BEA AquaLogic Commerce Services

Getting Started Guide

Version 5.1
March 2007

Copyright

Copyright © 1995-2007 BEA Systems, Inc. All Rights Reserved.

Restricted Rights Legend

This software is protected by copyright, and may be protected by patent laws. No copying or other use of this software is permitted unless you have entered into a license agreement with BEA authorizing such use. This document is protected by copyright and may not be copied photocopied, reproduced, translated, or reduced to any electronic medium or machine readable form, in whole or in part, without prior consent, in writing, from BEA Systems, Inc.

Information in this document is subject to change without notice and does not represent a commitment on the part of BEA Systems. THE DOCUMENTATION IS PROVIDED “AS IS” WITHOUT WARRANTY OF ANY KIND INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. FURTHER, BEA SYSTEMS DOES NOT WARRANT, GUARANTEE, OR MAKE ANY REPRESENTATIONS REGARDING THE USE, OR THE RESULTS OF THE USE, OF THE DOCUMENT IN TERMS OF CORRECTNESS, ACCURACY, RELIABILITY, OR OTHERWISE.

Trademarks and Service Marks

Copyright © 1995-2006 BEA Systems, Inc. All Rights Reserved. BEA, BEA JRockit, BEA WebLogic Portal, BEA WebLogic Server, BEA WebLogic Workshop, Built on BEA, Jolt, JoltBeans, SteelThread, Top End, Tuxedo, and WebLogic are registered trademarks of BEA Systems, Inc. BEA AquaLogic, BEA AquaLogic Data Services Platform, BEA AquaLogic Enterprise Security, BEA AquaLogic Interaction, BEA AquaLogic Interaction Analytics, BEA AquaLogic Interaction Collaboration, BEA AquaLogic Interaction Content Services, BEA AquaLogic Interaction Data Services, BEA AquaLogic Interaction Integration Services, BEA AquaLogic Interaction Process, BEA AquaLogic Interaction Publisher, BEA AquaLogic Interaction Studio, BEA AquaLogic Service Bus, BEA AquaLogic Service Registry, BEA Builder, BEA Campaign Manager for WebLogic, BEA eLink, BEA Kodo, BEA Liquid Data for WebLogic, BEA Manager, BEA MessageQ, BEA Salt, BEA WebLogic Commerce Server, BEA AquaLogic Commerce Services, BEA WebLogic Communications Platform, BEA WebLogic Enterprise, BEA WebLogic Enterprise Platform, BEA WebLogic Enterprise Security, BEA WebLogic Express, BEA WebLogic Integration, BEA WebLogic Java Adapter for Mainframe, BEA WebLogic JDriver, BEA WebLogic Log Central, BEA WebLogic Mobility Server, BEA WebLogic Network Gatekeeper, BEA WebLogic Personalization Server, BEA WebLogic Personal Messaging API, BEA WebLogic Platform, BEA WebLogic Portlets for Groupware Integration, BEA WebLogic Real Time, BEA WebLogic RFID Compliance Express, BEA WebLogic RFID Edge Server, BEA WebLogic RFID Enterprise Server, BEA WebLogic Server Process Edition, BEA WebLogic SIP Server, BEA WebLogic WorkGroup Edition, BEA Workshop for WebLogic Platform, BEA Workshop JSP, BEA Workshop JSP Editor, BEA Workshop Struts, BEA Workshop Studio, Dev2Dev, Liquid Computing, and Think Liquid are trademarks of BEA Systems, Inc. Accelerated Knowledge Transfer, AKT, BEA Mission Critical Support, BEA Mission Critical Support Continuum, and BEA SOA Self Assessment are service marks of BEA Systems, Inc.

All other names and marks are property of their respective owners.

