BEA WebLogic Portal

Administration Guide

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Administration Guide

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Contents

1. Introduction to BEA WebLogic Portal Administration

An Administrator's Portal Primer 1-2
Portal Features 1-2
User Management 1-2
Group Portals 1-3
Delegated Administration 1-3
Portal and Portlet Management 1-3
Personalization 1-3
Campaigns 1-3
Roadmap for Administering a Portal 1-4
How Do I Administer a Portal? 1-4
Starting and Logging in to the Administration Tools 1-6
Starting the WebLogic Portal Administration Tools 1-6
Starting the E-Business Control Center 1-7
Logging in to the Tools 1-7
How Do I Get Started? 1-8

Part I. Administering Portals—Tutorial

2. Tutorial – Creating Administrative Users

Step 1: Add a User 2-2
Step 2: Make the User Eligible to Manage Portals 2-5
Step 3: Grant Portal Administration Rights to the User 2-7
Step 4: Log in as the New Portal Administrator 2-10

3. Tutorial – Administering a Portal

Step 1: View the Existing Portal 3-2

Step 2: Make Skins and Layouts Available in the Portal 3-3
Step 3: Create a Portal Page and Add a Portlet 3-6
Step 4: Synchronize the Modified Portal 3-9
Step 5: Use the New Skins, Layouts, and Portlets 3-12
Step 6: View the Modified Portal 3-18

4. Tutorial – Creating a Portal and Group Portal

Step 1: Create and Deploy a Portal 4-2
Step 2: Making the Default Portlet Visible 4-10
Step 3: View the Default Group Portal Site 4-15

5. Tutorial – Creating a Group Portal

Step 1: Create a Group on Which to Base the Group Portal 5-2
Step 2: Create a Group Portal in an Existing Portal 5-8
Step 3: Customize the Group Portal 5-14
Step 4: View the Group Portal Site 5-20

Part II. Administering Portals

6. Administering Users and Groups

Before You Begin: Security for Users 6-2
  Changing the Default Administrators and Passwords 6-2
Creating and Managing Users 6-3
  Creating Users 6-3
  Modifying and Deleting Users 6-5
    Changing User Passwords 6-5
    Changing User Properties 6-6
    Deleting Users 6-8
Creating and Managing User Groups 6-9
  Creating User Groups 6-10
  Adding Users to User Groups 6-11
  Removing Users from Groups 6-14
  Modifying and Deleting User Groups 6-14
    Viewing Group Members 6-14
    Changing Group Properties 6-15
    Adding Groups to Groups 6-16

Deleting Groups 6-17
Creating and Managing Group Portals 6-17
Step 1: Create a Group to Be Used in a Group Portal 6-18
Step 2: Create a Group Portal 6-18
Step 3: Set up Group Portal Administrators 6-23
Creating Administrative Users 6-23
Creating WebLogic Server System Administrators 6-24
Creating a WebLogic Server System Administrator 6-24
Removing WebLogic Server System Administrators 6-25
Creating Portal System Administrators 6-25
Creating a Portal System Administrator 6-25
Removing Portal System Administrators 6-26
Creating Portal Administrators 6-26
Creating a Portal Administrator 6-26
Removing Portal Administrators 6-28
Creating Group Portal Administrators 6-29
Creating a Group Portal Administrator 6-29
Changing Group Portal Administrators to Portal Administrators 6-31
Removing Group Portal Administrators 6-32
Creating Groups to Control Page and Portlet Access 6-32
Creating Entitlement Segments 6-33
Modifying and Deleting Entitlement Segments 6-37
Creating Groups to Target Content to Customers 6-37
Creating Customer Segments 6-38
Modifying and Deleting Customer Segments 6-38

7. **Administering Portal and Portlet Attributes**

Modifying Portal Characteristics 7-2
Modifying Portal Characteristic Definitions 7-2
Modifying General Characteristic Definitions 7-3
Modifying Availability of Characteristics for Portals 7-6
Modifying Availability of Characteristics for Portal Pages 7-7
Modifying a Portal Look and Feel 7-8
Selecting Skins 7-9
Selecting and Ordering Pages 7-11

Editing Attributes for a Page 7-13
Editing Layouts for a Page 7-15
Selecting and Arranging Portlets on a Portal Page 7-16
Modifying Portlet Characteristics 7-18
Modifying Portlet Characteristic Definitions 7-18
Modifying the Portlet Look and Feel 7-20
Editing Portlet Attributes 7-21
Synchronizing the New Portal Data to the Application 7-23
Establishing Portal Access Using Group Portals 7-24
Set Entitlements for Portal Pages 7-25
Set Entitlements For Portlets 7-27

8. Personalization and Interaction Management

Targeting Customers with Portal Content 8-2
Targeting Customers with Advertisements 8-6

9. Creating Campaigns

Campaign Prerequisites 9-2
Create Triggers 9-2
Create Content 9-4
Defining Campaigns 9-6
Step 1: Creating a Campaign File 9-7
Step 2: Entering General Campaign Information 9-8
Step 3: Creating Scenarios and Actions 9-8
Creating Scenarios 9-8
Creating Scenario Actions 9-10
Modifying and Deleting Scenarios and Actions 9-21
Step 4: Defining Campaign Start and Stop Criteria 9-21
Setting the Campaign Start Date and Time 9-21
Ending a Campaign Using Dates and Times 9-22
Using Goals to End a Campaign 9-23
Step 5: Synchronizing the Campaign 9-25
Debugging and Modifying Campaigns 9-26
Debugging Campaigns 9-26
Modifying Campaigns 9-28

Deleting Campaigns 9-28
Deactivating and Reactivating Campaigns 9-28
Reactivating Campaigns That Have Ended Because of Goals Being Met 9-29

10. Administering Commerce Services

Creating and Administering a Catalog 10-1
Starting the Catalog Management Tools 10-3
Add Categories and Items to the Catalog 10-3
Adding Categories to the Catalog 10-3
To create subcategories in a existing category: 10-5
Adding Items to the Catalog 10-6
Modify Categories and Items in the Catalog 10-8
Assigning Items to Categories 10-8
Editing the Attributes for Categories and Items 10-10
Deleting Items or Removing Items from One or More Categories. 10-14
Deleting an Item from the Catalog 10-15
Removing an Item From One or More Categories 10-15
Removing Categories 10-17
Moving Items from One Category to Another Category 10-18
Administering Customer Order Information 10-19
Locating Orders 10-19
Updating Order Status 10-23
Administering Customer Payment Information 10-25
Searching for Payments 10-25
Authorizing Transactions 10-27
Administering Discounts 10-29
Defining a New Discount and Attributes 10-29
Define a New Discount 10-29
Establish the Discount Duration and Overall Limit 10-40
Saving, Finalizing, and Synchronizing a Discount 10-41
Saving, Finalizing, and Synchronizing 10-42
Requirements for Saving and Finalizing a Discount 10-42
Saving a Discount 10-43
Finalizing a Discount 10-43

Synchronizing a Discount 10-44
Finding Existing Discounts and Items 10-44
Browsing a Catalog 10-44
Searching a Catalog 10-46
Locating an Existing Discount Quickly 10-47
Modifying an Existing Discount 10-49
Controlling Active Status and Deleting Discounts 10-51
Activating and Deactivating Discounts 10-52
Deleting an Existing Discount 10-53

