phone column of the portaldatabase. 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.<br>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 |
| 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. |
| maxResponseMessages | For SMS messages that need to be parsed into 160 character message packages, indicates the maximum number of messages to send when splitting the response. | 1 |
| configInterval | Number of millisecond periods that CMC should check for configuration changes. | 0 (never) |

2 Use the run.bat file, located in *SYBASE\UA80\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\UA80\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, "labxp."
- *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). Use the port number you configured for UA.

For example:

```
http://labxp.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 3-2 on page 36 for values.

4 Save your configuration.

See the "Answers Anywhere and SMS" on page 110 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\UA80\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\UA80*, set the property to:

```
wrapper.java.command=%SYBASE%\jdk1.5.x\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 with the SMS modem**

Each user must register with the SMS modem by sending an SMS text message that includes user name and password to the SMS modem. Otherwise, SMS requests do not work. Develop a process for informing users how to register with the SMS modem. To register:

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 3-2 on page 36 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.

CHAPTER 4

# User Accounts

This chapter describes how to manage user accounts in the Unwired Accelerator configuration.


| Topic | Page |
|---|---|
| Overview | 43 |
| Mobile Web Studio accounts | 44 |
| Portal Interface accounts | 48 |
| Unwired Accelerator client accounts | 49 |
| M-Business Anywhere accounts | 55 |
| About data source access | 59 |


## Overview

You can easily set up a variety of individual or task-related Unwired Accelerator accounts to meet the job and security needs of your organization. Most Unwired Accelerator access is managed through Mobile Web Studio. If you are using M-Business Anywhere, and are configured to do so, you can manage some access through the M-Business Anywhere administrative console.

To manage Unwired Accelerator accounts, keep the following in mind:

- To manage Unwired Accelerator user accounts through Mobile Web Studio, you must use an account with StudioAdmin privilege (for example, the `masuper` account). You may want to create a special security manager account for managing user accounts, as described in “Setting up a security manager account” on page 132.
- To create and manage Mobile Web Studio users, use Manage | Users/Roles.

- To create Portal Interface accounts, Portal Interface users can create an account from the Portal Interface Welcome window, and the system administrator can create accounts from the Mobile Web Studio Manage | Users/Roles option. Both Portal Interface users and the system administrator can reset the password for a Portal Interface account.
- To create a UA client account for a mobile device user, a corresponding user account must be set up for the user in Unwired Accelerator. The Unwired Accelerator account can either be created by the user through the Portal Interface, or by the system administrator through Mobile Web Studio. Once the account is set up, the user can set up the UA client account on the mobile device.
- For M-Business Anywhere accounts, see "M-Business Anywhere accounts" on page 55.

**Note** This chapter provides basic information for creating and managing accounts, but see Chapter 7, "Security" for an overall understanding of the security measures provided with Unwired Accelerator. This chapter assumes that CSI has been configured with providers that allow for self-registration, account creation, and role management.

# Mobile Web Studio accounts

This section describes how to create, modify, and delete Mobile Web Studio, Portal Interface, and mobile device user accounts from Mobile Web Studio; and how to reset passwords.

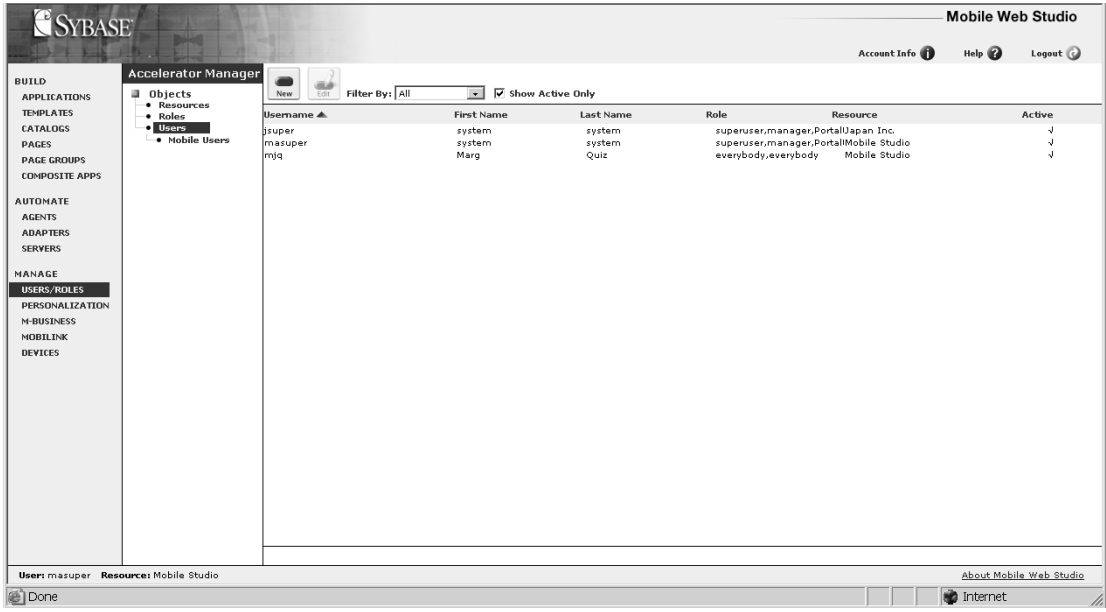
You may want to work out a process for resetting passwords. By default, the Portal Interface user's request is sent from the Portal Interface (Reset Password link) to the e-mail address or addresses listed in the *global.properties.xml* property, resetPasswordEmail. Once the request is received, use the procedure in "Resetting passwords for user accounts" on page 46 to reset the password.

### ❖ Creating new user accounts

1 Log in to Mobile Web Studio as StudioAdmin (such as the `masuper` account).

2 Select Manage | Users/Roles from the menu in the left pane, and select Users from the Accelerator Manager pane as shown in Figure 4-1.

***Figure 4-1: Managing UA users***




3 Select New from the toolbar.

4 When the Create New User window displays, complete the required fields.

- Username – enter a user name, such as “jdoe” or “guest,” or “IT.” This will be the account name when logging on to Mobile Web Studio. All user names must be unique; if you have duplicate names, find a way to make the user name unique, such as adding an initial or a number.

  **Note** Do not use “opsuper” or “masuper” for the Login Name.

- Active – make the account active. To set up accounts in advance, unselect this option to keep this account inactive, and then later select the option to activate the account.
- Default Resource – select a resource, such as Mobile Studio, from the drop-down list. When users log in, they will have access to objects in that resource, to which they have permission. See Chapter 5, “Resources” for information about resources.
- Available roles – select one or more roles and use Add, Add All, Remove, Remove All to move roles in and out of the Assigned roles column.

To set up additional roles, see “Administering roles” on page 133; to modify permissions for a role, see “Administering objects” on page 134.

- Assigned roles – the user can access any object that is assigned the roles in this column.
- First name – enter the user’s first name (required).
- Last name – enter the user’s last name (required).
- E-mail – enter the user’s e-mail address (required). The password is sent to this e-mail address.
- Work phone – enter the user’s work telephone number.
- Home phone – enter the user’s home telephone number.
- Zip code – enter the user’s five-digit zip code.
- Notes – enter notes or reminders for the account.

5 Click Save, and OK to confirm. The new user displays in the list of available users, and the password is sent to the e-mail address entered for the account. Upon login, the user can access any applications and pages assigned the permissions granted to this user.

❖ **Modifying existing user accounts**

1 Log in to Mobile Web Studio as StudioAdmin (such as the `masuper` account).

2 Select Manage | Users/Roles from the menu in the left pane.

3 Select Users.

4 Select an existing user from the list of users, and select Edit from the toolbar.

5 When the User Editor window displays, complete the required fields.

6 Click Save, and OK to confirm.

❖ **Resetting passwords for user accounts**

1 Log in to Mobile Web Studio as StudioAdmin (such as the `masuper` account).

2 Select Manage | Users/Roles from the menu in the left pane.

3 Select Users.

4 Select an existing user from the list of users, and select Edit from the toolbar.

5 When the User Editor window displays, select Password.

6 Select Yes to confirm. A confirmation message displays, explaining the password will be sent to the user's e-mail address.

❖ **Deleting user accounts**

1 Log in to Mobile Web Studio as StudioAdmin (such as the `masuper` account).

2 Select Manage | Users/Roles from the menu in the left pane.

3 Select Users.

4 Right-click an existing user in the list of users, and select Delete User from the pop-up menu.

5 Click OK twice to confirm. The user is removed from the list of available users.

---

**Note** When you delete a Mobile Web Studio user, you do not delete templates, applications, pages, and so forth that are owned by the user. You must run the PortalCleanup utility to clean up these entries in the PortalDB.

---

❖ **Cleaning up the PortalDB (PortalCleanup utility)**

When you delete a Mobile Web Studio user, you do not delete templates, applications, pages, and so forth that are owned by the user (in some cases you may not want to delete these things if they are use in applications used by other users). Over time you may want or need to clean up the database tables. Use the PortalCleanup utility to clean up these entries in the database tables.

1 From a Command Prompt window, navigate to the *PortalCleanup.bat* script located in: *SYBASE\tomcat\webapps\onepage\config* if you are using Tomcat.

2 Make sure the JAVA_HOME environment variable is set; for example, set to *SYBASE\jdk.1.5.x*.

3 Execute this command, substituting a the user's login name for *user*:

```
% PortalCleanup -webapproot
SYBASE\tomcat\webapps\onepage user
```

The script uses a com.sybase.ep.utils.PortalCleanup utility to access the PortalDB and remove all references to the given login name.

# Portal Interface accounts

This section describes how to create, modify, and delete Portal Interface user accounts from the Portal Interface, and how to reset passwords. You can also manage Portal Interface accounts from Mobile Web Studio.

Users create a Portal Interface account when they access the Portal Interface and select Join Now. Once the account is set up, you can manage the account through Mobile Web Studio, and users can manage passwords through the Portal Interface.

Portal Interface users can also request their password be reset, typically if they forget their password. You may want to work out a process for handling these requests. By default, the Portal Interface user's request is sent from the Portal Interface (Reset Password link) to the e-mail address or addresses listed in the *global.properties.xml* property, resetPasswordEmail. Once the request is received, use the procedure in "Resetting passwords for user accounts" on page 46 to reset the password.

When using M-Business Anywhere, you must set the global property alwaysValidateSession to false in the *global.properties.xml* file, in order for Portal Interface users to create personal channels. Otherwise, permission is denied and the channel cannot be viewed from M-Business Anywhere or M-Business Client on a mobile device.

See the *Portal Interface User's Guide* for information about using the portal. The following procedures are provided as a convenience.

❖ **Logging in to Portal Interface**

1 Open 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 if you are using Tomcat).

For example, enter:

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

2 Click Join Now. The self-registration window displays.

❖ **Entering profile information**

1 On the self-registration window, 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 Read the terms and conditions. If you agree, select the "I agree to the terms and conditions" box and click Done.

The Portal Interface default page group displays as shown in Figure 2-2 on page 14.

❖ **Resetting passwords**

1 From the Portal Interface default page group, select the MyInfo tab.

2 Enter the old password.

3 Enter the new password.

4 Enter the new password again to confirm.

5 Click Done to save the change. The message `Password updated successfully` displays.

6 Click Cancel to return to the Portal Interface default page group.

# Unwired Accelerator client accounts

This section describes how to set up UA client accounts, and assumes the UA client is already on the mobile device. Procedures or information for the following UA clients is provided:

- Symbian/J2ME client accounts

- BlackBerry accounts

---

Note For information about the .NET container client, see the *Unwired Accelerator Developer's Guide*; for M-Business Client, used with M-Business Anywhere, see "M-Business Anywhere accounts" on page 55.

---

Procedures may vary from device to device, but the basic information needed to set up a UA client account includes:

- Profile name – the profile name for the account. Most devices support multiple profiles on the device.
- User name – the user name for the profile, such as `masuper`.
- Password – the password for the profile, such as `m8super`. (The password is generated when you create the Mobile Web Studio or Portal Interface account).
- Server – the server and domain on which the Unwired Accelerator server is running, such as `labxp.sybase.com`.
- Port – the port used to access the Unwired Accelerator server, such as `4040`.
- Resource ID – the resource identifier (RID) for the account, such as `21` for Unwired Accelerator.
- HTTPS – indicates whether you plan to use HTTPS. When you select HTTPS, you are prompted to enter the HTTPS listener port number of the Unwired Accelerator server (4443 by default on Tomcat) When HTTPS is selected, all communication with UA is done over HTTPS.

In addition, for BlackBerry or Symbian/J2ME, you must configure push synchronization in order to sync between Mobile Web Studio and the mobile device. This enables you to send and receive applications and data.

## Symbian/J2ME client accounts

This section describes how to set up a UA client account for a Symbian/J2ME platform. Topics include:

- Enabling the password screen saver
- Setting up the Symbian/J2ME client user
- Setting up push sync for Symbian/J2ME client

- Editing the Symbian/J2ME client user
- Deleting the Symbian/J2ME client user

❖ **Enabling the password screen saver**

The first time you start the UA Client application on the Symbian/J2ME mobile device, you are prompted to set a password screen saver for your mobile applications.

1 Start the UA client on the Symbian/J2ME mobile device. The password input screen displays.

2 If you choose to enable password protection, enter a password and confirm the password. The UA client locks up when it has been idle for a configurable length of time, and you must enter the password to regain access.

If you choose not to enabled password protection, do not enter a password. The UA Client application is not password-protected when idle or closed.

❖ **Setting up the Symbian/J2ME client user**

Use the Configure Profile option on the home screen to set up a Symbian/J2ME client user account on the Symbian/J2ME mobile device.

1 Make sure the UA client is running on the device.

2 Select the Unwired Accelerator application. You should see the Unwired Accelerator splash screen when you start the application.

3 From the home screen, select the Profiles screen.

4 From the Profiles screen, select the Profile List Screen. The Profile List screen is empty until you create a new user.

5 Select New. The Profile Edit screen displays.

6 Enter the following information to create a new user:

- Profile Name – the profile name for the account, such as `mwsAdmin`.
- Protocol – the protocol used, either HTTP or HTTPS.
- Server Name – the server and domain on which Unwired Accelerator is running, such as `labxp.sybase.com`.
- Server Port – the port used to access Unwired Accelerator, such as `4040`.

- HTTPS – indicates whether you plan to use HTTPS. When you select HTTPS, you are prompted to enter the HTTPS listener port number of the Unwired Accelerator server (4443 by default on Tomcat) When HTTPS is selected, all communication with UA is done over HTTPS.

Click Next to continue.

7 Enter the following information:

- User Name – the account user name, such as `masuper`.
- Password – the account password, such as `m8super`.
- Resource – select the default resource identifier (RID) for the account, such as `21` for Unwired Accelerator, from the drop-down list.

8 From the UA client application home screen, select the Profiles screen.

❖ **Setting up push sync for Symbian/J2ME client**

Use the Settings option to set up push sync feature. You must configure your push address.

1 From the UA client application home screen, select the Settings option.

2 From the Settings screen, enter your push address, which is typically the phone number of your SMS-enabled device (or e-mail address, or both).

3 On the Application Info screen, determine how push synchronization notices should be handled, and select the option:

- Sync immediately (focus will change from what you are doing, to the synchronization process)
- Prompt for sync with a count-down timer on the prompt, and synchronize if the user does not explicitly cancel
- Prompt for sync with a count-down time, but do not synchronize unless the user OKs the sync
- Do not synchronize and do not prompt

---

**Note** You can identify applications waiting for synchronization by a visual indicator.

---

4 Save the change.

❖ **Editing the Symbian/J2ME client user**

Use the Configure Profile option on the home screen to modify a Symbian/J2ME client user account on the Symbian/J2ME mobile device.

1 From the UA client application home screen, select the Profiles screen.

2 From the Profiles screen, select the Profile List Screen. Existing Symbian/J2ME user accounts display in a list.

3 Select a user profile from the list of profiles and click Edit. The Profile Edit screen displays.

4 In Profile Editor, edit profile values for the account.

5 Click Next to continue.

6 Click Save to save the contents of the profile.

❖ **Deleting the Symbian/J2ME client user**

1 From the UA client application home screen, select the Profiles screen.

2 From the Profiles screen, select the Profile List Screen. The Profile Detail screen displays.

3 Select a user profile from the list of profiles and click Delete. The Profile List Screen displays minus the deleted profile.

## BlackBerry accounts

This section describes how to set up a user on the BlackBerry device or simulator. You can define a default profile for users through Mobile Web Studio, or you can require that individual user profiles be set up through Mobile Web Studio. Set up the default or individual accounts in Mobile Web Studio as described in “Mobile Web Studio accounts” on page 44.

In addition, this section describes how to configure push sync, so you can update the database from the BlackBerry device.

---

**Note** By default, the BlackBerry device is configured for an MDS connection. If your environment uses a TCP connection, inform the user to configure TCP on the BlackBerry device.

---

❖ **Setting up a user on BlackBerry device or simulator**

The BlackBerry user sets up a profile on the BlackBerry device, using the Profile option on the trackwheel menu.

1 Make sure the BlackBerry offline client is running on the device. You should see the Unwired Accelerator icon in the Application menu. If you do not, see "Installing the UA offline client" on page 93 for information about obtaining the offline client.

2 Select the Profiles option on the trackwheel menu.

3 Select the New Profile option from the trackwheel menu.

4 On the New Profile screen, enter the profile name, user name, password, resource ID, server name and domain, and port number. This example uses the `masuper`/`m8super` account.

- 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 `labxp.sybase.com`.
- Port number – the port used to access Unwired Accelerator, such as `4040`.
- HTTPS – indicates whether you plan to use HTTPS, which helps secure data transferred over the air (OTA). When you select HTTPS, you are prompted to enter the HTTPS listener port number of the Unwired Accelerator server (4443 by default on Tomcat) When HTTPS is selected, all communication with UA is done over HTTPS.

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 Return to the Unwired Accelerator screen.

Once you use Mobile Web Studio to create mobile applications, and synchronize, you see the applications on the mobile device.

❖ **Setting up push sync for BlackBerry client**

Use the Settings option to set up push sync feature. You must configure your push address.

1 From the UA client application home screen, select the Settings option.

2 From the Settings screen, enter your push address, which is typically the e-mail address on which your BlackBerry receives e-mail (but could be an SMS phone number, or both).

3 On the AppInfo screen, determine how push synchronization notices should be handled, and select the option:

- Sync immediately (focus will change from what you are doing, to the synchronization process)
- Prompt for sync with a count-down timer on the prompt, and synchronize if the user does not explicitly cancel
- Prompt for sync with a count-down time, but do not synchronize unless the user OKs the sync
- Do not synchronize and do not prompt

**Note** You can identify applications waiting for synchronization by a visual indicator.

4 Save the change.

# M-Business Anywhere accounts

This section describes how to create, modify, and delete M-Business Anywhere accounts from Mobile Web Studio and from M-Business Anywhere server. M-Business Anywhere accounts are needed to deploy applications to PDAs, such as PalmOS and PocketPC.

Unwired Accelerator integrates Mobile Web Studio and M-Business Anywhere 6.0. You can manage M-Business Anywhere accounts through Mobile Web Studio and M-Business Anywhere, but procedures may differ depending on how you have configured your system.

- To create and manage Mobile Web Studio users of M-Business Anywhere, when Unwired Accelerator is configured for self-registration, use Manage | M-Business.

  When Unwired Accelerator is not configured for self-registration, you must create M-Business Anywhere user accounts through the M-Business Anywhere administrative console as well through Mobile Web Studio. The accounts must be identical. See “M-Business Anywhere accounts” on page 55 for information.

- To manage users accounts through M-Business Anywhere, log in to the administrative console to set up users as described in “M-Business Anywhere accounts” on page 55.

Keep in mind the following:

- 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 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. See “Configuring M-Business Anywhere” on page 25 for information about changing the MB.AutoRegistraiton setting.

  - If MB.AutoRegistration is set to false, Mobile Web Studio does not self-register to M-Business Anywhere. The StudioAdmin user can register a Mobile Web Studio user in M-Business Anywhere using Manage | User/Roles, and selecting “Create M-Business user.” See “Configuring M-Business Anywhere” on page 25 for information about changing the MB.AutoRegistraiton setting.

- For existing Mobile Web Studio users who do not have an account in M-Business Anywhere:

  - The M-Business Anywhere administrator can create an account for the user in M-Business Anywhere.

  - The Mobile Web Studio administrator can create an M-Business user in Mobile Web Studio by selecting Manage | Users/Roles, selecting a user and right-clicking, and selecting Create M-Business User.

  - The Mobile Web Studio user can self-register in M-Business server or in Mobile Web Studio (using Manage | M-Business); or the Mobile Web Studio.

- User names in Mobile Web Studio and M-Business Anywhere must match. Also, if you create a user in M-Business server, an account is not created for the user in Mobile Web Studio.
- To manage Mobile Web Studio users, use Manage | Users/Roles.
- To manage Mobile Web Studio users of M-Business Anywhere, use Manage | M-Business.
- To create M-Business Anywhere users, use M-Business Anywhere or use Mobile Web Studio (Manage | M-Business).
- If you delete a user from Mobile Web Studio, through Manage | Users/Roles, the user is not automatically deleted from M-Business Anywhere.

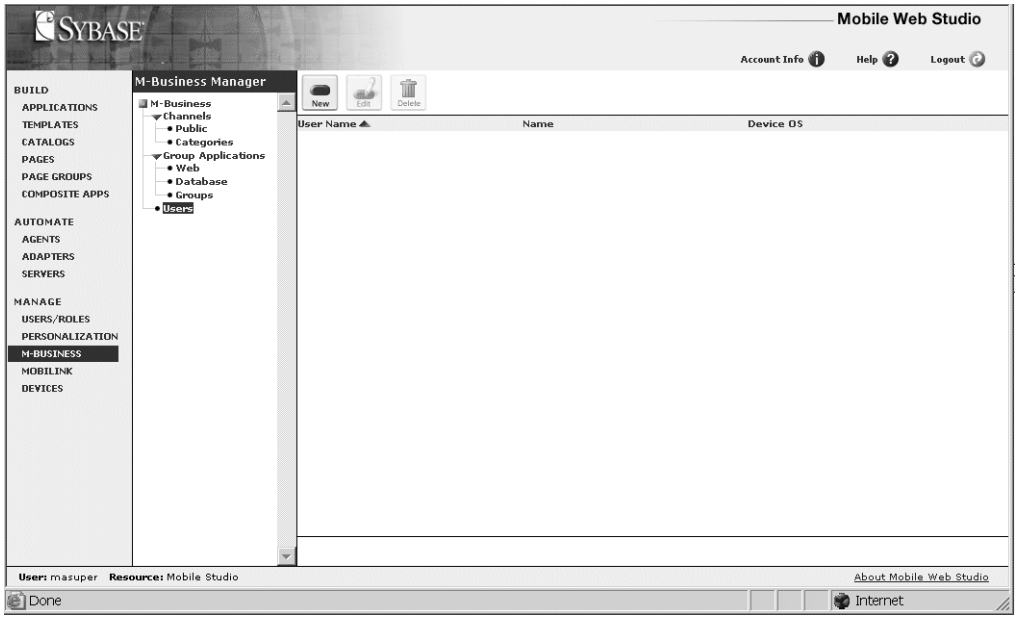
## M-Business user accounts (from Mobile Web Studio)

The Users list shows all M-Business Anywhere users. When you select the Users menu, then right-click a user name from the list, you can add, update, and delete users. You can also list the user's personal, public, and group channels (see the "M-Business Anywhere" on page 105 for information about working with groups and determining what the user subscribes to automatically through group membership). This section describes how to add, edit, and delete users.

### ❖ Adding new users

1 From Mobile Web Studio, select Manage | M-Business from the left pane, and select Users in the M-Business Manager pane. User name information displays in the detail pane (see Figure 4-2).

***Figure 4-2: Managing M-Business Anywhere users***




2 Click New in the toolbar. The New User window displays.

3 Create the new user:

- User name – enter the user name (required).
- First Name – enter the user's first name.
- Last Name – enter the user's last name.
- Password – enter a password, such as `password` (required).
- Confirm Password – enter the password again to confirm (required).

Click OK to save the new user.

4 In the confirmation pop-up window, click OK. The new users display in the User Name list. To deploy applications to the mobile device, you must set up a mobile application group, and associate the user with the group.

❖ **Editing users**

1 From the M-Business Manager menu, select Users, right-click the user name, and select Edit.

2 Update the User name field with your name, and click OK to save the change.

3 In the confirmation pop-up window, click OK.

❖ **Deleting users**

1 From the M-Business Manager menu, select Users, right-click the user, and select Delete.

2 In the confirmation pop-up window, click Yes to delete the user, and click OK to confirm.

---

**Note** You can delete more than one user at the same time by pressing the Ctrl key and selecting the users, then right-clicking any of the users and selecting Delete.

---

# About data source access

Unwired Accelerator enables you to configure access to your enterprise data sources, while maintaining the security measures you have in place.

***Table 4-1: Data source access***

| Data source | Notes |
|---|---|
| Domino | Access to Domino database files (.nsf) can be through direct connection or connection pools, as described in the “Setting up a Domino connection” on page 21.<br>Users can capture Domino data given sufficient user rights, including “Domino capture” and “Domino deletion” rights. |
| PeopleSoft | See the PeopleSoft whitepaper for information about setting up web service connection. |
| Remedy | Access to Remedy is through Unwired Accelerator’s Web service element, and WSDL files that provide access to Remedy methods.<br>Users can capture Remedy data given sufficient user rights. |
| SAP | Access to SAP applications can be through direct connection or connection pools, as described in the “Setting up a SAP connection” on page 18.<br>Users can capture SAP data given sufficient user rights. |
| Web services/WSDL | Access to various data sources can be provided through Unwired Accelerator’s Web service element, and WSDL files that provide access to the target application’s methods.<br>Users can capture target data given sufficient user rights. |

CHAPTER 5

# Resources

This chapter explains how to enable Unwired Accelerator to host multiple resources from one portal. A portal is the aggregated set of applications, pages, and page groups that are available within the UA product. A resource is portal content that you can configure to look the way you want.


| Topic | Page |
|---|---|
| Overview | 61 |
| Creating resources | 63 |
| Implementing resources | 68 |


## Overview

Unwired Accelerator includes a default resource (RID 21), which you see when you log in to Mobile Web Studio, Portal Interface, or a mobile device. Unwired Accelerator allows you to create additional resources with different logos, icons, text, colors, languages, and navigation styles.

Multiple resources allow you to create different looks for different audiences within a portal. For example, you might want to use different languages for different audiences, or to use a different look and navigation style for desktop and mobile device interfaces.

Applications can be deployed into multiple resources, and users are allowed to visit multiple resources in the same portal. A resource is also referred to as a co-brand.

---

**Note** Unwired Accelerator allows you to manage an unlimited number of portals, typical of Web hosting. You can configure each portal with different logos, icons, text, and colors. You can also create more complex portals by customizing portal component functionality such as global navigation buttons and self-registration forms. You can also customize the BlackBerry mobile device template for each RID.

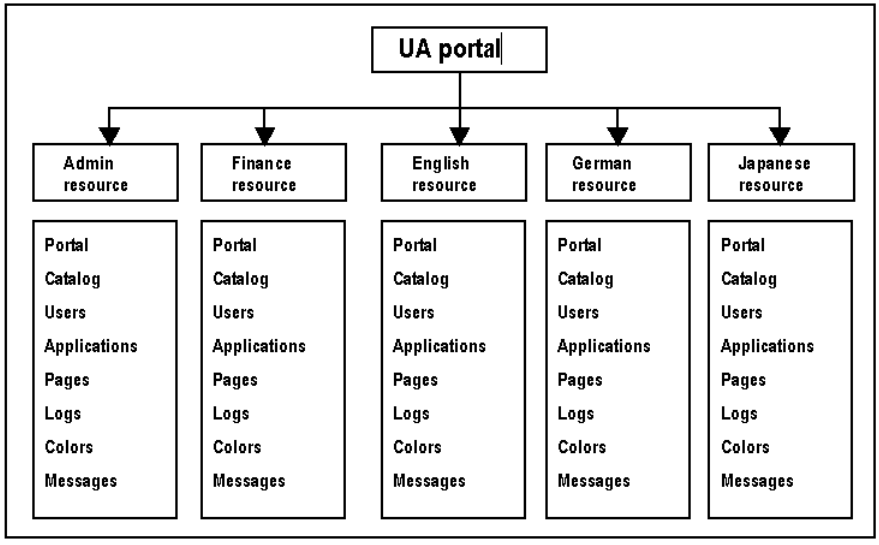
---

Each resource, or co-brand, has a row in the resources table, and that resource has a unique resource_id assigned to it when the resource is created.

The users table has a resource_id foreign key reference that identifies the default resource to which the user belongs if no resource is explicitly specified in the Portal Interface or mobile device URL. Upon login, the user works on objects in that resource.

Because each resource has its own text messages, image files, and JSPs that produce dynamic content for the portal, you can use resources to localize your portal, as illustrated in Figure 5-1, where Unwired Accelerator includes an Administrative resource and a Finance resource, as well as different resources for their English, German, and Japanese users.

***Figure 5-1: Multiple resources, one UA installation***




You can define resources to inherit attributes from other resources, which allows you to make minor user interface changes without having to reimplement large amounts of content. Inheritance is based on the `<Cobrands>` nesting structure in the *cobrands.xml* file, located in *SYBASE\tomcat\webapps\onepage\config* if you are using Tomcat. Typically, the resource inherits from the *messages.xml* and *styles.xml* files in the associated *cobrand** directory. These contain text messages (*messages.xml*) and fonts, colors, and so forth (*styles.xml*) that appear on the Portal Interface.

Each portal corresponds directly to a Mobile Web Studio resource. When you add your domain, Mobile Web Studio creates a default resource with a resource ID. The resource ID (RID) is the unique key that Mobile Web Studio assigns to all portal objects associated with that resource.

The default UA resource directory is *unwired-accelerator-21*, located in *SYBASE\tomcat\webapps\onepage\fw\cobrands*. Other default resource directories you will see in the *cobrands* directory include:

- onepage – the source resource for Portal Interface.
- onepage-1 – the default resource for Portal Interface.
- japanese-11 – an example resource that uses the Japanese language.

There must be a definition for each resource in the *cobrand.xml* file. In addition, each resource subdirectory has its own set of configuration files that override the properties in the master configuration file.

The onepage default installation gets its configuration from the contents of the onepage subdirectories, for example, the *.JSP* login page is in *onepage\fw\baseApps\fwlogin*.

When you create a new resource, you must create or import portal objects before you can access the portal from a Web browser. You can move portal objects between resources by importing and exporting those objects within Mobile Web Studio (see the *Unwired Accelerator Developer's Guide* for information about importing, exporting, and deploying portal objects).

You can also use modify the default onepage configuration using information in this chapter. The default onepage installation is located in:

Tomcat:

*SYBASE\tomcat\webapps\onepage\fw\cobrands\onepage-1*

# Creating resources

To create additional resources, repeat these steps for each resource you want to create. Each step references a procedure that gives detailed instructions.

1 Add a new resource. This step must be done by the StudioAdmin user. See "Adding resources" on page 64.

2 Create a directory for the new resource and edit the *cobrands.xml* file. This step can be done by the system administrator. See “Editing the cobrands.xml file” on page 65.

3 Copy resource-specific files to the new resource directory. This step can be done by the system administrator. See “Copying resource-specific files” on page 67.

4 Edit the resource-specific file to fit the new resource. The developer or system administrator can perform this step. See the *Unwired Accelerator Developer's Guide* for information about changing the portal display characteristics.

5 Implement the resource as described in “Implementing resources” on page 68.

**Note** Users can have multiple concurrent sessions from different Web browsers displaying different resources in the same portal.

## Adding resources

To create a resource:

1 Log in to Mobile Web Studio using a StudioAdmin role, such as `masuper`.

2 Select Manage | Users/Roles from the Mobile Web Studio left pane.

3 Select Resources from the Accelerator Manager Objects menu.

4 Select New from the toolbar, or right-click in the detail view and select New Resource. The Resource Editor displays.

5 Complete these fields:

- Resource Name – enter the resource name, for example `newResource`. This field becomes read-only once you save the resource.
- Active – indicates whether you have created the *cobrands* directory and modified the *cobrands.xml* file with the new resource. The default is Active, although the RID that is required to modify the *cobrands.xml* file is not actually generated until you finish adding the resource.

- Portal Setup Complete – leave this option unselected for now. You must select this option, after you have completed the other steps necessary to activate the portal associated with this resource (that is, after you have updated *cobrands.xml*, copied configuration files to the resource directory, and so on).
- Description – enter a description if desired; for example, "Test co-brands" or "Training division."
- Owner, Modified By, Date Created, Date Modified – these fields are filled in and updated automatically.

6 Click Save.

7 When you see the "Resource saved" message, click OK. The new resource and resource ID display in the Studio Manager detail view.

## Editing the *cobrands.xml* file

The *cobrands.xml* file defines the active resources for your portal installation. When you add a new resource, you must manually add the resource information to *cobrands.xml*:

1 Navigate to the *cobrands* directory:

Tomcat:

*SYBASE\tomcat\webapps\onepage\fw\cobrands*

2 Create a new folder using this naming format:

```
resource_name-resource_ID
```

where *resource name* is the name entered when you created the resource in Mobile Web Studio, and *resource ID* is the portal-assigned identification number. For example: *newResource-211*.

3 Navigate to the *config* directory:

Tomcat:

*SYBASE\tomcat\webapps\onepage\config*

4 Open *cobrands.xml* in any text editor and copy an existing `<CobrandDef>` section and paste it below the last `<CobrandDef>` section in the file before the `</Cobrands>` tag. For example, copy and paste the Sybase section.

5 In the section you copied, update the information to reflect the new resource. Enter:

- Rid – the resource ID generated by Mobile Web Studio; for example, 211.
- Name – the resource name; for example, `newResource`.
- Dir – the directory you created for the new resource where you copy the resource-specific files; for example, */fw/cobrands/newResource-211*.
- Charset – the character set you want the resource to use.
- EmailCharset – the character set you want the e-mail application to use.
- EmailerSetting – indicates whether the Mobile Web Studio sends an e-mail message to the user when you create a new account. A setting of "1" indicates send an e-mail message; a setting of "0" (zero) indicates not to send a message.