Contents

Getting Started with AquaLogic Commerce Services 1

Installing AquaLogic Commerce Services 1

What AquaLogic Commerce Services installs 1

Options during installation 2

Where to find everything 2

Windows menus 2

Linux symbolic links 2

Upgrading AquaLogic Commerce Services 3

Shut down AquaLogic Commerce Services domains 3

Backing up important files 3

Uninstalling existing AquaLogic Commerce Services Deployment 3

Installing the new version of AquaLogic Commerce Services 4

Restoring your backups 4

Upgrading your database schema 4

Running AquaLogic Commerce Services with Other WebLogic Server and WebLogic Portal Applications 5

Single Sign-On 5

WebLogic Portal integration 5

Adding AquaLogic Commerce Services to a Domain 5

Creating a new domain using the AqualLogic Commerce Services template 5

Deploying to an existing domain using WLST 6

Using Workshop for WebLogic Platform with AquaLogic Commerce Services 7

Creating the Project 7

Developing with Workshop for WebLogic 8

Making Modifications 8

Storefront folders 8

Further reading 8

Implementing Unified User Profile (UUP) with WebLogic Portal 9

The AquaLogic Commerce Services user profile property set 9

The AquaLogic Commerce Services UUP shared library 9

UUP in WebLogic Portal Administration Console 10

Integrating with Back-End Systems 11

AquaLogic Commerce Services Connect 11

Integrating Business Process Management (BPM) Functionality 11

Hooking Into Your E-Mail Server 11

Configuration 12

Getting Started with AquaLogic Commerce Services

This guide is designed to give you a starting point for getting running with AquaLogic Commerce Services. It includes the following

- Installing AquaLogic Commerce Services
- Running AquaLogic Services with other WebLogic Server and WebLogic Portal applications
- Adding AquaLogic Commerce Services to a domain
- Using Workshop for WebLogic with AquaLogic Commerce Services
- Making modifications
- Implementing Unified User Profile with WebLogic Portal
- Integrating with back-end systems
- Integrating BPM functionality
- Hooking into your e-mail server

Installing AquaLogic Commerce Services

BEA AquaLogic Commerce Services is very easy to install as it provides an automated installer which places the application in your existing BEA WebLogic Server installation.

NOTE: IF YOU ALREADY HAVE AN EARLIER VERSION OF AQUALOGIC COMMERCE SERVICES INSTALLED, PLEASE READ THE SECTION TITLED "UPGRADING AQUALOGIC COMMERCE SERVICES" IN THIS DOCUMENT FOR DETAILS ON HOW TO UPGRADE. IF YOU PERFORM AN INSTALLATION WITHOUT FOLLOWING THE UPGRADE STEPS YOU WILL LOSE ANY DATA AND CUSTOMIZATIONS YOU HAVE MADE!

What AquaLogic Commerce Services installs

The AquaLogic Commerce Services installation includes the following

Module	Description
AquaLogic Commerce Services Template	A template for easily creating new AquaLogic Commerce Services deployments
AquaLogic Commerce Services Sample	A sample deployment of AquaLogic Commerce Services with a preconfigured demo store
AquaLogic Commerce Services WLP Plugins	Plug-in modules for integrating AquaLogic Commerce Services with WebLogic Portal

Options during installation

The installation tries to find the root folder of your BEA installation to use to install AquaLogic Commerce Services, but it also provides an option to choose the installation folder should you have an unusual configuration.

The installer also allows you to customize which of the modules gets included in the installation.

Where to find everything

The installer will place AquaLogic Commerce Services in the following locations beneath `<BEA_HOME>/weblogic92`

- **commerce/database-scripts** - scripts for setting up the AquaLogic Commerce Services schema in the supported databases.
- **commerce/portal-plugins** - plug-ins for integration with WebLogic Portal.
- **commerce/uninstall** - allows you to uninstall AquaLogic Commerce Services.
- **samples/commerce/commerceApp** - the sample application including Commerce Storefront, Commerce Manager and Commerce Integration.
- **samples/domains/commerce** - the domain for the sample application.
- **common/templates/applications/commerce-services.jar** - the template to use for your own deployment.

Windows menus

The Windows installer adds a Commerce Services menu to the BEA Products > Examples menu of the Start > Programs menu, containing the following links

- Start Commerce Services Example Server
- Stop Commerce Services Example Server
- Visit Commerce Manager Example
- Visit Storefront Example

Linux symbolic links

The Linux installer adds the following symbolic links to your home directory to make it easy to start the examples:

- startCommerceServicesExampleServer
- stopCommerceServicesExampleServer
- Commerce Services Manager
- Commerce Services Sample

Upgrading AquaLogic Commerce Services

Upgrading to a newer version of AquaLogic Commerce Services can be done with minimal impact by performing the following steps to ensure your customizations and data are preserved.