11. System Administration

Post Configuration Wizard Tasks 11-1
Starting and Stopping the Server 11-2
Starting and Stopping WebLogic Portal Sample Domains 11-2
Starting and Stopping Domains Created with the Configuration Wizard 11-3
Running WebLogic Portal as a Windows Service 11-5
About PointBase 11-5
Installing as a Windows Service 11-5
Uninstalling as a Windows Service 11-5
Setting up the E-Business Control Center 11-6
Database Administration 11-11
Supported Databases 11-11
About PointBase 11-11
Starting and Stopping PointBase 11-11
Starting the PointBase Console 11-12
Switching to Other Databases 11-13
Step 1: Configure Your Database 11-13
Step 2: Edit db_settings.properties for Your Database Environment 11-13
Step 3: Start the Server 11-15
Step 4: Set up the Connection Pools and Realm in the WebLogic Server Console 11-15
Step 5: Stop the Server 11-17
Step 6: Edit db_settings.properties to Uncomment Your Database 11-17
Step 7: Run create_db 11-17

Step 8: Start the Server ... 11-17
Step 9: Run loadads and loaddocs ... 11-17
Step 10: Run sync ... 11-18
Step 11: Oracle Only - Rebuild Indexes ... 11-18
About Database Schemas ... 11-18
Backup and Recovery ... 11-19
Performance Tuning ... 11-20
Adjust Database Connections Available at Startup ... 11-20
Catalog Size ... 11-21
Campaigns ... 11-21
Increase Ad Display-Count Buffer Size ... 11-22
Location of Java Virtual Machines (JVMs) ... 11-22
Using the JRockit Virtual Machine ... 11-23
Using the HotSpot Virtual Machine ... 11-23
Internationalization Performance Tuning ... 11-24
Persisting Behavioral Tracking Data ... 11-24
Step 1: Understanding Data Storage and Table Structure ... 11-25
Relational Databases ... 11-25
Database Directory Paths ... 11-26
Behavior Tracking Database Schema ... 11-27
EVENT Database Table ... 11-27
The EVENT_ACTION Database Table ... 11-32
The EVENT_TYPE Database Table ... 11-33
Constraints and Indexes ... 11-34
Step 2: Create the Behavior Tracking Databases ... 11-34
Creating a Database for a Development Environment ... 11-34
Creating Databases for a Production Environment ... 11-35
Step 3: Enable the Behavior Tracking Listener ... 11-35
Step 4: Configure the Behavior Tracking Service ... 11-36
Configure a Data Source (Optional) ... 11-38

A. Database Schemas

Campaign Database Schemas ... A-1
The Entity-Relation Diagram for Campaign Manager Database Tables .. A-2
List of Tables Composing the BEA Campaign Manager ... A-2

The Campaign Manager Data Dictionary A-2
The SCENARIO_END_STATE Database Table A-2
Event Database Schemas A-3
Data Storage A-4
Relational Databases A-4
Database Directory Paths A-4
Behavior Tracking Database Schema A-5
The EVENT Database Table... A-6
The EVENT_ACTION Database Table..................................... A-11
The EVENT_TYPE Database Table... A-11
Constraints and Indexes A-12
Catalog Database Schemas.. A-12
The Entity-Relation Diagram for the Core Product Catalog Tables A-13
Product Catalog Tables... A-15
The CATALOG_ENTITY Database Table A-16
The CATALOG_PROPERTY_KEY Database Table A-16
The CATALOG_PROPERTY_VALUE Database Table............... A-17
The WLCS_CATEGORY Database Table A-18
The WLCS_PRODUCT Database Table A-22
The WLCS_PRODUCT_CATEGORY Database Table A-26
The WLCS_PRODUCT_KEYWORD Database Table.................. A-26
Defined Constraints for Product Catalog Tables................................... A-27
Order and Discount Database Schemas A-29
The Entity-Relation Diagram for the Order and Discount Tables A-29
The Order Processing Data Dictionary Tables...................................... A-32
The DISCOUNT Database Table.. A-32
The DISCOUNT_ASSOCIATION Database Table A-34
The ORDER_ADJUSTMENT Database Table A-34
The ORDER_LINE_ADJUSTMENT Database Table A-35
The WLCS_CREDIT_CARD Database Table A-36
The WLCS_CUSTOMER Database Table A-38
The WLCS_ORDER Database Table A-40
The WLCS_ORDER_LINE Database Table A-42
The WLCS_SAVED_ITEM_LIST Database Table A-43
The WLCS_SECURITY Database Table A-44

The WLCS_SHIPPING_ADDRESS Database Table A-44
The WLCS_SHIPPING_METHOD Database Table A-45
The WLCS_TRANSACTION Database Table A-47
The WLCS_TRANSACTION_ENTRY Database Table A-49
Defined Constraints in the Order Database Schema A-50
Personalization Database Schemas.. A-51
The Entity-Relation Diagram for WebLogic Portal Personalization A-52
List of WebLogic Portal Personalization Tables.................................... A-54
The Personalization Server Data Dictionary A-55
The AD_BUCKET Database Table A-56
The AD_COUNT Database Table A-57
The DATA_SYNC_APPLICATION Database Table..................... A-57
The DATA_SYNC_ITEM Database Table A-58
The DATA_SYNC_SCHEMA_URI Database Table A-59
The DATA_SYNC_VERSION Database Table............................. A-60
The DOCUMENT Database Table A-60
The DOCUMENT_METADATA Database Table......................... A-61
The ENTITLEMENT_RULESET Database Table A-62
The ENTITY Database Table A-62
The GROUP_HIERARCHY Database Table................................. A-63
The GROUP_SECURITY Database Table..................................... A-64
The MAIL_ADDRESS Database Table A-64
The MAIL_BATCH Database Table A-65
The MAIL_BATCH_ENTRY Database Table............................... A-65
The MAIL_HEADER Database Table A-65
The MAIL_MESSAGE Database Table... A-66
The PLACEHOLDER_PREVIEW Database Table A-66
The PROPERTY_KEY Database Table A-67
The PROPERTY_VALUE Database Table.................................... A-67
The SAMPLE_UUP_INFO Database Table................................... A-68
The SEQUENCER Database Table A-69
The USER_GROUP_CACHE Database Table A-69
The USER_GROUP_HIERARCHY Database Table...................... A-70
The USER_PROFILE Database Table A-70
The USER_SECURITY Database Table A-71

The WEBLOGIC_IS_ALIVE Database Table A-71
Defined Constraints A-72
Portal Database Schemas A-74
The Entity-Relation Diagram for the Portal and Portlet Tables A-75
List of Tables Comprising the Portal Management Package A-77
The Portal Management Data Dictionary A-78
The LAYOUT Database Table A-78
The PORTAL Database Table A-79
The PORTAL_P13N Database Table A-79
The PORTAL_P13N_LAYOUT Database Table A-80
The PORTAL_P13N_SKIN_POOL Database Table A-81
The PORTAL_PAGE Database Table A-82
The PORTAL_PAGE_P13N Database Table A-82
The PORTAL_PAGE_P13N_LAYOUT_POOL Database Table ... A-84
The PORTLET Database Table A-84
The PORTLET_P13N Database Table A-85
The PORTLET_PLACEHOLDER Database Table A-87
The RESOURCE_GROUP_ADMIN Database Table A-88
The SKIN Database Table A-89
Defined Constraints A-89

Index

Preface

Welcome to the BEA WebLogic Portal Administration Guide. In addition to this document, we encourage you to use the following resources, as well.