**Note** If you do not have an SMTP server, or if you do not want an e-mail message to be sent, set the value of emailerSetting to "0." An e-mail message is written to the *WorkRoot\emails* directory.

The value of the WorkRoot property is specified in the *global.properties.xml* file (typically *x:\tmp*); see the WorkRoot entry in "Global property group" on page 183 for additional information. The *email* file name is the e-mail address of the user.

Your entry should look similar to this:

```
<CobrandDef rid='211' name='newResource'
     dir='/fw/cobrands/newResource-211'
     charset='ISO-8859-1'
     emailCharset='ISO-8859-1'
     emailerSetting='1' >
</CobrandDef>
```

6 Save and close the *cobrands.xml* file.

## Copying resource-specific files

In this step, configure new resources by copying and modifying default resource files. This section demonstrates the required changes for setting up the resource, but you can copy and modify other default files to override default values. For more information, study some of the example resources provided with Unwired Accelerator.

1 Navigate to:

Tomcat:

*SYBASE\tomcat\webapps\onepage\fw\baseApps*

2 Copy *messages.xml* and *styles.xml* and paste them in the new resource folder you created in "Editing the cobrands.xml file" on page 65.

3 Create the subdirectory *fwdisplaystaticfile\style* in the new resource folder.

4 Navigate to the subdirectory *baseApps\fwdisplaystaticfile\style*.

5 Copy *css.css* and *css.jsp*, and paste them into the *\style* subdirectory that you just created for the new resource.

6 In a text editor, open the copied *css.jsp* file, and change the HREF location reference to the *css.css* file's location in the *\style* subdirectory for the new resource. Your entry should look similar to this:

```
%>

<%@ taglib uri="http://www.sybase.com/taglib/syp"
prefix="syp"%>
<LINK REL="stylesheet" TYPE="text/css"
HREF="<syp:appContext/>/fw/cobrands/newResource-211/
fwdisplaystaticfile/style/css.css">
```

7 Save and close the file.

## Editing resource-specific files

Edit the resource-specific files to create the interface you want for the new resource. The developer or system administrator can perform this step. See the *Unwired Accelerator Developer's Guide* for more information.

# Implementing resources

To implement a new resource, you must set up user accounts, and create portal objects in the new resource. The minimum requirement is that at least one guest page and page group is approved and active per resource.

❖ **Implementing new resources**

1 Restart the application server.

2 Open a Web browser, and log in to the Mobile Web Studio as a StudioAdmin user, such as `masuper/m8super`.

3 Either assign the new resource to an existing user account, or create a new account and assign the new resource. In either case, select the resource from the Default Resource drop-down list. The user account should be granted the StudioAdmin role to fully use the new resource.

4 Open another Web browser session, and log in to the Mobile Web Studio with the user account you created for the new resource.

5 Use the instructions in the *Unwired Accelerator Developer's Guide* to:

- Build several applications.
- Create a catalog, define some categories, and add the applications to it. Save and approve the catalog and make it Active.
- Build pages to create a guest page with an application.

6 To mark the process as completed, select Manage | Users/Roles from the Mobile Web Studio left pane, and select Resources in the Accelerator Manager pane.

7 Right-click the Resource listing in the detail pane and select Edit Resource.

8 When the Resource Editor displays, select Portal Setup Complete, then click Save.

9 When the confirmation message appears, click OK, then click Close to exit the Resource Editor.

10 When you finish, click Logout to exit Mobile Web Studio.

CHAPTER 6

# Managing Integrated Products

This chapter describes how to manage products that may be integrated with Unwired Accelerator.


| Topic | Page |
|---|---|
| Overview | 69 |
| Unwired Accelerator | 70 |
| BlackBerry client | 91 |
| Symbian/J2ME client | 103 |
| .NET container client | 104 |
| M-Business Anywhere | 105 |
| Answers Anywhere and SMS | 110 |


## Overview

This chapter provides information for managing Unwired Accelerator and the products integrated with Unwired Accelerator, such as devices, interfaces, applications, and so forth. It includes information about tools available for configuring, testing, managing, monitoring, and troubleshooting products used with UA. These topics do not replace vendor documentation, but help you use integrated products in the context of Unwired Accelerator.

# Unwired Accelerator

Unwired Accelerator provides an environment for developing mobile applications, and deploying them to the desktop (Portal Interface) and to mobile devices (BlackBerry, PocketPC, PalmOS, Symbian/J2ME, .NET, and so forth). Unwired Accelerator is configured with the Tomcat application server and Adaptive Server Anywhere (ASA) database server. By default, security is provided through the Common Security Infrastructure (CSI) framework, and the PortalDB.

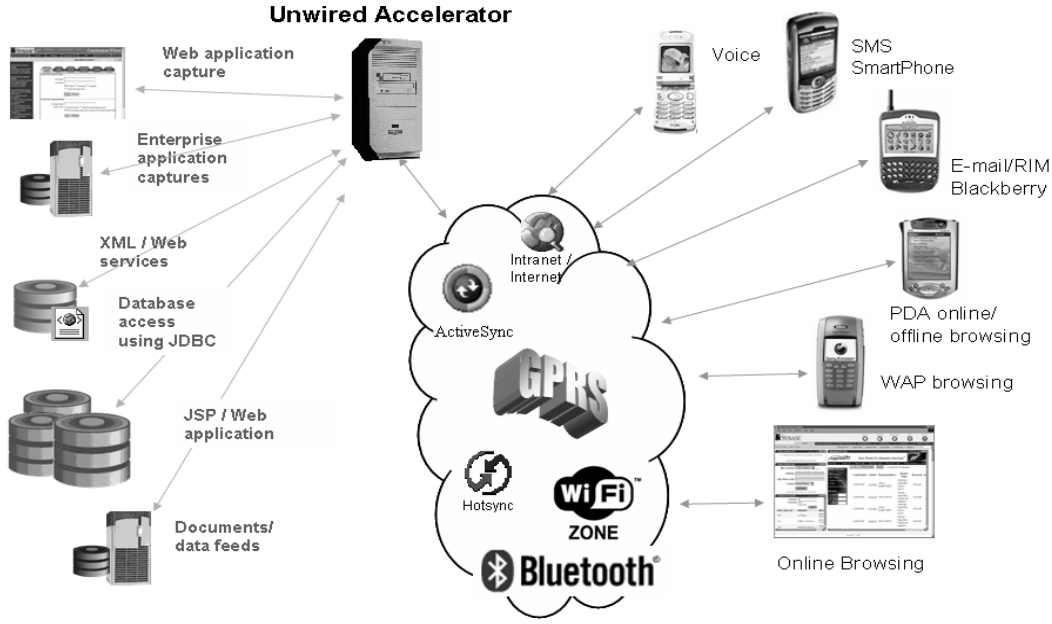
With some releases of Unwired Accelerator, you can configure Unwired Accelerator to use:

- Adaptive Server Enterprise (Adaptive Server) for the persistent storage database, instead of ASA
- CSI with LDAP for authentication and authorization, instead of PortalDB or in addition to PortalDB
- EAServer for the application server, instead of Tomcat
- Enterprise Security for security, instead of CSI
- M-Business Anywhere to deploy mobile applications (Unwired Accelerator 8.0 is integrated with M-Business Anywhere 6.0 only)
- Research in Motion BlackBerry Enterprise Server (BES) to deploy mobile applications
- Research in Motion Mobile Data Service (MDS), a component of BES, to deploy mobile applications to mobile devices
- Answers Anywhere to provide natural language search from a variety of interfaces

## Architectural overview

Typically, all Unwired Accelerator components are installed on the UA server in a network domain. Figure 6-1 on page 71 shows a functional view of Unwired Accelerator.

***Figure 6-1: Unwired Accelerator architecture***




Unwired Accelerator components include:

- CSI framework – CSI uses profiles and roles stored in PortalDB to authenticate users and authorize their access to mobile applications and data.
- onepage application – the main Web application that contains the portal engine and Mobile Web Studio.

  The Application Builder is the primary tool for: accessing element sources, whether database, Web or JSP application, Web service, file, or enterprise applications, such as SAP, PeopleSoft, Crystal Reports, Domino Objects, and so forth; capturing applications; and manipulating the application for presentation on the mobile device.

  Applications are stored in the PortalDB, and deployed to mobile devices, or to Portal Interface. The Portal Interface is a desktop interface that can be used as a portal for Web applications.
- Interfaces – mobile applications can be deployed to a variety of interfaces, including SMS, mobile devices, WAP enabled devices, and desktop, in both connected and disconnected modes.

- Mobile applications can be accessed in online mode (either through direct cradle connection or wireless access), or in offline mode (cached in the mobile device's memory).
- ASA acts as a consolidated (or reference) database for mobile applications.
  - BlackBerry and Symbian/J2ME clients get data directly from the consolidated database.
  - PDA/Smartphone
  - .NET clients (including the .NET container client and .NET clients developed with the .NET API) use the MobiLink client and UltraLite database to connect to the consolidated database via an ODBC connection.
- Synchronization – synchronization between Mobile Web Studio and mobile devices can be pushed or scheduled.
- M-Business Anywhere server and client (optional) – mobile applications are stored in the AvantGo Database (AGDB). Users access the most current version of data and application upon logging in to their mobile devices, or upon synchronization.
- Answers Anywhere (optional) – a default agent network is provided, which enables natural language search for information in mobile applications from various interfaces, including SMS, e-mail, and mobile device. The application developer can add search synonyms. If you already have a customized agent network, you can replace the default agent network with your customized version.

## Mobile application sources

Following is brief information about mobile application sources. This information is provided to help you troubleshoot problems and advise developers. See the *Unwired Accelerator Developer's Guide* for detailed information.

- Enterprise applications – provide access to enterprise applications using client interfaces using different strategies. The strategy for SAP is to download and configure an API. See "Setting up a SAP connection" on page 18.

  Another strategy uses the web service element and WSDL files to connect to enterprise applications. See Remedy tutorial in *Mobile Application Development Tutorial* for an example.

- Web application – capture Web content and display it in an application. The captured content is updated dynamically as the source Web content changes. The Web element wizard guides you through creating a Web element and provides different capture strategies, which represent the different HTML objects that you can capture from Web pages.
- Database – query a back-end database and display the results in an application, or create and update records. When you create a database element, you can either enter a JNDI resource name or a JDBC connection URL for the data source.
  - JNDI data source – use the Java Naming and Directory Interface (JNDI) to connect the application to the data source. The following default JNDI data source resources are typically included in Unwired Accelerator:
    - java:/com/env/jdbc/portaldb – connects to the portal database
    - java:/com/env/jdbc/sampledb – connects to the sample database
    - java:/com/env/jdbc/agdb – connects to the M-Business Anywhere database
    - java:/com/env/jdbc/msales – connects to the mobile sales demo database
    - java:/com/env/jdbc/mpharma – connects to the mobile pharmacy demo database
    - java:/com/env/jdbc/uaml – connects to the consolidated database used by MobilLink and SmartSync

    In Mobile Web Studio, on the New Application Database Element Definition window, select the JNDI resource name from the drop-down list; for example, “portaldb” for portal database, or “sampledb” for the sample database. You can use these data sources, or add other data sources. See “Setting up a JNDI data source resource” on page 78 for information about adding a new JNDI resource.
  - JDBC connection cache – connection information is defined when the application server is set up, and available to application developers building JDBC applications. A disadvantage is that connection changes, which must be made through the application server, may cause applications to break.

In general, connection cache definitions are safer and easier to use, but if a connection to a database is required that is not available through a connection cache, you may have to either use the full JDBC specification, or to create the necessary connection cache definition through the application server. See “Setting up a JDBC connection cache” on page 80 for information about adding a new connection cache.

- XML – capture an application that is XML-based rather than HTML-based. XML is used to describe data, while HTML is mainly used to display data. XML is a common tool for transmitting and manipulating data in Web development. This type of application is generally used by portal administrators who are familiar with XML to Extensible Stylesheet Language (XSLT) transformations.
- Web services – provide access to software that is available over the Internet and uses a standardized XML messaging system to invoke the service and supply the response. Web services are a useful way to provide data to a variety of consumers; for example, traffic reports, stock quotes, and travel services. This section provides basic introductory material about Web services and describes how to implement Web services in your portal.
- JSP/ASP applications – capture Java Server Pages (JSP) Web applications and display them in an application.
- HTML – specify HTML code that you can arrange within an application with other element types.
- Document – create applications into which you load an application document (Microsoft Word, Microsoft Excel, PDF, and so on).
- File – create applications that are based on files. The file must contain data arranged in a format that can be mapped to grid data.
- Domino – create applications that capture data—such as workflow, contacts, e-mail, and so forth—in tabular format from the Domino Notes server. Users can access their e-mail, contacts, To-Do lists, meetings, and workflow applications through their mobile devices, and update and insert data to the Domino database from their mobile devices.
- SAP – create applications that capture data in tabular format from the SAP server.

## Capture process

Following are important concepts for understanding the mobile application capture process in UA. This information is provided to help you troubleshoot problems and advise developers. See the *Unwired Accelerator Developer's Guide* for detailed information.

- Grid/table format – mobile applications that are to be deployed to BlackBerry devices must be in structured format, that is in a grid or table format.
- Spidering – in UA, a spidered application must be a data application that is in grid format, and can include server-side click across (SSCA) events or continuous capture. When the data application is captured, the SSCA links are also captured, packaged in an XML representation, and sent to M-Business Anywhere server as a "spidered application." The spidered application is sent to the mobile device, and can be accessed on the PDA by a JavaScript application that displays the data on the PDA, and on the BlackBerry device by a Java program.
- CCL – content capture language is the markup code used for captured Web content.
- Templates – templates can be applied to mobile applications to change the way they look. JSP templates can be applied to mobile applications as a post-capture step to change what is displayed.

## Playback

Following are important concepts for understanding the mobile application playback process in UA.This information is provided to help you troubleshoot problems and advise developers.

- Playback is generated in the UA server, and the data is then sent through one of a number of possible routes to the mobile device.
- When playback is requested for a mobile application, the SSCA defined on an application can have a significant performance impact, as the full spidered data is generated before the data is returned to the mobile device. Using application caching in conjunction with agents can help improve performance.

- The same CCL code is used to retrieve data whether you access the data using a mobile device or using Mobile Web Studio. If there are problems with the data accessed through a PDA, try using Web Studio to view the same data to see if the problem lies with the PDA client side or the playback within UA.
- Use personalization to control how a particular application's content is generated (in cases where content generation can be controlled by parameters).
- The Unwired Accelerator client, including the BlackBerry, Symbian/J2ME, and .NET clients, and M-Business Server's database channels require grid data, and the application must have either a single element, or multiple elements mapped to a virtual grid using labels.
- For encoding issues on the PDA client, try adjusting the application encoding setting. In general, the best choice is probably UTF-8.

## Administrative tasks

Administrative tasks for UA include the topics included in this guide, as well as the following:

- Setting the session time out value in *web.xml*.
- Helping users create web service and data source connections to applications, such as SAP, Remedy, Domino Business Objects, PeopleSoft, and so forth. See Chapter 3, "Post-Installation Configuration."
- Adding JNDI database connections. See "Setting up a JNDI data source resource" on page 78:
- Adding JDBC database connections. See "Setting up a JDBC connection cache" on page 80.
- Managing Unwired Accelerator security for your environment. See Chapter 7, "Security" for security information, and see the *Unwired Accelerator Installation Guide* for information about using LDAP, or a combination of CSI and LDAP.
- Cleaning up the PortalDB by removing agents/alerts associated with deleted users, as well as templates, applications, pages, and so forth. See the procedure for cleaning up the PortalDB in "Mobile Web Studio accounts" on page 44.

- Managing various template types used with Unwired Accelerator. See “Managing templates” on page 83.
- Managing Unwired Accelerator clients for multiple device types. See “Managing Unwired Accelerator clients” on page 84.
- Managing and monitoring synchronization between the UA server and mobile devices as needed. See “Managing synchronization” on page 85.

❖ **Setting session length**

Session information is controlled by Unwired Accelerator.

1 Open web.xml in a text editor. This file is located in SYBASE\tomcat\conf.

2 Search for `Default Session Configuration`.

3 Change the `<session-timeout>` value to the desired number of minutes. The default is 30, meaning the session times out after 30 minutes of disuse.

```
<session-config>
   <session-timeout>30</session-timeout>
</session-config>
```

4 Save the file and close the text editor.

5 Restart the database server and the application server.

---

**Note** If you are using BlackBerry with the MDS/BES server, the MDS/BES server holds the cookies containing the JSESSIONID that Tomcat uses to keep track of sessions.

---

❖ **Configuring web service connections**

You must also set the WebServiceRoot property in the UWP property group.

1 Open *webservices.properties.xml* in a text editor. This file is located in *SYBASE\tomcat\webapps\onepage\config* if you are using Tomcat.

2 Search for these properties, and change them if you want:

- ArraySize1 – the default array size. The default is 2.
- WSCache – indicates whether to use caching for processed complexTypes and definitions of wsdl. The default is “true.”
- DefaultExpireLength – the default expiration length for cached WS elements. The default is 259200000 (or 3 days).

3 Save and close the file.

4 Restart the application server to put the changes into effect.

## Setting up a JNDI data source resource

To add a new JNDI data source resource, you must make changes to these files:

- *server.xml*
- *context.xml*
- *web.xml*

The following sections provide basic configuration information; see the Tomcat 5.5.*x* documentation for detailed JNDI resource instructions at http://tomcat.apache.org/tomcat-5.5-doc/jndi-resources-howto.html.

### Step 1: adding a JNDI entry to server.xml

To add a new JNDI data source resource, you must make an entry must for the resource in the *server.xml* file located in *SYBASE\tomcat\conf* if you are using Tomcat. Here is an example for PortalDB:

```
<!-- Global JNDI resources -->
<GlobalNamingResources>
    <Resource name="jdbc/portaldb" auth="Container"
      type="javax.sql.DataSource"
      driverClassName="com.sybase.jdbc3.jdbc.SybDriver"
      url="jdbc:sybase:Tds:labxp.sybase.com:4747”?
      servicename=portaldatabase"
      username="dba"
      password="SQL"
        maxActive="20"
        maxIdle="10"
        maxWait="20000"/
```

❖ **Updating server.xml**

1 Open the *server.xml* file with a text editor.

2 Copy and paste an existing section of code, such as the PortalDB section, to use as a template.

3 Modify the resource name, driver, URL, and service name values using the template values as a guide.

4 Modify the database connection values:

- Username – the database user name
- Password – the database password
- maxActive – the maximum number of database connections allowed. This value should reflect the maximum expected user load for the database.
- maxIdle – the maximum number of idle database connections available at all times. This value should reflect expected user load fluctuation for the database.
- maxWait – the maximum length of time to wait for a database connection. If additional connections are requested that exceed the maxActive property, the additional connections are put into a wait state until an available connection is returned to the pool. maxWait throws an exception when the defined time is exceeded.

**Note** See "Data connections" on page 152 for performance and tuning guidelines for data connections defined in *server.xml*.

5 Save and close the file.

### Step 2: adding a JNDI entry to context.xml

To add a new JNDI data source resource, you must also make an entry for the resource in the *context.xml* file located in *SYBASE\tomcat\conf*. An entry in this file makes the data source you created in *server.xml* available to all Web applications. Here is an example for PortalDB:

```
<ResourceLink global="jdbc/portaldb"
name="jdbc/portaldb"
type="javax.sql.DataSource"/>
```

Instead, you could set up a data source for a particular Web application using the Web application's ...*META-INF\context.xml* file. This is described in the JNDI resource instructions at http://tomcat.apache.org/tomcat-5.5-doc/jndi-resources-howto.html.

### Step 3: adding a JNDI entry to web.xml

To add a new JDNI data source resource, you must also make an entry in *web.xml*.

There are several instances of *web.xml* in the Unwired Accelerator installation. The initial instance is located in *SYBASE\tomcat\conf* as part of the original Unwired Accelerator installation. Each subsequent instance of *web.xml* is created and configured when a Web application is deployed; for example, when Mobile Web Studio is deployed, *SYBASE\tomcat\webapps\onepage\WEB-INF\web.xml* is created and configured. Each deployed Web application has its own *web.xml* file in that application's associated *WEB-INF* directory.

Here is an example for PortalDB:

```
<resource-ref>
   <description>PortalDatabase</description>
   <res-ref-name>jdbc/portaldb</res-ref-name>
   <res-type>javax.sql.DataSource</res-type>
   <res-auth>Container</res-auth>
</resource-ref>
```

**Note** All configured *web.xml* entries and resources are placed in the java:comp/env portion of the JNDI namespace.

## Setting up a JDBC connection cache

When you create a database element, you can use a JDBC URL and JDBC driver to connect to the data source. This method is not as efficient as a connection pool, but is useful for testing, training, and demonstrating applications.

### SQL Server

This section describes two variations for setting up a SQL Server cache – one sets up a global cache that is available to all Web applications, the other sets up a cache that is available to particular Web application.

❖ **Setting up a SQL Server cache for all Web applications:**

1 Copy the *msbase.jar*, *mssqlserver.jar*, and *msutils.jar* to both:

*SYBASE\tomcat\common\lib*

*SYBASE\tomcat\webapps\onepage\WEB-INF\lib*

2 Edit *SYBASE\tomcat\conf\server.xml* and add the following inside the `<GlobalNamingResources>` section:

```
 <Resource name="jdbc/sqlserver" auth="Container"
type="javax.sql.DataSource"

driverClassName="com.microsoft.jdbc.sqlserver.SQLServe
rDriver"
url="jdbc:microsoft:sqlserver://win2k3:1433"
username="sa"
password=""
maxActive="20"
maxIdle="10"
maxWait="20000"/>
```

3 Edit the *SYBASE\tomcat\conf\context.xml* file and add the following inside the `<Context>` section:

```
<Resource name="jdbc/sqlserver" auth="Container"
type="javax.sql.DataSource"

driverClassName="com.microsoft.jdbc.sqlserver.SQLServe
rDriver"
url="jdbc:microsoft:sqlserver://win2k3:1433"
username="sa"
password=""
maxActive="20"
maxIdle="10"
maxWait="20000"
removeAbandoned="false"
removeAbandonedTimeout="60"
logAbandoned="false"/>
```

That should show the `sqlserver` cache as a drop-down in the database capture wizard. You will need to modify the hostname, port, username, password in the above entries appropriately for your data source.

❖ **Setting up a SQL Server cache for a Web application:**

1 Copy the *msbase.jar*, *mssqlserver.jar*, and *msutils.jar* to both:

*SYBASE\tomcat\common\lib*

*SYBASE\tomcat\webapps\onepage\WEB-INF\lib*

2 Edit the *SYBASE\tomcat\webapps\onepage\META-INF\context.xml* file and add the following inside the `<Context>` section:

```
<Resource name="jdbc/sqlserver" auth="Container"
type="javax.sql.DataSource"

driverClassName="com.microsoft.jdbc.sqlserver.SQLServe
rDriver"
url="jdbc:microsoft:sqlserver://win2k3:1433"
username="sa"
password=""
maxActive="20"
maxIdle="10"
maxWait="20000"
removeAbandoned="false"
removeAbandonedTimeout="60"
logAbandoned="false"/>
```

3 Edit the *SYBASE\tomcat\webapps\onepage\WEB-INF\web.xml* file and add the following inside the `<web-app>` section:

```
 <resource-ref>

<description>SQLServer Sample DB</description>
<res-ref-name>jdbc/sqlserver</res-ref-name>
<res-type>javax.sql.DataSource</res-type>
<res-auth>Container</res-auth>
</resource-ref>
```

That should show the `sqlserver` cache as a drop-down in the database capture wizard. You will need to modify the hostname, port, username, password in the above entries appropriately.

## Oracle

To set up Oracle, follow the same steps as SQL Server, but substitute the Oracle JDBC URL and driver values in this format:

```
url="jdbc:oracle:thin:@<host>:1521:<OID>"
```

```
driverClassName="oracle.jdbc.driver.OracleDriver"
```

Oracle provides multiple JDBC drivers and above is the thin version. If you use other types your URL will change too. Also, contact your Oracle DBA for the hostname, OID, username, and password values to use.

## Managing templates

This section describes several template types available with Unwired Accelerator. Understanding the various template types is useful for granting access, and directing users to the correct template.

- Template Editor – Unwired Accelerator provides a template editor that enables you to create HTML, JSP, XML, and XSL templates from Mobile Web Studio. The template editor includes a wizard for creating mobile device templates. The mobile device templates can be modified from the Template Editor or Application Builder.

  See the *Unwired Accelerator Developer's Guide* for information about using the Template Editor.

- Mobile device templates – Unwired Accelerator enables you to preview an application for various device types, and to modify the mobile application and the mobile device template during the development phase. You can associate multiple device type templates to a mobile application, enabling you to develop a single application that can be deployed to multiple devices.

  See the *Unwired Accelerator Developer's Guide* for information about creating and using mobile device templates to develop mobile applications.

- JSP templates – Unwired Accelerator provides several hooks for incorporating JSP code to capture or playback mobile applications. You can reference JSP code in files, or you can create templates that include the JSP code and apply the template to the mobile application.

  Allowing users to create their own JSPs and have them executed in the same VM and in the same context as other Unwired Accelerator requests introduces the possibility for users to implement JSPs in inappropriate ways. To prevent this, ensure that suitable access permissions are applied to the *SYBASE\UA80\tomcat\webapps\onepage* directory, and make sure that appropriate security is applied when accessing Mobile Web Studio to ensure that only authorized personnel can edit the applications and associate JSPs with them.

  See the *Unwired Accelerator Developer's Guide* for information about creating JSP templates, and implementing JSP code to capture and playback mobile applications.

- BlackBerry client templates – Unwired Accelerator enables you to modify the BlackBerry client template from Mobile Web Studio.You can change the look and feel of the BlackBerry client, and deploy the updated client to mobile devices. You can create a different BlackBerry client template for each resource, which enables you to brand and localize the client.

  See "Customizing BlackBerry client device templates" on page 95 for information.

## Managing Unwired Accelerator clients

This section describes how to manage the .NET client, BlackBerry client, and UA client. In general, you will need to do the following (specific information is provided in sections that follow):

- Make UA clients (BlackBerry, Symbian, and .NET) available for download for mobile devices, either via file download or over the air (OTA).

  Work with developers to make a custom .NET client, created with the .NET client development tools, available for download to mobile devices. See the *Unwired Accelerator Developer's Guide*.

- Customize default BlackBerry client template for each RID (look and feel, graphics). See "BlackBerry client" on page 91.
- Customize default Symbian/J2ME client template (look and feel, graphics). See "Symbian/J2ME client" on page 103.
- Customize default .NET container client (look and feel, localization, graphics, messages, and so forth). Users can further customize the .NET container client from the mobile device. See the *Unwired Accelerator Developer's Guide*.

By default, the UA clients and OTA version of the clients are located in these locations:

- BlackBerry UA client
  - *SYBASE\tomcat\webapps\onepage\bb*
  - *SYBASE\tomcat\webapps\onepage\ota\bb* (OTA)
- Symbian/J2ME UA client
  - *SYBASE\tomcat\webapps\onepage\j2me*
  - *SYBASE\tomcat\webapps\onepage\ota\j2me* (OTA)

- .NET container client
  - *SYBASE\tomcat\webapps\onepage\ota\wm* (OTA)

**Note** In some cases, you may want to establish subdirectories for various mobile device types. For example, you may have multiple Windows Mobile devices types, and want to set up a subdirectories for UA clients by device type, such as ...*onepage\ota\wm\ppcclient*.

## Managing synchronization

Unwired Accelerator enables you to manage synchronization between Mobile Web Studio and mobile devices from Mobile Web Studio.

You can configure automated push for an application either from the Mobile Web Studio, or from an off-line mobile device. From Mobile Web Studio, the administrator can assign an application to one or more registered mobile users. From a mobile device, an individual user can subscribe to an application and, if authorized, modify the subscription. Either way, automated push ensures that off-line mobile users automatically get updates as data in the database changes.

### Setting up an application for automated push

Your mobile device users must have installed a UA client on their device; have configured a UA profile and either SMS or e-mail connection, and have synchronized at least one application in order for them to be visible from Mobile Web Studio.

❖ **Setting up an application for automated push**

1 Log in to Mobile Web Studio.

2 Select Build | Applications | Approved from the left pane.

3 Right-click an application in the right pane, and select Show Subscriptions. The Subscriptions window displays. Any existing subscriptions to the application display.

**Note** Profiles are not listed until one or more of your users installs the UA mobile offline client on their device, and creates a profile that accesses this UA server. During device profile creation, the UA mobile application registers the device and user information with the UA server.

4 Click New. The New Subscriptions window displays.

5 On the Subscription window, click one or more user profiles to subscribe to the application.

6 Fill out the following push synchronization information (these settings apply to all the applications selected).

- Sync Interval (Minutes) – defines the minimum interval of time during which a users will have changes pushed out to their device. If you set it to 60, then even if the application data changes every few minutes, the UA server will only update the device's data once an hour.
- Push – indicates whether to enable synchronization for the application. If set to Y, synchronization is enabled; if set to N, synchronization is not enabled (you can set up synchronization values in advance, but not enable the process).
- Admin Assigned – determines whether a user can override this subscription from their mobile device. If set to Y, the subscription can only be edited through Mobile Web Studio by a user with necessary permissions, and the mobile user cannot change their own subscription from the AppInfo form on their mobile device. If set to N, the user can override the values from the device.

Click OK to create the push subscription, and close the Subscription window. The subscriptions displays on the Subscriptions list.

- Name – the application name, such as `employeeSales`.
- User – the user name, such as `masuper`.
- Device ID – the device ID, such as `2100000A`.
- Profile – the profile name, such as `mwsAdmin`.
- Count – record count for the last synchronization, such as `100`.
- Last – the date and time of the last synchronization.
- Sync interval – the minimum interval between synchronizations, in minutes; for example, `60` indicates 60 minutes.
- Push – whether synchronization is enabled for the application.
- Admin – whether the users can override the synchronization settings from the mobile device.

7 To push the application immediately, right-click the subscription, and select Device | Synchronize. UA server pushes the application to the specified device immediately.

**Note** The first time any user obtains a push-subscription for an application, UA server automatically creates an agent to monitor the application for changes.

8 You can click Close to close the Subscription window, or work with the automated push subscriptions.

❖ **Working with automated push subscriptions**

Once you create a subscription, you can edit, delete, execute or refresh the subscription. Additionally, you can force synchronization to the selected device immediately, or delete the subscription from the device.

1 Log in to Mobile Web Studio.

2 Select Build | Applications | Approved from the left pane.

3 Right-click an application in the right pane, and select Show Subscriptions. The Subscriptions window displays.

4 Select an application, and select a button from the top of the window to do the following:

- Edit – the subscription window displays, and you can modify any of the subscription values on the UA server.
- Delete – delete the subscription from the UA server.
- Execute – synchronize the application to the device immediately.
- Refresh – refresh the screen to see the latest synchronization values.

**Note** These buttons affect only the UA server.

In addition, you can right-click the subscription, select Device from the cascading menu, and:

- Synchronize the application to the selected device immediately.
- Delete the subscription from the device and the UA server.

5 On the Subscription window, click one or more user profiles.

## Working with push agents

The first time any user obtains a push-subscription for an application, UA server automatically creates a local agent to monitor the application for changes.The nature of the agent depends on application settings:

- If the application has a non-Real Time Content Cache Interval set (the example in the Mobile Application Development Tutorial shows a 15 minute interval), the agent is created with a schedule to re-execute the application and look for changes at the same interval, and the agent starts immediately.
- If the Content Cache Interval is left as Real Time (the default), the agent is created, but is left in the Stopped state.

The local agent looks the same as any agent created in Mobile Web Studio. You can edit them, start and stop them, and view their logs. Agents are described in the *Unwired Accelerator Development Guide*, but this section provides information that pertains to push agents.

### ❖ Viewing push agents

1 From Mobile Web Studio, select Automate | Agents from the left pane.

2 Select Ready (or Stopped) from Agent Manager | Status in the middle the middle pane. The agents are listed in the right pane. Agent details include:

- Name – the application name, such as `poll-employeeSales`.
- Details
- Owner – the application owner, such as `masuper`.
- Last Run – the date and time the agent last ran.
- Last result– the result of the last agent run.
- Next run – the date and time of the next scheduled run for the agent.

3 Right-click an agent in the right pane, such as poll-employeeSales, and select Edit. The Agent Builder window displays.

4 The Agent Builder works just as described in Unwired Accelerator Development Manager. Of special interest for push agents:

**Schedule tab** If the “Recurrence” setting should match the “Content Cache Interval” if it was set for the mobile application.

**Action tab** For the “Deliver” action, select the action and click Edit. The Action Details window displays. You can see details about how the agent runs:

- Description – the description you entered.
- Destination Viewer
- User List Adapter – if an auto-filled adapter is used, such as `region`, select "push-registered users" from the drop-down list. This enables UA server to detect changes at the personalized content level for each subscribed user.

  **Note** Using the "push-registered users" user-list feature can cause performance problems with the UA server if the frequency of the agent is low, or the number of users is large. Sybase recommends not using push subscriptions for applications that use autofill adapters to personalize the application. That way the agent can just execute the application once each time it runs, in the context of a "default" user, and generate notifications to all subscribers as data changes.

- Destination set – Trash Can indicates that when the agent runs, the results are discarded.
- Portlet set

Make modifications and click OK to save and exit, or click cancel to exit.

5 From Agent Builder, click Close to save the changes.

Each time the agent executes, the agent retrieves a list of all the users who are subscribed for push notifications on the application, and will execute the application as each of the users in turn, at each point checking to see if the data has changed since the last time. Whenever the data has changed, UA sends a notification only to those users who are monitoring for changes.

## Viewing mobile users

Mobile Web Studio enables you to view all registered mobile clients. A mobile client refers to a unique combination of a mobile users, device ID, and profile name. You can view list subscriptions, delete profiles, and create subscriptions.