Shut down AquaLogic Commerce Services domains

Firstly, ensure your current AquaLogic Commerce Services domain is shutdown. You can shutdown the sample domain as follows:

- In a Windows environment, select the "Stop Commerce Services Example Server" menu option from the BEA Products > Examples menu
- In a Linux environment, use the stopCommerceServicesExampleServer symbolic link from your home directory.

Any additional domains you have created that include AquaLogic Commerce Services can be shutdown by using the stopWebLogic command in the domain's bin folder.

Backing up important files

To preserve any data you have changed or entered in AquaLogic Commerce Services you should backup your database.

- If you are still using the database that was installed with AquaLogic Commerce Services, you should make a backup copy of this by copying the **commerce_sample** folder from your domain folder to a safe location. The default installation of AquaLogic Commerce Services uses `<BEA_HOME>/weblogic92/samples/domains/commerce.`
- If you are using a different database to the one installed with AquaLogic Commerce Services, you are not required to make a backup but it is good practice to do so anyway (using the standard backup strategy for your chosen RDBMS).

If you have made some customizations to the code in the Storefront demo store application, you should backup those changes before performing the upgrade.

- Copy the **commerceServices** folder from the sample application folder to a safe location. The default installation of AquaLogic Commerce Services uses `<BEA_HOME>/weblogic92/samples/commerce/commerceApp`.

Uninstalling existing AquaLogic Commerce Services Deployment

Once you have backed up any essential data and/or customizations, you should uninstall the existing installation of AquaLogic Commerce Services as follows:

1. Go to the `<BEA_HOME>/weblogic92/commerce/uninstall` folder

2. Run the **uninstall** executable
3. Follow the prompts in the uninstaller program. It will take a few minutes to remove all the AquaLogic Commerce Services files from your system.

AquaLogic Commerce Services will now be uninstalled from your system. Note, if you have created any new domains using the AquaLogic Commerce Services template these will not be affected (and will still be using the old version).

Installing the new version of AquaLogic Commerce Services

Now you backup up your essential data/customizations and removed the old version of AquaLogic Commerce Services, you are ready to install the new and improved version.

This is done exactly as before – see the "Installing AquaLogic Commerce Services" section earlier in this document.

Restoring your backups

Database restoration:

- If you were using the database that was installed with AquaLogic Commerce Services, you should now restore the backup copy you made of this earlier by copying the **commerce_sample** folder from your backup location to your domain folder. The default installation of AquaLogic Commerce Services uses `<BEA_HOME>/weblogic92/samples/domains/commerce.`
- If you are using a different database you do not need to restore anything, but please refer to the section below "Upgrading your database schema".

Restoring your customizations:

- For any customizations you made to the previous version of AquaLogic Commerce Services, you may want to compare the files you customized to the new release versions rather than simply copying your customizations back over. This will allow you to merge your changes with any changes made as part of this release.
- See the release notes for the new version to get a better idea of what may have changed.

Upgrading your database schema

If you are using a database other than the one which was installed with AquaLogic Commerce Services then you should run the database upgrade script for your database. The SQL scripts can be found in the folder:

`<BEA_HOME>/weblogic92/commerce/database-scripts/upgrade`.

If you are using the default database you do not need to do anything further, as the database upgrade script consists only of some production database performance improvements.

Running AquaLogic Commerce Services with Other WebLogic Server and WebLogic Portal Applications

AquaLogic Commerce Services is designed to run in harmony with other WebLogic Server and WebLogic Portal applications.

Single Sign-On

AquaLogic Commerce Services provides Single Sign-On (SSO) integration with other WebLogic Server and WebLogic Portal applications that are running in the same server instance.

You may need to add the following section to your web application's `weblogic.xml` to ensure your application uses the same cookie as AquaLogic Commerce Services

```
<session-descriptor>
  <cookie-name>JSESSIONID</cookie-name>
  <cookie-path>/</cookie-path>
</session-descriptor>
```

WebLogic Portal integration

AquaLogic Commerce Services runs stand-alone on WebLogic Server, with no dependence on WebLogic Portal. However, if you do run WebLogic Portal, AquaLogic Commerce Services provides some integration that you may wish to use.