Finding documentation online BEA product documentation is available on the BEA corporate Web site. From the BEA Home page, click on Product Documentation or go directly to the "e-docs" Product Documentation page at **http://e-docs.bea.com**.

Providing documentation feedback Your feedback on the WebLogic Portal documentation is important to us. Send us e-mail at **docsupport@bea.com** if you have questions or comments. Please indicate that you are using the documentation for the WebLogic Portal version **7.0**

Contacting BEA WebSUPPORT If you have any questions about this version of WebLogic Portal, or if you have problems installing and running WebLogic Portal, contact BEA Customer Support through BEA WebSUPPORT at **http://www.bea.com** or by using the contact information provided on the Customer Support Card in the product package.

1 Introduction to BEA WebLogic Portal Administration

Welcome to the WebLogic Portal *Administration Guide*. Portal administration involves more than traditional system administration activities. It also involves tasks that control the behavior, content, and appearance of portals. While portal administrators do not develop the resources required for a portal Web site, they use those resources to maintain and modify portals.

This guide shows you how to administer portal Web sites built with BEA WebLogic Portal. Administration tasks include setting up and managing users, creating and managing group portals, modifying portal attributes, creating personalization behavior, developing campaigns, and changing a portal's look and feel.

Portal development tasks are described in the WebLogic Portal *Development Guide*.

This section includes information on the following subjects:

- An Administrator's Portal Primer
- Roadmap for Administering a Portal
- How Do I Get Started?

An Administrator's Portal Primer

A portal is a feature-rich Web site. It provides a single point of access to enterprise data and applications, presenting a unified and personalized view of that information to employees, customers, and business partners.

Portals allow you to have multiple Web applications within a single Web interface. In addition to regular Web content that appears in a portal, portals provide the ability to display portlets—self-contained applications or content—all in a single Web interface.

Portals support multiple pages with tab-based navigation, with each page containing its own content and portlets.

Portal Features

While a fully-functioning portal offers many features to portal users that enhance their experience when using WebLogic Portal, many administration features likewise enhance your experience when managing portals and portal resources. This section describes some of these features.

User Management

WebLogic Portal lets you create users (made up mostly of your site visitors) and optionally store information about them, giving you the details necessary to target Web content to your visitors with pinpoint accuracy. You can also create groups and add users to them. Groups let you define different views of your portal for different groups (Group Portals), making it seem as if visitors in each group are looking at completely different Web sites.

WebLogic Portal also provides tools for creating dynamic groups of visitors: Segments and Entitlement Segments. By creating groupings of characteristics, such as gender, browser type, or date, any site visitors who match those characteristics dynamically become members of the group. Segments are used to target visitors with campaigns and personalized content. Entitlement Segments are used to control the pages and portlets visitors can view.

Group Portals

Portals are designed either for single users or for groups. With Group Portals you can restrict portal access to specific visitors and set up delegated administration for portals. You can create multiple Group Portals within a portal. The Group Portals can share portal resources, such as layouts and portlets, but can be configured differently to satisfy the needs of each group separately. Because users are designated individually as members of a group, the Group Portal provides a static form of personalization.

Delegated Administration

The WebLogic Portal security service lets you create different levels of administrators, each with varying degrees of access. You can also create administrators that can in turn delegate administration tasks to other users.

Portal and Portlet Management

Using existing resources that are either provided by BEA or created by developers, administrators can modify a portal's look and feel, define and arrange the pages and portlets displayed in a portal, define the different views of the portal (Group Portals) that different visitors see, and control access to pages and portlets within a group portal (with Entitlement Segments).

Personalization

Administrators have a great deal of control over the personalized content that is displayed in a portal by defining rules for Content Selectors and Placeholders. Content Selectors are rules that target specific Web content stored in a content database to specific site visitors. Placeholders are rules that control which advertisements are displayed on a Web page, and can provide a mechanism for ad rotations that display different ads each time the same person visits the site.

Campaigns

Campaigns are powerful tools for targeting content to visitors. Administrators can create campaign scenarios that target specific visitors with three types of actions. For example: targeting a specific content piece to an employee, giving the visitor a discount in a purchasing session, or sending the visitor a predefined e-mail message.

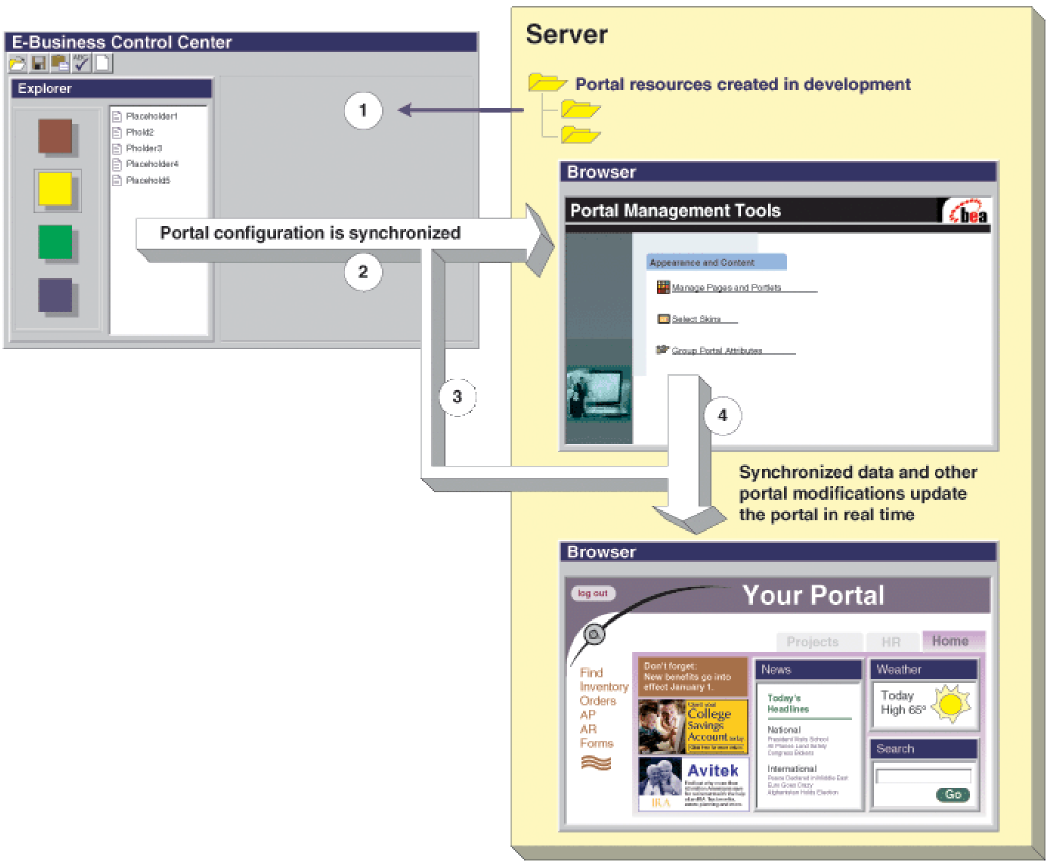
Roadmap for Administering a Portal

This section describes the tools and processes involved in administering a portal and implementing the features in the previous section.