❖ **Viewing mobile users**

1 From Mobile Web Studio, select Manage | Users/Roles from the left pane.

2 Select Accelerator Manager | Objects | Users | Mobile Users in the middle pane. A list of registered mobile clients displays in the right pane.

3 Select a users. A list of Unwired Accelerator users displays. Mobile client details include:

- User Name – the mobile device users, such as `masuper`.
- Device ID – the device identifier, such as `2100000A`.
- Profile – the resource identifier, such as `Res21`.
- Protocol – the communications protocol used, such as `UAMAIL` or `SMS`.
- Email – e-mail used, such as `simulation@this.nuclient`.
- Client application – the name of the application.

4 Select a mobile client and do one of the following (either click the button, or right-click the mobile client and select from the pop-up menu):

- List – list subscriptions.
- Delete – delete the profile.
- New – create subscriptions for the selected applications and mobile users.

## Troubleshooting push synchronization

The MobiLink server has a GUI console with a scrolling window of log messages, as well as a */tmp/logs/ml.log* log file. In the current default configuration, the console and log files show only warning and error messages, but you can turn up the verbosity level so that each server initiated push message is shown as well.

As you test push notifications to user devices, monitor these logs to see that the notifications are indeed getting out of UA and over to MobiLink. If the push synchronization is not working on the user's device, have users start analyzing things down-stream from MobiLink to isolate the error.

# BlackBerry client

In UA 8.0 you can deploy mobile applications directly from Mobile Web Studio to the BlackBerry device, including over the air (OTA). Unwired Accelerator does not require the BES server to operate, but some functionality, such as push synchronization, requires Internet and e-mail service. Optionally, you can set up the UA client for direct TCP/IP connection through your carriers that support it.

The method are available for deploying mobile applications from Mobile Web Studio to BlackBerry devices:

- Offline mode – make sure the "Make available for disconnected mobile devices" box is selected in the Properties Editor in Application Builder. To use offline mode, the UA offline BlackBerry client must be available on the BlackBerry device.
- Online mode – use pages and page groups to create a container for the mobile application. See the *Unwired Accelerator Developer's Guide* for more information.

Two BlackBerry clients are available for running mobile applications on the mobile device:

- UA offline client – provides access to mobile applications developed in UA and deployed to the mobile device. UA Server stores the list of applications marked "Make available for disconnected mobile devices". The BlackBerry offline client sends a Refresh Apps request to the UA Server for the list of applications that has the "Make available for disconnected mobile devices" attribute turned on. You select an application from the list, and Sync the application. The mobile application is cached in memory on the mobile device.
- BlackBerry browser – provides real-time access to mobile applications and data. If an application cannot be opened in UA offline client, the BlackBerry browser is used.

Table 6-1 on page 92 describes the advantages and disadvantages for using UA offline client and BlackBerry browsers. Use the information to troubleshoot mobile application problems.

***Table 6-1: UA client versus BlackBerry browser***

| Option | Advantages | Disadvantages |
|---|---|---|
| UA offline client | • Has better table UI support. BlackBerry browser does not support tables. Has list/detailed view of records. We can control the columns in the list/detail view.<br>• Provides offline access to data. The application data is stored in device memory.<br>• Access content quicker since data is stored in memory. | • Not live application content.<br>• Requires network connection to sync.<br>• Memory limits on mobile devices. |
| BlackBerry browser | • Real time access to data. Application data is always up-to-date because it is always online.<br>• No need to sync. | • Cannot access application content if you are out of range (no network connection). Need to be always connected.<br>• Lack of table UI support. Columns are wrapped to the next line. |

## Architectural overview

Use Mobile Web Studio to create mobile applications bound for BlackBerry devices. The “Make available for disconnected mobile devices” box in the Properties Editor must be selected to indicate that it is for a device in offline mode.

The mobile applications are deployed from Mobile Web Studio to mobile devices. If M-Business Anywhere is configured, the applications are stored in the AGDB database. If BES is configured, the applications pass through to the mobile devices).

An offline client program, which provides an interface to the mobile applications, must be installed on the user’s BlackBerry device. The UA client enables the user to request synchronization; to use the downloaded mobile applications; to request, sort and manipulate data; and to clean out old data and applications. Mobile applications that cannot be viewed from the UA client are automatically opened in the Web browser.

The JVM on the BlackBerry device has an internal limitation of 128K for the amount of data it can process at a time. When syncing large applications, the application is parsed into smaller chunks, if the BlackBerry device has sufficient memory to handle the parsed chunks.

## Administrative tasks

Administrative tasks for managing UA and BlackBerry integration include:

- Make the offline client program available to BlackBerry users. Develop a process for downloading these files either to the user's BlackBerry Desktop Manager, or over the air (OTA).
  - *Uaclient.alx* and *Uaclient.cod* – these are the UA client files
  - *Uaframework.alx* and *Uaframework.cod* – these are the framework files for the push synchronization feature.
  - *Ualistener.alx* and *Ualistener.cod* – these are the listener files for the push synchronization feature.

  The user can download the files to the BlackBerry device or simulator as described in "Installing the UA offline client" on page 93.

  **Note** Inform users to install the *Uaframework.** files before installing *Uaclient.** and *Ualistener.** files.

- Manage user accounts for BlackBerry users in Mobile Web Studio. Develop a process for instructing the user to set up an account on the BlackBerry device or simulator. See "BlackBerry accounts" on page 53. You can also set up a default user profile as part of the BlackBerry template.
- Create a custom BlackBerry client template for each resource ID. See "Customizing BlackBerry client device templates" on page 95.

## Installing the UA offline client

This section shows how to install the Unwired Accelerator offline client application on a BlackBerry device via the BlackBerry Desktop Manager or over the air (OTA), and on a simulator. The offline client enables you to use the applications you create through Unwired Accelerator on your BlackBerry device in offline mode.

- The UA offline client is available in:

  *SYBASE\tomcat\webapps\onepage\bb*

- The OTA version of the UA client is available in:

  *SYBASE\tomcat\webapps\onepage\ota\bb*

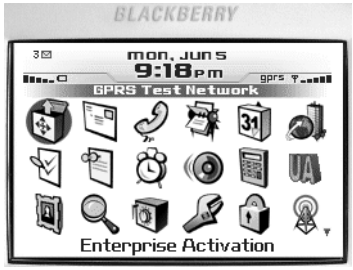
Develop a process for making the offline client available for BlackBerry users.

❖ **Installing an offline client on a BlackBerry device**

1 On the BlackBerry device, use the BlackBerry browser to navigate to `http:/hostname.domain:port\onepage\ota\bb\direct`.

2 Download the *Uaclient.**, *Uaframework.**, and *Ualistener.** files to the device.

3 On the BlackBerry device, you see the Unwired Accelerator (UA) icon.




4 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.

5 Set up a user on the BlackBerry device as described in "BlackBerry accounts" on page 53.

❖ **Obtaining the offline client OTA**

1 On the BlackBerry device, use the BlackBerry browser to navigate to `http:/hostname.domain:port\onepage\ota\bb`.

2 First download: *Uaframework.jad*. This downloads the UA framework, needed for push synchronization.

3 Then download the following to install the UA client, and the UA listener also needed for push synchronization:

- *Uaclient.jad*
- *Ualistener.jad*

❖ **Installing an offline client on a BlackBerry simulator**

A BlackBerry simulator, installed on the desktop, can be a useful tool for testing and troubleshooting mobile applications during development.

1 Navigate to *SYBASE\tomcat\webapps\onepage\ota\bb\direct*.

2 Copy the *Uaclient.**, *Uaframework.**, and *Ualistener.** files into your BlackBerry simulator installation directory:

*RIM\Research In Motion\BlackBerry JDE 4.x\simulator*

3 Optionally, select Start | Programs | Research In Motion | BlackBerry Java Development Environment 4.1.*x* | 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 4.1.*x* | Device Simulator to start the BlackBerry device simulator. You can minimize the Device Simulator window.

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 window 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 "BlackBerry accounts" on page 53.

## Customizing BlackBerry client device templates

You can customize BlackBerry device templates from the resource manager (Manage | Devices) or the template manager (Build | Templates) in Mobile Web Studio. Each resource ID can have one active BlackBerry template.

---

**Note** Developers can also modify how applications display on various device types, taking into account screen dimensions and orientation. This is different from customizing BlackBerry client device templates for a specific RID. See the *Unwired Accelerator Developer's Guide* for information about modifying how an application displays on various device types.

---

Once you customize the BlackBerry client device template, you must run a script to create new *.cod*, *.alx*, and *.jad* files.Before you can run the script, you you need the following:

- RIM JDE 4.0.2 – install Java Development Environment (JDE) 4.0.2 on the same machine as Unwired Accelerator. You can download the RIM JDE for no charge.

- RIM Code signature – obtain a code signature from RIM. You can request the code signature from RIM by submitting a form, paying a fee (typically $100.00), and obtaining the user name and password that you will need.

**Note** To learn more about code signatures, see the BlackBerry JDE 4.0 *BlackBerry Application Developer Guide*, Volume 2.

When you run the script, the Signature prompts you for the code signature, then creates new files. You can push the updated BlackBerry client to users, or inform them the updated files are available OTA.

❖ **Customizing the BlackBerry device template**

1 Log in to Mobile Web Studio.

2 Select Manage | Devices from the Mobile Web Studio left pane.

3 Under Device Manager, navigate to Objects | Customization | Templates.

4 Select New from the toolbar in the right pane. The Device Template Customization window displays.

5 Select each of the tabs and make modifications.

- Device tab – change the template name, COD file name, and set client version, icons, and default profiles. See “Device tab” on page 98.
- Application List tab – set the header, footer, application for list view, including images, font color, font type, and font size. See “Application List tab” on page 99.
- Application View tab – set the default header, row, and alternate row properties, and unique settings for individual applications. See “Application View tab” on page 101.
- Splash Screen tab – identify the splash screen and text for the UA client. See “Splash Screen tab” on page 102.
- Menu tab – design the main menu and application menu, and rename menu options if desired. See “Menu tab” on page 102.

6 Select Finish to save and close Device Template Customization.The new template displays on the Mobile Web Studio right pane. The template customization settings are saved as an XML template, and linked to a resource ID.

Before you can deploy the new BlackBerry template, you must build a new BlackBerry client.

7 Verify that any icons you changed are placed in this directory, or the images will not be included in the new BlackBerry client:

```
SYBASE\tomcat\webapps\onepage\bb\customization\images
```

❖ **Installing JDE 4.0.2**

To build the new BlackBerry client, you need the RIM JDE 4.02 installed on the same machine as Unwired Accelerator. The scripts use RIM executables that are packaged with the JDE.

1 In a Web browser, navigate to the RIM download Web site at http://www.blackberry.com/developers/downloads/jde/index.shtml.

2 Under Downloads, select BlackBerry Java Development Environment v4.0.2.

3 On Software Download for Developers, select BlackBerry Java Development Environment v4.0.2 and click Next.

4 Follow the prompts and instructions to install the JDE on the same machine as Unwired Accelerator.

❖ **Obtaining a code signature**

To build the new BlackBerry client, you also need to obtain a code signature from RIM. To learn more, see see the RIM Web site at http://www.blackberry.com/developers/downloads/jde/api.shtml.

1 In a Web browser, navigate to the BlackBerry Code Signing Keys Order Form at https://www.blackberry.com/SignedKeys/.

2 Fill out the form as required and submit payment to RIM. Once your request is processed, you receive the private key and password via e-mail.

❖ **Building a new BlackBerry client**

You must build the BlackBerry client on a Windows machine, which requires JDK 1.4.2 or later. When you request to build the BlackBerry client, UA server generates the customization XML. The customization XML is zipped in with the BlackBerry client libraries, ant, and RIM utilities. A script, which implements a Signature Tool, generates new ALX, COD, and JAD files.

1 From Mobile Web Studio, highlight the template in the right pane.

2 Select the down arrow from the toolbar in the right pane (the tooltip indicates Build). You are prompted to provide the destination for the *customization.zip* file.

3 Supply the destination for the file, typically *SYBASE\tomcat\webapps\onepage\ota\bb\direct\customization*. You can browse to the location. The *customization.zip* file is downloaded.

4 Navigate to the location, and extract the files in the destination you specified, such as *SYBASE\tomcat\webapps\onepage\ota\bb\direct\customization*.

5 Double-click run.bat to run the script. The script runs.

6 When the Signature Tool prompts you, enter the private key and password you received from RIM, and click OK.

When the script finishes, the new *.cod*, *.alx*, and *.jad* files are generated and placed in the *\build* directory where the files were extracted; for example:

*SYBASE\tomcat\webapps\onepage\ota\bb\direct\customization\build\cod files*

7 Navigate to the these locations.

8 Move the files to the BlackBerry, OTA, or simulator directories:

- *SYBASE\tomcat\webapps\onepage\bb*
- *SYBASE\tomcat\webapps\onepage\ota\bb*
- *RIM\Research In Motion\BlackBerry JDE 4.x\simulator*

9 Notify BlackBerry users that the new BlackBerry client is available. You can use a push sync notice to do so, as described in “Managing synchronization” on page 85.

## Device tab

The Device tab enables you to change the template name, COD file name, and set client version, icons, and default profiles.

***Table 6-2: Device tab parameters***

| Parameter | Description |
|---|---|
| Name | The template name, such as `Mobile-Customization`. This will be the default template associated with the resource.<br>To create a new template, enter a new name. All changes you make are associated with the new template name when you save the template.<br>To edit an existing template, enter the template name. |

| Parameter | Description |
|---|---|
| Cod Name | The compiled source code file name (.COD) of the UA client, such as `Uaclient` (you do not need to include the .COD extension). This associates the template with the client, so each COD file name must be unique. |
| **Client Version and Icon** | |
| Set Client Version and Icon | Indicates whether you want to set the UA client version or specify an alternate desktop icon. The default values are displayed in the "Version number" and "Desktop Icon" fields, but are grayed out. If these values are appropriate, you do not have to select this checkbox. |
| Version number | If activated, enter the version number for the UA client, such as `2.4.6`. You can use the software version number, or develop your own versioning method. |
| Desktop Icon | If activated, enter the desktop icon for the UA client, such as `epunwired.png`. You can use the default UA icon, or you can use an icon that reflects branding or localization. Icons must be filed in:<br>`SYBASE\tomcat\webapps\onepage\bb\customization\images`<br>Restrict icon dimensions to 19 pixels wide and 16 pixels high, so they do not have to be rescaled on the BlackBerry device. |
| **Default Profile** | |
| Create Default Profile | Indicates whether you want to define a default profile, so when a user first launches the UA client, the profile is active on the BlackBerry device. The default values are displayed in the "Profile name," "Server name," "Port number," and "Resource" fields, but are grayed out. If these values are appropriate, you do not have to select this checkbox. |
| Profile name | The profile name for the default user profile, such as `Mobile`. |
| Server name | The Unwired Accelerator server name, such as `labxp`. |
| Port number | The Unwired Accelerator port number, such as `4040`. |
| Resource | Select a resource from the drop-down list, such as `Japan Inc.` or `Mobile Studio`. |

## Application List tab

The Application List tab enables you to modify the look of the application list view on the BlackBerry device. You can specify images, text, font, and background color for various header, footer, and application screen regions. You can also reorder the application list, eliminate applications from the list, and associate icons with each application in the list.

***Table 6-3: Application list tab parameters***

| Parameter | Description |
|---|---|
| Use images | Indicates whether to use an icon in the header. If you select this checkbox, the Icon field under Header becomes active, and you can specify a graphics file for the header. |
| **Header** | |
| Icon | If activated, the header icon for the application list view window, such as `header.png`. Icons must be filed in:<br>`SYBASE\tomcat\webapps\onepage\bb\customization\images`<br>Restrict icon dimensions to 19 pixels wide and 16 pixels high, so they do not have to be rescaled on the BlackBerry device. |
| Text | The header text, such as `Unwired Accelerator`. Non-ASCII characters can be used.<br>**Note** Note that if the header name is changed, i18n will not work for the header names, since the resource bundle is not used for custom header names. |
| Font color | The text color used in the header, such as #FFFFFF for white. The font color should contrast with the background color. |
| Background Color | The background color used in the header, such as #000000 for black. |
| **Footer** | |
| Text | The footer text, such as `Copyright 2004-2006, Sybase, Inc.`. |
| Font Color | The text color used in the footer. The font color should contrast with the background color. |
| Background Color | The background color used in the footer. |
| **Applications** | |
| Default Font Color | The font color used in the application list. The font color should contrast with the background color. |
| Default Border Color | The color used to outline the selected item in the application list. |
| Background Color | The background color used in the application list. |
| **Sequence/Application** | |
| Sequence/Application | Each application available for the profile and resource is listed. Use the up and down arrows to reposition the applications in the order you choose. |
| Display Name | The name of the application as it appears on the application list. You can shorten or clarify a name, or localize it. For example, shorten `employeeSales` to `Sales`. |

| Parameter | Description |
|---|---|
| Icon | The icon for the application, such as `sales.png`. The icon is displayed to the left of the application name. Icons must be filed in:<br>`SYBASE\tomcat\webapps\onepage\bb\customization\images`<br>Restrict icon dimensions to 19 pixels wide and 16 pixels high, so they do not have to be rescaled on the BlackBerry device |
| Add to Menu List | Indicates whether to include the application in the application list. If you select the checkbox, the application is added to the menu list, otherwise the application is omitted. |

**Note** For colors, you can either select a color from the palette, or specify a value such as #AEC6A2.

## Application View tab

The Application View tab enables you to modify the look of the application view on the BlackBerry device. You can specify the default header and row properties, including background colors, alternate row color, and text color. Additionally, you can specify alternate settings for individual applications.

***Table 6-4: Application view tab parameters***

| Parameter | Description |
|---|---|
| **Default properties** | |
| **Header properties** | |
| Background Color | The default background color used in application view if no other background color is specified for an application, such as `#006C85`. |
| **Row properties** | |
| Alternate Row Color | Indicates whether you want alternate row colors on the BlackBerry device. Alternating row colors may make the grid text easier to read. If this box is selected, alternate row colors are used. If the box is not selected, the default row color is used. |
| Row Text Color | If alternate row colors are not enabled, the text color used in the grid row. |
| Row Background Color | If alternate row colors are not enabled, the background color used for grid rows. |
| **(Alternate row color properties)** | |
| Even Row Background Color | If alternate row colors are enabled, the background color used for even-numbered grid rows. |
| Even Row Text Color | If alternate row colors are enabled, the text color used for even-numbered grid rows. |

| Parameter | Description |
|---|---|
| Odd Row Background Color | If alternate row colors are enabled, the background color used for odd-numbered grid rows. |
| Odd Row Text Color | If alternate row colors are enabled, the text color used for odd-numbered grid rows. |
| **Applications** | |
| Use Default Properties | For each application in the list, indicates whether to use the default properties. By default, the default properties are used. To change the properties for one or more applications, de-select the checkbox. You can specify the header, row, and alternate row properties for the application. |

## Splash Screen tab

The Splash Screen tab enables you to provide a splash screen or welcome message for the UA client. When a user opens the UA client, the screen or welcome message display.

***Table 6-5: Splash screen tab parameters***

| Parameter | Description |
|---|---|
| Splash Screen Image | Optionally, provide a splash screen image for the UA client, such as `UAicon.png`. Images must be filed in:<br>`SYBASE\tomcat\webapps\onepage\bb\customization\images`<br>Restrict icon dimensions to 19 pixels wide and 16 pixels high, so they do not have to be rescaled on the BlackBerry device. |
| Splash Screen Message | Optionally, provide a welcome message for the UA client, such as `Welcome to Unwired Accelerator`. |

## Menu tab

The Menu tab enables you to add and remove options from the main menu and application menu, to reorder menu options, and to rename menu options. Some menu options are shown in red text, which indicates they are required and cannot be removed.

***Table 6-6: Menu tab parameters***

| Parameter | Description |
|---|---|
| **Main Menu**<br>**Application Menu** | |
| Available | Entries in this list are omitted from the main menu or application menu. Use Add, Add All, Remove, and Remove All to move options in and out of the Available column. |

| Parameter | Description |
|---|---|
| Assigned | Entries in this list are included in the main menu or application menu. Use Add, Add All, Remove, and Remove All to move options and the dotted separator lines in and out of the Assigned column; for example, if you are not planning to use Answers Anywhere, move `Ask UA` to the Available column. Note that the options shown in red are required, and cannot be moved to the Available column.<br>You can also reorder the options by selecting an item and using the up and down arrows to reposition it. |
| Rename | Select an option in the Assigned list. The option displays in the Rename field. In the Rename field, change the option name (for example, change `Profiles` to `Users`), then click OK to save the change. |

# Symbian/J2ME client

Unwired Accelerator provides a UA client for Symbian/J2ME platforms. In UA 8.0 you can deploy mobile applications directly from Mobile Web Studio to the Symbian/J2ME device, including over the air (OTA).

- The Symbian/J2ME offline client is available in:

  *SYBASE\tomcat\webapps\onepage\j2me*

- The OTA version of the UA client is available in:

  *SYBASE\tomcat\webapps\onepage\ota\j2me*

Develop a process for making the offline client available for BlackBerry users.

The methods are available for deploying mobile applications from Mobile Web Studio to Symbian/J2ME devices:

- Offline mode – make sure the "Make available for disconnected mobile devices" box is selected in the Properties Editor in Application Builder. To use offline mode, the UA offline Symbian/J2ME client must be available on the mobile device.
- Online mode – use pages and page groups to create a container for the mobile application. See the *Unwired Accelerator Developer's Guide* for more information.

# .NET container client

Unwired Accelerator provides a sample .NET container client that you can use on Windows mobile devices. You can deploy mobile applications and synchronize data between Unwired Accelerator and the mobile device. You can customize the default .NET client on the Unwired Accelerator server, and on the individual mobile device. See the *Unwired Accelerator Developer's Guide* for information.

Additionally, Unwired Accelerator provides .NET development APIs for creating a custom .NET client. The .NET APIs work with UltraLite and MobiLink to store and sync data to and from the UA 8.0 server. No knowledge of SQL is needed when using these APIs. The APIs enable you to interact with the UA mobile applications and data using an object oriented approach.

See the following for information:

- The .NET development API and online help are located in:

  *SYBASE\tomcat\webapps\onepage\dotnet\UA.API-bin.zip*

  The online help is in two forms: windows compiled help (*.chm*) and HTML pages.

- The generated API development documentation API is located in:

  *SYBASE\tomcat\webapps\onepage\dotnet\docs*

- The "Custom .NET Client Development Tutorial "is located in the *Mobile Application Development Tutorial*.

# M-Business Anywhere

Optionally you can configure M-Business Anywhere to work with Unwired Accelerator, so that you can deploy mobile applications to mobile devices, such as PocketPC and Palm OS. Mobile Web Studio provides menu access to M-Business Anywhere functionality; in fact, you should manage M-Business Anywhere through the Mobile Web Studio interface and not through the M-Business Anywhere interface.

---

**Note** With Unwired Accelerator 8.0, you must enable M-Business Anywhere in the *global.properties.xml* file. See "Configuring M-Business Anywhere" on page 25 for information about setting up M-Business.

---

All M-Business Client users require an M-Business Anywhere user account to receive mobile applications upon synchronization. Use Mobile Web Studio to create M-Business Anywhere accounts. See "M-Business Anywhere accounts" on page 55 for more information.

From Mobile Web Studio, you can deploy mobile applications with channels, for HTML applications with a single HTTP request pointing back to the UA server. Channels on the PDA represent a set of HTML pages that are browsed by following the links on the page.

- Channels can either be public channels (available to all users) or group channels (available to members of a group, or category, to which the channel is deployed).
- Channels send spidered HTML to the mobile device through M-Business Anywhere server. Spidered HTML includes the captured content including embedded images and click-through links. You can specify the link depth (the level to which M-Business must spider for data starting at the first page), and the maximum size of the data (since spidering can cause data size to grow very quickly).
- Typically, you need only channels if the mobile application generates images or HTML, or is not in structured, tabular format.

See for additional information and procedures.

To learn more about M-Business Anywhere, see the *M-Business Server Administration Guide* located at:

`http://localhost:8091/enterprise_doc/Admin_Mbiz.pdf`

## Architectural overview

Typically M-Business Anywhere server is deployed on the same machine as Unwired Accelerator. If deployed on different machines, additional configuration steps are required so the two can communicate.

Mobile applications are deployed from Mobile Web Studio to M-Business Anywhere through pages and page groups or channels in offline mode. The mobile applications are stored in the AGDB database, and deployed to mobile devices when the mobile device user logs in or initiates synchronization.

M-Business Client is deployed on a Windows machine for a particular mobile device type. Synchronization occurs between M-Business Client and the mobile device, either in connected or disconnected modes, depending on the mobile device capabilities.

## Administrative tasks

Administrative tasks for M-Business Anywhere include:

- Managing M-Business Client user accounts – see "M-Business Anywhere accounts" on page 55
- Managing public channels – see "Working with channels" on page 106
- Managing group channels (categories) – see "Working with categories" on page 108

### Working with channels

This section describes how to manage channels that you can display and access on an M-Business Client. Channels can be accessed by everyone (public) or by those who belong to specific groups (categories). Use the M-Business | Channels | Public option on Mobile Web Studio to create, edit, and delete M-Business Anywhere public channels.

❖ **Deploying an application to a public channel**

1 In Mobile Web Studio, select an approved application.

2 Right click and select MBusiness | Public.

❖ **Creating new channels**

Use this procedure to create a new public channel, or a new channel for a specific category of users. For the latter, you must first set up the category, as described in "Working with categories" on page 108.

1 Log in to Mobile Web Studio with a user login account that has administrator privileges for M-Business Anywhere (such as `masuper`/`m8super`).

2 Select M-Business from the left pane. The M-Business Manager menu displays.

3 Select Channels | Public, and click New in the toolbar. The New Public Channel window displays.

4 Enter a new public channel:

- Title (required) – enter the name of your new channel.
- Location (required) – enter the URL of the channel content.

  Click Preview to preview the channel content, then close the window.
- Category – indicate whether this is a public channel or a channel for a specific group of users:
  - Public – for a public channel, select None from the drop-down list.
  - Category – for a specific group, select a category, such as "Search," from the drop-down list. Only those users in this category can access this channel.
- Description – enter a description of your new channel.
- Channel Size Limit (KB) – enter the maximum size that the entire channel can consume, such as 100, for 100KB.
- Link Depth – enter a number, such as "0" to indicate how many levels of hypertext links to traverse from the first page of the channel when downloading channel content to the device.
- Include Images – select this option to include all the images from the channel.
- Follow Offsite Links – select this option if M-Business Anywhere server must fetch an HTTP address or other Web-based content from a server other than the one that hosts the channel.

- Allow Binary Distribution – select this option if the channel is a binary file, for example, an *.exe* or *.dll* file.
- Auto Subscribe For Users – select this option for all M-Business users to automatically subscribe to this public channel.

5 Click OK to save your new public channel, then OK to confirm.

6 You see the new channel in the list of public channels. All M-Business Anywhere users have access to this channel.

❖ **Editing channels**

1 From the M-Business Manager menu, select Channels | Public. The list of public channels displays. Right-click the channel the list, and select Edit.

2 The Edit Public Channel window displays. Make the desired changes to the public channel, and click OK.

Click Cancel to return to the originating page without saving the changes.

❖ **Deleting channels**

1 From the M-Business Manager menu, select Channels | Public. The list of channels displays. Right-click the channel in the list, and select Delete.

2 Click Yes in the confirmation pop-up to delete the channel.

Click No to not delete the channel.

---

**Note** You can delete more than one public channel at the same time by pressing the Ctrl key and selecting the public channels, then right-clicking any of the selected channels and selecting Delete.

---

## Working with categories

You can create categories, or groups, for channels. Categories are only available to members of the group into which the channel is deployed.

❖ **Deploying an application to a group (category) channel**

1 In Mobile Web Studio, select an approved application.

2 Right click and select MBusiness | Group.

❖ **Creating new categories**

1. Log in to Mobile Web Studio with a user login account that has administrator privileges for M-Business Anywhere (such as `masuper`/`m8super`).
2. Select M-Business from the left pane. The M-Business Manager menu displays.
3. Select Channels | Categories, and click New in the toolbar. The New Category window displays.
4. Enter a new category:
   - Name (required) – enter the name of the new category.
   - Description – enter the description of the new category.
   - Subcategory of – indicate whether the category is a subcategory of an existing category.
     - For a category, select the default of None (Miscellaneous) from the drop-down list.
     - For a subcategory, select the category under which it belongs from the drop-down list. This ability to nest categories enables you to further restrict access channels.
   - Click OK to save the new category.
   - Click OK in the confirmation window. The new category displays in the detail pane.

❖ **Editing categories**

1. From the M-Business Manager menu, select Channels | Categories, right-click the category, and select Edit. The Edit Category window displays.
2. Make your changes.
3. Click OK to save the category.
4. Click OK in the confirmation window. The new category description displays in the detail pane.

❖ **Deleting categories**

1. From the M-Business Manager menu, select Channels | Categories, click the category to select it, then click Delete in the toolbar.
2. Click Yes in the confirmation pop-up to delete the category.
3. Click Yes in the confirmation window.

4 Click Yes. The category no longer displays in the detail pane.

**Note** You can delete more than one category at the same time by pressing the Ctrl key and selecting the categories, then right-clicking any of the categories and selecting Delete.

# Answers Anywhere and SMS

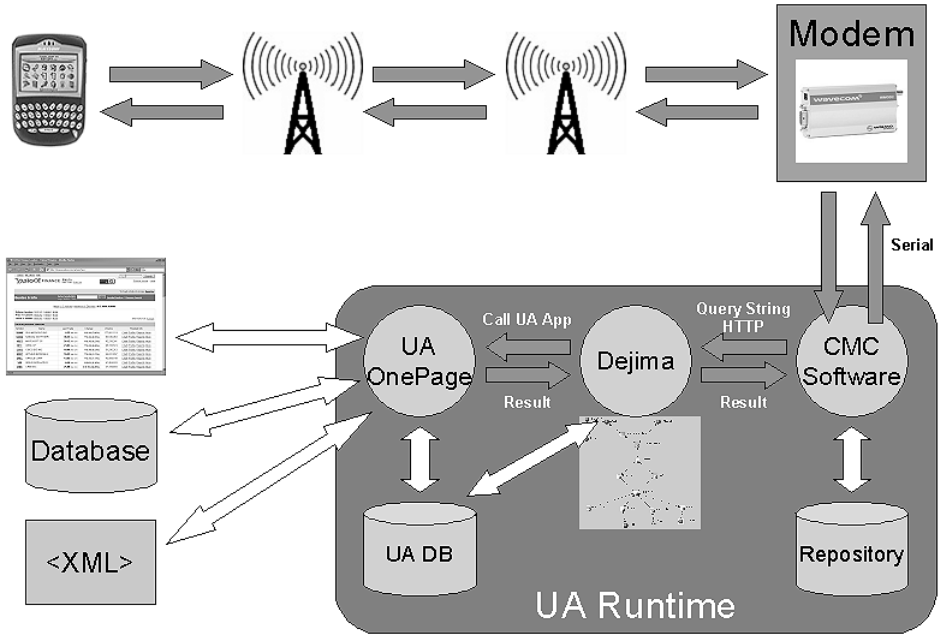
Unwired Accelerator integrates Answers Anywhere to provide natural language search capability from various interfaces, such as mobile device, SMS, and e-mail.

**Note** With Unwired Accelerator 8.0, you must enable M-Business Anywhere in the *global.properties.xml* file. See "Installing Answers Anywhere server" on page 32 for information about setting up Answers Anywhere.

## Architectural overview

The Unwired Accelerator onepage application is integrated with Answers Anywhere (Dejima).

***Figure 6-2: Answers Anywhere architecture***




Answers Anywhere must be customized for your environment to provide natural language search capability from SMS and e-mail:

- SMS – CellularModemController (CMC) software provides an interface for Answers Anywhere to communicate with an SMS provider. Make configuration entries in the *CMCConfig.properties* file.
- E-mail – a dedicated e-mail account provides an interface for Answers Anywhere to communicate with a POP3 e-mail server. Make configuration entries in the *uadejima.properties* file.

The Answers Anywhere (Dejima) software uses a preconfigured agent network, which includes general search commands and parameters, to search mobile applications. You cannot customize the default agent network, but you can create additional search synonyms for the mobile applications you create. Additionally, you can load a custom agent network if your enterprise has one.

An Unwired Accelerator user sends a request, such as “get employee list for Bob,” from a devices in either an SMS format, or in e-mail format to the dedicated e-mail account. Answers Anywhere authenticates the user through the repository, accesses the desired information in PortalDB using the agent network, and returns a response. Authentication can be through the roles established for Unwired Accelerator.

## Administrative tasks

See “Installing Answers Anywhere server” on page 32 for information about setting up the Answers Anywhere environment. Additional administrative tasks for managing UA and Answers Anywhere/SMS integration include:

- Setting an e-mail account for users to make queries – see “Setting up Answers Anywhere for e-mail” on page 32
- Configuring additional features – see “Configuring CMC and SMS features” on page 112
- Loading a custom agent network – see “Loading a custom agent network” on page 113
- Informing users to register with the SMS modem – see “Registering with SMS modems” on page 114
- Monitoring the health of SMS and CMC communications – see “Monitoring SMS and CMC communications health” on page 114
- Managing telephone number access (whitelist/blacklist) – see “Configuring CMC to allow access (whitelist)” on page 116 and “Configuring CMC to deny access (blacklist)” on page 117

## Configuring CMC and SMS features

After initially configuring CMC, you will probably want to fine tune the configuration for your environment. See “CMC Admin GUI” on page 114 for information about the properties to configure for these categories:

- System performance, connectivity, basic processing:
  - baudRate
  - config
  - httpURL
  - instanceName
  - interval
  - messageHandler
  - modemDriver
  - serialPort
  - simPin

    - smscPhone
    - configInterval
- Database access:
    - databaseDriver
    - databasePwd
    - databaseURL
    - databaseUser
    - initDatabase
- Security (roles):
    - httpAuthenticationURL
    - roleBasedAccess
- Grant/deny access by phone number:
    - accessChecker
    - blacklistFile
    - whitelistFile
- Access logs
    - accessLog.File
    - accessLog.Request
    - accessLog.Response
    - logFile
    - logLevel

See “Configuring CMC parameters” on page 115 for information about using the CMC Admin GUI to configure CMC parameters.