It is important for this integration that AquaLogic Commerce Services and WebLogic Portal run on the same server instance (domain). This allows seamless Single Sign-on between AquaLogic Commerce Services and WebLogic Portal applications as well as providing WebLogic Portal with access to the AquaLogic Commerce Services Customer profile data through the Unified User Profile (UUP).

Adding AquaLogic Commerce Services to a Domain

It is quite easy to add the AquaLogic Commerce Services applications to a new or existing WebLogic Server domain. You may prefer to do this rather than make changes to the sample domain created by the installer.

Creating a new domain using the AqualLogic Commerce Services template

You can use the WebLogic Configuration to create a new domain based on the AquaLogic Commerce Services domain template included in the installation. Run the Configuration Wizard

and select the **Create a new WebLogic Domain** option. On the Select Domain Source page, select the Base this domain on an existing template and then Browse for the template which you can find at `<BEA_HOME>/weblogic92/common/templates/applications/commerce_services.jar`. You can then follow the rest of the configuration wizard as usual.

Once you have created your new domain based on this template you can run the configuration wizard again to extend that domain to include other BEA products if you have them (e.g. WebLogic Portal, Workshop for WebLogic, etc).

Deploying to an existing domain using WLST

If you chose to install the AquaLogic Commerce Services sample application then you can easily deploy the sample app into your domain using the following wlst command. You may need to change some values to match your server configuration.

```
commerceAppDir='<WL_HOME>/sample/commerce/commerceApp'


connect('weblogic','weblogic','localhost:7011')
deploy(appName='commerceServicesApp',path=commerceAppDir,stageMode='n
ostage')
```

You will need to add a data source entry to your domain. This can be done through the WebLogic console or using wlst. An example script is shown below containing the settings for connecting to the sample derby database bundled with AquaLogic Commerce Services.

createJNDI.py

```
dsName="commercejndi"
jndiName="jdbc/epjndi"

connect('weblogic','weblogic','localhost:7011')



edit()
startEdit()

jdbcSR = create(dsName,"JDBCSystemResource")
theJDBCResource = jdbcSR.getJDBCResource()
theJDBCResource.setName(dsName)

connectionPoolParams = theJDBCResource.getJDBCConnectionPoolParams()
connectionPoolParams.setConnectionReserveTimeoutSeconds(25)
connectionPoolParams.setMaxCapacity(100)
connectionPoolParams.setTestTableName("TCMUSER")
```

```
dsParams = theJDBCResource.getJDBCDataSourceParams()
dsParams.addJNDIName(jndiName)

driverParams = theJDBCResource.getJDBCDriverParams()
driverParams.setUrl("jdbc:derby:commerce_sample")
driverParams.setDriverName("org.apache.derby.jdbc.EmbeddedDriver")

driverParams.setPassword("")
driverProperties = driverParams.getProperties()

proper = driverProperties.createProperty("user")
proper.setValue("")

save()
activate()
```

If you used the above script to create your data source then you will need to edit its configuration in your WebLogic console in order to target it to the desired server (ex. AdminServer).

Using Workshop for WebLogic Platform with AquaLogic Commerce Services

This section explains how to configure Workshop for WebLogic to prepare for developing customizations to the Commerce Services application.

Creating the Project

Take the following steps to create your project in Workshop for WebLogic

1. Select File > New > Project.
2. Select Java Project and click Next.
3. Enter a name for the project, e.g. CommerceServices.
4. Select “Create project from existing source.”
5. Click Browse and navigate to this location: <BEA_HOME>\weblogic92\samples\commerce\commerceApp\commerceServices
6. Click Next.
7. In the Source tab, right-click WEB-INF/src/test/java under the project you created and select “Remove from build path.”
8. Check “Allow output folders for source folders.”
9. Click Finish.

Developing with Workshop for WebLogic

- Read the BEA Workshop for WebLogic Platform documentation for more information on developing applications usig Workshop for WebLogic.
- Read the AquaLogic Commerce Services Developer Guide for additional information on enhancing your development environment with plug-ins to assist with making enhancements to the AquaLogic Commerce Services applications.

Making Modifications

Once you've become familiar with the workings of the AquaLogic Commerce Services Storefront sample, you are going to want to make your own modifications. AquaLogic Commerce Services is designed with flexibility in mind so you can make changes relatively easily.