How Do I Administer a Portal?

For most WebLogic Portal administration tasks, you will use two tools: the WebLogic Portal Administration Tools that run in a browser when your portal domain is running, and the locally installed E-Business Control Center for off-line changes to portal resources. Figure 1-1 shows how these tools fit into a portal administration workflow. See the numbered key following the roadmap for a full explanation of each stage of portal administration.

Figure 1-1 Portal Administration Workflow



1. **Portal resources are created and stored** on the server during the development process. Examples of resources are:
   - JSPs and graphics used in portlets
   - JSPs that define a page layout
   - Graphics and cascading style sheets that make up portal skins
   - Drop-down lists for selecting Web content stored in a database or content management system
   - E-mail JSP files

As an administrator, you access these resources in the E-Business Control Center, where you can create files that target visitors with personalized content, control campaigns, and define the look, feel, and content of a portal.

2. **Send, or synchronize, data** to the server, after you configure portal content and behavior in the E-Business Control Center.
3. **Some configuration data automatically takes effect** in the portal after synchronization, such as campaign and personalization behavior.
4. **Set up the portal** after synchronization from the E-Business Control Center. Portal setup includes user and group management, delegating administration, defining Group Portals, determining the pages and portlets visitors can see, changing the look and feel of a portal for each Group Portal, and rearranging and managing pages and portlets. These tasks affect the portal in real time.

Starting and Logging in to the Administration Tools

Procedures throughout this guide require you to use the WebLogic Portal Administration Tools or the E-Business Control Center. The following procedures show you how to start and log in to these tools.

Starting the WebLogic Portal Administration Tools

To launch the WebLogic Portal Administration Tools for your domain:

Open a browser and enter the following URL:

`http://<hostname>:<port>/<enterprise_app_folder_name>Tools`

where `<enterprise_app_folder_name>` is located beneath the `beaApps` folder in your domain.

For example, if you are launching the tools on the server itself, the default URL is:

`http://localhost:7501/portalAppTools`

Starting the E-Business Control Center

The E-Business Control Center must be installed on each machine that will run it. To launch the E-Business Control Center, choose Start →Programs →BEA WebLogic Platform 7.0 →WebLogic Portal 7.0 →E-Business Control Center.

After you start the E-Business Control Center, you must open a project file that corresponds with your enterprise application (which can include multiple portals). The project file gives you access to all the metadata and rules defined in the E-Business Control Center for your enterprise application's portals. The default location of your project (`.eaprj`) file is:

```
<your_domain>/beaApps/portalApp-project/portalApp-project
```

the last item in the path being the project file. When you start the E-Business Control Center, the last project file that was open is loaded automatically.

For information on setting up proper connections from the E-Business Control Center to the server, see "Setting up the E-Business Control Center" on page 11-6.

Logging in to the Tools

After you install WebLogic Portal, initial login to the tools requires a WebLogic Server system administrator or a WebLogic Portal system administrator username and password. WebLogic Server system administrators have full security privileges for the entire domain and can log into and use the WebLogic Server Console tools. WebLogic Portal system administrators have full security privileges for an enterprise application, which can include multiple portals. Table 1-1 shows the default system administrator usernames and passwords.

Table 1-1 Default Administrators

Username	Password	Description
system	weblogic	WebLogic Server system administrators with full privileges in the domain
weblogic	weblogic	WebLogic Server system administrators with full privileges in the domain
administrator	password	WebLogic Portal system administrator with full privileges in an enterprise application, which can include multiple portals

For information on creating additional administrators, see "Creating Administrative Users" on page 6-23.

Note: For E-Business Control Center server connections, such as synchronization, you must be either a WebLogic Server system administrator or a WebLogic Portal system administrator.

How Do I Get Started?

With the basic background on portals and portlets presented in this section, you can now begin administering portals. This guide is structured to let you view and perform the many tasks involved in portal administration.

While the procedures contained in this guide will show you what you need to know to administer portals and portlets, you should also do some advanced planning to enable your portal to fully support your enterprise.

The following list suggests some activities you need to consider before administering your portal. This list is not a comprehensive planning guide for a new portal. However, it should provide sufficient guidance for getting you started.

- Determine the database you want to use for your portal. BEA provides a default PointBase database for all new domains. Using a database other than the default involves procedures for switching databases.
- Identify the portal audience by defining users and groups.
- Identify the portal components; that is, what will be available in the portal.
- Develop a convention for determining which portlets are for internal viewing and which are for external viewing. These conventions help administrators create Group Portals and set entitlement rules.
- Identify portal management roles and responsibilities; that is, who are the system administrators, portal administrators, and Group Portal administrators, and what are they required to do?
- If you are developing a new portal, build the wireframes for the portal and its portlets.

- Develop campaign and personalization strategies carefully before adding the functionality to your portal.

You are now ready to begin administering your portal. From here you can:

- Go through the tutorial for creating a new portal domain, a new portal, and a new portlet: "Creating a Portal from a New Domain" in the *Development Guide* at http://edocs.bea.com/wlp/docs70/dev/newdom.htm.
- Go through the tutorial for setting up portal administration: "Tutorial – Creating Administrative Users" on page 2-1.
- Go through the tutorial for modifying an existing portal: "Tutorial – Administering a Portal" on page 3-1.
- Administer an existing portal by following the procedures in this guide: "Administering Portals" on page -1.

Part I Administering Portals—Tutorial

Some of the main tasks WebLogic Portal administrators perform are: creating new administrators; modifying the look and feel of portals; and creating different views of a single portal for different visitors. This section contains tutorials that guide you through a subset of each of these tasks.

After the tutorials, the rest of the *Administration Guide* provides procedures for completing the many tasks involved in portal administration. See “Administering Portals.”

This section includes information on the following subjects:

- Tutorial – Creating Administrative Users
- Tutorial – Administering a Portal
- Tutorial – Creating a Portal and Group Portal
- Tutorial – Creating a Group Portal

2 Tutorial – Creating Administrative Users

In this tutorial, you will create an administrative user—a portal administrator—who has administrative rights for an entire portal, but who has fewer overall administrative rights than a WebLogic Portal system administrator. When you finish, you will be able to log in to the WebLogic Portal Administration Tools as the new portal administrator and see only the features you can administer.

This tutorial includes the following steps:

- Step 1: Add a User
- Step 2: Make the User Eligible to Manage Portals
- Step 3: Grant Portal Administration Rights to the User
- Step 4: Log in as the New Portal Administrator

Step 1: Add a User

This step shows you how to add a user to WebLogic Portal. You will log in as an existing WebLogic Portal system administrator with full administrative rights.

Note: You can skip the first two steps if your domain and Portal Administration Tools are still running.

1. Launch and log in to the server for your new domain.

   On Windows, you can launch the domain server from the Start menu (BEA WebLogic Platform 7.0 > User Projects > *yournewdomain* > Start Portal Server).

   You also can use the domain start scripts which are, by default, in the `<BEA_HOME>\user_projects\<your_new_domain>` folder.

   When prompted to log in, use the appropriate username and password. The default username and password is **weblogic** and **weblogic.**

2. Start the WebLogic Portal Administration Tools if they are not already running. In your browser, go to the following URL:

   `http://<hostname>:<port>/portalAppTools`

   If you are running the server on your local machine, the default URL is **`http://localhost:7501/portalAppTools`**.