## Loading a custom agent network

This feature is an unsupported demo feature. If your enterprise has already developed an Answers Anywhere agent network for your environment, you can use it instead of the default agent network. Contact your Sybase representative for information about loading your custom agent network.

## Registering with SMS modems

Each user must register their phone number with the SMS modem, by sending an SMS text message that includes user name and password to the SMS modem number. Otherwise, SMS requests do not work. Develop a process for informing users how to register with the SMS modem.

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

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 set to "true" (see Table 3-2 on page 36 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.

## Monitoring SMS and CMC communications health

If users complain of lost or slow searches, you may want to monitor SMS and CMC communications and make adjustments in the configuration files.

You can use the access log, available with the CMC Admin GUI to monitor access, look for trends, and make adjustments or recommendations for persistent problems. See "Displaying access logs" on page 116.

## CMC Admin GUI

This section describes the Admin GUI available for configuring the CMC software modem, and for monitoring CMC processing. The Admin GUI is an unsupported tool. If you choose to not use the GUI, see the *Unwired Accelerator Installation Guide* for command line procedures.

❖ **Using the CMC Admin GUI**

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

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

For example:

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

2 Log in using `masuper/m8super`.

The Home page displays. The Home page displays these options:

- Configure – configure the parameters for the selected configuration. See Table 3-2 on page 36 for values.
- Access Log – view and manage access logs for the selected CMC configuration. See "Displaying access logs" on page 116.
- Whitelist – identify telephone numbers that are allowed access. See "Configuring CMC to allow access (whitelist)" on page 116.
- Blacklist – identify telephone numbers that are denied access. See "Configuring CMC to deny access (blacklist)" on page 117.

3 From the Current Configuration drop-down list, select an existing configuration to modify an existing CMC configuration file, or select "Create a new configuration" to establish a new CMC configuration file.

4 Configure the parameters for the selected configuration. See Table 3-2 on page 36 for values.

5 Save your configuration changes. If you are creating a new CMC configuration, supply a name.

❖ **Configuring CMC parameters**

1 Select the Configure option. The properties described in Table 3-2 on page 36, and their values display in alphabetical order.

2 Click on a property value to view its configuration window. The configuration window provides:

- Property Name - display only.
- Description – provides a brief description, and the default value.
- Property value – displays the current value.

3 In Property Value, provide the new value, and select Save to save the change and return to the list of properties.

You can also select Delete to restore the default value, or select Cancel to exit the configuration window and return to the list of properties.

❖ **Displaying access logs**

The access logs enable you to monitor CMC processing of the Answers Anywhere user requests, and are a good troubleshooting tool.

1 Select the Access logs option. The first page of log file records display, from oldest to newest. Log file data includes:

- Request date (RqDate) – date and time the CMC received a user request, in the format ***YYYY.MM.DD***T***HH:MM:SS***.
- Response date (RsDate) – date and time the CMC sent a response to the user, in the format ***YYYY.MM.DD***T***HH:MM:SS***.
- User/phone – the user's telephone number, in the format +***15555551212***.
- Status – request sent by the user; for example, `Get quote for SY`.
- Request – request processed by CMC; for example, `Phone number +15555551212 is not registered. If you would like to register it, send a message with 3 lines: Registration <your username>`, and so forth.
- Reply – response returned by CMC; for example, `Denied`.

2 You can:

- Next – displays the next records in the log file.
- Purge Logs to last date shown – trim the access log up to the currently displayed access records.
- # Records
- Purge all Access Logs – clear the log file of all records.

❖ **Configuring CMC to allow access (whitelist)**

Enables you to enter a list of telephone numbers that are allowed to use this SMS service. If used, each message received is checked against the list. Phone numbers that are not on the list are not processed.

1 Select the Whitelist option.

2 In User/phone, enter the telephone number in the format ***5555551212*** (no punctuation), and click Add. The number is added to the User/phone list.

You can also select Delete to remove a specific phone number, or select Remove All Users to remove all phone numbers in the whitelist file.

**Note** If you want to use the list, you must include at least one phone number in the list.

❖ **Configuring CMC to deny access (blacklist)**

Enables you to enter a list of telephone numbers that are denied access to SMS service. If used, each message received is checked against the list. Phone numbers that are on the list are not processed. These options enable this feature:

- accessChecker
- blacklistFile

1 Select the Blacklist option.

2 In User/phone, enter the telephone number in the format ***5555551212*** (no punctuation), and click Add. The number is added to the User/phone list.

You can also select Delete to remove a specific phone number, or select Remove All Users to remove all phone numbers in the blacklist file.

**Note** If you want to use the list, you must include at least one phone number in the list.

CHAPTER 7

# Security

This chapter describes the security features included in Unwired Accelerator, and provides information for ensuring overall security for integrated products.


| Topic | Page |
|---|---|
| Overview | 119 |
| Managing role-based security | 130 |
| Security utilities | 137 |
| Auditing | 139 |
| Tightening portal security | 142 |


## Overview

Unwired Accelerator security architecture is built on the Common Security Infrastructure (CSI) security framework, with the PortalDB security provider. CSI features include:

- Authentication – based on user name and password authentication using the Java Authentication and Authorization Service (JAAS) model, and on single sign-on.
- Authorization – based on role checks
- Fine-grained access control – based on resource access checks
- Data confidentiality and integrity – based on Secure Sockets Layer (SSL) protocol

Alternatively, you can use CSI with the LDAP security provider, or you can use both PortalDB and LDAP security providers. See the *Unwired Accelerator Installation Guide* for configuration information.

## Understanding CSI

Common Security Infrastructure (CSI) is a security framework that enables Unwired Accelerator to work with an existing security system. A realm is Tomcat's abstraction to allow integration between the Web Container security model (authentication and role-based access control) to a back-end security store. The CSI realm is an implementation of the Tomcat realm that bridges Tomcat to the CSI security integration layer.

The CSI realm component plugs in to a Tomcat 5.5.*x* Web application container, and is an abstract interface to security information such as user names, passwords, and role membership.

Unwired Accelerator automatically takes advantage of the capabilities the configured security providers afford. If a provider supports self-registration, then Unwired Accelerator allows self-registration. If a provider allows password change, Unwired Accelerator allows password change. If a provider returns password expiration warnings, Unwired Accelerator displays them.

CSI also supports client certificate mutual authentication and radius 2-factor authentication by configuring other available authentication providers into *csi.xml*. See “Auditing” on page 139.

When a user logs in to Unwired Accelerator, the user’s name and password are verified against the data server. If the password is about to expire, the user is prompted to change the password. If the user’s name and password are valid, role information is retrieved to provide Tomcat with a list of the user’s roles. The authenticated CSI sessions are persistent while the user maintains a session with the Web container. If *csi.xml* has been configured properly, users can change their LDAP passwords using Portal Interface and Mobile Web Studio.

The CSI configuration file (*SYBASE\tomcat\conf\csi.xml*) as shipped uses the PortalDB security providers. These providers access a simple security store based on tables contained within the portal database (PortalDB) that Unwired Accelerator uses for all its persistent data. This configuration is suitable for demos and development, but most likely not suitable for a production environments.

The LDAP security provider is typically more appropriate for production systems. This LDAP provider works with a wide range of security stores including ActiveDirectory, iPlanet LDAP, Netscape LDAP, OpenLDAP, Novell eDirector, among others. When you want to provide a population of existing users access to Unwired Accelerator, this is usually the provider you want. You can enable the LDAP provider by un-commenting it in the *csi.xml* configuration file.

If you want to use LDAP for authentication data (user/password or certificate), but do not want to use LDAP for access control (mapping LDAP groups to J2EE roles), you can use both the PortalDB and LDAP providers at the same time. When an LDAP user authenticates to Unwired Accelerator for the first time, a "shadow-copy" of the user is created in the PortalDB. No sensitive data from LDAP is stored with this shadow user. An administrator can then use the Mobile Web Studio GUI to grant roles to this shadow user. The next time this user logs in, they will still be authenticated against the LDAP security store, but their roles will be the union of roles derived from LDAP and roles granted them in the PortalDB.If you have an existing security system that is not LDAP compliant, it is possible to write your own custom CSI security provider to access that data. Talk to your Sybase Professional Services contact for help in this area.

Most messages are logged through the Jakarta-common logging framework and available through log files. Some messages, such as password expiration and similar warnings, are passed through to CSI. In a troubleshooting scenario, you can change the logging level to obtain additional messages, as described in "CSI logging level" on page 157.

## Authentication

Unwired Accelerator uses the Java Authentication and Authorization Service (JAAS) API to secure client- and server-side Java applications. JAAS protects the system from users based on who runs the code and their permissions, and is compatible with various standard security mechanisms such as LDAP.

Unwired Accelerator accesses CSI interfaces indirectly through these standard J2EE security mechanisms:

- HttpServletRequest.getUserPrincipal() – returns the name of the current authenticated user. If the user has not been authenticated, the method returns null.
- HttpServletRequest.isUserInRole(*j2ee_Role*) – returns a Boolean value indicating whether the authenticated user is included in the specified logical "role." If the user has not been authenticated, the method returns false.

Whether using CSI with the PortalDB or an LDAP security provider, Unwired Accelerator uses the following security management functions:

- Portal Interface:

- Users establish a password when they click Join Now and set up a user profile.
- Users can change their passwords from the MyInfo link.
- Users can select Reset Password from the login screen to request a new password if they forget theirs. If a valid e-mail address is specified for the resetPasswordEmail property in *global.properties.xml* file, Unwired Accelerator notifies the PortalAdmin user. (If an e-mail address is not specified, an alternate procedure for notifying the PortalAdmin user must be in place).

  The PortalAdmin user requests a new password in the User Editor screen (from Manage | Users/Roles | Users). Unwired Accelerator generates a new password and sends it to the user's e-mail address.

- Mobile Web Studio:
  - The StudioAdmin user creates a user profile (from Manage | Users/Roles | Users). Unwired Accelerator generates a new password and sends it to the user's e-mail address.
  - The StudioAdmin user changes a user's password by selecting Password in the User Editor screen (from Manage | Users/Roles | Users). Unwired Accelerator generates a new password and notifies the users via an e-mail message.
  - Studio users can change their passwords from the Account Info link. Unwired Accelerator sends e-mail notification of the password change to the user's e-mail address.
  - If *csi.xml* has been configured properly, users can change their LDAP passwords using Portal Interface and Mobile Web Studio.

---

**Note** If you are using Enterprise Security with Unwired Accelerator, see the *Enterprise Security Administration Guide* for information.

---

## Role-based authorization

Unwired Accelerator uses role-based authorization. By default, Mobile Web Studio users can only see those objects for which they have the necessary roles. For example, if Application_1 is protected by Role_A, and a user is not assigned Role_A, when the user selects Build | Applications in Mobile Web Studio, Application_1 does not display in the Application Manager list of applications. This prevents users from previewing an application they are not allowed to see in Portal Interface or from a mobile device.

**Note** If an object is assigned several roles, a user needs only one of the roles to access the object.

Several global properties determine how role-based authorization is implemented in Unwired Accelerator:

- RoleBaseDisplay – indicates whether Mobile Web Studio should only display objects with the same role as the user. The default is "true," indicating role-based filtering is used. If set to "false," role-base filtering is disabled and users can see all objects in Mobile Web Studio regardless of role.
- RoleBaseDisplaySeeAllRoles – indicates the user role or roles that can see all objects in Mobile Web Studio. The default role is "superuser."

**Note** See Chapter 10, "Configuring Global Properties"for information about *global.properties.xml* file, and "ProductConfiguration property group" on page 200 for information about these global properties.

## Fine-grained access control

Unwired Accelerator uses fine-grained access control. Mobile Web Studio users need permission to perform operations on objects.

- Operations – such as create, delete, and execute
- Objects – such as applications, pages, and page groups

Through Mobile Web Studio, you can create roles with the appropriate permission, and can create user accounts to which are assigned one or more role. Unwired Accelerator includes several pre-defined roles. You can use these roles as is, use them as a base to create other roles, or create your own roles. The StudioAdmin role has all of the Mobile Web Studio permissions enabled.

Table 7-1 describes Unwired Accelerator's basic security infrastructure.

***Table 7-1: Unwired Accelerator security infrastructure***

| Security item | Description |
|---|---|
| Roles (Mobile Web Studio permission) | The StudioAdmin user creates and administers roles in Mobile Web Studio. Mobile Web Studio roles are modeled after J2EE roles, and grant access permissions to objects, such as pages, applications, catalogs, and so on. Objects are mapped to operations, such as create, edit, manage, and so on.<br>See Table 7-2 on page 131 for information about the roles used in Unwired Accelerator, and see Table 7-3 on page 135 for information about objects and their operations. |
| Users (accounts) | The StudioAdmin user creates and administers user accounts in Mobile Web Studio. Each user account is assigned one or more roles, which grants the user access to various objects with permission to carry out specific operations.<br>Portal Interface users are created automatically when the users sets up an account from the Join Now link on the log in screen. Portal Interface users are not granted access to Mobile Web Studio objects. |
| Resources (co-brand) | Users may be associated with one or more resource, or co-brand. Resources can represent companies, divisions, departments, languages, and so on. If a user is associated with more than one resource, the user must specify the resource identifier (RID) when logging in to Mobile Web Studio, Portal Interface, or a mobile device.<br>See Chapter 5, "Resources" for more resource information. |

To set up role-based security in the portal, an administrator logs in to Mobile Web Studio using the StudioAdmin account, such as `masuper`, and creates the appropriate security roles and users. For example, the StudioAdmin might create the StudioDeveloper, StudioDesigner, and PortalUser roles, and give the StudioDeveloper role "create" permissions on the "application" object.

The StudioAdmin creates the user accounts and assigns each user the appropriate role. For example, the administrator assigns the StudioDeveloper and PortalUser roles to a user named "Smith." When user Smith logs in to Mobile Web Studio, CSI verifies the user's identity, and limits the information the user is allowed to see, modify, or execute. Smith creates an application, which is allowed because he is assigned the StudioDeveloper role that has that access right.

When Smith creates the application, he assigns roles to the application that a user must have to access it. Smith sees all of the roles defined in Mobile Web Studio, including those roles for which he does not have access. This allows him to assign roles that he does not have to protect the application. All users that have the roles assigned to the application, can access that application. See “Working with secure applications” on page 136 for more information about working with applications that use sensitive or confidential data.

**Note** Although Smith sees all J2EE roles when creating an object, he sees only the Mobile Web Studio objects that the StudioDeveloper and PortalUser roles have permission to see.

In summary, roles are assigned permissions to view and act on specified objects. User access to objects is controlled by the roles the user is assigned.

## Data confidentiality and integrity

Unwired Accelerator uses Secure Sockets Layer (SSL), a security protocol that provides communications privacy over the Internet when transmitting data between client and server. Unwired Accelerator uses HTTP or HTTPS, depending on the secure_login setting in *global.properties.xml*:

- If the parameter is set off, HTTP is enabled for Unwired Accelerator.
- If the parameter is set on, HTTPS is enabled for Unwired Accelerator, and HTTPS is used for login and registration.

If secure_login is set on (true), keep in mind the following:

- If you start your Portal Interface session using `https://host.domain:port/onepage/index.jsp` (note the `s` in `https`), your entire session remains under HTTPS all the time, even while retrieving things that do not need to be secured, such as images, CSS, and JavaScript files.

- If you start your Portal Interface session using `http://host.domain:port/onepage/index.jsp` (note `http` only), your browser is redirected to use HTTPS only when you are exchanging sensitive information like passwords and personalization data, or executing secure applications.

---

**Note** You must enable the HTTPS listener on your portal before you enable secure_login. To do so, set the default_https_port property in the *global.property.xml* file to the appropriate port number (the defaults are 4443 from the Tomcat listener), then enable secure_login.

---

To enable Web capture of HTTPS sites and creation of "secure" applications, set these parameters on in the *global.properties.xml* file:

- secure – indicates whether to enable HTTPS for the Web container (Mobile Web Studio and Portal Interface).
- use_https – indicates whether to enable secure navigation.

See "Global property group" on page 183 for more information about the secure, secure_login, use_https and default_https_port properties.

## Security and integrated products

This section provides security information for products that are integrated with or configured to use Unwired Accelerator. See Chapter 6, "Managing Integrated Products" for more information about managing these integrated products in the context of Unwired Accelerator.

### .NET container client security

For the .NET container client, each user can set up multiple Unwired Accelerator profiles, each with different roles and privileges. Access to mobile applications depends on the profile selected.

### Symbian/J2ME client security

Unwired Accelerator uses the following security measures for running the UA client on a Symbian/J2ME device:

- Password screen saver for Unwired Accelerator applications – if enabled, the client locks up when it has been idle for a configurable length of time, or when the client is closed.
- Multiple profiles – a user can set up multiple profiles with the Symbian/J2ME client, each with different roles and privileges. Access to mobile applications depends on the profile selected.
- Connection protocols – both HTTP and HTTPS connections are supported.

Some mobile devices running under the MIDP 2.0 platform are protected by a security domain. A security domain is an environment in which a MIDlet is granted a set of permissions. The number of security domains and the set of permissions for each domain is not defined by the MIDP specification, but is left to the device implementers. This security uses airtime for which the user is billed. Periodically, this message pops up on the mobile device:

```
HTTPMIDlet wants to send information. This will require the
use of airtime which may cost you money. Is this OK?
(//wireless.java.sun.com)
```

Users can select one of the options offered, such as these options from the J2ME Wireless Toolkit emulator:

- Yes, always. Don't ask again.
- This time. Ask me next time.
- Not this time. Ask me next time.
- No. Shut off HTTPMIDlet.

To learn more about MIDP 2.0 security architecture, see Sun Developer Network (SDN) at http://developers.sun.com/techtopics/mobility/midp/articles/permissions/. To learn more about changing J2ME mobile device settings to suppress messages, see Sun Wireless Toolkit documentation at http://java.sun.com/j2me/docs/wtk2.2/docs/UserGuide-html/commandline.html.

## BlackBerry client security

Unwired Accelerator uses Research in Motion (RIM) built in security for BlackBerry devices, including:

- Unwired Accelerator access:

- Synchronization of applications, or online browsing of Unwired Accelerator applications requires the user to login with a UA user name and password.
- All the HTTP traffic is encrypted as described above, under Data Theft. The only place data is unencrypted is when it is behind the firewall and inside the corporate intranet.
- For extra security, you can access UA over HTTPS and the data is always encrypted from end-to-end, and fine-grained access control to corporate data is guaranteed via the UA access controls. You can set HTTPS from the mobile device in the user profile.

- Device security:
  - Password protection with screen saver.
  - Only a hash of the password is stored on the device, so even if a hacker can access device memory he or she cannot figure out the password.
  - Ten bad password attempts wipes out all user data.
  - Administrator can remotely command the BlackBerry to wipe all user data when the device is reported stolen.
  - Administrator can block access from BlackBerry if it is temporarily lost.
- Data security:
  - All communication between the BlackBerry over wireless and the Internet is 3DES-encrypted until it reaches the BlackBerry Enterprise Server (BES).
  - The shared keys for 3DES encrypt/decrypt is generated by random mouse movements monthly and stored in the BES and BlackBerry device.
- Virus/malicious application:
  - Administrators can control whether new applications are allowed to be downloaded to BlackBerry.
  - If application downloads are allowed, those applications can be controlled as to whether they are allowed to connect to the intranet, extranet addresses, both, or neither. A single application cannot then pull information from the intranet and push it to the extranet.

- Certain sensitive APIs are access controlled. An application cannot call those APIs unless the application's code has been digitally signed by RIM.
- Applications are explicitly sandboxed to prevent them from accessing data/memory from other applications.

To learn more about RIM security, or to find out how to change the default settings, see *BlackBerry Application Platform 4.0 Technical Overview*, available on the RIM online site at http://www.blackberry.com/knowledgecenterpublic/livelink.exe/fetch/2000/7979/1181821/828044/1181292/1199067/1199150/BlackBerry_Enterprise_Solution_Security_version_4.1_Technical_Overview?nodeid=1199212&vernum=0.

## M-Business Anywhere security (PDA)

Unwired Accelerator uses M-Business Anywhere built-in security for PDAs in offline and online modes:

- Offline mode – Unwired Accelerator is configured to access the M-Business Anywhere AGDB database to create channels for users from Mobile Web Studio (Manage | M-Business). All other security is based on M-Business Anywhere default settings.

  To learn more about M-Business Anywhere security, or to find out how to change the default settings, see these guides:

  - *Ensuring Mobile Security from the Device to the Datacenter* – available at the iAnywhere online site: http://www.ianywhere.com/whitepapers/ensuring_security.html
  - *M-Business Server Administrator Guide* – available at the following URL where M-Business Anywhere is installed: http://localhost:8091/enterprise_doc/
  - *M-Business Client User's Guide* – available at the following URL where M-Business Anywhere is installed: http://localhost:8091/enterprise_doc/
- Online mode – Unwired Accelerator implements the PDA's use of HTTPS for online browsing, if you use HTTPS in the URL.

### Answers Anywhere security

Using a Web interface, the BlackBerry or PDA client, or SMS interfaces, you can force users to authenticate and thus apply the role-based access controls for accessing applications and data.

For SMS access, perform the following to set up role-based access controls:

- Set the roleBasedAccess configuration property true in the *CMCConfig.properties* file, initially located in *SYBASE\cmc\classes\com\sybase\cellmodem*.
- Set the role.check property true in the *uadejima.properties* file, located in *SYBASE\tomcat\webapps\dejima\WEB-INF\classes*.

**Note** You cannot use security for e-mail access.

### SAP/PeopleSoft security

For both SAP and PeopleSoft, the user name/password for a direct connection to a datasource is stored in either the application definition file, or in the autofill adapter (personalization keys). See the *Unwired Accelerator Developer's Guide* or *Mobile Application Development Tutorial* for information about setting up a JDBC database connection, or an adapter/personalization key.

For SAP, the user name/password for a pooled connection to a datasource is stored in the *pool_name*`.properties` file, located in `SYBASE\tomcat\webapps\onepage\fw\properties`. See "Setting up a SAP connection" on page 18 for information.

# Managing role-based security

Unwired Accelerator implements role-based security. This section provides information about managing role-based security, in these topics:

- Setting up a security manager account
- Administering roles
- Administering objects
- Working with secure applications

When you install Unwired Accelerator, a default configuration enables you to log in to Mobile Web Studio and work with the Studio and its functionality. From the default configuration, you create and administer your enterprise's users, roles, and objects.

Table 7-2 describes the default J2EE security roles that Unwired Accelerator uses.

***Table 7-2: J2EE security roles***

| Security role | Description |
|---|---|
| PortalAdmin | A role for system or administrative users. If you want this user to represent your system administrator, grant this user the StudioAdmin and PortalAdmin roles.<br>The PortalAdmin role, set in the *global.properties.xml* file as follows, enables you to deploy mobile applications to devices:<br>`<Property name="PortalAdministrationRole" value="PortalAdmin" description="The J2EE role required to administer the Portal performing export/import and update operations." menugroup="-1" />`<br>**Warning!** This property is designed for a single role and not a list of roles. There is no parsing of the string to look for multiple roles. |
| PortalUser | A role for Portal Interface users. Users with this role can work with any Portal Interface object, but cannot access Mobile Web Studio objects. |
| StudioAdmin | A role for the Unwired Accelerator administrator. The StudioAdmin role is automatically defined when you install and configure Unwired Accelerator (opsuper for RID1, and masuper for RID21).<br>By default, the StudioAdmin has complete access to Mobile Web Studio operations, including development (but not deploying).<br>Generally, the StudioAdmin sets up initial security for objects, roles, and users, but StudioAdmin can perform all other Mobile Web Studio functions. |
| everybody | A role required for all authenticated Portal Interface and Mobile Web Studio users, as determined by the RequiredRoles property in the *global.properties.xml* file. See "ProductConfiguration property group" on page 200 for information about this property.<br>**Note** For the LDAP security provider, the EverybodyRoleAuthorizer function automatically grants the "everybody" role to users who need it. |
| manager | This role is not currently used. You can establish the manager role to meet the needs of your installation. |

| Security role | Description |
|---|---|
| superuser | This role is not currently used. You can establish the superuser role to use in conjunction with the RoleBaseDisplaySeeAllRoles, and RoleBaseDisplay properties in the *global.properties.xml* file. See “ProductConfiguration property group” on page 200 for information about these properties. |

## Setting up a security manager account

Use these steps to create a system administration user to manage overall security from Mobile Web Studio.

❖ **Creating a new user to access Mobile Web Studio objects and security**

1 Log in to Mobile Web Studio as StudioAdmin, such as the masuper account.

2 Select Manage | Users/Roles from the menu in the left pane.

3 Select Users and click New on the toolbar.

4 When the Create New User window displays, complete the required fields.

- Username – enter a user name, such as securityManager. This will be your account name when you log in to Mobile Web Studio.

  **Note** Do not use “opsuper” or “masuper” for the Login Name.

- Active – make the account active.
- Default Resource – select Mobile Studio from the drop-down list. If you set up multiple co-brands, set up a separate administrative user for each resource.
- Available roles – select StudioAdmin and PortalAdmin.
- First name – enter the user’s first name.
- Last name – enter the user’s last name.
- E-mail – enter the user’s e-mail address. The password is sent to this e-mail address.

5 Click Save. The new user displays in the list of available users.

6 Log out of Mobile Web Studio.

7 Log in as the new user to test the account. If you are logging on to another co-brand, specify the resource ID when logging in.

8 Create some applications and pages to use the permissions that have been granted to this user.

## Administering roles

Roles are sets of permissions to access objects. The permissions assigned to a role define what a user with that role can do in the secured system. Each role can have multiple permissions assigned to it. Examples of permissions are create, update, administration, security, and management. You can create a new role, or you can create a role from an existing role. Roles span resources.

### ❖ Creating new roles

1 Select Manage | Users/Roles.

2 Select Roles. Mobile Web Studio has these default roles—PortalAdmin, PortalGuest, PortalUser, StudioAdmin, everybody, manager, and superuser, as described in Table 7-2 on page 131.

3 Select New to create a new role.

4 When the Role Editor window displays, complete the required fields.

- Role name – enter the role name, such as StudioDeveloper.
- Description – optionally enter a description for the role.
- Under Object, select Applications. A list of operations displays in the Available Operations column.

  Select Add All to move all operations into the Assigned Operations column. You could also select specific operations.

5 Select Save, click OK to confirm. The role displays in the list of roles, and can be selected when you set up a user account.

### ❖ Creating a role from an existing role

You can create a new role from an existing role, and change its properties.

1 Select Manage | Users/Roles.

2 Select Roles.

3 Select an existing role to use as your source. For example, select PortalUser, and select Edit.

Mobile Web Studio has these default roles—PortalAdmin, PortalGuest, PortalUser, StudioAdmin, everybody, manager, and superuser. See Table 7-2 on page 131 for information about the default roles. You can also use a role you created as a source role.

4 When the Role Editor window displays, click Save As.

5 In the Save Role As window, type a new role name, such as PortalTrainee, and click OK to confirm.

6 Click Ok a second time to confirm. The new role displays in Mobile Web Studio.

7 Select the new role, and select Edit.

8 When the Role Editor window displays, complete the required fields

- Role name – make sure the new role displays; in this case, PortalTrainee.
- Description – update the description for the role.

9 Select Edit Details. Security details display.

10 Under Security, select an object. A list of operations displays in the Available Operations column.

Select one or more operations. You can select Add All to move all operations into the Assigned Operations column.

11 Select Save, and click OK to confirm. The role displays in the list of roles, and can be selected when you set up a user account.

## Administering objects

Objects are any portal object to which you want to restrict access. An object can be a page, a portlet, a catalog, and so on. Typical access permissions include read, write, update, create, and delete. See Table 7-3 on page 135 for a list of predefined objects and their permissions.

### ❖ Modifying role objects

Objects are associated with roles, so you must select a role and modify its objects.

1 Select Manage | Users/Roles.

2 Select Roles.

3 Select the role to modify and select Edit. The Roles Editor displays.

4 Select Edit Details. The Security detail information displays.

5 Under Object, select the object to edit. The Available Operations and Assigned Operations tables are populated with operations for that object.

When you install Unwired Accelerator, the predefined objects and permissions shown in Table 7-3 are created by default.

***Table 7-3: Predefined objects and permissions***

| Objects | Permissions |
|---|---|
| Accounts | Create, Edit, Manage, SelectCompany, Delete |
| Adapters | Create, Delete, Edit, Manage, ViewLog, Find |
| Agents | Broken, Create, Deleted, Edit, Manage, Ready, Run, Stopped, ViewLog, Find |
| Applications | Approved, Archived, Broken, Create, Deleted, Display, Edit, Find, Manage, New, Pending, Properties, Refresh, Rejected, Shared, SkipWorkflow |
| Catalogs | Approved, Archived, Broken, Create, Deleted, Display, Edit, Find, GetShared, Manage, New, Pending, Preview, Properties, Rejected, SelectCompany, Shared, SkipWorkflow |
| PageGroups | Approved, Archived, Broken, Create, Deleted, Display, Edit, Find, Manage, New, Pending, Properties, Refresh, Rejected, Shared, SkipWorkflow, |
| Pages | Approved, Archived, Broken, Create, Deleted, Display, Edit, Find, Manage, New, Pending, Properties, Refresh, Rejected, Shared, SkipWorkflow |
| Personalize | Create, Delete, Edit, Manage |
| Portal | Deploy, Export, Import, Manage, UpdateCatalog, UpdatePage |
| Portlets | Active, Approved, Archived, Broken, Create, Deleted, Display, Edit, Element, Find, GetShared, Manage, New, Pending, Preview, Properties, Publish, Rejected, Replace *, SelectCompany, Shared, SkipWorkflow<br>**Note** * The Replace permission is not used. To have the Replace button display for a user in Mobile Web Studio, the user must be in the RoleBaseDisplaySeeAllRoles security role as specified in *global.properties.xml*. |
| Resources | Create, Delete, Edit, Manage, Undelete |
| Roles | Create, Delete, Edit, Manage, Undelete |
| Servers | Broken, Create, Delete, Deleted, Edit, Find, Manage, Ready, Stopped, ViewLog |
| Studio | Manage |
| Templates | Active, Approved, Archived, Broken, Create, Deleted, Edit, Manage, New, Pending, Preview, Rejected, Shared, SkipWorkflow |

| Objects | Permissions |
|---|---|
| Users | Edit, Delete, Manage |

6 Use the Add, Add All, Remove, and Remove All buttons to move operations into the appropriate columns for the object.

7 Click Save to save the changes, and OK to confirm.

## Working with secure applications

This section provides information for administrators or developers who are asked to develop mobile applications that use sensitive or confidential content, to which their roles do not allow access. For example, suppose you are a Studio developer for an executive portal and your assignment is to create a new application that shows projected financial results for the next quarter. You know that only one group of portal users (financial officers) is allowed to see this information, and that your role does not permit you to see the application content.

First, build a new application based upon some dummy data of the right general format (for example, a PDF document). Actual content replaces this data when the application is deployed to the production system.

Next, assign the correct role to protect this application. You need not know the UA role that will be used on the production portal. In Mobile Web Studio, select Manage | Users/Roles to see if any existing roles meet your needs. If not, create a new role (for example, CFO). The next time you log in to Mobile Web Studio, you have that role.

Finally, create the application with the dummy data, assign the CFO role to it, and save it. At this point, if you have not created the CFO role mapping to a role you do have, the application disappears from your view in Mobile Web Studio. Assuming you do have the appropriate role, you continue with testing, debugging, and so on, and eventually export the content and send it to the administrator to import into the production portal.

When the application is imported to the production portal, the administrator creates the correct mapping of the J2EE role reference CFO to the actual FinancialOfficer security role.

# Security utilities

Unwired Accelerator provides several command line tools to for managing security:

- csi-tool.jar utility – used to manage CSI. The encmessage argument enables you to encrypt sensitive data in a file.
- execdbscript script – provides an administrative tool for managing the portal database (portalDB).

## Using the csi-tool.jar utility

The csi-tool.jar is a command line utility, with arguments to carry out various activities. For example, if there is sensitive data in the configuration file, *csi.xml*, you can use the encmessage argument to encrypt the data and copy the encrypted data back into the configuration file.

❖ **Using csi-tool.jar**

1 Navigate to the following directory:

*SYBASE\tomcat\common\lib* (Tomcat)

If csi-tool.jar is executed directly, you must be in this directory, because it must be in the same directory as *commons-logging.jar*.

2 Run the tool using one of these methods:

```
java -jar csi-tool.jar
```

or

```
java -classpath csi-tool.jar com.sybase.security.
tools.CSITool
```

Usage instructions for all task names display on the window. Alternatively, you can enter the following to get detailed argument descriptions for a specific task name:

```
java -jar csi-tool.jar taskname help
```

3 Issue your command, using the usage information. Table 7-4 shows required and optional arguments.

***Table 7-4: csi-tool.jar arguments***

| Argument name | Argument description | Argument type | Argument default value |
|---|---|---|---|
| **Required arguments** | | | |
| keyStoreAlias | Specify the alias name in the keystore | string | |
| keyStoreAliasPassword | Specify the alias password | password | |
| keyStoreLocation | Specify the path to a keystore | readable file | |
| keyStorePassword | Specify the password to access the keystore | password | |
| text | The text to be encrypted or decrypted | string | |
| encmessage | Encrypt or decrypt a text string | | |
| execdbscript | Execute a database script. | | |
| **Optional arguments** | | | |
| cipherMode | Indicate encrypt or decrypt operation (encrypt/decrypt) | choice | encrypt |
| cipherProvider | Specify the name of cipher provider | string | |
| cipherTransformation | Specify the transformation to be used by cipher | string | AES |
| cipherStoreProvider | Specify the keystore provider | string | |
| keyStoreType | Specify the keystore type | string | |
| useCertificate | Specify whether the key or certificate associated with an alias in the keystore is to be used | boolean | false |
| keyStoreProvider | | | |
| charSet | | | |

❖ **Encrypting a string using csi-tool.jar**

Use the encmessage argument to encrypt a string of text using specified options. This is useful for encrypting and decrypting sensitive configuration parameters in the CSI configuration file.