Storefront folders

The Storefront demo store application is in the `commerceServices` folder, which the installer puts in `<BEA_HOME>/weblogic92/samples/commerce/commerceApp`. You may wish to make a copy of this into your development folders.

Most of the files you will want to modify will be in the following folders

- **template-resources** - contains resources needed for the UI as follows
    - **images** - all the UI images used in the Storefront
    - **js** - JavaScript files used by the Storefront
    - **stylesheet** - CSS files used for the Storefront layout
- **WEB-INF/conf** - configuration files as follows
    - **misc** - Miscellaneous configuration (validator and velocity toolbox)
    - **resources** - Properties files for Lucene, payment processors, country configuration
    - **spring** - Spring configuration files
- **WEB-INF/templates** - Velocity templates for the Storefront pages
- **WEB-INF/src** - Java source code

Further reading

The AquaLogic Commerce Services Developer Guide is rich with information on making changes to the Storefront application, including tutorials. Give it a read and you will be making advanced modifications in no time!

Implementing Unified User Profile (UUP) with WebLogic Portal

AquaLogic Commerce Services includes a plug-in for WebLogic Portal that allows you to access AquaLogic Commerce Services Customer profile attributes using WebLogic Portal's Unified User Profile (UUP) functionality.

The AquaLogic Commerce Services user profile property set

The AquaLogic Commerce Services installation includes a property set file, `<BEA_HOME>/weblogic92/commerce/portal-plugins/uup/CommerceServices.usr`.

Assuming you have already set up a WebLogic Portal EAR Project and Datasync Project in Workshop for WebLogic, copy the CommerceServices.usr file to your Datasync project's userprofile folder.

New to WebLogic Portal?

If you aren't yet an expert on setting up Portal EAR and Datasync projects, follow the steps in the Getting Started with WebLogic Portal tutorial at http://edocs.bea.com/wlp/docs92/tutorials.

The AquaLogic Commerce Services UUP shared library

To use UUP in your portal project, the UUP shared library needs to be included. This can be done as follows

1. Enter Workshop's Project Explorer view (Window > Show View > Project Explorer) and expand Enterprise Applications.
2. Expand the node relating to your Portal EAR
3. Expand the [WebLogic] node
4. Right-click WebLogic J2EE Libraries and choose Add
5. In the Add WebLogic J2EE Library reference window, click Browse
6. In the Select WebLogic J2EE Library window, click Add
7. In the Add WebLogic J2EE Library window, click Browse
8. Look for alcs-uup-lib in the J2EE Library list. If you don't see it on the list add it as follows
   - Click the Add button
   - In the Add WebLogic J2EE Library window, click Browse
   - Browse to <BEA_HOME>/weblogic92/commerce/portal-plugins/uup

- Select alcs-uup-lib-5.1.ear and click Open.
- Click the OK button.

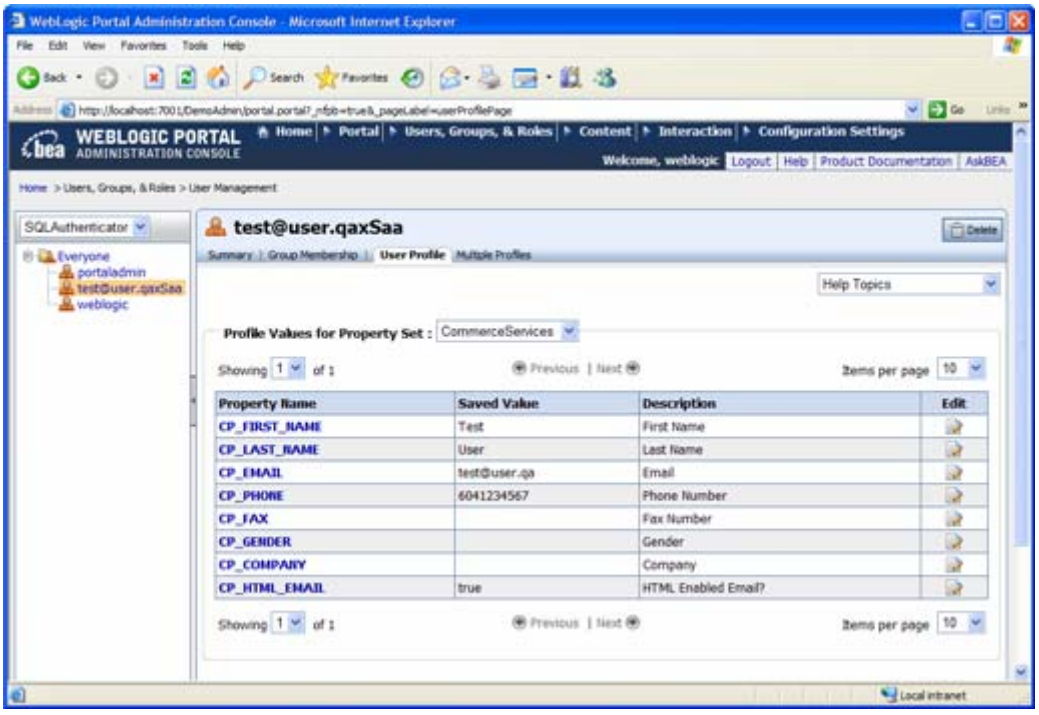
9. Select alcs-uup-lib from the list and click OK.
10. Click OK in the remaining open windows.