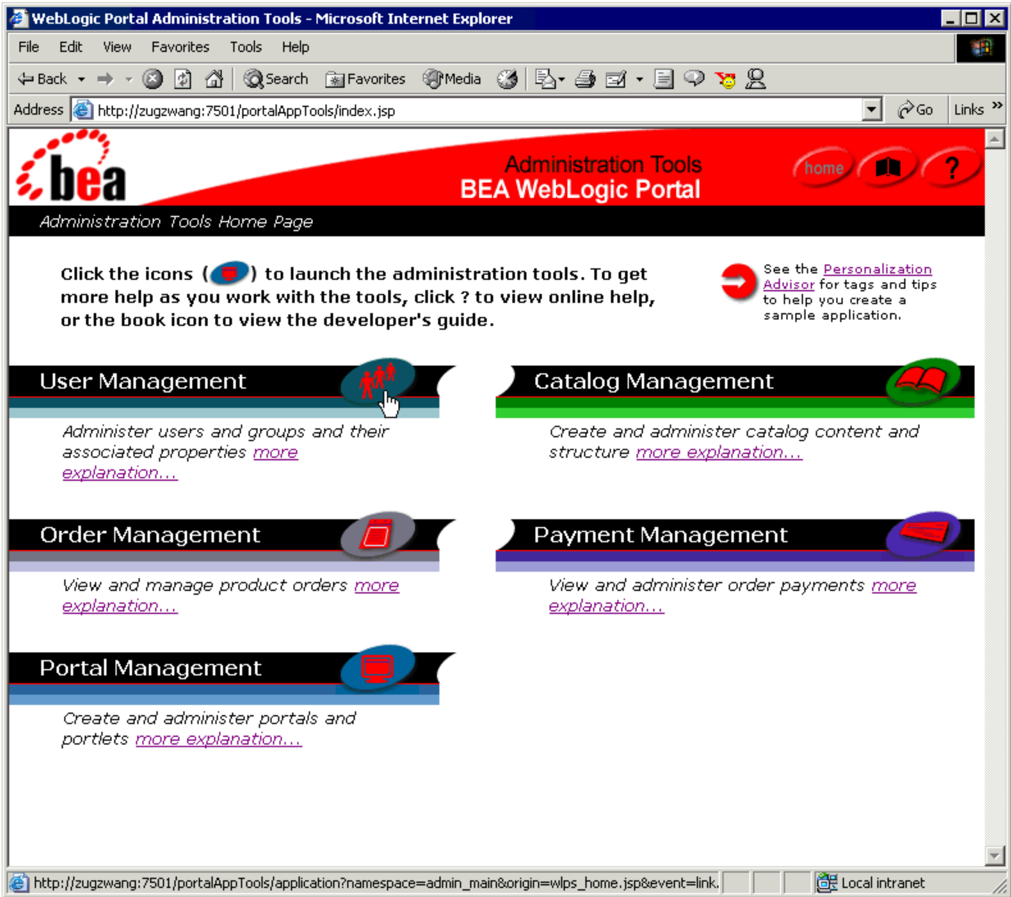
   When prompted, log in as the WebLogic Portal system administrator that BEA provides:

   Username: **administrator**

   Password: **password**

3. On the WebLogic Portal Administration Tools Home page, click the **User Management** icon, as shown in Figure 2-1.

Figure 2-1 Portal Administration Tools Home



4. On the User Management page, click **Create** on the Users bar, as shown in Figure 2-1.

Figure 2-2 Click Create on the Users Bar

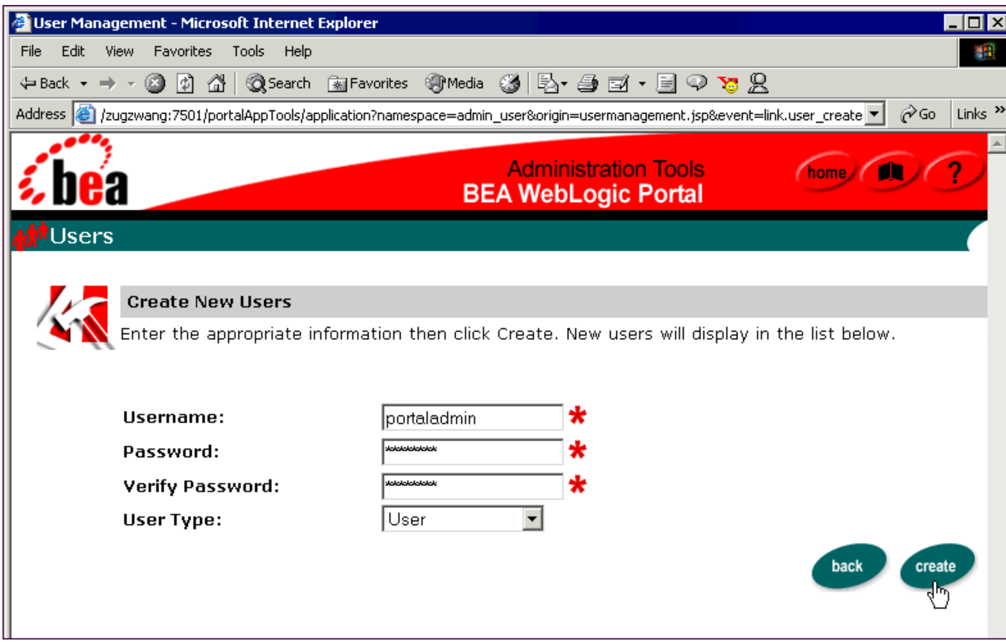
5. On the Create New Users page, name the new portal administrator and provide a password. This procedure uses the following examples as shown in Figure 2-3.

   Username: **portaladmin**

   Password: **password**

   Select **User** as the User Type and click **Create**.

Figure 2-3 Creating a User



After you click **Create**, a confirmation message appears below the page banner, and the name of the new user is displayed at the bottom of the page.

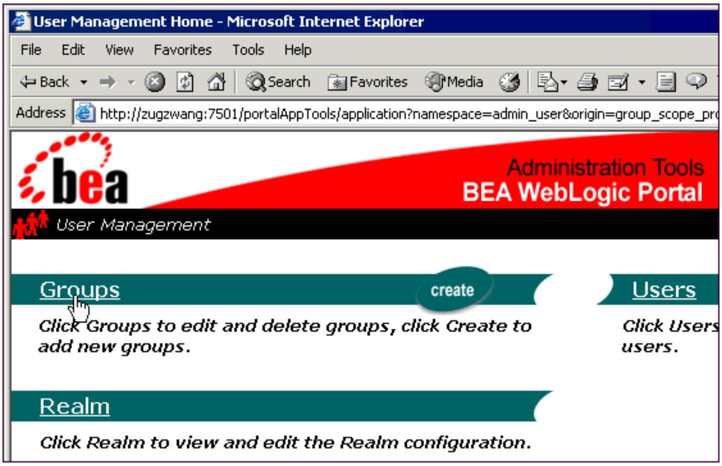
6. Click the **Back** button at the bottom of the page. You are returned to the User Management page.

Step 2: Make the User Eligible to Manage Portals

After you add the new user, you must make the user eligible to be an administrator. The WebLogic Portal system administrator performs this task.