1 Set up the csi-tool.jar environment and run the tool using instructions in “Using csi-tool.jar” on page 137.

2 Issue your command, using the usage information in Table 7-4. For example, to encrypt the following message string:

```
encmessage text user_password
```

An encrypted message string displays.

3 You can cut and paste the encrypted message string into the destination file.

## Using execdbscript with PortalDB

Use the execdbscript script to manage and monitor the portal database (PortalDB). Start the csi-tool.jar utility as described in "Using the csi-tool.jar utility" on page 137, then issue your command, using the usage information in Table 7-5.

***Table 7-5: execdbscript arguments***

| Argument name | Argument description | Argument type | Argument default value |
|---|---|---|---|
| Required arguments | | | |
| SCRIPT_FILE | The database script file in absolute path. | Readable file | |
| JDBC_URL | The JDBC URL to use when connecting to the database. | string | |
| JDBC_DRIVER | The JDBC driver to register before attempting to connect to the database | Java classname | |
| Optional arguments | | | |
| JDBC_ADMIN_USERNAME | The user name for connecting to the database for administrative purposes. | string | dba |
| JDBC_ADMIN_PASSWORD | The password of the user specified by the JDBC_ADMIN_USERNAME argument. | string (password) | sql |
| SYBASE_ASA_SERVICE NAME | The SERVICENAME connection property to use when connecting to the Sybase ASA database. | string | |
| DELIMITER | The symbol to delimit SQL statements. | string | go |
| DATABASE_TYPE | The database type. Acceptable values: sybase_asa, sybase_ase. | string choice | sybase_asa |

# Auditing

Unwired Accelerator implements the CSI auditing tool. CSI provides the following default audit components in *csi.xml*, and you can write your own audit components with the CSI audit API:

- com.sybase.security.core.FileAuditDestination – writes audit records to the file specified. The file size can be configured to roll over if a size limitation is reached; for example, *uaaudit.log.0*, *uaaudit.log.1*, and so forth.
- com.sybase.security.core.DefaultAuditFilter – uses a filter string to determine whether an audit record should be audited or not.
- com.sybase.security.core.XmlAuditFormatter – transforms audit records into XML format.

## Configuring auditing

To configure the CSI auditing tool:

1 Set the auditEnabled property to "true" in the *global.properties.xml* file. See "Audit property group" on page 193 for information about the property.

2 Optionally, modify the default parameter settings in the *SYBASE\tomcat\conf\csi.xml* file, including:

```
<?xml version="1.0" encoding="UTF-8"?>
<config:configuration xmlns:config="http://www.sybase.com/csi/2.5/config"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">

. . .

<!-- CSI auditing provider configuration -->
<!-- This is a default auditing configuration. Users can change it with their own
   auditing providers. User should enable "auditEnabled" property in
   global.properties.xml and uncomment out the following configuration in order
   for auditing
-->

  <config:auditDestination
name="com.sybase.security.core.FileAuditDestination" controlFlag="optional">
   <config:options name="auditFile" value="uaaudit.log" />
   <config:auditFilter name="com.sybase.security.core.DefaultAuditFilter">
     <config:options name="filter" value="(resourceclass= *)" />
   </config:auditFilter>
   <config:auditFormatter name="com.sybase.security.core.XmlAuditFormatter" />
  </config:auditDestination>
```

Table 7-6 describes several default parameters you can modify in *csi.xml*. Additional options are available through the CSI API.

***Table 7-6: Auditing parameters in csi.xml***

| Parameter | Description |
|---|---|
| encoding | The character encoding used when writing the audit data. The default is `UTF-8`. |
| auditFile | The file name of the audit log. The default is `uaaudit.log`. |
| auditFilter | The filter used to determine what records to audit. Any records in the list are audited. The default filter value is `resourceclass=*`, which means all audit records from UA, CSI core, and providers such as LDAP, are audited. Alternatively, you can audit your own UA records, such as: `resourceclass=client.*`, or you can provide a list of records to audit:<br>The syntax for filter consists of zero or more filter expressions, delimited by parenthesis (brackets denote optional values). For example:<br>*`expr1 [expr2...]`*<br>Each of these expressions has syntax like the following:<br>`[key1=value [,key2=value...]]`<br>The allowed keys are:<br>• resourceclass<br>• action<br>• decision (valid values includes: permit, decision, abstain, notapplicable) |
| auditFormatter | The formatter used to transform an audit record from raw format to the format required by the audit log. The default is: `com.sybase.security.core.XmlAuditFormatter` |
| logSize | This option may be supplied to specify the maximum audit log file size before a rollover occurs. The default value never rolls over. |
| compressionThreshold | This option may be supplied to specify the number of uncompressed audit log rollover files that are created, before GZIP compression is used to archive the audit data. The default value is to never compress the data. |
| deleteThreshold | This option may be supplied to specify the number of audit log files that will be preserved. This value includes the main audit log, so a value of "3" will allow an *audit.log, audit.log.0* and *audit.log.1* before deleting old logs. The default value is to never delete old audit log data. |
| errorThreshold | This option may be supplied to specify the maximum number of audit log files that will be allowed; when this threshold is reached, an error occurs and all auditing fails. For example, with this value set to "3", *audit.log, audit.log.0* and *audit.log.1* are created according to the maximum log size value. If another audit log rollover is triggered, all audit operations fail until one of the rollover files is removed.<br>This value is mutually exclusive with the deletion threshold; the smallest value of the two will take effect. |

## Sample Audit Record

The following example shows an audit record when a Studio role is created:

```
<AuditRecord Action="Studio.Create" Decision="permit"
    When="2006-05-19T17:16:21.921Z">
    <Resource Class="client.STUDIO.Roles" ID="261"/>
        <Attribute Name="active" Value="true"/>
        <Attribute Name="context.id"
            Value="CTXChZUcQae99a4210b4da4cb8e7ff5"/>
        <Attribute Name="date_modified"
            Value="2006-05-19T10:16:21"/>
        <Attribute Name="description" Value=" "/>
        <Attribute Name="name" Value="TestRole"/>
        <Attribute Name="date_created"
            Value="2006-05-19T10:16:21"/>
</AuditRecord>
```

# Tightening portal security

Currently, Unwired Accelerator does not encrypt the user name and password used to log in to the RDBMS server containing the portal database tables. If anyone knows the database user name and password, they can use ISQL to access the database tables directly. To safeguard portal security, you can:

- Change the DBA password.
- Optionally create a whole new database user to own the portal database.
- Limit access to the *global.properties.xml* file, so that only appropriate people can view it and see the passwords.
- Change the password in the *server.xml* file, and limit access so that only appropriate people can view it and see the passwords.

❖ **Changing the password, and optionally the PortalDB table owner**

The simplest safeguard is to change the database password, using the ISQL GUI. The ISQL GUI requires the jConnect JDBC driver, which is packaged separately under the *SYBASE\tomcat\common\lib* directory.

Optionally, another safeguard is to create a custom database user to own the portal database tables, rather than using the dba user (ASA) or the sa user (Adaptive Server). This prevents unauthorized users from using ISQL directly into your database to look at PortalDB tables.

If you create the custom database owner, also change the default database user name found in this entry in *SYBASE\tomcat\conf\server.xml*:

```
<GlobalNamingResources>
    <Resource name="jdbc/portaldb"
```

Coordinate these changes between the PortalDB and the *server.xml* file.

1 From the command line, navigate to the following directory:

```
cd SYBASE\asa\java
```

2 Access isql using the command that follows. The command adds the jConnect JDBC driver to the class path.

```
java -classpath ..\..\tomcat\common\lib\
jconn3.jar;jisql.jar com.sybase.jisql.Jisql
```

The jisql login screen displays.

3 Log in, and change the dba or sa password from the defaults ("SQL" for ASA and " " for Adaptive Server).

```
// Change the password.

sp_password <oldpassword>, <newpassowrd>
```

4 Optionally, use isql to create a new database user in the portal database and make this user the owner of PortalDB. Here is the input using isql:

- For ASA:

```
// Create a user portalowner/portalowner.

GRANT CONNECT TO portalowner IDENTIFIED BY portalowner
go

// Change the DBA password.

GRANT CONNECT TO DBA IDENTIFIED BY <newpassword>
go

// Make the "dba" account a group

GRANT GROUP to DBA

// Make the portalowner a memeber of the group, enabling portalowner
// to access the tables/views of the dtabase without having to prefix
// everytning with "dba."
```

```
GRANT MEMBERSHIP IN GROUP DBA TO portalowner
```

- For Adaptive Server:

```
// Create a user portalowner/portalowner whose default database
// is the portaldatabase.

sp_addlogin portalowner, portalowner, portaldatabase
go

// Make this user the owner of portaldatabase.

use portaldatabase
go

sp_changedbowner portalowner, true
go

// Change the DBA password.

sp_password <oldpassword>, <newpassowrd>
```

❖ **Limiting global.properties.xml access to the portal server owner**

Another safeguard is to make the *global.properties.xml* file readable only by the computer user the portal server (Tomcat) runs in.

1 Make the *global.properties.xml* file readable only by the computer user for the portal server.

- If you are using Tomcat:

  From Windows Explorer, navigate to *SYBASE\tomcat\webapps\onepage\config*, right-click the *global.properties.xml* file, and choose Properties.

  Select the Security tab and:

  - In the top window, add the user/group that will be running the portal, and grant them Full Control on the file.
  - Click Everyone, unselect the "Allow inheritable permissions" check box and click the Deny check box next to Full Control.

  This prevents anyone but the specified users from reading the file and seeing the password.

- On UNIX:

If you run the portal as the "root" user, issue these commands to make *global.properties.xml* owned by root, and readable only by root:

```
% su
>chown root global.properties.xml
>chmod 400 global.properties.xml
>exit
```

2 Modify database account information in the *server.xml* file, and limit access to the file.

❖ **Modifying database account information in server.xml**

As a final safeguard, modify the database account information in the *server.xml* file, then limit access to the *server.xml* file as you did in the preceding procedure.

**Note** These instructions are for Tomcat.

1 In Windows Explorer, navigate to the following directory:

```
cd SYBASE\tomcat\conf
```

2 In a text editor, open *server.xml*.

3 Search for "Global JNDI resources." This section defines a Java Naming and Directory Interface (JNDI) connection pool to the PortalDB. The XML looks like:

```
<!-- Global JNDI resources -->
<GlobalNamingResources>
    <Resource name="jdbc/portaldb" auth="Container"
      type="javax.sql.DataSource"
      driverClassName="com.sybase.jdbc3.jdbc.SybDriver"
      url="jdbc:sybase:Tds:labxp.sybase.com:4747?
      servicename=portaldatabase"
      username="dba"
      password="SQL"
        maxActive="20"
        maxIdle="10"
        maxWait="20000"/

    <Resource name="jdbc/agdb" auth="Container"
      type="javax.sql.DataSource"
      driverClassName="com.sybase.jdbc3.jdbc.SybDriver"
      url="jdbc:sybase:Tds:labxp.sybase.com:8099"
      username="dba"
      password=""
```

```
          maxActive="20"
          maxIdle="10"
          maxWait="20000"/>

      <Resource name="jdbc/uaml" auth="Container"
        type="javax.sql.DataSource"
        driverClassName="com.sybase.jdbc3.jdbc.SybDriver"
        url="jdbc:sybase:Tds:labxp.sybase.com:4747?servicename=uaml"
        username="DBA"
        password="SQL"
          maxActive="20"
          maxIdle="10"
          maxWait="20000"/>
</GlobalNamingResources>
```

4 Change the appropriate set of user name and password parameters to the new database user owner and password that you set up, and optionally change the database connections for the new database (see “Setting up a JNDI data source resource” on page 78 for information).

5 Save and close the *server.xml* file.

6 Make the *server.xml* file readable only by the computer user for the portal server (Tomcat).

- On Windows:

  From Windows Explorer, navigate to *SYBASE\tomcat\conf*, right-click the *server.xml* file, and choose Properties.

  Select the Security tab and:

  - In the top window, add the user/group that will be running the portal, and grant them Full Control on the file
  - Click Everyone, unselect the “Allow inheritable permissions” check box and click the Deny check box next to Full Control.

  This prevents anyone but the specified users from reading the file and seeing the password.

- On UNIX:

  If you run the portal as the “root” user, issue the following commands to make *server.xml* owned by root, and readable only by root:

  ```
  % su
  >chown root server.xml
  >chmod 400 server.xml
  >exit
  ```

7 Restart the application server to apply the changes you made to *global.properties.xml* and *server.xml*.

CHAPTER 8

# Performance and Tuning

This chapter provides performance and tuning information for Unwired Accelerator.


| Topic | Page |
|---|---|
| Overview | 149 |
| Tomcat connections | 149 |
| ASA cache | 151 |
| UA navigation | 151 |
| Data connections | 152 |
| JVM Tuning | 153 |


## Overview

You can improve Unwired Accelerator performance in the following areas:

- Tomcat application server connectors
- Adaptive Server Anywhere cache sizing
- UA navigation sizing
- PortalDB data connections
- JVM performance

## Tomcat connections

This section covers the most relevant information for performance and size tuning the Tomcat 5.5.x Servlet/JSP Container. Most of this information is available on the Apache Software Foundation Web site at http://tomcat.apache.org/tomcat-5.5-doc/index.html.

At server startup time, a Connector object creates a number of request processing threads (based on the value configured for the minSpareThreads attribute). Each incoming request requires a thread for the duration of that request. If more simultaneous requests are received than can be handled by the currently available request processing threads, additional threads are created, up to the configured maximum (the value of the maxThreads attribute). If still more simultaneous requests are received, they are stacked up inside the server socket created by the Connector, up to the configured maximum (the value of the acceptCount attribute. Any further simultaneous requests receive "connection refused" errors, until resources are available to process them.

This object and its attributes are defined in the *server.xml* file, located in *SYBASE\tomcat\conf*. The following configurable properties are available for the HTTP Connector. For simplicity only sizing relevant properties are included.

- acceptCount – defines the maximum queue length for incoming connection requests when all possible request processing threads are in use. Any requests received when the queue is full are refused. The default value is 10.
- bufferSize – defines the size (in bytes) of the buffer to be provided for input streams created by this connector. By default, buffers of 2048 bytes are provided.
- maxKeepAliveRequests – the maximum number of HTTP requests that can be held in the pipeline until the connection is closed by the server. Setting this attribute to 1 disables HTTP/1.0 keep-alive, as well as HTTP/1.1 keep-alive and pipelining. Setting this to -1 allows an unlimited number of pipelined or keep-alive HTTP requests. If not specified, this attribute is set to 100.
- maxSpareThreads – the maximum number of unused request processing threads that are allowed to exist until the thread pool starts stopping the unnecessary threads. The default value is 50.
- maxThreads – the maximum number of request processing threads to be created by this Connector, which therefore determines the maximum number of simultaneous requests that can be handled. If not specified, this attribute is set to 200.
- minSpareThreads – the number of request processing threads that are created when this Connector is first started. The connector will also make sure it has the specified number of idle processing threads available. This attribute should be set to a value smaller than that set for maxThreads. The default value is 4.

# ASA cache

This section covers the most common performance and size related tuning for Adaptive Server Anywhere. Most of this information is also available on the Sybase Web site at http://sybooks.sybase.com/nav/summary.do?prod=7389&lang=en&prodName=SQL+Anywhere+Studio&archive=0&Submit.x=21&Submit.y=13.

The server command line switches allows for the configuration of ASA at start up. For simplicity, only sizing relevant properties are included. Cache sizing options are not included since Adaptive Server Anywhere provides automatic resizing of the database cache that minimizes the impact to system resources by requesting memory only when it is required and returning memory to the system when it is not being used.

- `-gm` – defines the number of concurrent database connections to the server. This option should reflect the number of database connections defined in *global.properties.xml*. The syntax is:

  [dbsrv8 | dbeng8] -gm integer...

- `-gn` – sets the maximum number of execution threads to be used in the database server. Each connection uses a thread for each request, and when the request is completed, the thread is returned to the pool for use by other connections. Increase this option if the number of total requests (active + unscheduled) is often larger than the number specified by the `-gn` option. The syntax is:

  [dbsrv8 | dbeng8] -gn integer...

# UA navigation

This section discusses information related to sizing the UA Web application.

The *global.properties.xml* file defines the start up properties for the UA Web application. For simplicity, only sizing relevant properties are discussed. The *global.properties.xml* file is located in *SYBASE\tomcat\webapps\onepage\config* if you are using Tomcat.

## Performance tuning parameters for UWP

This section contains information on property settings for maximizing the Universal Window (application) Player (UWP). This refers to navigation in Mobile Web Studio.

- ObjectCacheMaxEntries – defines the maximum number of entries in the UWPObjectCache object. This is used for clickthru_cache, windows_def_omt_cache, and the parsed_template_cache. The default for this property is 250.
- ObjectCacheLRUReductionSize – defines the number of entries removed at a time from the UWPObjectCache object when implementing the LRU policy, which is a page-replacement policy that removes from main memory the pages that show the least amount of recent activity. This is also used for clickthru_cache, windows_def_omt_cache, and the parsed_template_cache. The default is 5.
- ContentCacheMaxEntries – sets the maximum number of entries in the Portlet ContentCache object. This object is used to cache the resolved application contents.
- ContentCacheLRUReductionSize – like the ObjectCacheLRUReductionSize property, this property defines the number of entries removed at a time from the Portlet ContentCache object when implementing the Least Recently Used (LRU) policy, which is a page-replacement policy that removes from main memory the pages that show the least amount of recent activity. This property is used in conjunction with the resolved application content cache.

# Data connections

This section discusses tuning database connection properties. PortalDB should be tuned to handle user load, but you can also modify the database connection properties for any entry in *server.xml*.

The maxActive, maxIdle, and maxWait properties in the *SYBASE\tomcat\conf\server.xml* file define the data connections from the Web application to the PortalDB.

- maxActive – defines the maximum number of database connections that should be allowed for PortalDB. This number should be set to a value that reflects the maximum expected user load for the UA 8.0 application.

- maxIdle – defines the maximum number of idle database connections that should be available at all times. This number should be set to a value that reflects expected user load fluctuation for the UA 8.0 application.
- maxWait – defines the maximum length of time to wait for a database connection. If additional connections are requested that exceed the maxActive property, the additional connections are put into a wait state until an available connection is returned to the pool. maxWait throws an exception when the defined time is exceeded while waiting for an available connection to be returned to the pool.

# JVM Tuning

Using the largest possible heap size will result in optimal JVM performance for UA 8.0. Heap sizes equal to or greater than 4GB are highly recommend for installations with expected user loads exceeding 250 concurrent users. To implement the appropriate heap sizes for UA 8.0, the JVM options below should be added to the *SYBASE/tomcat/bin/catalina.bat* file using set. These options should be set to the *JAVA_OPTS* variable. For example, `set JAVA_OPTS=-Xms3g`. The values given are for example only and should not be taken as suggestions; best values for your application will vary and should be set by measurement.

- If the memory available for the JVM heap is equal to or less than 4GB the following options should be used to define the minimum and maximum heap size.

  ```
  -Xms3g -Xmx3g
  ```

  Starting a heap with the same minimum and maximum sizes will result in the JVM spending less time attempting to adjust the heap in response to load, and will often improve startup time.

  This example sets the minimum and maximum total heap size to 3GB. The ‘g’ suffix may be replaced by ‘m’ to measure in megabytes.

- If the memory available for the JVM heap exceeds 4GB the following option should be used,

  ```
  -XX:+AggressiveHeap
  ```

This option instructs the JVM to push memory use to the limit: the overall heap is 3900MB, the new generation is 3072MB, the allocation area of each thread is 256KB, and the collection policy defers as long as possible before collecting. This option should be used with caution. In some cases `-Xss` can be used to define a smaller thread stack size.

CHAPTER 9

# Troubleshooting

This chapter describes how to troubleshoot Unwired Accelerator system and configuration problems. Troubleshooting information is also provided for application development and production problems where a change to the system configuration is required.


| Topic | Page |
|---|---|
| Overview | 155 |
| Unwired Accelerator setup | 161 |
| Troubleshooting resource configuration | 163 |
| Unwired Accelerator login problems | 164 |
| M-Business Anywhere setup | 166 |
| BlackBerry Enterprise Server setup | 166 |
| MobiLink server setup | 167 |
| Mobile device setup | 167 |
| Answers Anywhere/SMS setup | 170 |
| SAP, Domino, Remedy connection setup | 173 |
| Mobile application development problems | 174 |
| Production problems | 178 |


## Overview

To troubleshoot configuration and operational problems:

- View Unwired Accelerator log files, typically found in *x:\tmp\logs*
- Run trace to obtain detailed Unwired Accelerator information
- Increase the CSI logging level to obtain detailed information
- View error messages
- Check the configuration
- Test and monitor connections

## Unwired Accelerator log files

Unwired Accelerator log files are a useful source of troubleshooting information. Log files include:

- *uwp.err* – error log for UWP.
- *ds.err* – error log for document servers.
- *portal.err* – error log for the portal development environment.
- *as.err* – error log for agent servers. Agents are used for events.
- *transaction.log* – log file for agent transactions. Agents are used for events.
- *nav.log* – log file for navigation servers, which create the CCL for one-click capture. If tracing is enabled, debugging information is also logged in the log file.
- *capture.log* – log file for capture output and fatal error messages. If tracing is enabled, debugging information is also logged in the log file.
- *datamanager.log* – log file for database output, such as connection handling, database access, etc.
- *aa.log* – log file for Answers Anywhere output.

Log files are written to the *WorkRoot\logs* directory, typically *x:\tmp\logs*. The *WorkRoot* directory is created automatically during installation, but can be changed in the *global.properties.xml* file. See “Global property group” on page 183 for information about the WorkRoot property.

## Trace files

The trace feature is another useful source of troubleshooting information. Typically, the trace feature should not be enabled in a production system, because the extra trace processing can be detrimental to system processing. But you may want to enable tracing briefly to gather information, then disable it. Trace files includes:

- *uwp.trc* – trace file for UWP.
- *ds.trc* – trace file for document servers.
- *portal.trc* – trace file for the portal development environment.
- *as.trc* – trace file for the agent server.

The TraceFile property in the *global.properties.xml* file establishes the trace file name and location, and the TraceOn property establishes whether tracing is enabled. The trace file location is relative to the *WorkRoot* directory, typically *x:\tmp\logs*. The VerboseTrace property enables you to enable detailed levels of tracing.

You can enable trace for a particular portion of the system, to reduce overall impact on the system. See the following sections for information about enabling trace:

- UWP – "Global property group" on page 183.
- Doc Servers – "Docservers property group" on page 199.
- Portal development environment – "Portal property group" on page 201.
- Agent server (alerts and transactions) – "Agents property group" on page 201.
- Navigation (CCL and one-click capture) – "Nav property group" on page 202.
- Capture output – "Capture logging properties" on page 204.
- Database (connection, access, etc.) – "Database property group" on page 205.

## CSI logging level

Most Common Security Infrastructure (CSI) messages are logged through the Jakarta-common logging framework and available through log files. Some messages are passed through to CSI, depending on the logging level defined. The logging level is defined in the logging configuration file (*SYBASE\tomcat\conf\logging.properties* for Tomcat). Valid logging levels include SEVERE, INFO, FINE, FINER, FINEST (from the fewest messages to the most messages). The default logging level is INFO.

To increase the verbosity of logging, add this line to the end of the *logging.properties* file (substitute the appropriate logging level for FINE):

```
com.sybase.security.level = FINE
```

When you are finished, remove the line, or comment it out.

## Monitor connections (TCPMon)

The Apache Axis TCPMon utility provides a tool for monitoring messages passed over TCP/IP connections to various data sources, such as Remedy and Domino. TCPMon includes a graphical users interface, works on most platforms that Java supports, and does no depend on third party libraries. Some of the UI features rely on JDK 1.4, so TCPMon requires JRE that is 1.4 or higher.

You can download the utility from the Apache Web site at http://ws.apache.org/axis/index.html. Select the latest version of Axis.

❖ **Starting TCPMon**

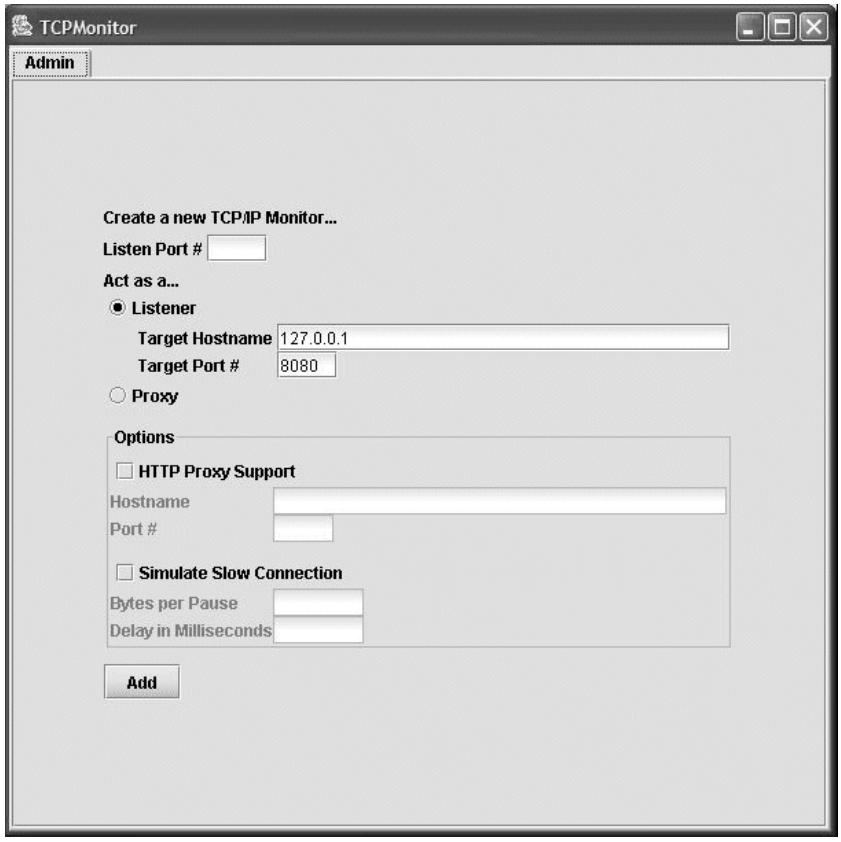
1 Make sure Java is JDK 1.4 or higher, and *%JAVA_HOME%\bin* is in the PATH variable.

2 The TCPMon utility can be found in the org.apache.axis.utils package which is zipped in *axis.jar*. To run it from the command line:

```
cd [axis installation dir]
java -cp .\lib\axis.jar
org.apache.axis.utils.tcpmon
[listenPort targetHost targetPort]
```

**Note** If you do not supply the optional arguments, the basic TCPMonitor GUI displays. You can supply the arguments from the GUI.

***Figure 9-1: Axis TCPMon admin tab***




❖ **Using TCPMon**

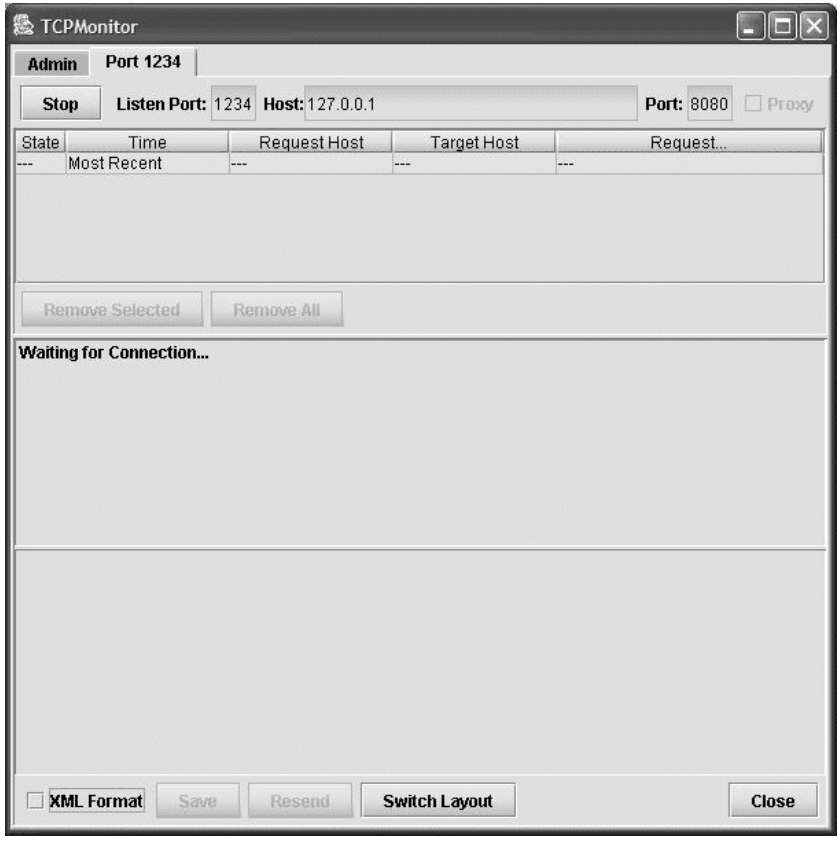
1 Identify the connection to monitor; select:

- A local port which TCPMon will monitor for incoming connections
- A target host where it will forward such connections
- A port number on the target machine to which to "tunnel"

For example, if your Remedy Mid Tier is `mymidtier.domain.com`, and is running on port `80`, then you enter those values in the target host and port.

2 Click Add. Another tab appears in the window for the new tunneled connection.

***Figure 9-2: Axis TCPMon port tab***




3 Monitor the connection. Each time a SOAP connection is made to the local port, you will see the request appear in the “Request” panel, and the response from the server in the “Response” panel. TCPMon keeps a log of all request/response pairs, and allows you to view any particular pair by selecting an entry in the top panel. You may also remove selected entries, or all of them, or choose to save to a file for later viewing.

The “resend” button will resend the request you are currently viewing, and record a new response. This is particularly handy in that you can edit the XML in the request window before resending – so you can use this as a great tool for testing the effects of different XML on SOAP servers. Note that you may need to change the content-length HTTP header value before resending an edited request.

❖ **Sending UA requests to TCPMon**

1 Locate the WSDL file, and save it locally. To do so, use Internet Explorer to get the WSDL content, right-click on the screen, and select "view source."

2 Find the address location:

```
<soap:address
location="http://mymidtier.domain.com/
arsys/services/ARService?server=ua8&webService=
HelpDesk_Query_Service" />
```

Change it to include "localhost":

```
<soap:address
location="http://localhost:[tcpmon listen port]/
arsys/services/ARService?server=ua8&webService=
HelpDesk_Query_Service" />
```

3 Save this file to *SYBASE\tomcat\webapps\onepage*; for example, *testwsdl.xml*.

4 In Mobile Web Studio, in the Web Services tab, enter the URL to *testwsdl.xml* instead of the URL to the real Remedy Mid-Tier server.

# Unwired Accelerator setup

Table 9-1 identifies common Unwired Accelerator configuration problems and provides useful troubleshooting information.

***Table 9-1: Troubleshooting Unwired Accelerator problems***

| Problem | Try this |
|---|---|
| Cannot start ASA database:<br>`Connection error: Unable to initialize requested communication links` | If you receive this error when trying to start the ASA database using `startdb`, check the *global.properties.xml* and *server.xml* files to make sure the ASA port number is set to the correct value. The default is 4747. If you changed the value, it must be the same in both places.<br>You can also check the *datamanager.log* file, located in *x:\tmp\logs*, for database-related error messages. |

| Problem | Try this |
|---|---|
| Cannot start the Portal Interface:<br>`File Not Found 404 error` | If you receive this error when trying to start Portal Interface, make sure you:<br>• Entered the URL correctly to access Portal Interface as described in "Accessing Portal Interface" on page 12.<br>• Are using the correct port number; for example, 4040 when running in Tomcat. |
| Cannot start Mobile Web Studio | If you cannot start Mobile Web Studio, verify that you are using:<br>• Internet Explorer and not Netscape.<br>• The correct version of Internet Explorer as described in *Unwired Accelerator Installation Guide*.<br>• The correct port number, for example, 4040 when running in Tomcat. |
| Mobile Web Studio window does not display | You may have disabled pop-ups in the Web browser. The Mobile Web Studio application requires pop-ups. You can:<br>• Enable pop-ups in your Web browser.<br>• Alternatively, if you do not want to enable pop-ups, you can access Mobile Web Studio by entering the following in the Web browser:<br>`http://hostname.domain:port/onepage/loader.jsp` |
| Cannot log in to Mobile Web Studio, after deploying a mobile application | Assuming the mobile application works and was deployed correctly from Mobile Web Studio, check the *uwp.err* file, located in WorkRoot, for clues. If you see a message similar to the following, your *localhost* listener is probably not working:<br>`HTTPUtils - getHTTPResponse: connection error: java.net.ConnectException: Connection refused: connect.`<br>Verify that your EAServer has a *localhost*:8080 listener as well as the *host.domain*:8080 listener. |
| Encountering problems starting Tomcat:<br>`Content is not allowed in prolog. And the UA cannot be started properly` | This typically occurs after Unwired Accelerator is removed from the machine without using the Uninstaller, and Unwired Accelerator is then reinstalled. To solve the problem:<br>1 Remove the InstallShield persistent storage from *\tmp\GEN1* (be sure to remove the entire *GEN1* directory).<br>2 Re-install Unwired Accelerator using InstallShield. |

# Troubleshooting resource configuration

Table 9-2 identifies common Unwired Accelerator resource configuration problems and provides troubleshooting information.