UUP in WebLogic Portal Administration Console

Once you deploy your WebLogic Portal project, you should be able to access the AquaLogic Commerce Services Customer profile data from the WebLogic Portal Administration Console.

1. Log in to the console.
2. Select User Management from the Users, Groups, & Roles menu to display the user management page.
3. From the list of users on the left, click on a user you created in Storefront.
4. Click on the User Profile tab over on the right
5. Ensure Profile Values for Property Set: is set to CommerceServices

You should now be able to see the Customer Profile properties similar to the following:



You can click on the Edit button to the right of any property to change the value of that property.

A note about caching

The UUP property values are cached, so a change made to a profile property in Storefront make take a few minutes to appear in the User Profile view in the administration console. However, changes you make to properties within the administration console should be visible immediately.

Integrating with Back-End Systems

AquaLogic Commerce Services includes support for integrating your AquaLogic Commerce Services store with external systems.

AquaLogic Commerce Services Connect

AquaLogic Commerce Services Connect integrates Apache Axis (an open source Web Services engine for Java) along with Dozer and XDoclet to expose services from the AquaLogic Commerce Services service layer as Web Services to external systems.

For more information please read the AquaLogic Commerce Services Connect documentation in the AquaLogic Commerce Services Developer Guide.

Integrating Business Process Management (BPM) Functionality

AquaLogic Commerce Services can be used with AquaLogic Business Process Management (BPM). Using the AquaLogic BPM Suite you can easily register and consume Web services, such as the Web services provided by the AquaLogic Commerce Services Connect module.

You can also integrate with AquaLogic Service Bus by configuring and registering AquaLogic Commerce Services web services with the service bus, configuring its related proxy services, and exposing them as Web services. AquaLogic Service Bus can help configuration and deployment, and it simplifies management of shared services across a SOA environment.

For more information see the AquaLogic BPM documentation at http://edocs.bea.com/albsi/docs57/index.html, the AquaLogic Service Bus documentation at http://edocs.bea.com/alsb/docs26/index.html , and the AquaLogic Commerce Services Connect documentation.

Hooking Into Your E-Mail Server

AquaLogic Commerce Service's Storefront and Manager modules are capable of sending e-mail, for example when a new Customer registers on the store or requests their password to be reset. You can easily configure this functionality to use your mail server and details.

Configuration

The e-mail configuration can be found in the file `commerce-config.xml` which is in the WEB-INF folder of the Storefront and Manager modules. For example in the installed sample you would edit `<BEA_HOME>/weblogic92/samples/commerce/commerceApp/commerceServices/WEB-INF/commerce-config.xml` and `<BEA_HOME>/weblogic92/samples/commerce/commerceApp/commerceServicesManager/WEB-INF/commerce-config.xml` respectively.

The configuration options in the `<mail>` section and are as follows

Option	Description
mail.host	The domain name or IP address of the SMTP server that will send e-mail
mail.host.port	The port of the SMTP server
email.from	The "From" e-mail address which e-mails appear to come from
email.from.name	The "From" personal name which e-mails appear to come from
email.store.url	The URL to use for images, etc in the e-mail from Commerce Storefront
email.cm.url	The URL to use for images, etc in the e-mail from Commerce Manager