1. On the User Management page, click the **Groups** link, as shown in Figure 2-4.

Figure 2-4 Accessing Groups



2. On the Groups page, click the **AdminEligible** group name as shown in Figure 2-5.

Figure 2-5 Click AdminEligible

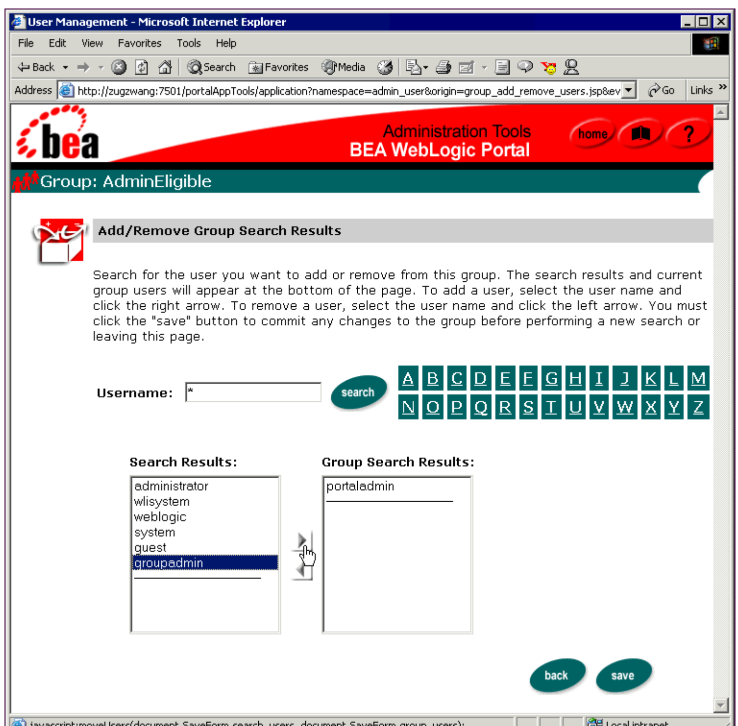
1. On the AdminEligible page, click the +/- icon on the **Add/Remove Users From Group** bar as shown in Figure 2-5.

Figure 2-6 Click AdminEligible

2. On the Add/Remove Group Search Results page, enter an asterisk (*) in the **Username** field and press **Enter**.

3. In the **Search Results** list, move the **portaladmin** user into the **Group Search Results** list, as shown in Figure 2-7.

Figure 2-7 Adding Users to the AdminEligible Group



4. Click **Save**. A confirmation message appears below the page banner.

5. Click **Back** at the bottom of the page to return to the AdminEligible page, and click **Finished**.

6. Click the **Home** icon on the page banner to return to the WebLogic Portal Administration Tools Home page.

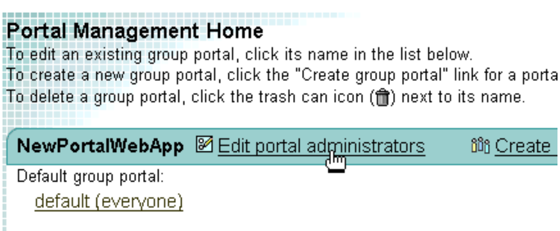
Step 3: Grant Portal Administration Rights to the User

After users are added to the AdminEligible group, you can make them portal administrators. This step shows you how to set specific portal administration rights.

1. On the WebLogic Portal Administration Tools Home page, click the **Portal Management** icon.

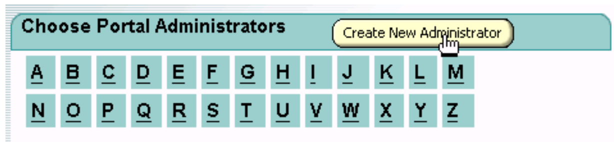
2. On the Portal Management Home page, click the **Edit Portal Administrators** link as shown in Figure 2-8.

Figure 2-8 Click Edit Portal Administrators



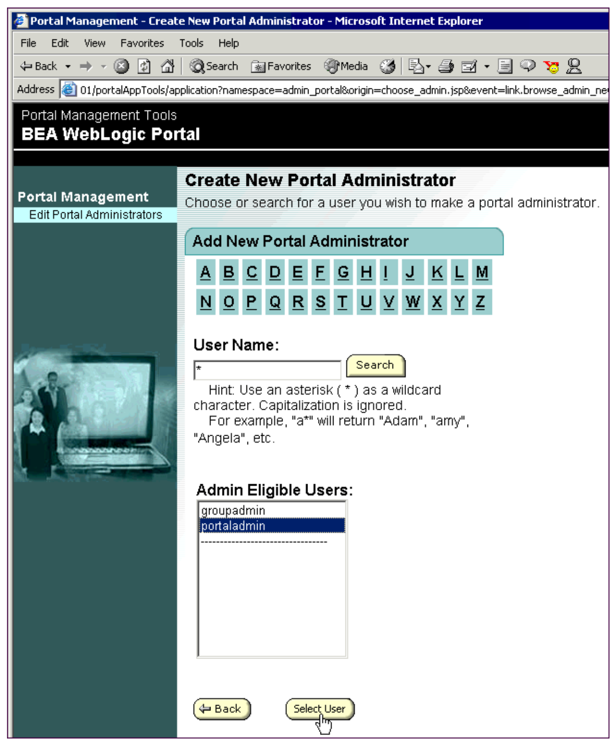
3. On the Edit Portal Administrator Settings page, click **Create New Administrator** as shown in Figure 2-9.

Figure 2-9 Click Create New Administrator



4. The Create New Portal Administrator page appears. In the **Admin Eligible Users** list, select the **portaladmin** user and click **Select User**, as shown in Figure 2-10.

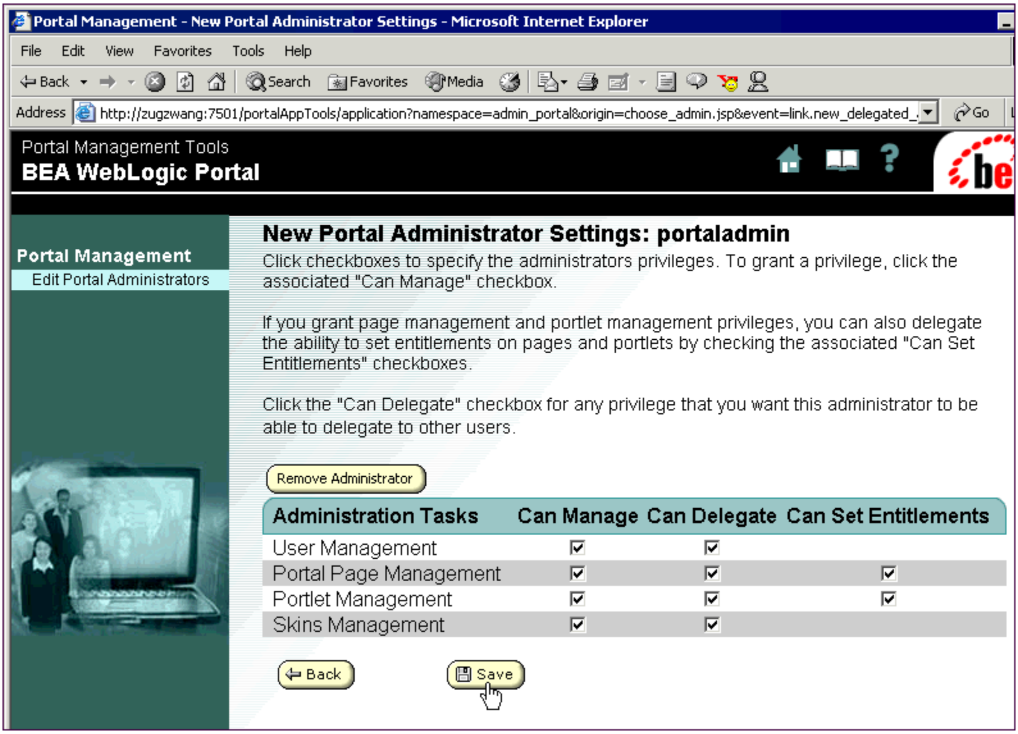
Figure 2-10 Selecting an AdminEligible User to Set Portal Administration Rights



5. In the New Portal Administrator Settings page, put check marks in all the check boxes in the **Can Manage** column. As you check these boxes, additional check boxes appear. Put check marks in all additional boxes, as shown in Figure 2-11.