***Table 9-2: Troubleshooting resource problems***

| Problem | Try this |
|---|---|
| The following error displays in the *uwp.err* log:<br>`ERROR Id='211' is NOT defined for OEM resources, defaulting to OEM rid 1` | If there are no other signs that the resource is set up incorrectly, this indicates the resource name is misspelled.<br>Verify that the *\cobrands* directory name you created, and the co-brands name in the *cobrand.xml* file (located in *...\onepage\config*) are the same. See “Adding resources” on page 64 for information. |
| The following error displays when you try to access the new resource in a Web browser:<br>`Resource id = '211' is NOT configured for Poral usage. Usage of this new resource in portal and tools requires explicitly configuring the '/onepage/config/cobrands.xml'` | Check the *cobrands.xml* file, located in *...\onepage\config*, and verify:<br>• There are no duplicate entries for the resource specified.<br>• The resource entry is entered correctly. |
| Applications are not showing up in my new resource | When you build applications in Mobile Web Studio, you build them as a user in a particular resource. For example, if you log in as a masuper/m8super user, you build applications in RID 21 by default. If you build a new resource, such as RID 211, you must export the applications to the new resource. To do so:<br>1 Log in to the resource where you created the applications.<br>2 Export the applications.<br>3 Log out of the resource.<br>4 Log in to the new resource.<br>5 Import the applications.<br>For information about resources, see Chapter 5, “Resources.” For information about exporting and importing objects, see the *Unwired Accelerator Developer’s Guide*. |

# Unwired Accelerator login problems

Table 9-3 identifies common Unwired Accelerator login problems and provides troubleshooting information.

***Table 9-3: Troubleshooting Unwired Accelerator problems***

| Problem | Try this |
|---|---|
| Cannot log in to Mobile Web Studio - blank screen after entering user name and password | After you enter your user name and password to log in to Mobile Web Studio, you see a mostly blank screen prompting you to enter the user name and password again and you see in this text in the status bar:<br>`User: HARDCODED Resource: HARDCODED Company: HARDCODED`<br>Option 1 – Browser. Configure the browser to accept cookies.<br>1 In Internet Explorer, select Tools \| Internet Options.<br>2 In the Internet Options window, select the Privacy tab, then click Advanced.<br>3 Verify that the options are set to accept cookies. Click OK to exit the window.<br>4 Click OK to close the Internet Options window. |
| | Option 2– Browser. Remove any special characters from the host name or domain name. Some browsers cannot properly store and retrieve cookies for a site with special characters in the site's name, so the browser never sends back cookies to that site.<br>Change the name of the machine, or change the browser's character encoding to a character set that does contain special characters. |

| Problem | Try this |
|---|---|
| | Option 3 – EAServer. Change the Web container's proxy settings. During container login, the Web container uses HTTP 302 redirects to display the login form, authenticate the user, then take the browser to protected content. A cookie must be passed along with these 302 redirects, so it is important that you configure the Web container so that the 302 redirects appears to be identical to the URL address that set the cookie.<br>1 Start and connect to EAServer Manager.<br>2 Once you connect, select EAServer Manager \| Servers.<br>3 Right-click Jaguar and select Server Properties.<br>4 When the Server Properties window displays, select the HTTP Config tab.<br>5 In the Domain Name field, enter the host name + domain.<br>6 Verify that the Proxy HTTP Port and the Proxy HTTPS Port match the listeners configured for EAServer (Jaguar) and in *global.properties.xml*.<br>7 Click OK.<br>8 Right-click Jaguar and select Refresh to implement any changes you made.<br>9 Select File \| Exit to close Jaguar Manager. |
| Cannot log in to Mobile Web Studio – persistent problem | Check the *security.log* file for more details. Change the logging level from INFO to DEBUG in *JAGUAR\java\classes\log4j.properties*, restart EAServer and try to log in into Mobile Web Studio. Debug output in the *security.log* file should point to the cause of the failure. |
| User forgets password – Portal Interface users | If you are using CSI with the PortalDB security provider, instruct users to select Reset Password on the Portal Interface login screen.<br>• If a valid e-mail address is provided for the resetPasswordEmail property in *global.properties.xml*, the PortalAdmin user is notified. The PortalAdmin user requests a new password for the user through Mobile Web Studio, and UA generates a new password and notifies the users via an e-mail message.<br>• If a valid e-mail address is not provided, you must have a manual process in place to notify the PortalAdmin user to request a new password for the user.<br>If you are using CSI with LDAP, and *csi.xml* is configured correctly, users can reset the password on the Portal Interface login screen.<br>If you are using Enterprise Security, you must manage security from EAServer Manager. |

| Problem | Try this |
|---|---|
| User forgets password – Mobile Web Studio users | If you are using CSI with PortalDB:<br>• Mobile Web Studio users can change their passwords from the Account Info link in Mobile Web Studio. Unwired Accelerator sends an e-mail notification to the user's e-mail address.<br>• StudioAdmin users can request a new password for a user through Mobile Web Studio. Unwired Accelerator sends an e-mail notification to the user's e-mail address.<br>If you are using CSI with LDAP, and csi.xml is configured correctly, users can reset the password from the Portal Interface or Mobile Web Studio.<br>If you are using Enterprise Security, you must manage security from EAServer Manager. |

# M-Business Anywhere setup

Table 9-4 identifies common M-Business Anywhere configuration problems and provides useful troubleshooting information.

***Table 9-4: Troubleshooting M-Business Anywhere setup problems***

| Problem | Try this |
|---|---|
| M-Business Anywhere and Unwired Accelerator are not communicating | If you installed M-Business Anywhere server on a different Windows server than Unwired Accelerator, verify that you modified *server.xml* correctly:<br>See "Configuring Unwired Accelerator for M-Business Anywhere" on page 29 for correct settings. |
| Cannot use the Manage M-Business option from Mobile Web Studio | This may be a configuration problem. Check the *server.xml* file to make sure the jdbc/agdb JNDI datasource is configured properly for the container as described in "Setting up a JNDI data source resource" on page 78. |

# BlackBerry Enterprise Server setup

Table 9-5 identifies common BlackBerry Enterprise Server (BES) setup problems and provides useful troubleshooting information.

***Table 9-5: Troubleshooting BES setup problems***

| Problem | Try this |
|---|---|
| Unwired Accelerator cannot connect to the BlackBerry Desktop Manager | Verify that the BlackBerry Desktop Manager is version 4.0, the version required by Unwired Accelerator. |
| Receiving a `Sync has failed` message, even though everything seems to be OK | BlackBerry Enterprise Server, with BlackBerry device 1.8.3. Perform a manual reset on the mobile device to overcome this problem. Remove the back cover of the BlackBerry device, and use a paper clip to press the reset button. |

# MobiLink server setup

Table 9-6 identifies common MobiLink server and connection setup problems and provides useful troubleshooting information. When you install Unwired Accelerator, you can choose to install a local MobiLink server, or you can use an existing MobiLink server.

***Table 9-6: Troubleshooting MobiLink setup problems***

| Problem | Try this |
|---|---|
| Unable to install MobiLink server with the Unwired Accelerator installer | This typically occurs if you try to install UA 8.0 in Windows 2000. Windows XP and Windows 2003 are required. |
| Receiving a message:<br>`MobiLink Server experienced an unrecoverable error on startup` | Possibly the ODBC drivers that are specified in the registry are not pointing to the correct path. Update the path in the registry. |

# Mobile device setup

Table 9-7 identifies common mobile configuration problems and provides useful troubleshooting information.

***Table 9-7: Troubleshooting mobile device setup 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 “Global property group” on page 183. |

| Problem | Try this |
|---|---|
| Cannot access mobile application:<br>`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 "Global property group" on page 183. |
| Mobile application does not appear on the mobile device | Verify that:<br>• 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 "Configuring M-Business Anywhere" on page 25 and "M-Business Anywhere accounts" on page 55.<br>• For BlackBerry devices, make sure the "Make available for disconnected mobile devices" option is selected for the application, and that the application is in a grid format. |
| JVM error when attempting to load UA client on the BlackBerry device | This problem is typically seen on small memory devices (like the 7230) that only have 16MB of memory, especially when the device is loaded for Chinese language (or multiple European languages) support. To correct the problem:<br>1 Check the device memory to see whether less than 1.5MB of memory is available. To do so, select Options \| Status.<br>2 If less than 1.5MB of memory is available, remove some components to free up some memory. Some of the components you can remove are unused Input Methods for Chinese (for devices running Chinese support), or unused European language support (for devices running support for multiple European languages). |
| The UA client logo does not appear on the BlackBerry device | Verify that you installed the offline client on the BlackBerry device (or BlackBerry simulator), as described in "Installing the UA offline client" on page 93. |
| Large applications hang the BlackBerry device | If applications exceed 128K, they are parsed and sent to the BlackBerry in chunks. If the BlackBerry device does not have enough memory, it cannot handle the reparsing. Check the available and used memory on the BlackBerry device. |
| `Sync has failed`<br>`Response code returned 0`<br>`This UA application cannot be used with server version` *`version`*`.` | Somehow the Unwired Accelerator server and BlackBerry version strings are out of sync. Search the *global.properties.xml* file for the portal.version property, and make sure it is set to 8.0. See Chapter 10, "Configuring Global Properties" for information. |

| Problem | Try this |
|---|---|
| On the device simulator, too many applications display after using Refresh All to obtain the list of applications (even some that do not have "Make available for disconnected mobile devices" set). | The BlackBerry device simulator is useful for testing applications during development, but it does need maintenance. On the BlackBerry device, try selecting Delete All from the trackwheel menu, and then use Refresh All again. If the problem persists, run the clean.bat script:<br>1 Navigate to *RIM\BlackBerry JDE 4.x.x\bin*.<br>2 Double-click clean.bat.<br>3 Navigate to *RIM\BlackBerry JDE 4.x.x\simulator*.<br>4 Delete *Uaclient.** , *Uaframework.**, and *Ualistener.**.<br>5 Copy new *Uaclient.**, *Uaframework.**, and *Ualistener.** files into the simulator directory again as described in "Installing the UA offline client" on page 93. |
| Cannot push sync e-mail to BlackBerry device | This could indicate your BES configuration has become corrupt. Check to see how many CMIME service books you have:<br>1 On the trackwheel menu, select Options \| Service Books.<br>2 Look for the number of "Desktop [CMME]" entries you see.<br>3 If there are more than one, use the Delete option on the trackwheel menu to delete all entries.<br>4 Then sync with your BES again to get the proper CMIME service book back. You can sync by connecting to Database Manager, or running enterprise activation. |
| Sync activities keep interrupting what you are doing on the BlackBerry or Symbian/J2ME device | If you selected the option to "Sync immediately" when you configured push synchronization, focus changes from what you are doing to the sync process during synchronization. You can choose to ignore the sync request, and retrieve them from the Sync log when it is more convenient.<br>If you are interrupted a lot, you can select one of the other options as described in "Setting up push sync" procedure in "Symbian/J2ME client accounts" on page 50 or "BlackBerry accounts" on page 53. |
| After pushing an application from the UA server, mobile devices do not receive the mobile application at the same time | Push-sync behavior is influenced by UA server settings, and user settings on their mobile devices. If the user subscribes to the application, settings on the mobile device may require the user to Refresh All to get the updated mobile application. If the user does not subscribe to the application, the Administrator may have to create a version of the application that can be pushed to the user. |

| Problem | Try this |
|---|---|
| Push sync does not appear to update personalized applications for different users at the same time | This is typically due to one of the following:<br>• The user who does not receive notification of a push-sync, probably has not performed a sync since the subscription was set to "Y." Consequently, UA does not have the correct watchers for that user's version of the application.<br>• The user adapter may not be push-enabled, so a user's version of the application not getting executed. Consequently, change detection never occurs to start the push process. |
| Message keeps popping up on the Symbian/J2ME device:<br>`HTTPMIDlet wants to send information. This will require the use of airtime which may cost you money. Is this OK? (//wireless.java.sun.com)` | This indicates the mobile device is protected by a security domain, that protects users and software from malicious software. This security requires airtime for which you will be billed. Make your choice from those offered, typically:<br>• Yes, always. Don't ask again.<br>• This time. Ask me next time.<br>• Not this time. Ask me next time.<br>• No. Shut off HTTPMIDlet.<br>See "Symbian/J2ME client security" on page 126 for more information, and to learn more about MIDP 2.0 security architecture, see Sun Developer Network (SDN) at http://developers.sun.com/techtopics/mobility/midp/articles/permissions/. |

# Answers Anywhere/SMS setup

Table 9-8 identifies common Answers Anywhere, and Answers Anywhere with SMS setup problems and provides useful troubleshooting information.

***Table 9-8: Troubleshooting Answers Anywhere/SMS setup problems***

| Problem | Try this |
|---|---|
| Unwired Accelerator cannot communicate with the SMS provider | Check the CMC0.log file, located in SYBASE\cmc, to see whether Unwired Accelerator and Answers Anywhere software are communicating with your cell modem properly.<br>Check the following Answers Anywhere software configuration:<br>• Make sure the CellularModemController (CMC) software, used by Unwired Accelerator to communicate with your SMS provider, is configured properly as described in the *Unwired Accelerator Installation Guide*.<br>• If you did not do so, stop and start the Tomcat application server to initialize the changes to the *CMCConfig.properties* file, as described in the *Unwired Accelerator Installation Guide*. See “Starting and stopping the Tomcat application server” on page 9 for Tomcat application server restart instructions.<br>• If you installed the CMC software on a machine other than the one on which Unwired Accelerator is installed, make sure you copied the *CMCConfig.properties* file to the new location.<br>• If you set up multiple resources, make sure you configured a different instance of CMC for each resource in the *CMCConfig.properties* file. |

| Problem | Try this |
|---|---|
| Error when trying to run CMCModem (run.bat):<br>`WARNING: Bad status response from modem -20` | Check the following hardware and environment settings:<br>• Verify that the modem is working:<br>1 Select Start \| Settings \| Control Panel \| Phone and Modem Options \| Modems tab \| Properties \| Diagnostics tab.<br>2 Select the modem and click Query Modem.<br>Alternatively, select Computer Management \| Device Manager \| Modem \| Properties \| Diagnostics \| Query Modem.<br>• If no modem is installed, install it. To do so, access Control Panel \| Phone and Modem Options, select the Modems tab, select Add, and install the modem using the Add/Remove Hardware wizard. Supply the manufacturer, model, and port number. Make sure the port number is not already used.<br>• Verify that the SIM card is working. To do so, take out the SIM card, put it into a mobile phone, and check to see that the phone works. If so, the SIM card is working.<br>• Check for modem port conflicts. If you are running the emulator, shut it down, since it may be using the same port as the modem. Make sure no other applications are using the modem port number.<br>• Check for modem hardware setting problems. To do so, access Control Panel \| Add/Remove Hardware; select Add/Troubleshoot Device; from the list of devices, select the modem. Look for any irregularities that might explain the modem problems.<br>• Verify the CMC modem software is installed. To do so, access Control Panel \| Add/Remove Programs, and find the CMC software in the list. Look for any irregularities that might explain the modem problems.<br>• If you have not already done so, check the *CMC0.log* file, located in *SYBASE\cmc*, to see whether Unwired Accelerator and Answers Anywhere software are communicating with your cell modem properly. |
| Answers Anywhere does not work from a mobile device | Make sure users register the phone number with the SMS modem "Setting up Answers Anywhere for SMS" on page 36.<br>If role-based access is used, the user may not have sufficient privilege to access the information requested. |

| Problem | Try this |
|---|---|
| Answers Anywhere does not work properly with e-mail | If you set up Answers Anywhere for e-mail, check the following configuration settings:<br>• Verify the dedicated e-mail account, such as "askua," is set up for Unwired Accelerator, and that your e-mail system provides POP3 access to the e-mail account.<br>• Verify that the *uadejima.properties* file is configured properly, as described in "Setting up Answers Anywhere for e-mail" on page 32. |
| Exclude/include telephone number feature (blacklist/whitelist) does not work | If you use the blacklist or whitelist feature to exclude or include specific telephone numbers, you must have at least one telephone number listed for the option. See "Setting up Answers Anywhere for SMS" on page 36for information on the blacklist and whitelist options. |

# SAP, Domino, Remedy connection setup

Table 9-9 identifies common problems you might encounter when connecting to various data sources, such as SAP, Domino, and Remedy, and provides you might encounter when using useful troubleshooting information.

***Table 9-9: Troubleshooting SAP, Domino, and Remedy connection problems***

| Problem | Try this |
|---|---|
| Cannot download the SAP Java connector from SAP | You must be a registered SAP customer to download the SAP Java connector from the SAP Service Marketplace Web site. |
| Unwired Accelerator cannot connect with the SAP environment | Check the following configuration settings:<br>• Verify that you configured the SAP Java connector correctly, using information in "Setting up a SAP connection" on page 18. Specifically, make sure the *sapjco.jar*, *librfc32.dll*, and *sapjcorfc.dll* files are in the correct location, and that the connection pools are defined in the *sapjco.properties* file.<br>• Check the *global.properties.xml* file and make sure the connection pools are defined as described in "Setting up a SAP connection" on page 18 and "SAP property group" on page 194.<br>• Verify that a properties file is defined for each connection pool entry in the *global.properties.xml* file, as described in "SAP property group" on page 194.<br>• Use Apache Axis TCPMon to monitor the TCP/IP connection. See "Monitor connections (TCPMon)" on page 158. |

| Problem | Try this |
|---|---|
| Unwired Accelerator cannot connect with the Domino environment | Check the following configuration settings:<br>• Verify that you configured the Domino connection correctly, using information in “Setting up a Domino connection” on page 21.<br>• Check the *global.properties.xml* file and make sure the connection pools are defined as described in “Setting up a Domino connection” on page 21 and “Domino property group” on page 195.<br>• Verify that a properties file is defined for each connection pool entry in the *global.properties.xml* file, as described in “Domino property group” on page 195.<br>• Use Apache Axis TCPMon to monitor the TCP/IP connection. See “Monitor connections (TCPMon)” on page 158. |
| Unwired Accelerator cannot connect with the Remedy environment | Check the following configuration settings:<br>• Use Apache Axis TCPMon to monitor the TCP/IP connection. See “Monitor connections (TCPMon)” on page 158. |

# Mobile application development problems

Table 9-10 provides troubleshooting information for common mobile application development problems, especially those that may required a change to the Unwired Accelerator configuration. See the *Unwired Accelerator Developer's Guide* for application development information.

***Table 9-10: Troubleshooting mobile application problems***

| Problem | Try this |
|---|---|
| A Web application that was created for offline mode does not display on the PDA. The following error displays in the *UWP.err* file:<br>`UWPWindowsApp::CreateMApp Data:application definition is not compatible with MAPP GRID generation` | Check the following:<br>• Verify that UA, M-Business Anywhere, and M-Business Client are configured properly as described in the *Unwired Accelerator Installation Guide*.<br>• Verify that you can sync between M-Business Client on your PDA and M-Business Anywhere.<br>• Verify that you captured the application as a “grid” style application in Mobile Web Studio. Mobile applications can be sent offline to a PDA only when they have been captured as grid-style applications. See the *Unwired Accelerator Developer's Guide* for procedures. |

| Problem | Try this |
|---|---|
| Attempted to change the application border color in *styles.xml*, by setting `tileBorderColor="#D9A996"`; but the color used for each application defaults to `#CCCCCC`. | The application border color is actually set in the Page properties through Mobile Web Studio. See the *Unwired Accelerator Developer's Guide* for information about editing Page properties. In the Page Properties window, you must select "Enable Applications Border," and replace the default color `CCCCCC` with the color you prefer, such as `D9A996`, in hexadecimal format. |
| Problems capturing Web applications that use Java script. | Try using a more robust capture strategy, such as ActiveX (requires Windows). Another approach is to ignore the JavaScript errors (for example, you can turn off the error reporting in Internet Explorer during the capture process). Sometimes the errors display during capture, but not during playback. See the *Unwired Accelerator Developer's Guide* for information about advanced capture strategies that might work. |
| Problems capturing Web applications that take a long time to load (UA times out) | If you are capturing Web sites that have very slow page loads, and are using Advanced navigation, consider increasing the acx.timeout property value in *global.properties.xml*. See "Nav property group" on page 202 for information about the property. |
| Problems capturing Excel spreadsheet | You may need to increase the file size limit specified in the excelfilelimit property value in *global.properties.xml*. See "Global property group" on page 183 for information about the property. |
| Not sure whether a new record was created or an existing record updated from BlackBerry for SAP | The output from the new record is converted to a string and returned to the BlackBerry device. Select Logs from the trackwheel and scroll down to the item associated with the new record. If the sync was successful, the log will contain the string. |
| The drop-down list feature in an application does not work on the BlackBerry device | On the UA client, the value of a parameter always uses the default unless you assigned it to a personalization key. Unlike the BlackBerry browser, you can enter parameter values. Data for each item on the list is synchronized. |

| Problem | Try this |
|---|---|
| Unable to access Portal Interface from a WAP browser | The phone (user agent) is probably not listed in the *UserAgentMapping.xml* file.<br>1 Identify the user-agent string for your browser. In a browser window, go to:<br>`http://host.domain.com:port/onepage/snoop.jsp`<br>Look for the agent string, which should be similar to:<br>`user-agent=Mozilla/5.0 (yourDeviceBrowser; U; Windows Mobile; en-US; rv:1.7.3) Gecko/20040910`<br>2 Make note of the browser (*yourDeviceBrowser*) and platform (*Windows Mobile*) values.<br>3 In a text editor, open the *UserAgentMapping.xml* file, located in *SYBASE\tomcat\wepapps\onepage\fw\properties*, and add an entry for the browser and platform, similar to:<br>`<UserAgent clientpattern="YourDeviceBrowser" platform="Windows Mobile">`<br>`<NavStyle name="Phone-WML"/>`<br>`<Content name="WAP-WML" type="text/ vnd.wap.wml"/>`<br>`</UserAgent>`<br>4 Save and close the file, and try again. |
| Having problems capturing HTTPS applications | Edit *global.properties.xml* (see Appendix 10, "Configuring Global Properties"):<br>• Set the secure property to on.<br>• Set the use_https property to on.<br>See "Data confidentiality and integrity" on page 125 for more information. |
| Created a Web service application, but it does not show up on a Blackberry device | Check the parameters and make sure the Enable Grid Rule check box is selected. Also, when you select Enable Grid Rule, you must select or define a content XSLT and provide input parameters. See the *Unwired Accelerator Developer's Guide* for information about creating Web service applications. |

| Problem | Try this |
|---|---|
| How do I use the ACX option when building portlets using a UNIX/Linux UA installation? | To use the ACX option on UNIX when you create one-click capture applications, the ActiveX processing must be delegated to a remote Windows machine that has UA installed. Specifically:<br>1 Install UA on a Solaris box. See the *Unwired Accelerator Installation Guide*.<br>2 Install UA on a Windows machine. See the *Unwired Accelerator Installation Guide*.<br>3 Edit *global.properties.xml* (see Appendix 10, "Configuring Global Properties"):<br>• Set the acx property to remote. On UNIX, this property defaults to none, and on Windows, the default is local.<br>• Set acx.host to the URL of the host (for example, `http://labxp.sybase.com:4040` on Tomcat, or `http://labxp.sybase.com:8080` on EAServer.<br>Leave the acx.servlet.url property as is (default is */onepage/servlet/ACX*).<br>• Restart the UNIX UA installation.<br>Now you can use the ACX option when building applications using the UNIX UA installation. See the *Unwired Accelerator Developer's Guide*. |
| The user is receiving messages like:<br>`Login failed, check your username/password` | Check account set up in Mobile Web Studio, or recommend the user check to make sure the profile is set up correctly. |
| The user is receiving messages like:<br>`Operation failed! You do not have proper access rights`, or<br>`Permission denied to user` | The Unwired Accelerator account does not give permission for the user to do the operation. For example, to develop and deploy mobile applications, a user needs both StudioAdmin and PortalAdmin roles. See Chapter 7, "Security" for information about UA security, roles, and so forth. |
| Created a new BlackBerry client template, but the images are not showing up in the client | Check to make sure the icons you specified are in the correct directory:<br>`SYBASE\tomcat\webapps\onepage\bb\customization\images`<br>If they are not in the directory, you must move the images to the directory, and rebuild the BlackBerry client.<br>If they are in the directory, make sure you spelled the icon name correctly. Keep in mind that images with a *.png* extension work best on mobile devices. |

# Production problems

Table 9-11 provides troubleshooting information for common Unwired Accelerator production problems. Topics include performance and security problems.

***Table 9-11: Troubleshooting production problems***

| Problem | Try this |
|---|---|
| Agent (alert) response time is very slow | The agent transaction logging fills up the database too fast and the View Log or other agent functionality seems slow. Check the database logs to see if the database is out of space. You may see an error like this:<br>`Tasks are sleeping waiting for space to become available in the log segment for database tempdb`<br>Increase the database size. For Adaptive Server Anywhere, see the *ASA Database Administration Guide* for instructions. |
| Chart text displays incorrectly (EAServer) | If your chart text displays incorrectly, use this procedure to resolve the problem:<br>1 Start EAServer Manager, select Tools \| Connect \| Jaguar Manager, then enter:<br>• User Name – `jagadmin`<br>• Password – leave blank.<br>• Host Name – the name of your local machine.<br>• Port Number – `9000`<br>Click Connect.<br>2 Expand the Servers folder, right-click the Jaguar tree node, and select Server Properties.<br>3 Select the Static Page Caching tab and do either of the following:<br>• Unselect the Enable Static Page Caching option so no static pages or items are cached; or<br>• Prevent caching of items stored in */onepage/jspfilter* by entering the following into the Exclude WebApp Files text box:<br>`(onepage/jspfilter, *.*)`<br>4 Select File \| Refresh Static Cache.<br>5 Exit EAServer Manager, then restart EAServer.<br>Charts are no longer cached. |

| Problem | Try this |
| --- | --- |
| User cannot access a page<br>`403 error` | The 403 error indicates the user does not have the permissions required to access the page. Specifically, the “everybody” role is required.<br>On Tomcat, from Mobile Web Studio, access Manage \| Users/Roles \| Users, select the user, and make sure the “everybody” role is granted. See “Mobile Web Studio accounts” on page 44 for account maintenance information, and “Fine-grained access control” on page 123 for role information.<br>On EAServer, the “everybody” role is granted to the user by default, so this error should not occur unless the account is changed. |

CHAPTER 10

# Configuring Global Properties

The *global.properties.xml* file is the master configuration file for Mobile Web Studio and Portal Interface. This appendix describes properties in *global.properties.xml*.


| Topic | Page |
|---|---|
| Overview | 181 |
| Viewing global.properties.xml contents | 182 |
| Updating global properties | 205 |


## Overview

This appendix describes the key configuration properties in *global.properties.xml*, provides tips on using this file, and documents procedures for changing property values.

As you set up Unwired Accelerator and modify *global.properties.xml*, note that:

- In a default UA installation, *global.properties.xml* is located in:
  - Tomcat – *SYBASE\tomcat\Webapps\onepage\config*
- You must have a separate *global.properties.xml* file for each portal installation. See Chapter 5, “Resources.”
- When you change the contents of *global.properties.xml*, you must restart the application server to implement the changes.

---

**Note** Some of the remarks in the *global.properties.xml* file are no longer applicable. Use the information in this appendix instead.

---

# Viewing *global.properties.xml* contents

Once you install Unwired Accelerator, there are several properties in *global.properties.xml* that you can modify.

The contents of *global.properties.xml* are organized into these property groups:

- Global property group – properties for general portal settings.
- Audit property group – properties for Portal Interface and Mobile Web Studio auditing.
- Mobile Web Studio property group – properties for mobile applications.
- M-Business property group – properties for integrating M-Business Anywhere with Unwired Accelerator.
- SAP property group – properties for connecting to an SAP system from Mobile Web Studio.
- Domino property group – properties for connecting to a Domino Business Object system from Mobile Web Studio.
- UWP property group – application playback engine settings.
- Docservers property group – Mobile Web Studio application settings.
- ProductConfiguration property group – file name configuration.
- Portal property group – properties for the portal framework.
- Agents property group – agent configuration properties.
- Clickthru property group – click-through settings. Not included in this document.
- Nav property group – properties specific to Web element application navigation.
- Operation events – not included in this document; legacy property settings that are not used.
- Capture logging properties – properties for capture logging events.
- Database property group – properties for the data servers the portal is using.

The *global.properties.xml* file includes a section for each property group in the preceding list. Property groups and properties that are not discussed in this appendix are either not used, or use a default value that you should not change.

**Note** The strings "*eashost*", "*asehost*", "*hostname*", "*aseport*", and "*domain*" in *global.properties.xml* are replaced by the appropriate values during the installation of Unwired Accelerator. When configuration is successful, the administrator sees the actual values for these properties instead of the above string variables.

## Global property group

This group contains general settings, including server names, addresses, mail properties, and portal properties. For ease of reference, properties are listed in alphabetical order.

| Global property name | Default value | Description |
|---|---|---|
| alwaysValidateSession | true | (true/false) When this value is set to true, the user's portal session is validated on every request. There is a slight performance penalty for this. When this value is set to false, the session is checked only when security configuration requires an explicit authorization.<br>**Note** For personal channels to work properly on a mobile device or Portal Interface, set this value to false. 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. |
| Anonymous.Roles | everybody,PortalGuest | Lists the J2EE role values for anonymous users. Values are comma separated. See Chapter 7, "Security" for information about roles in Unwired Accelerator. |

| Global property name | Default value | Description |
|---|---|---|
| catalog_cache_refresh_list | Tomcat – 127.0.0.1:4040/onepage | Keep the default entry for a single-machine installation.<br>For a multimachine installation, enter the list of machines with catalogs that should be refreshed when a cache refresh is triggered. Use commas to separate entries in the list.<br>If you use the machine name, there must be a DNS entry inside the machine to resolve the entry.<br>This comma-separated list should consist of machine names that are internally addressable from within the servers themselves and should include the port number followed by the name of the Web application. For example, on Tomcat:<br>`"catalog_cache_refresh_list= demo1.$DOMAIN:4040/onepage, demo2.$DOMAIN:4040/onepage"`<br>**Note** If the `xml_catalog_serialize` property is set to yes, you must also set a value for `catalog_cache_refresh_list`. |
| client_virtual_path | /onepage/ | Used for JSP forward/include; for example:<br>BEA=/onepage/<br>iplanet=/onepage/ |
| CryptoSecretKey | SybaseUA | Defines a secret key to use for encrypting and decripting passwords. |
| default_http_port | Tomcat – 4040 | The application server port number. You provide the initial value at installation.<br>This value must match the default application server HTTP port number and must be the same as the application server settings.<br>**Note** If you change EAServer listener port numbers, you must also change this value to match. For EAServer, you must also assign a localhost listener on this port. |

| Global property name | Default value | Description |
|---|---|---|
| default_https_port | Tomcat – 4443<br>EAServer – 8081 | The application server HTTPS port number.<br>This value must match the default application server HTTP port number and must line up with the application server settings.<br>**Note** If you change listener port numbers, you must also change this value. |
| default_tile_href | " " | Default HREF that appears on application title bars. The default is none. If you wanted the same HREF to display on most application title bars, enter that HREF here. You can override this value during application development. |
| DefaultResourceID | 1 | The resource ID (RID) that is used if one is not included in a request. |
| DefaultUserID | 1 | The user ID that is used if one is not included in a request. |
| disableAutomaticReauthentication | false | (true/false) This property is not used for Unwired Accelerator; accept the default. See the *Enterprise Security Administration Guide* for information about Enterprise Security. |
| DocumentRoot | */tmp/PortletDocs* | Identifies the directory where application documents reside, when you create a file element and upload a document. See the *Unwired Accelerator Developer's Guide* for information about creating a file element using a document file. |
| domain | *subdomain.domain* | The DNS name of your portal Web server in the format ".xxx.xxx". Include any subdomain.<br>This value is used by the portal's servers. If you change your installation's domain, you must change the value here to the new domain name. |
| EclipseMode | false | (true/false) Indicates whether Unwired Accelerator is running under Eclipse. For stand-alone UA, leave this set to false. |
| ep_security_eas_guest_pwd | guest | This property is not used for Unwired Accelerator; accept the default. See the *Enterprise Security Administration Guide* for information about Enterprise Security. |

| Global property name | Default value | Description |
|---|---|---|
| ep_security_eas_url | iiop://*hostname.domain*:9000 | This property is not used for Unwired Accelerator; accept the default. See the *Enterprise Security Administration Guide* for information about Enterprise Security. |
| excelfilelimit | 200 | Specifies the Excel file limit size in KBs. This is used for limiting file size when capturing Microsoft Excel file elements. If you have problems capturing Excel spreadsheets, try increasing this value. |
| extensions | on | (on/off) Enables extra Portal extensions, such as JMS. |
| https.playback | on | (on/off) Enables secure bypass for Web applications. Turn off when you are using Oracle as the portal database. Oracle is not supported in Unwired Accelerator. |
| javascript.domain | *domain* | DNS name of your portal JavaScript Web server in the same format as the "domain" without the leading period (.) Included any subdomain. This value is used by the browser from which you are running the portal. |
| LicenseFile | */config/license.txt* | The location of the Unwired Accelerator license file. The evaluation software has a temporary license that expires, and the Unwired Accelerator product has a permanent license that does not expire. If you change this default, the portal will not run. |
| mail.host | 10.22.97.100 | Fully qualified DNS name or IP address of the mail server. This should be a server that is internally available to you.<br>**Note** You must change this value after installation to enter your own mail.host. The default entry is not a valid mail host. |
| mail.transport.protocol | smtp | (smtp/imap) Identifies the mail transport protocol used. This property and mail.host are passed as initialization properties to javax.mail.Session. |
| markupNoJSFile | */config/noJavascript OcMarkup.txt* | If you cannot navigate through a Web site because of JavaScript, enter that site here and Mobile Web Studio ignores or removes the JavaScript. |
| maxPageName | 25 | Maximum number of characters allowed per tab/page name. |
| maxTabSetChar | 5000 | Maximum number of characters per tabset. |