Checking all the boxes gives the portal administrator unlimited administration rights in the portal.

Figure 2-11 Granting Portal Administration Rights



6. Click **Save**. You are returned to the Create New Portal Administrator page.

Step 4: Log in as the New Portal Administrator

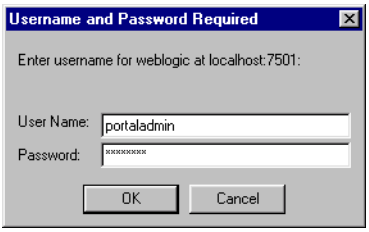
Test your new user's administration rights by closing your browser, launching it again, going to the WebLogic Portal Administration Tools URL (such as `http://localhost:7501/portalAppTools`), and logging in with the following username and password.

Username: **portaladmin**

Password: **password**

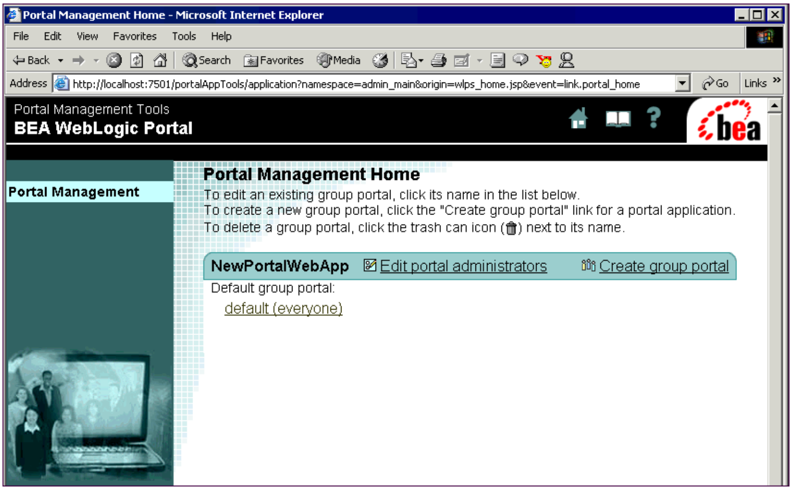
The login window is shown in Figure 2-12.

Figure 2-12 Log In Using the New Portal Administrator Username and Password



Because the new portal administrator does not have full WebLogic Portal system administration rights, you are not taken to the WebLogic Portal Administration Tools Home page (Figure 2-1). Instead, you are taken to the Portal Management Home page, as shown in Figure 2-13.

Figure 2-13 Portal Management Home Page



You have successfully created and logged in as a portal administrator.

Note: You can also create administrators that are limited to working with group portals within a portal. For more information on setting up group portal administration, see Chapter 6, "Administering Users and Groups."

3 Tutorial – Administering a Portal

In the previous tutorial, you created a portal administrator. In this tutorial, you use the new portal administrator to modify the content and look and feel of an existing portal. When you finish, you can view the portal to see the changes you made.

This tutorial is part of a larger tutorial that begins with "Creating a New Portal in a New Domain" in the WebLogic Portal *Development Guide* at http://edocs.bea.com/wlp/docs70/dev/newdom.htm. That tutorial has you create the new domain, new portal, and new portlets that are used in this tutorial.

This tutorial includes the following steps:

- Step 1: View the Existing Portal
- Step 2: Make Skins and Layouts Available in the Portal
- Step 3: Create a Portal Page and Add a Portlet
- Step 4: Synchronize the Modified Portal
- Step 5: Use the New Skins, Layouts, and Portlets
- Step 6: View the Modified Portal

Step 1: View the Existing Portal

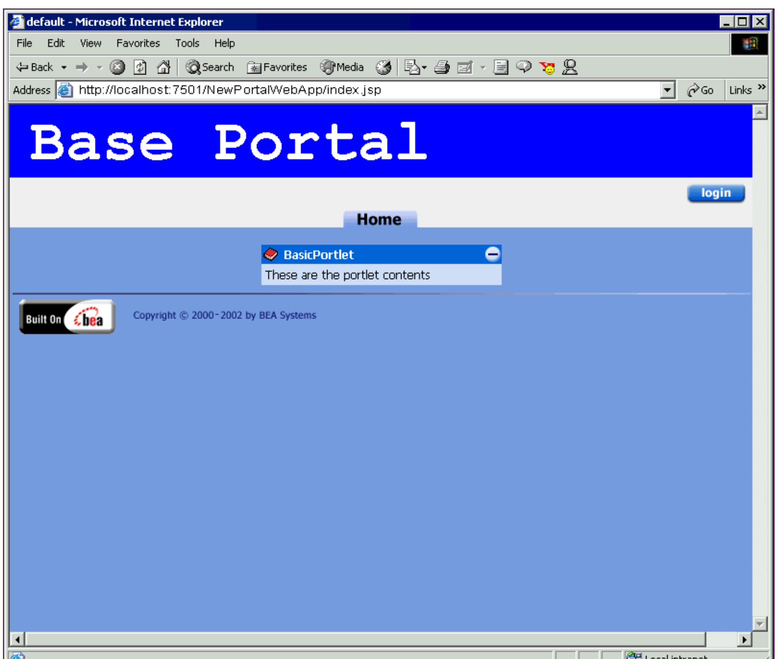
View the portal you created as it is now so you can compare it to the modified version you will create.

In a browser, go to http://<hostname>:<port>/<portalwebappname>/index.jsp. If you are running the server on your local machine and using the example data in these procedures, the URL will probably be http://localhost:7501/NewPWApp/index.jsp.

Log in with username **administrator** and password **password**.

Figure 3-1 shows the existing portal's look and feel with a single "Home" page, indicated by the page tab.

Figure 3-1 The Portal and Portlet You Created in the First Tutorial



Step 2: Make Skins and Layouts Available in the Portal

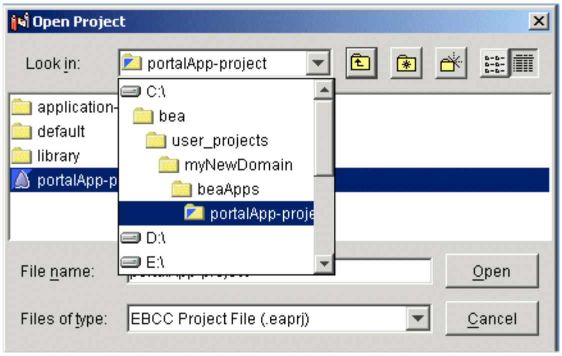
Skins and *layouts* are existing resources that affect the appearance of portals and portlets. In this step you will make these resources available for use in your portal.