| Global property name | Default value | Description |
|---|---|---|
| maxTabSets | 99 | Maximum number of page groups (tabsets) allowed. Valid range is 1– 99. |
| multipleGuestPages | true | (true/false) Controls the number of guest pages to display. Set to true to display multiple guest pages; set to false to display only one guest page. |
| page.group | on | (off/on) Set to on to enable page groups in the portal. |
| passwordExpirationWarning Window | 30 | This property is not used for Unwired Accelerator; accept the default. |
| PortalAdministrationRole | PortalAdmin | The J2EE role required to administer the portal, perform export/import and update operations. See Chapter 7, “Security” for information about roles in Unwired Accelerator.<br><br>**Warning!** This property is designed for a single role and not a list of roles. There is no parsing of the string to look for multiple roles. |
| portal.build_number | *MMDDYYYY* | The Unwired Accelerator version number, in date format. |
| portal.defaultRID | 1 | Default resource ID (RID) for the portal. If a request does not include a RID, the systems falls back to the RID specified here. When you add a new resource in Web Studio, you may want to change the value here. |
| portal.host | *hostname* | Host name of the page playback server. The initial value is supplied at installation. |
| portal.portlet_create_lock | E,T,U | Lists the page types on which you cannot create, add, and move applications:<br>E – default<br>T – catalog<br>U – guest page |
| portal.version | 8.0 | The Unwired Accelerator version number. |
| proxy | off | (on/off) Set this value to on only if you are planning to use a HTTP proxy server, and this proxy server is installed and configured. See “Enabling proxy servers” on page 208, and the *Unwired Accelerator Installation Guide* for more information. |

| Global property name | Default value | Description |
|---|---|---|
| proxy.bypass_list | 127.0.0.1 \| localhost | Value – host1\|host2<br>The addresses and host names of Unwired Accelerator machines that must bypass the proxy server. When there are machines that cannot go through the proxy server (typically for internal sites), create the list of machines names; separate machine names using a bar (\|).<br>**Note** See the HTTPConnection Javadocs for information on dontProxyFor() method. |
| proxy.host | 127.0.0.1 | IP address of the proxy server. Enter this value only if the proxy property is set to on. |
| proxy.password | DefaultProxyUser Password | Configure this property only if the proxy property is set to on and the user exists on the proxy server |
| proxy.port | 3128 | Port number of the proxy server cache. Configure this property only if the proxy property is set to on and the user exists on the proxy server. |
| proxy.user | DefaultProxyUserName | Configure this property only if the proxy property is set to on and the user exists on the proxy server |
| redirfile | */config/redirlist.txt* | The location and content to which a user is redirected if he or she enters a URL that does not exist or is unavailable. |
| registration.organization | o=Sybase Inc,c=us | This property is not used for Unwired Accelerator; accept the default. See the *Enterprise Security Administration Guide* for information about Enterprise Security. |
| registration.userJ2EERoles | PortalUser,PortalGuest, PortalAdmin,manager, everybody | Lists the J2EE role values. Values are comma-separated. See Chapter 7, “Security” for information about roles and security in Unwired Accelerator. |
| resetPasswordEmail | pso@yourCompany. com | A semicolon-delimited list of e-mail addresses to which reset password notifications are to be sent. Change the default to e-mail addresses of people who manage the portal security system. |

| Global property name | Default value | Description |
|---|---|---|
| secure | off | (off/on) Indicates whether to enable HTTPS for the Web container (Mobile Web Studio and Portal Interface). Set to off to disable HTTPS. If enabled, HTTPS is used for log in and registration.<br>To enable Web capture of HTTPS sites and creation of "secure" applications, set secure and use_https properties to on.<br>See "Data confidentiality and integrity" on page 125 for more information. |
| SecureHostname | *LoadBalanceSecure Serverhost.domain* | Fully qualified host name for the load-balanced secure publish/subscribe server used by Mobile Web Studio and the application playback server (UWP or UPP). |
| secure_login | off | (off/on) Indicates whether to enable secure navigation. Set to off to have Portal Interface and Mobile Web Studio use HTTP during login and self-registration.<br>Set to on to have Portal Interface and Mobile Web Studio use HTTPS during login and self-registration.<br>See "Data confidentiality and integrity" on page 125 for more information.<br>**Note** Before setting this value to on, you must enable the HTTPS listener on your portal. |
| secure.tile.host | *hostname* | Host name of the secure HTTPS application playback server. The initial value is supplied at installation. This value should be the same as tile.host. |

| Global property name | Default value | Description |
|---|---|---|
| send.mail | true | (true/false) Set this value to true to send SMTP-based e-mail messages when you create a new accounts in Mobile Web Studio, or when Portal Interface users register for the first time or request to change their password.<br>If set to false, e-mail content is written to the *WorkRoot/emails* directory. See the WorkRoot property, later in this table, for information about WorkRoot.<br>**Note** You can leave this value set to true, then set the value to false for individual portals in the *cobrands.xml* file. See Chapter 5, "Resources" for detailed information. |
| server_virtual_path | / | Used for JSP forward/include; for example:<br>BEA=/<br>JRun=/<br>iplanet=/onepage/ |
| sharePage | on | (on/off) Enables page sharing in Portal Interface. |
| SOAPServer | 127.0.0.1 | The Service Oriented Architecture Protocol (SOAP) server machine name. |
| SplitEnabled | false | (true/false) Indicates whether to expose the Grid Split feature in the capture wizard. If enabled, the Split window appears in the capture wizard, and you can manipulate row and column configuration, and modify headers. If disabled, the Split window is not included in the capture wizard. |
| tabingChar | 4 | The number of characters that tabs use for the corners. |
| tabset<br>**Note** Tabset is synonymous with page groups. | on | (off/on) Indicates whether to enable use of page groups. Set to on to enables use of page groups. |
| tile.host<br>**Note** Tile is synonymous with application. | *hostname* | Host name of the application playback server. The initial value is supplied at installation. |

| Global property name | Default value | Description |
|---|---|---|
| tile_style | 3 | (1/ 2/ 3) Indicates the default application style:<br>1 <IFRAME> tag only. Defines an inline frame for the inclusion of external objects including other HTML documents. Unlike frames created using <FRAMESET> and <FRAME>, <IFRAME> creates a frame that sits in the middle of a regular nonframed Web page. <IFRAME> works like <IMG>, only instead of putting a picture on the page, it puts another Web page on the page.<br>**Note** Internet Explorer versions 5.x and 6.x support <IFRAME>. Netscape 6 supports <IFRAME> but not all of the attributes. Versions of Netscape earlier than version 6 do not support <IFRAME>.<br>2 <DIV> tag only. The <DIV> tag has a single attribute—align—with four possible values—left, center, right, and justify. The <DIV> tag is used primarily to create divisions that require the same alignment attribute within an HTML document.<br>**Note** Does not work on Netscape 7, which does not support Web data within <DIV> tags.<br>3 Mixed mode. The application is formatted using either an <IFRAME> or a <DIV> tag, depending on which tag is more appropriate to the application's content. |
| turnOffSecurePassword | false | (true/false) Toggles use of secure password prompt by Portal Interface when using HTTPS applications created from Mobile Web Studio. The default is false, which means you are prompted for an additional password to view secure applications. If you change the value to true, you are not prompted for an additional password, and cannot view secure applications. |

| Global property name | Default value | Description |
|---|---|---|
| use_https | on | (on/off) Indicates whether to use secure navigation. Set to off to disable secure navigation.<br>To enable Web capture of HTTPS sites and creation of "secure" applications, set secure and use_https properties to on.<br>See "Data confidentiality and integrity" on page 125 for more information. |
| versioning | off | (on/off) Indicates whether to use versioning of applications and catalogs. Set to on to save versions of applications and catalogs. |
| WebServiceRoot | *ws* | This property indicates the location for generated Web service files when publishing applications to the UDDI registry.<br>There are two ways to enter this information:<br>• Enter an absolute location. For example, if you enter *d:\work\service\ws* on Windows or */work0/service/ws* on UNIX, the system adds files directly to the specified location. You must ensure that the location can be accessed from a URL, like *http://localhost:4040/onepage/ws*.<br>• Enter a relative location. For example, if you enter *service\ws* on Windows or *service/ws* on UNIX, the system adds files to the location relative to the current Web application; specifically, *root/work0/tomcat/webapps/onepage/service/ws* (on UNIX). You must ensure that the location can be accessed from a URL, like *http://localhost:4040/onepage/service/ws*. |
| wireless_portal | off | (on/off) This property is not used for Unwired Accelerator; accept the default. |
| WorkRoot | */tmp* | Base working directory to which the portal can write log files, upload files, and so on. |
| xml_catalog_serialize | yes | (yes/no) Enter "yes" to create local serialized objects of the XML catalog in your local */onepage/lib* directory. This allows a quicker-loading catalog.<br>Enter "no" to disable catalog serialization. |

| Global property name | Default value | Description |
|---|---|---|
| XmlValidation | off | (on/off) Indicates whether to enable runtime XML validation for application, page, and template definitions. Set to on to enable runtime xml validation.<br><br>**Note** Set this property to on in a development environment; and, to improve performance, set it to off in production environment. |

## Audit property group

This group contains properties for configuring auditing. Properties are listed in alphabetical order.

| Audit property name | Default value | Description |
|---|---|---|
| auditEnabled | false | (true/false) Indicates whether to enable auditing through the CSI security framework. If set to "true," the *csi.xml* file must also be configured. (This is not audit filtering, which is set up using the configuration service). |
| auditPortletPlayback | false | (true/false) Indicates whether to audit portlet or application playbacks. Set to "true" to enable auditing on playbacks. |
| auditRoleFilter | false | (true/false) Indicates whether to audit role filtering on auditable resources. Set to "true" to enable auditing. |

## Mobile Web Studio property group

This group lists obsolete Mobile Web Studio settings.

| Mobile application property name | Default value | Description |
|---|---|---|
| MS.Enabled | false | (true/false) This property is not used for Unwired Accelerator; accept the default. |

## M-Business property group

This group lists Answers Anywhere and M-Business Anywhere settings. Properties are listed in alphabetical order.

| Mobile application property name | Default value | Description |
|---|---|---|
| AA.CustomAgent Network | false | (true/false) Enables display of the Answers Anywhere Custom Agent Network feature. |
| MB.AutoRegistration | false | (true/false) Indicates how user accounts are handled when Unwired Accelerator and M-Business Anywhere are integrated.<br>• If set to true, when a user joins the Portal Interface, or when a user is added to Mobile Web Studio, the user automatically joins the M-Business Anywhere server with the same user name and password.<br>• If set to false, Mobile Web Studio does not self-register to M-Business Anywhere. A user with the Studio Admin role—such as opsuper or masuper—can register a user with M-Business Anywhere (using the M-Business \| User/Roles option).<br>See “Configuring M-Business Anywhere” on page 25 for information about integrating Unwired Accelerator and M-Business Anywhere, and see “M-Business Anywhere accounts” on page 55 for more information about managing user accounts. |
| MB.Enabled | true | (true/false) Indicates whether to enable connection from Mobile Web Studio to the M-Business Anywhere database, AGDB. If you are using M-Business Anywhere server to deploy applications to mobile devices, accept the default of true. |

## SAP property group

This group lists SAP settings. Properties are listed in alphabetical order.

| SAP property name | Default value | Description |
|---|---|---|
| ConnectionPools | sapjco | Comma-separated list of connection pool names available for SAP connection. For each connection pool name given in the ConnectionPools property, there must be a corresponding *<pool-name>.properties* file in the *...\onepage\WEB-INF\classes* directory. The default value points to a *sapjco.properties* file in the directory. See “Setting up a SAP connection” on page 18 for information about configuring ConnectionPools. |

| SAP property name | Default value | Description |
|---|---|---|
| DefaultConnectionPool Name | sapjco | Identifies the default connection pool name to use for an SAP connection, from the list of available connection pools. The user name provided in the *properties* file must have access rights to call a number of remote function module (RFMs) for metadata repository access (Authorization Object: S_RFC, ACTVT: 16, FUGR). |
| SAP.Enabled | false | (true/false) Indicates whether to enable SAP integration in Mobile Web Studio. Change the value to true to enable integration with SAP. |

## Domino property group

This group lists Domino settings. Properties are listed in alphabetical order.

| Domino property name | Default value | Description |
|---|---|---|
| ConnectionPools | defaultdomino | Comma-separated list of connection pool names available for the Domino connection. For each connection pool name given in the ConnectionPools property, there must be a corresponding *<pool-name>.properties* file in the *...\onepage\WEB-INF\classes* directory. The default value points to a *defaultdomino.properties* file in the directory. See “Setting up a Domino connection” on page 21 for information about configuring ConnectionPools. |
| ConnectionType | nrpc | (nrpc/diiop/websession) The connection type to use for a Domino connection. |
| DefaultConnectionPool Name | defaultdomino | Identifies the default connection pool name to use for a Domino connection, from the list of available connection pools. The user name provided in the *properties* file must have access rights to a Domino database with document creation, deletion, and agent running. |
| Domino.Enabled | false | (true/false) Indicates whether the UA server has been configured for for connection to a Domino database. This value is used by WorkSpace. |

## UWP property group

UWP is the Universal Window (application) Player, also referred to as UPP—Universal Portlet Playback engine. This is the application content handling framework that provides a uniform mechanism for application execution. UWP provides an application container and a personalization engine. Properties are listed in alphabetical order.

| UWP property name | Default value | Description |
|---|---|---|
| CacheRefreshList | 127.0.0.1 | Comma-separated list of internally addressable machine names to refresh the cache.<br>**Example:**<br>`CacheRefreshList=`<br>`machine1.$DOMAIN,`<br>`machine2.$DOMAIN`<br>**Note** Update this list for a multimachine UA configuration. See "Configuring multimachine installations" on page 206 for additional information about configuring multimachine UA configurations. |
| ContentCacheMaxEntries | 250 | The maximum number of entries in the application ContentCache object. This is used for caching resolved application contents. |
| ContentCacheLRU ReductionSize | 5 | The number of entries removed at time from the Portlet ContentCache object when implementing the least recently used (LRU) policy. This is used with caching content of resolved applications. |
| DefaultTemplateName | Template1 | The default template used for single-element application. See the *Unwired Accelerator Developer's Guide* for information about templates. You can change this to any template you want. For example, if you wanted every application to use the same header logo or footer, create that template and enter that template's name here.<br>When you change the template name here, it changes the default template for all resource IDs. |
| ErrorFile | */logs/uwp.err* | Location and name of the file to log UWP error messages, relative to the value for WorkRoot. |

| UWP property name | Default value | Description |
|---|---|---|
| ObjectCacheLRUReduction Size | 5 | The number of least recently used (LRU) entries removed at a time from the UWPObjectCache object when implementing the LRU policy.<br><br>**Note** The LRU policy is a page-replacement policy that removes from main memory the pages that show the least amount of recent activity. This policy is based on the assumption that these pages are the least likely to be used again in the immediate future.<br><br>This value is used for clickthru_cache, windows_def_omt_cache, and parsed_template_cache. |
| ObjectCacheMaxEntries | 250 | Every object that goes into and out of the database gets cached. This value is the maximum number of entries allowed in the UWPObjectCache object. This value is used for clickthru_cache, windows_def_omt_cache, and parsed_template_cache. |
| StorageConnector | onepage-generic | Values – onepage-instantdb, onepage-generic, onepage-cloudscape, onepage-cloudscape-iplanet.<br><br>**Warning!** Do not change this value. |
| SyncBranchKeepAlive Timeout | 30 | The number of days after which a branch may be purged if it has not been accessed in any sync request. This value is used in conjunction with SmartSync. |
| SyncCacheLRUReduction Size | 2 | The number of entries removed at a time from the UWPObjectCache object when implementing the last recently used *(LRU) policy. |
| SyncCacheMaxEntries | 10 | The maximum number of version entries that are maintained in the UWPObjectCache object. |
| SyncPerAppStorageLimit | 30 | The maximum storage in MBs allowed per application in the database. When the total data across all branches in an application (full data for HEAD + the diff for previous version) crosses this limit, half of the existing diffs are deleted from every branch of that application. Both size thresholds are checked every time a new version is committed. This value is used in conjunction with SmartSync. |
| SyncPerBranchStorageLimit | 10 | The maximum storage in MBs allowed per branch in the database. In any branch, when the total data (full data for HEAD + diff for previous version) crosses this limit, half of the existing diffs are deleted from that branch. This value is used in conjunction with SmartSync. |

| UWP property name | Default value | Description |
|---|---|---|
| ThisMachineName | 127.0.0.1 | The host name or IP address of this machine. If this machine is also a cache server, the value of ThisMachineName and UWPCacheServer must match. |
| TraceFile | */logs/uwp.trc* | Location and name of the file to log trace messages, relative to the value for WorkRoot. |
| TraceOn | false | (true/false) Indicates whether to enable basic tracing.<br>**Note** Set this value to off in a production environment. |
| UsePreCompiledJSP | false | (true/false) Indicates whether to use precompiled JSP. Set to true to have the application use precompiled JSP that is built ahead of time (.WAR file mode). |
| UWPCacheServer | 127.0.0.1 | The cache server is used for clickthru. If this machine is also a cache server, the value of ThisMachineName and UWPCacheServer must be the same.<br>**Warning!** Do not change this value. |
| UWPIntegrationHost | *localhost.domain* | Used by BEA/Yahoo integrations to make requests for application playback, edit screens, and returning to the OEM portal screens. This name must be visible from outside the firewall. |
| UWPWebServiceHost | *localhost.domain* | This property must be the actual name of the machine that is a server for the Web services WSDL files. This name must be visible from outside the firewall. |
| VerboseTrace | false | (true/false) Indicates whether to enable detailed tracing.<br>**Note** Set this value to false in a production environment. |

## Docservers property group

Docservers retrieve application content from the portal database (portalDB). Properties are listed in alphabetical order.

| Docservers property name | Default value | Description |
|---|---|---|
| CacheRefreshList | 127.0.0.1 | Comma-separated list of internally addressable machines on which to refresh the cache; for example:<br>`CacheRefreshList=`<br>`demo1.$DOMAIN,`<br>`demo2.$DOMAIN` |
| DBLookUpDocument Caching | true | (true/false) Indicates whether to cache documents that are typically database lookups, but change only with manual updates to the database; for example, category, subcategory.<br>Change this value to false when someone makes changes to database settings using something other than Mobile Web Studio. |
| DeployHost | *hostname.domain* | Real name of the machine used for import, export, and deploy functions. This name must be visible from outside the firewall. |
| EPSecurityHost | *hostname.domain* | This property is not used for Unwired Accelerator; accept the default. See the *Enterprise Security Administration Guide* for information about Enterprise Security. |
| EPSecurityHostPortNumber | 9000 | This property is not used for Unwired Accelerator; accept the default. See the *Enterprise Security Administration Guide* for information about Enterprise Security. |
| ErrorFile | */logs/ds.err* | Location and name of the file in which to log error messages, relative to the value of WorkRoot. |
| FrequentlyChangable DocumentCaching | true | (true/false) Indicates whether to cache documents that change because of changes to other documents. |
| MailOn | false | (true/false) Indicates whether to use a mail server for Agent servers. |
| MaxBytesForDocuments ToCache | 3000000 | The maximum number of bytes cached.<br>3000000= 3MB. |
| MaxNumberOfDocuments ToCache | 100 | The maximum number of documents cached. |
| NonfrequentlyChanged DocumentCaching | true | (true/false) Whether to cache documents that are updated infrequently; for example, a list of resources. The default maximum number of documents cached is 100. |
| TraceFile | */logs/ds.trc* | Location and name of the file in which to log trace messages, relative to the value of WorkRoot. |

| Docservers property name | Default value | Description |
|---|---|---|
| TraceOn | false | (true/false) Indicates whether to enable basic tracing.<br>**Note** Set this value to off in a production environment. |
| UseAccessControl | true | (true/false) Indicates whether to apply access control.<br>**Warning!** Do not change this value. |
| UseStudioDatabase | true | (true/false) This property is not used for Unwired Accelerator; accept the default. See the *Enterprise Security Administration Guide* for information about Enterprise Security. |
| VerboseTrace | false | (true/false) Indicates whether to enable detailed tracing.<br>**Note** Set this value to false in a production environment. |

## ProductConfiguration property group

This group lists portal settings for several Mobile Web Studio features. Properties are listed in alphabetical order.

| Product property name | Default value | Description |
|---|---|---|
| ClickacrossOn | true | (true/false) Indicates whether to expose the click-across user interface. |
| RequiredRoles | everybody | Lists required J2EE role values in conjunction with roles specified in *web.xml*. Values are comma-separated. See Chapter 7, “Security” for information about roles and security in Unwired Accelerator.<br>**Note** The everybody roles is required and should not be removed. |
| RoleBaseDisplay | true | (true/false) Indicates whether Mobile Web Studio should only display objects with the same role as the user. |
| RoleBaseDisplaySeeAll Roles | superuser | Identifies one or more J2EE roles that supersede the RoleBaseDisplay property. Any roles listed here see every item as if RoleBaseDisplay was set to false. Values are comma-separated. |
| WebServiceOn | true | Indicates whether to enable Web service element creation. When this value is set to true, the Web service user interface displays and you can create Web service elements. |

## Portal property group

This group lists portal settings for the development environment. Properties are listed in alphabetical order.

| Portal property name | Default value | Description |
|---|---|---|
| ErrorFile | */logs/portal.err* | Location and name of the file in which to log error messages, relative to WorkRoot. |
| TraceFile | */logs/portal.trc* | Location and name of the file in which to log trace messages, relative to WorkRoot. |
| TraceOn | false | (true/false) Indicates whether to enable basic tracing.<br>**Note** Set this value to off in a production environment. |
| VerboseTrace | false | (true/false) Indicates whether to enable detailed tracing.<br>**Note** Set this value to false in a production environment. |

## Agents property group

This group contains agent server settings. Properties are listed in alphabetical order.

| Agents property name | Default value | Description |
|---|---|---|
| AgentServerID | 0 | Default Agent Server ID. See the *Unwired Accelerator Developer's Guide* for information about creating and using Unwired Accelerator agents. |
| ErrorFile | */logs/as.err* | Location and name of the file in which to log error messages, relative to WorkRoot. |
| HeartBeat | 30000 | Sets the default heartbeat time in millions of seconds. Heartbeat is the time to sleep between agent tasks. The default, 30000, is equivalent to 30 seconds. |
| LoggingLevel | info | Defines what gets put into transaction logs. Values are info (all messages) or error (errors only). |
| LogToDatabase | true | (true/false) If set to true, agent logs are inserted in the database where they can be viewed from Mobile Web Studio and WorkSpace GUIs. If false, messages go to the TransactionFile only, and you must view that file to see the messages. |
| MaxLogRows | 150 | Sets the maximum number of data (rows) returned from the database to the browser for log information on a view log request. Set to zero for all. |

| Agents property name | Default value | Description |
|---|---|---|
| PushAgentLog | 2 | Sets the interval for pushing the agent transaction log to the Mobile Web Studio server. The interval multiplied by the heartbeat establishes when to push the agent transaction log. If the heartbeat is 30000 (30 seconds) and the push is 2, the agent log is pushed every minute (2 * 30). |
| PSHost | *hostname.domain* | Fully qualified name of the Mobile Web Studio/agent server machine. |
| PSPort | Tomcat – 4040<br>EAServer – 8080 | Port on which the PSHost server is listening for requests. |
| StatusUpdateFreq | 10 | Sets the status report/update frequency for gathering statistics about agents. The frequency multiplied by the heartbeat establishes when to gather the statistics. If the heartbeat is 30000 (30 seconds), and the frequency is 10, the statistics are gathered every five minutes (10 * 30). |
| TimeZone | PST | Time zone for the Publish Server (database). |
| TraceFile | */logs/as.trc* | Location and name of the file in which to log trace messages, relative to WorkRoot. |
| TraceOn | false | (true/false) Indicates whether to enable basic tracing.<br>**Note** Set this value to off in a production environment. |
| TransactionFile | */logs/transaction.log* | File to log agent execution events, relative to the directory in the WorkRoot property. |
| VerboseTrace | false | (true/false) Indicates whether to enable detailed tracing.<br>**Note** Set this value to false in a production environment. |

## Nav property group

This group contains one-click capture properties. The navigation server creates the Content Capture Language (CCL) statements that define applications in Application Builder. Properties are listed in alphabetical order.

| Nav property name | Default value | Description |
|---|---|---|
| acx | local | (local/remote/none) Identifies the ActiveX (ACX) control location.<br>Set this value to none to disable ActiveX support completely, and to remove the option from the application capture wizard interface.<br>For Windows, this value is best set to "local" so that ActiveX support is carried out on the local machine. However, you can set it to remote if you require remote support.<br>For UNIX, setting ACX to local causes errors to appear in the application server's log file, and causes capture and playback to fail.<br>To use the ActiveX component during capture and playback on UNIX, set this property to remote and set acx.host and acx.servlet.url properties. The request to use ActiveX is delegated to a remote Unwired Accelerator installation on Windows that handles the request and returns the result. Set acx.remote to point to the host and port where the ActiveX support servlet is located; for example:<br>`http://demo.sybase.com:4040/`<br>The URL must be a Windows machine with Unwired Accelerator installed.<br>The acx.servlet.url property is set to */onepage/servlet/ACX* and should remain that value unless you are directed to change the value by a qualified Sybase support engineer. |
| acx.host | http://*hostname*.*domain*:*port* | Indicates the host/domain/port where ACX servlet is located. |
| acx.servlet.url | /onepage/servlet/ACX | Indicates the URL of the ACX servlet.<br>**Warning!** Sybase recommends that you change this property only with the guidance of a Sybase support engineer. |
| acx.timeout | 20 | Indicates the length of time that UA waits for a page (URL) to load before timing out. If you are capturing Web sites that have very slow page loads, and are using Advanced navigation, consider increasing the value. |
| includelistfile | */config/includelist.txt* | This property is not used for Unwired Accelerator; accept the default. |
| log | *logs/nav.log* | Location and name of the navigation log, relative to the value of WorkRoot. |

| Nav property name | Default value | Description |
|---|---|---|
| LogAllNav | off | (on/off) Indicates whether to enable tracing. Set this value to on to turn on tracing for nav, HTTP, navigate, clickthru, and servlet.<br>**Note** When this value is set to on, all other loggers in the Nav property group are also set on. |
| nav.servlet.url | */servlet/nav* | The URL of the nav servlet. |
| nav.general.host | *hostname* | Value – http://<*host*>.<*subdomain*><br>Host name of the fully qualified DNS name of the aliased general host for all nav servers. |
| nav.general.secure.host | https://*hostname* | Value – https://<*host*>.<*subdomain*><br>Host portion of the fully qualified DNS name of the aliased general HTTPS content capture secure server. |
| nav.host | *hostname* | Value – http://<*host*>.<*subdomain*><br>The host portion of the DNS name of the server when HTTP is used. |
| nav.secure.host | *hostname* | Value – https://<*host*>.<*subdomain*><br>The host portion of the DNS name of the server when HTTPS is used. |
| NavTraceOn | off | (off/on) Indicates whether to perform navigation tracing.<br>**Note** Set this value to off in a production environment. |
| use_include | off | Set this value to on to limit navigation scope. |

## Capture logging properties

This group contains properties for capturing log files and enabling tracing. Properties are in alphabetical order.

| Capture logging property name | Default value | Description |
|---|---|---|
| CaptureTraceOn | off | (on/off) Indicates whether to enable tracing. Set this value to on for tracing.<br>**Note** Fatal and error levels are always logged. Setting this property value to on sets the trace level to debug.<br>Sybase recommends that you set TraceOn to off in a production environment. |

| Capture logging property name | Default value | Description |
|---|---|---|
| LogFile | */logs/capture.log* | Location and name of the log file for capture output, relative to the value of WorkRoot. |

## Database property group

This group contains the database properties for each server. Properties are listed in alphabetical order.

| Property name | Default value | Description |
|---|---|---|
| enable.tracing | false | (true/false) Indicates whether to enable tracing. Set this value to true to write traces to a log file.<br>**Note** Set this value to false in a production environment. |
| logfile | */logs/datamanager.log* | Location and name of the logfile for database output, relative to the value of WorkRoot. |

# Updating global properties

The *global.properties.xml* file is the master configuration file for Mobile Web Studio and Portal Interface. After you install Unwired Accelerator, there are properties you must change to suit your enterprise. The *Unwired Accelerator Installation Guide* describes changes to make to the *global.properties.xml* file for the Unwired Accelerator host, domain, and port configuration; Mobile Web Studio and M-Business Anywhere integration; and proxy server (if used). This section describes additional changes you must make to configure Unwired Accelerator.

Read through all the procedures in this section to determine which properties you must change. After changing each property, save the file, but do not close it, until you have made all of the necessary changes. When you are finished, save and exit the file, close the text editor, then stop and restart the application server.

❖ **Sending e-mail to a file**

The send.mail property, by default, is set to true, which means that SMTP-based e-mail is sent when a new user account is created. If you do not have SMTP-based e-mail, set this value to false, which writes the e-mail content to *<WorkRoot>/emails*. See "Global property group" on page 183 for information about the send.mail property.

1 Use any text editor to open *global.properties.xml*, which is located in:

- Tomcat – *SYBASE\tomcat\Webapps\onepage\config*

2 Search for the send.mail property and change the value to false.

3 Save the file but do not close it.

❖ **Sending e-mail to users**

If you have an SMTP-based e-mail host and leave the send.mail value set to true, you must change the mail.host property value for this functionality to work.

1 Search for the property called mail.host. See "Global property group" on page 183 for information about the mail.host property.

2 Change the value to the name of your company's SMTP-based e-mail host server.

3 Save the file.

❖ **Configuring multimachine installations**

If you installed UA on multiple machines, there are several properties in *global.properties.xml* that you must update to reflect this configuration.

1 Search for the catalog_cache_refresh_list property in the Global properties section of the configuration file.

2 Enter a comma-separated list of machines with catalogs that must be refreshed when a cache refresh is triggered. If you use the machine name, there must be a DNS entry inside the machine to resolve the entry.

This list must be machines that are internally addressable from within the servers themselves and must include the port number, followed by the Web application name, which is "onepage." For example, using Tomcat:

```
"catalog_cache_refresh_list=
demo1.$DOMAIN:4040/onepage,
demo2.$DOMAIN:4040/onepage"
```

See the table in Global property group for information about the catalog_cache_refresh_list property.

3 Search for the CacheRefreshList property in the UWP properties section of the configuration file.

Enter a comma-separated list of internally addressable machines names to refresh the cache. If you use the machine name, there must be a DNS entry inside the machine to resolve the entry.

This list must be machines that are internally addressable from within the servers themselves and must include the port number, followed by the Web application name, which is “onepage.” For example, using Tomcat:

```
"CacheRefreshList=
demo1.$DOMAIN:4040/onepage,
demo2.$DOMAIN:4040/onepage"
```

See “UWP property group” on page 196 for information about the CacheRefreshList property.

4 Search for the CacheRefreshList property in the Docserver properties section of the configuration file.

Enter a comma-separated list of internally addressable machines names to refresh the cache. If you use the machine name, there must be a DNS entry inside the machine to resolve the entry.

This list must be machines that are internally addressable from within the servers themselves and must include the port number, followed by the Web application name, which is “onepage.” For example:

```
"CacheRefreshList=
demo1.$DOMAIN:4040/onepage,
demo2.$DOMAIN:4040/onepage"
```

See “Docservers property group” on page 199 for information about the CacheRefreshList property.

❖ **Configuring different machines and ports for the same domain**

This example illustrates the settings used to configure a different machine and port for the same domain as other machines in your UA installation.

1 Search for *hostname* and replace it with the name of the Tomcat or EAServer machine host name that is on a different port, for example, “labxp”. *hostname* is the machine name entered at installation.

2 Change the value of the default_http_port property to the new port for the different machine hosting Tomcat or EAServer:

```
<Property name="default_http_port" value="new http port"
description="the application server port" menugroup="10"/>
```

See “Global property group” on page 183 for information about the default_http_port property.

3 Verify that the value to which you changed the default_http_port property is the value for which the application server is configured.

In either Tomcat or EAServer, the portal requires a listener configured for both the IP address 127.0.0.1 and the new port that you configured for the default_http_port property:

```
hostname.domain    new http port
127.0.0.1           new http port
```

4 Stop and restart the application server.

❖ **Turning trace functionality off for production**

If you are running the portal in a production environment, you may want to turn off the trace settings, which are turned on by default, to improve performance.

1 In the UWP properties section, set TraceOn and VerboseTrace to false. See “UWP property group” on page 196 for information about the TraceOn and VerboseTrace properties.

2 In the Docservers properties section, set TraceOn and VerboseTrace to false. See “Docservers property group” on page 199 for information about the TraceOn and VerboseTrace properties.

3 In the Portal properties section, set TraceOn and VerboseTrace to false. See “Portal property group” on page 201 for information about the TraceOn and VerboseTrace properties.

4 In the Capture properties section, set CaptureTraceOn to off. See “Capture logging properties” on page 204 for information about the CaptureTraceOn property.

❖ **Enabling proxy servers**

If you are using a HTTP proxy server, there are several settings in *global.properties.xml* that you must modify.

1 In the Global properties section, set the proxy property to true.

2 Set the remaining proxy properties (proxy.host, proxy.port, proxy.bypass_list) to the correct values for your proxy configuration. See “Global property group” on page 183 for information about the proxy properties, and the *Unwired Accelerator Installation Guide* for detailed.

3 Save and exit the file, close the text editor, then stop and restart Tomcat or EAServer.

# Glossary

**access control** Controlling access to a data source.

**AGDB** AvantGo Database. M-Business Anywhere database used to store mobile applications. When a user log in to the mobile devices, or synchronizes, mobile applications are deployed to the device.

**Answers Anywhere** The Answers Anywhere product enables you to retrieve Unwired Accelerator application data using natural-language-like questions. You can use a variety of client interfaces, including e-mail, short message service (SMS), Web, and M-Business Client, to request information.

**API** Application Program Interface. A set of routines, protocols, and tools for building software applications that enable programs to communicate with each other.

**ASP** Active Server Pages. An open, compile-free application environment in which Web developers can combine HTML, scripts, and reusable Active Server components. ASP technology enables server-side scripting for IIS with native support for both Visual Basic Scripting Edition and JScript.

**adapter** A component that provides an interface between an internal application and external applications or messaging systems. An adapter detects events and validates event contents.

**application** A software program that runs on any computing device, such as a computer or a mobile device. In this guide, mobile application is used to describe an application specifically designed to run on a mobile device.

**Application Builder** An Unwired Accelerator wizard used to define applications. A succession of windows shows you how to create, configure, and customize the application. You need not use all the windows to define your application; the windows needed vary depending on the type of application you are creating (for example, Web, HTML, JSP, database, document, and so forth).

**authorization** Assigning permissions to users or groups of users to access secured objects.

**BES** — BlackBerry Enterprise Server. A Research in Motion platform for delivering applications to BlackBerry mobile devices rapidly and cost-effectively. An alternate solution is M-Business Anywhere, which is available with Unwired Accelerator.

**BlackBerry device** — A handheld device from Research in Motion that combines computing, telephone/fax, Internet, and networking features. In this document, the term BlackBerry device is used to distinguish between other PDAs, such as PalmOS and PocketPC.

**CCL** — Content Capture Language.

**channel** — Web content that is optimized for and delivered to mobile devices by M-Business Anywhere server. Channels are defined by a base URL and by other parameters such as channel size, link depth, image preferences, and frequency of refresh. M-Business Anywhere server automatically delivers new information from the specified URL to M-Business Client on the connecting mobile device.

**click-across** — An Unwired Accelerator feature that enables you to connect related or unrelated applications in a flow using events.

**client/server** — A network architecture in which one or more computers (servers) accept requests for services from one or more workstations (clients).

This may also refer to a back-end application (server) that accepts requests for information from a front-end application (client).

**client-side click-across** — Click-across feature when it is captured from the client side. In Unwired Accelerator, all linked mobile applications are created with server-side click-across.

**co-brand** — Synonymous with resource. Resource definitions are located in *SYBASE\tomcat\webapps\onepage\fw\cobrands*.

**Configure Parameters window** — Application Builder window used to customize the parameters, or variables, used to capture the grid. This enables application end users to customize or personalize parameter values when they view the application.

**connected mode** — Describes the connection mode that a device—such as a desktop computer, laptop, or a mobile device—uses to access applications and data. In connected mode, the device has physical or wireless connection to the source. Applications and data are accessed in real time. See also disconnected mode.

**connection pooling** Connection pooling is a performance optimization based on using collections of preallocated resources, such as objects or database connections. Pooling results in more efficient resource allocation.

**connectionless communications** Communications that do not require a dedicated connection or session between applications.

**continuous capture** An Unwired Accelerator feature that enables you to capture a set of Web pages from a remote site, and define how to extract the content for display.

**CSI** Common Security Infrastructure. The native security framework included with Unwired Accelerator. The default security provider is the portaldatabase (PortalDB); optionally, you can configure the LDAP security provider. An Enterprise Security product is available for those using EAServer as the application server, instead of Tomcat.

**Continuous Capture window** Application Builder window used to capture a set of Web pages from a remote site and define how to extract the content for display.

**Define window** Application Builder window used to define the grid layout of an application.

**DIIOP** Domino Internet Inter-ORB Protocol (CORBA). A Domino connection type used to create a connection between Unwired Accelerator and a Domino server. The Domino connection is required if you plan to develop mobile applications using Domino Business Objects. A DIIOP connection requires a DIIOP port. Other connection types include “nrpc”, and “websession.”

**disconnected mode** Describes the connection mode that a device—such as a desktop computer, laptop, or a mobile device—uses to access applications and data. In disconnected mode, the device has no physical or wireless connection to the source. Applications and data may be cached in memory, or unavailable. See also connected mode.

**enterprise** A reference to all aspects of a large business organization—from manufacturing to finance, marketing to human resources. This term can also refer to an organization plus its partners, vendors, suppliers, and customers.

**EP** An acronym for Enterprise Portal. An enterprise portal integrates all aspects of an organization’s IT infrastructure and offers customers, partners, vendors, and employees a broad array of resources and services, including personalized information, online purchasing, e-mail, forums, and product support.

**event** An event is a notification that occurs in response to some action. It can be a change in state or as a result of the user clicking or moving the mouse, pressing a key, or other actions that are focus-related, element-specific, or object-specific. Developers write code that responds to these actions. An event can also be an object that is imported, passed between processors, and exported to an external database.

**event definition** A set of criteria that is used to determine the contents of events.

**Filter window** Application Builder window used to identify which rows, columns, and fields to include in the application and which to exclude; and to define additional grid rules.

**Finish window** Application Builder window used to configure the application for use.

**grid rules** The Unwired Accelerator feature for manipulating the content and format of an application for display on a mobile device.

**HTTP** HyperText Transport (or Transfer) Protocol is the set of rules that governs the exchange of text, graphic, sound, and video files on the World Wide Web.

**HTTPS** The secure version of HTTP.

**Internet** A global network connecting millions of computers.

**intranet** A private network within an organization.

**JDBC** JDBC is a data access interface based on **ODBC** and used with the **Java** programming language.

**J2EE** Sun software: Java 2 platform, Enterprise Edition.

**Java** Developed by Sun Microsystems, Java is an object-oriented programming language, similar to C++. Java-based applications, or applets, can be quickly downloaded from a Web site and run using a Java-compatible Web browser such as Microsoft Internet Explorer or Netscape Navigator. Java applets are the most widespread use of Java on the Web.

**LDAP** Lightweight Directory Access Protocol. LDAP is a software protocol that allows anyone to locate organizations, individuals, and other resources (files, devices, etc.) on the Internet or on a corporate intranet. The CSI framework can be configured to work with an LDAP security provider, instead of PortalDB.

**LRU** Least recently used. The LRU policy is a page-replacement policy that removes from main memory the pages that show the least amount of recent activity. This policy is based on the assumption that these pages are the least likely to be used again in the immediate future.

**M-Business Anywhere**
A server platform for delivering applications to mobile devices rapidly and cost-effectively. An alternate solution is BlackBerry Enterprise Server (BES), which is available from Research in Motion.

**M-Business Client**
The browser client for M-Business Anywhere. The client can be installed on a desktop, or a mobile device. If you use M-Business Anywhere to deploy mobile applications, you can sync data from the browser or mobile device to receive updated applications.

**MDS**
Mobile Data Service. Research In Motion service used to deploy mobile applications to mobile devices. MDS provides internet service, but no e-mail service, where BES provides e-mail service.

**metadata**
Data that describes other data. Any file or database that holds information about another database's structure, attributes, processing, or changes.

**mobile application**
An application that is specifically designed to run on a mobile device, such as a BlackBerry device or a PDA. Mobile applications are usually smaller, lighter, and more focused.

**mobile device interface**
The mobile device interface to Unwired Accelerator that can be used for using mobile applications. See also Portal Interface.

**mobile device**
A generic term used for any handheld device, such as a BlackBerry device or a PDA. In this document, the term "mobile device" indicates a concept that applies to any device, not a specific device.

**Mobile Web Studio**
A platform for developing applications for mobile devices. Mobile Web Studio is a Web-based rapid development tool for creating powerful and interactive mobile Web applications or for mobilizing existing Web applications or data sources like databases, XML, Web Services, HTML, and JSPs/ASPs.

**New Element window**
Application Builder window used to create the element of your choice, including elements for Web, XML, HTML, JSP, database, document, and so forth.

**NoteID**
Notes Document Identifier. A unique Notes Document Identifier field within a Domino Database. For some Domino agents, UA passes the NoteID field to the agent.

**NRCP** Notes Remote Procedure Call. A Domino connection type used to create a connection between Unwired Accelerator and a Domino server. The Domino connection is required if you plan to develop mobile applications using Domino Business Objects. A NRCP connection type requires the Notes client be installed on the same machine as the UA server, and the user must provide an ID file for authentication. Other connection types include “diiop”, and “websession”; NRCP is the default.

**ODBC** Open Database Connectivity. ODBC is a Windows standard API that is used for SQL communication to connect applications to a variety of data sources. Access is generally provided through the Control Panel, where data source names (DSNs) can be assigned to use specific ODBC drivers.

**offline mode** Describes the mode in which a device—such as a desktop computer, laptop, or a mobile device—has access to applications and data. In offline mode, the device is physically disconnected from the source. Applications and data may be cached in memory, or unavailable. See also online mode.

**online mode** Describes the mode in which a device—such as a desktop computer, laptop, or a mobile device—has access to applications and data. In online mode, the device is physically connected to the source. Applications and data are available through a physical or wireless connection. See also offline mode.

**PDA** Personal Digital Assistant. Handheld devices from various manufacturers that combines computing, telephone/fax, Internet, and networking features. In this document, the term PDA is usually used in conjunction with specific devices such as PalmOS and PocketPC, to distinguish from BlackBerry devices.

**portal** The entire aggregated set of applications, pages, page groups that are available within Unwired Accelerator. The portal content is divided into different resources (also known as co-brands) where each resource can be configured with a different look and feel, and navigation style. Any given application can be deployed into as many different resources as you want.

**PortalDB** The portaldatabase included with Unwired Accelerator that is used to store user information (authentication and access), and applications you create through Mobile Web Studio.

**Portal Interface** The computer desktop interface to Unwired Accelerator that can be used for creating personal Web applications. See also mobile device interface.

**portlet** Synonymous with application. Typically, a mobile application that can be deployed to Portal Interface (a desktop interface), or to mobile devices.

**resource** A division of portal content that can be configured with a different display and navigation style. Applications can be deployed into multiple resources. Resources are also known as co-brands.

**server** A computer or software package that provides specific capabilities to client software running on other computers.

**server-side click-across** Click-across feature when it is captured from the server side. In Unwired Accelerator, server-side click-across can be captured from Mobile Web Studio (server side), but not from Portal Interface or mobile devices (client side). All linked mobile applications are created with server-side click-across.

**servlet** A servlet is a small, persistent, low-level program that runs on a server. The term was coined in the context of the Java applet, a small program that is sent as a separate file along with a Web (HTML) page.

Some programs that access databases based on user input need to be on the server. These programs were most often implemented using a Common Gateway Interface (CGI) application. However, if a Java virtual machine is running in the server, servlets can be implemented in Java. A Java servlet can execute more quickly than a CGI application. Instead of creating a separate program process, each user request is invoked as a thread in a single daemon process, so that the system overhead for each request is slight.

**SOAP** Simple Object Access Protocol. SOAP provides a way for applications to communicate with each other over the Internet, independent of platform. Remote objects can give a program almost unlimited power over the Internet, but most firewalls block non-HTTP requests. SOAP, an XML-based protocol, avoids this limitation to provide intraprocess communication across machines.

In Unwired Accelerator, the implementation of SOAP is intended to provide businesses with a way to expose corporate software functionality to their customers with minimal firewall constraints, platform dependencies, or complex development implementations involving DCOM or CORBA.

SOAP was developed by Microsoft, DevelopMentor, and Userland Software and has been proposed to the Internet Engineering Task Force (IETF) as a standard.

**Split window** Application Builder window used to add parameters for splitting rows and columns in a grid. Split rules are defined for rows and columns; for delimiters; and for personalization adapters.

**spidered application** A spidered application refers to data collected from a Web site within an URL structure, with the intent to create a searchable index.

| | |
|---|---|
| **SQL** | Structured Query Language. Set of commands to access and manipulate data stored in a database. |
| **SSL** | Secure Sockets Layer. SSL is a standard for providing encrypted and authenticated service over the Internet. Using the Rivest Shamir and Adleman (RSA) public key, a public-key cryptography for Internet security, specific TCP/IP ports can be encrypted. Primarily used for handling commerce payments, SSL is a general-purpose encryption standard for the Internet. |
| **sockets** | A portable standard for network application providers on TCP/IP networks. |
| **stored procedure** | A program that creates a named collection of SQL or other procedural statements and logic that is compiled, verified, and stored in a server database. |
| **style sheet** | General term for software that transforms XML documents based on one XML vocabulary into XML documents based on a different XML vocabulary. Example style sheets are JavaServer Pages (JSPs) and XSLT style sheets. |
| **TCP/IP** | Transmission Control Protocol/Internet Protocol—the network protocol for the Internet that runs on virtually every operating system. IP is the network layer and TCP is the transport layer. |
| **Unwired Accelerator** | A software solution that accelerates the mobilization of enterprise Web applications and data sources for constant access. Unwired Accelerator is comprised of Mobile Web Studio, M-Business Anywhere, and Answers Anywhere. |
| **UWP** | The Universal Window (application) Player, also referred to as UPP—Universal Portlet Playback engine. This refers to the navigation in Mobile Web Studio. |
| **WAP** | Wireless Application Protocol. A protocol designed to show internet contents on wireless clients, like mobile phones. WAP uses the markup language WML. WAP uses a microbrowser to fit into a small mobile device. |
| **WebSession** | A Domino connection type used to create a connection between Unwired Accelerator and a Domino server. The Domino connection is required if you plan to develop mobile applications using Domino Business Objects. A websession connection requires that the Domino server is installed on the same machine as the UA server Other connection types include “nrpc”, and “diiop.” |
| **Window Preview window** | Application Builder window used to view the element and give it a name. |

**WML**

Wireless Markup Language. WML is used to create pages that can be displayed in a WAP browser. WML is a markup language inherited from HTML, but is based on XML.

**workflow**

Software used to automatically route events or work items from one user or program to another. Workflow is synonymous with process flow, although traditionally has been used in the context of person-to-person information flows.

**XML**

eXtensible Markup Language—a simplified subset of Standard Generalized Markup Language (SGML)—is a way to that provides a file format for representing data, a method for describing data structure, and a mechanism for extending and annotating HTML with semantic information.

As a universal data format, XML provides a standard for the server-to-server transfer of different types of structured data so that the information can be decoded, manipulated, and displayed consistently and correctly. In addition, it enables the development of three-tier Web applications, acting as the data transfer format between the middle-tier Web server and the client.

# Index

## A


AA.CustomAgent Network global property 194
*aa.log* log file 156
acceptCount Tomcat connection property 150
accounts
  managing M-Business Anywhere accounts 55
  managing Mobile Web Studio accounts 10
  managing user accounts 55
  **PortalCleanup** utility 47
ActiveX
  configuring for UNIX 203
  configuring for Windows 203
  disabling support 203
acx (ActiveX) global property 203
acx.host global property 203
acx.servlet.url global property 203
acx.timeout global property 203
adding
  companies 64
administrative accounts
  M-Business Anywhere 55
  Mobile Web Studio 10
AGDB 72, 92, 129
AGDB database
  configuring 30
  preserving before uninstalling M-Business Anywhere 31
agent network
  customizing search synonyms 32
  default agent network 32
  loading a custom agent network 32
AgentServerID global property 201
alwaysValidateSession global property 167, 183
Anonymous.Roles global property 183
Answers Anywhere
  configuring properties 171
  customizing search synonyms 32
  default agent network 32
  described 32
  for e-mail 32
  for SMS 36
  loading a custom agent network 32
  Simplified Chinese for PDAs only 35
  troubleshooting 116, 156
application list tab, parameters 99
application view tab, parameters 101
applications
  running in disconnected mode 15
*as.err* log file 156
*as.trc* log file 156
ASA
  starting the database 9
  stopping the database 9
auditEnabled global property 193
auditPortletPlayback 193
auditPortletPlayback global property 193
auditRoleFilter global property 193
Automate menu
  overview 11
AvantGo Database 72, 92, 129


## B


BlackBerry device
  application display (by device type) 95
  installing an offline client application 93
  installing an offline client application OTA 93, 94
  setting up a user 53
  templates (by RID) 95
  troubleshooting application problems 91
browser
  accessing mobile device interface 14
  session expiration 10
bufferSize Tomcat connection property 150
Build menu
  overview 11

## C

CacheRefreshList global property 196, 199, 207
CacheRefreshList property 207
*capture.log* log file 156
CaptureTraceOn global property 204, 208
CATALINA_HOME environment variable xi
catalog_cache_refresh_list global property 184, 206
catalog_cache_refresh_list property 206
categories 108
CCL
  troubleshooting 156
CellularModemController. *See* CMC
channels 30, 31, 167
ClickacrossOn global property 200
client_virtual_path global property 184
CMC
  Admin GUI (not supported) 40, 114
  as a Windows service 40
  command 36
  configuring 36
  described 36
  properties 36
  troubleshooting cell modem communication problems 40
*CMC0.log* file 40
*CMC0.log* log file 171
co-brands
  creating 61
  multiple portals 61
  troubleshooting 163
*cobrands.xml* file, editing 65
commands
  CMC commands 36
  **InstallCMC** 41
  **isql** 143
  **PortalCleanup** utility 47
  **startdb** 7
companies
  adding to create cobranded portal 64
config database 92
configuring
  Answers Anywhere 32
  datasource connections 18
  global properties 181
  M-Business Anywhere 29
  multimachine installations 196, 206
  SAP connection 18, 21
connected mode 14
connected mode, accessing mobile applications 14
ConnectionPools (Domino) global property 195
ConnectionPools (SAP) global property 194
ContentCacheLRUReductionSize global property 152
ContentCacheMaxEntries global property 152, 196
*context.xml* file 79
*context.xml*file 78
CryptoSecretKey global property 184
CSI realm
  defined 120

## D

data connection property
  maxActive 152
  maxIdle 153
  maxWait 153
databases
  AGDB 72, 92, 129
  config 92
*datamanager.log* log file 7, 156, 161
DBLookUpDocumentCaching global property 199
default_http_port global property 184, 208
default_https_port global property 185
default_tile_href global property 185
DefaultConnectionPoolName (Domino) global property 195
DefaultConnectionPoolName (SAP) global property 195
DefaultResourceID global property 185
DefaultTemplateName global property 196
DefaultUserID global property 185
DeployHost global property 199
device tab, parameters 98
disableAutomaticReauthentication global property 185
disabling, ActiveX support 203
disconnected mode, accessing mobile applications 14
displaying
  domain name 7
docservers, *global.properties.xml* property group 199
documentation
  Adaptive Server Anywere viii

jConnect for JDBC viii
M-Business Anywhere 26, 28, 105
SAP Javadocs 19, 21, 24
Unwired Accelerator viii
DocumentRoot global property 185
domain global property 185
domain name 7
downloading
M-Business Anywhere client software 27
M-Business Anywhere server software 27
SAP Java Connector 18
*ds.err* log file 156
*ds.trc* log file 156

## E

EAServer
configuring multiple servers for the same domain 207
EclipseMode global property 185
editing
cobrands.xml file 65
e-mail
sending to a file 206
sending to users 206
enable.tracing global property 205
environment variables
CATALINA_HOME xi
JAVA_HOME xi
MBUSINESS_SERVER xi, 26, 27
RIM xi
SYBASE xi
WorkRoot xi, 192
ep_security_eas_guest_pwd global property 185
ep_security_eas_url global property 186
EPSecurityHost global property 199
EPSecurityHostPortNumber global property 199
ErrorFile global property 196, 199, 201
everybody role 131
excelfilelimit global property 186
extensions global property 186

## F

files
*context.xml* file 78, 79
*datamanager.log* file 7
*global.properties.xml* file 19, 30
*librfc32.dll* file 19
*sapjco.jar* file 19
*sapjco.properties* file 19
*sapjcorfc.dll* file 19
*server.xml* file 78
*UserAgentMapping.xml* file 176
*web.xml* file 76, 77, 79
*web.xml* file 78
*wrapper.conf* file 41
FrequentlyChangableDocumentCaching global property 199

## G

getting started
Portal Interface 12
global properties
AA.CustomAgentNetwork 194
global property 193
acx (ActiveX) 203
acx.host 203
acx.servlet.url 203
acx.timeout 203
AgentServerID 201
alwaysValidateSession 167, 183
Anonymous.Roles 183
auditEnabled 193
auditRoleFilter 193
CacheRefreshList 196, 199, 207
CaptureTraceOn 204, 208
catalog_cache_refresh_list 184, 206
ClickacrossOn 200
client_virtual_path 184
ConnectionPools (Domino) 195
ConnectionPools (SAP) 194
ContentCacheLRUReduction Size 152
ContentCacheMaxEntries 152, 196
CryptoSecretKey 184
DBLookUpDocumentCaching 199
default_http_port 184, 208

default_https_port 185
default_tile_href 185
DefaultConnectionPoolName (Domino) 195
DefaultConnectionPoolName (SAP) 195
DefaultResourceID 185
DefaultTemplateName 196
DefaultUserID 185
DeployHost 199
disableAutomaticReauthentication 185
DocumentRoot 185
domain 185
EclipseMode 185
enable.tracing 205
ep_security_eas_guest_pwd 185
ep_security_eas_url 186
EPSecurityHost 199
EPSecurityHostPortNumber 199
ErrorFile 196, 199, 201
excelfilelimit 186
extensions 186
FrequentlyChangableDocumentCaching 199
HeartBeat 201
https.playback 186
includelistfile 203
javascript.domain 186
LicenseFile 186
log 203
LogAllNav 204
LogFile 205
logfile 205
LoggingLevel 201
LogToDatabase 201
mail.host 186, 206
mail.transport.protocol 186
MailOn 199
markupNoJSFile 186
MaxBytesForDocumentsToCache 199
MaxLogRows 201
MaxNumberOfDocumentsToCache 199
maxPageName 186
maxTabSetChar 186
maxTabSets 187
MB.AutoRegistration 56, 194
MB.Enabled 194
MS.Enabled 193
nav.general.host 204
nav.general.secure.host 204
nav.host 204
nav.secure.host 204
NavTraceOn 204
NonfrequentlyChangedDocumentCaching 199
ObjectCacheLRUReductionSize 152, 196, 197
ObjectCacheMaxEntries 152, 197
page.group 187
portal.build_number 187
portal.defaultRID 187
portal.host 187
portal.portlet_create_lock 187
portal.version 187
PortalAdministrationRole 187
proxy 187, 208
proxy.bypass_list 188, 209
proxy.host 188, 209
proxy.password 188
proxy.port 188, 209
proxy.user 188
PSHost 202
PSPort 202
PushAgentLog 202
redirfile 188
registration.organization 188
registration.userJ2EERoles 188
RequiredRoles 131, 200
resetPasswordEmail 44, 48, 122, 165, 188
RoleBaseDisplay 132, 200
RoleBaseDisplaySeeAllRoles 132, 200
secure 189
secure_login 125, 126, 189
SecureHostname 189
security.title.host 189
send.mail 190, 206
server_virtual_path 190
sharePage 190
SOAPServer 190
SplitEnabled 190
StatusUpdateFreq 202
StorageConnector 197
SyncBranchKeepAliveTimeout 197
SyncCacheLRUReducitonSize 197
SyncCacheMaxEntries 197
SyncPerAppStorageLimit 197
SyncPerBranchStorageLimit 197

tabingChar 190
tabset 190
ThisMachineName 198
tile.host 190
tile_style 191
TimeZone 202
TraceFile 157, 198, 199, 201, 202
TraceOn 157, 198, 200, 201, 202, 208
TransactionFile 202
turnOffSecurePassword 191
updating 205
use_https 192
use_include 204
UseAccessControl 200
UsePreCompiledJSP 198
UseStudioDatabase 200
UWPCacheServer 198
UWPIntegrationHost 198
UWPWebServiceHost 198
VerboseTrace 157, 198, 200, 201, 202, 208
versioning 192
WebServerOn 200
WebServiceRoot 192
wireless_portal 192
WorkRoot 192
xml_catalog_serialize 192
XmlValidation 193
*global.properties.xml*
capture logging property group 204
configuration file 181
configuring a SAP connection 19
configuring M-Business Anywhere server 29
database property group 205
docservers property group 199
global property group 183
limiting access to 142
nav property group 202
portal property group 201
UWP property group 196


## H


HeartBeat global property 201
HTTPS listener
required for secure_login 189
https.playback global property 186


## I


includelistfile global property 203
**InstallCMC** 41
installing
Answers Anywhere 32
offline client application on BlackBerry device 93
offline client application on BlackBerry device (OTA) 93, 94
SAP connection 18, 21
Unwired Accelerator 17
interfaces
mobile device 16
Mobile Web Studio 11
**isql** command line utility 143


## J


JAVA_HOME environment variable xi
javascript.domain global property 186
JDBC connection
documentation viii


## L


*librfc32.dll* file 19
LicenseFile global property 186
log files
*aa.log* log file 156
*as.err* log file 156
*as.trc* log file 156
*capture.log* log file 156
*CMC0.log* file 40
*CMC0.log* log file 171
*datamanager.log* log file 156, 161
default location 155
*ds.err* log file 156
*ds.trc* log file 156
*logging.properties* log file 157
*ml.log* 90
*nav.log* log file 156

*portal.err* log file 156
*portal.trc* log file 156
*transaction.log* log file 156
*uwp.err* log file 156, 174
*uwp.trc* log file 156
log global property 203
LogAllNav global property 204
LogFile global property 205
logfile global property 205
logging in to Mobile Web Studio 10
*logging.properties* log file 157
LoggingLevel global property 201
LogToDatabaseglobal property 201
LRU policy 152

## M

mail.host global property 186, 206
mail.transport.protocol global property 186
MailOn global property 199
Manage menu
overview 11
manager role 131
managing
M-Business Anywhere accounts 55
Mobile Web Studio accounts 56
push synchronization 85, 88
user accounts 55
markupNoJSFile global property 186
masuper
StudioAdmin user 31
maxActive data connection property 152
MaxBytesForDocumentsToCache global property 199
maxIdle data connection property 153
maxKeepAliveRequests Tomcat connection property 150
MaxLogRows global property 201
MaxNumberOfDocumentsToCache global property 199
maxPageName global property 186
maxSpareThreads Tomcat connection property 150
maxTabSetChar global property 186
maxTabSets global property 187
maxThreads Tomcat connection property 150
maxWait data connection property 153
MB.AutoRegistration global property 56, 194
MB.Enabled global property 194
M-Business Anywhere
AvantGo Database (AGDB) 72, 92, 129
config database 92
configuring *global.properties.xml* 29
database (AGDB) 30
described 25
development and deployment licenses 26
documentation 26, 28, 105
downloading software 27
installed on a different machine 26
installing server and client software 26
integrated with Unwired Accelerator 29, 32
integrating with Mobile Web Studio 29, 32
managing accounts 55
managing users 57
uninstalling 31
MBUSINESS_SERVER environment variable xi, 26, 27
member name 13, 49
menu tab, parameters 102
minSpareThreads Tomcat connection property 150
*ml.log* log file 90
mobile device
interface 16
Mobile Web Studio
administrative accounts 10
defined 10
integrating with M-Business Anywhere 29, 32
interface 11
logging in 10
login 164
managing accounts 56
user interface described 11
MobiLink
startup problems 167
MobiLink server
deploying mobile applications 11
described 9
GUI console 90
icon on taskbar 7, 9
installation problem 167
MobiLink clients 9
starting 9
stopping 9
MS.Enabled global property 193
multimachine installations, configuring 196, 206

multiple co-brands 61
multiple portals 61

## N

nav.general.host global property 204
nav.general.secure.host global property 204
nav.host global property 204
*nav.log* log file 156
nav.secure.host global property 204
NavTraceOn global property 204
NonfrequentlyChangedDocumentCaching global property 199

## O

ObjectCacheLRUReductionSize global property 152, 196, 197
ObjectCacheMaxEntries global property 152, 197
ODBC connection 72
one-click
  troubleshooting 156
overview
  Unwired Accelerator installation 25

## P

page.group global property 187
passwordExpirationWarningWindow global property 187
passwords
  choosing 13, 49
performance and tuning
  ASA cache 151
  JVM tuning 153
  PortalDB data connections 152
  Tomcat connections 149
  UA navigation 151
permissions
  role needed to find and replace 135
personal channels 30, 167
Portal Interface
  logging in 12
portal.build_number global property 187
portal.defaultRID global property 187
*portal.err* log file 156
portal.host global property 187
portal.portlet_create_lock global property 187
*portal.trc* log file 156
portal.version global property 187
PortalAdmin role 124, 131, 187
PortalAdministrationRole global property 187
**PortalCleanup** utility 47
PortalDB
  included with ASA 8
PortalDB security provider
  defined 120
  included with ASA 8
PortalGuest role 124
portals, multiple 61
PortalUser role 124, 131
portlets
  role needed to find and replace 135
ports
  4040 (UA HTTP, in Tomcat) 40
  8091 (M-Business admin) 27
  8092 (M-Business client "synch") 29
post-installation tasks
  configuring M-Business Anywhere server/client 26
  installing Answers Anywhere server 32
  installing M-Business Anywhere (PDAs) 26
  installing M-Business Anywhere server/client 26
  setting up a SAP connection 18
production environment
  settings 198, 200, 201, 202
properties
  configuring Answers Anywhere 171
  configuring global 181
properties, global 205
proxy global property 187, 208
proxy properties 208
proxy servers, enabling 208
proxy.bypass_list global property 188, 209
proxy.host global property 188, 209
proxy.password global property 188
proxy.port global property 188, 209
proxy.user global property 188
PSHost global property 202

PSPort global property 202
public channels 106
push agents 88
push synchronization 85, 88
PushAgentLog global property 202

## R

redirfile global property 188
registration.organization global property 188
registration.userJ2EERoles global property 188
Replacing portlets
  necessary permission 135
RequiredRoles global property 131, 200
resetPasswordEmail global property 44, 48, 122, 165, 188
resource
  Answers Anywhere integration 34
  CMC configuration file 36
  resource identifier (RID) 33
resource ID 15, 62
RID 15, 62
RIM environment variable xi
RoleBaseDisplay global property 132, 200
RoleBaseDisplaySeeAllRoles global property 132, 200
roles
  everybody 131
  manager 131
  PortalAdmin 124, 131, 187
  PortalGuest 124
  PortalUser 124, 131
  StudioAdmin 131
  superuser 132

## S

SAP
  creating ConnectionPool property files 20, 24
  described 18, 21
  downloading SAP JCo 19
  *global.properties.xml* properties 19
  SAP Java Connector (SAP JCo) 19
  setting up a SAP connection 19
SAP Java Connector (SAP JCo) 19
SAP JCo 18
*sapjco.jar* file 19
*sapjco.properties* file 19
*sapjcorfc.dll* file 19
secure global property 189
secure.title.host global property 189
secure_login global property 125, 126, 189
SecureHostname global property 189
send.mail global property 190, 206
sending
  e-mail to a file 206
  e-mail to users 206
*server.xml* file 78
server_virtual_path global property 190
setting up a BlackBerry user 53
sharePage global property 190
SIM card 39
SOAPServer global property 190
splash screen tab, parameters 102
SplitEnabled global property 190
starting
  ASA database 9
  Mobile Web Studio 10
  Tomcat application server 9
status bar
  described 11
StatusUpdateFreq global property 202
stopping
  ASA database 9
  Tomcat application server 9
StorageConnector global property 197
StudioAdmin role 131
StudioAdmin user
  masuper 31
superuser role 132
SYBASE environment variable xi
sync server port 29
SyncBranchKeepAliveTimeout global property 197
SyncCacheLRUReducitonSize global property 197
SyncCacheMaxEntries global property 197
synchronizing UA server and mobile devices 85, 88
SyncPerAppStorageLimit global property 197
SyncPerBranchStorageLimit global property 197

## T

tabingChar global property 190
tabset global property 190
tabset. *See* page groups
templates
  application list tab 99
  application view tab 101
  BlackBerry device (by RID) 95
  device tab 98
  menu tab 102
  splash screen tab 102
ThisMachineName global property 198
tile. *See* application
tile.host,global property 190
tile_style global property 191
TimeZone global property 202
Tomcat
  equivalent EAServer path names 17
Tomcat application server
  starting the application server 9
  stopping the application server 9
Tomcat connection property
  acceptCount 150
  bufferSize 150
  maxKeepAliveRequests 150
  maxSpareThreads 150
  maxThreads 150
  minSpareThreads 150
toolbar
  described 12
trace property, disabling for production 208
TraceFile global property 157, 198, 199, 201, 202
TraceOn global property 157, 198, 200, 201, 202, 208
*transaction.log* log file 156
TransactionFile global property 202
troubleshooting
  Answers Anywhere problems 116, 156
  BlackBerry application problems 91
  cannot access mobile application 168
  cannot communicate with SMS provider 171
  cannot connect with Domino 174
  cannot connect with Remedy 174
  cannot connect with SAP 173
  cannot create personal channels 167
  cannot download the SAP Java connector 173
  cannot start Mobile Web Studio 162
  cannot start Portal Interface 162
  cannot use Manage M-Business option from Mobile Web Studio 166
  capture output 156
  CCL and one-click problems 156
  CMC problems 40
  co-brands 163
  CSI configuration problems 157
  database output 156
  document server problems 156
  events (agents) 156
  File Not Found 404 error 162
  JVM error when loading UA client on BlackBerry device 168
  large applications hang BlackBerry device 168
  M-Business Anywhere and Unwired Accelerator not communicating 166
  mobile application does not appear on PDA 168
  Mobile Web Studio login 164
  Mobile Web Studio window does not display 162
  MobiLink connection 90
  MobiLink server installation problem 167
  MobiLink server startup problems 167
  navigation servers 156
  portal development environment 156
  resources 155
  sync failure on BlackBerry device 168
  too many applications appear on BlackBerry device 169
  UA cannot connect to BlackBerry Desktop Manager 167
  UA client logo does not appear on BlackBerry device 168
  Unwired Accelerator 155
  UWP problems 156, 174
turnOffSecurePassword global property 191

## U

uninstalling
  M-Business Anywhere 31
Unwired Accelerator
  integrated with M-Business Anywhere 29
  performance and tuning 149

resources 33
verifying the installation 40
updating global properties 205
use_https global property 192
use_include global property 204
UseAccessControl global property 200
UsePreCompiledJSP global property 198
user interfaces
Mobile Web Studio 11
*UserAgentMapping.xml* 176
UseStudioDatabase global property 200
utilities
**isql** 143
**PortalCleanup** 47
UWP, *global.properties.xml* property group 196
*uwp.err* log file 156, 174
*uwp.trc* log file 156
UWPCacheServer global property 198
UWPIntegrationHost global property 198
UWPWebServiceHost global property 198

## V

VerboseTrace global property 157, 198, 200, 201, 202, 208
versioning
global property 192

## W

*web.xml* file 76, 77, 79
*web.xml* file 78
WebServerOn global property 200
WebServiceRoot global property 192
wireless_portal global property 192
WorkRoot
defined 192
WorkRoot environment variable xi, 192
WorkRoot global property 192
*wrapper.conf* file 41

## X

xml_catalog_serialize global property 192
XmlValidation global property 193