Note: If you are continuing from previous procedures and the E-Business Control Center is still running with your portal project file open, you can skip the first two steps.

1. Launch the E-Business Control Center. (Choose Start > Programs > BEA WebLogic Platform 7.0 > WebLogic Portal 7.0 > E-Business Control Center.)

2. Open the project file, which is **portalApp-project** in this example. (Choose **File > Open Project** and navigate to <BEA_HOME>\user_projects\<your_new_domain>\beaApps\portalApp-project\portalApp-project). This is shown in Figure 3-2.

Figure 3-2 Opening a Project File

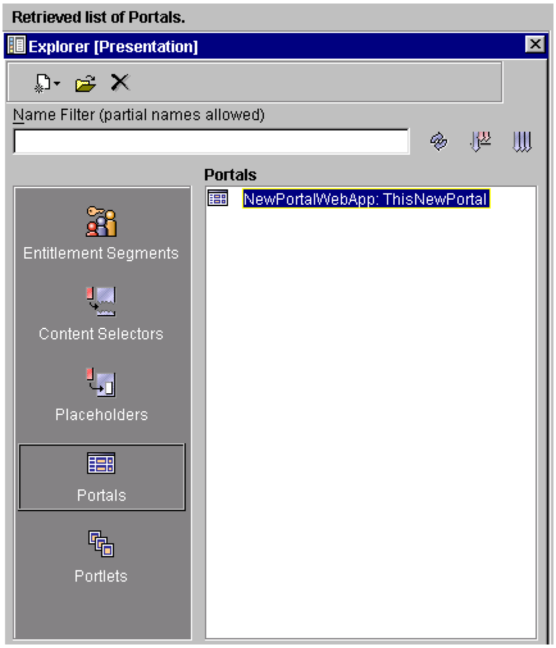


3. Click the **Presentation** tab in the E-Business Control Center Explorer window.

4. Click the **Portals** icon, and double-click the file for the Portal you created. In this example, it should be the **NewPortalWebApp: ThisNewPortal** file. See Figure 3-3.

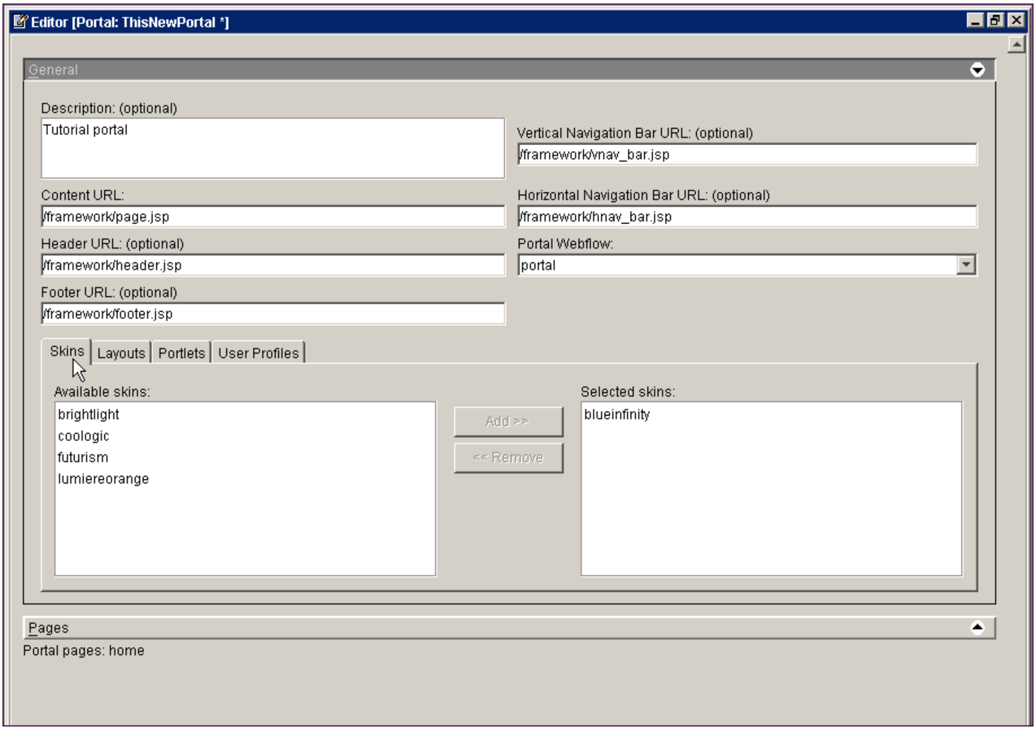
   The editor window for ThisNewPortal appears.

Figure 3-3 Opening the Portal File



5. In the portal editor window, click the **General** bar and click the **Skins** tab, as shown in Figure 3-4.

Figure 3-4 Making Skins Available

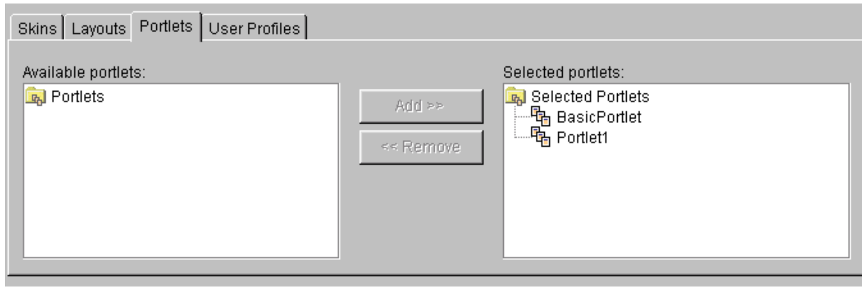


6. In the **Available skins** list, select the **coologic** skin, and click **Add** to move it into the **Selected skins** list.

7. Click the **Layouts** tab, and move the **fourcolumn** layout into the **Selected layouts** list.

8. Click the **Portlets** tab, and make sure all portlets are in the **Selected portlets** list as shown in Figure 3-5.

Figure 3-5 Make Sure All Portlets Are In Selected Portlets List



9. Click the **General** bar to close it.

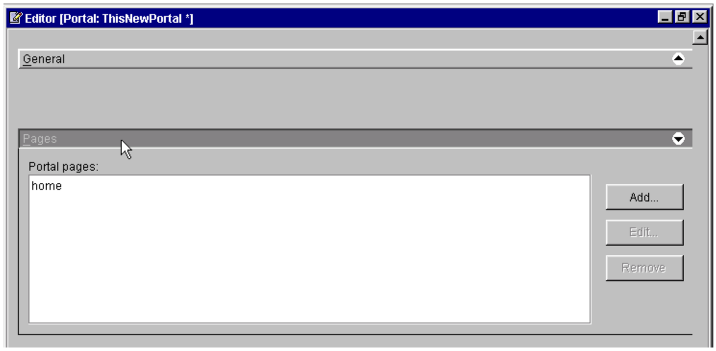
Keep the portal file open.

Step 3: Create a Portal Page and Add a Portlet

A new portal page is like a blank slate that you add things to. In this step, you will create a new portal page, add layouts that you made available in the previous step, and select a portlet to use on the page.

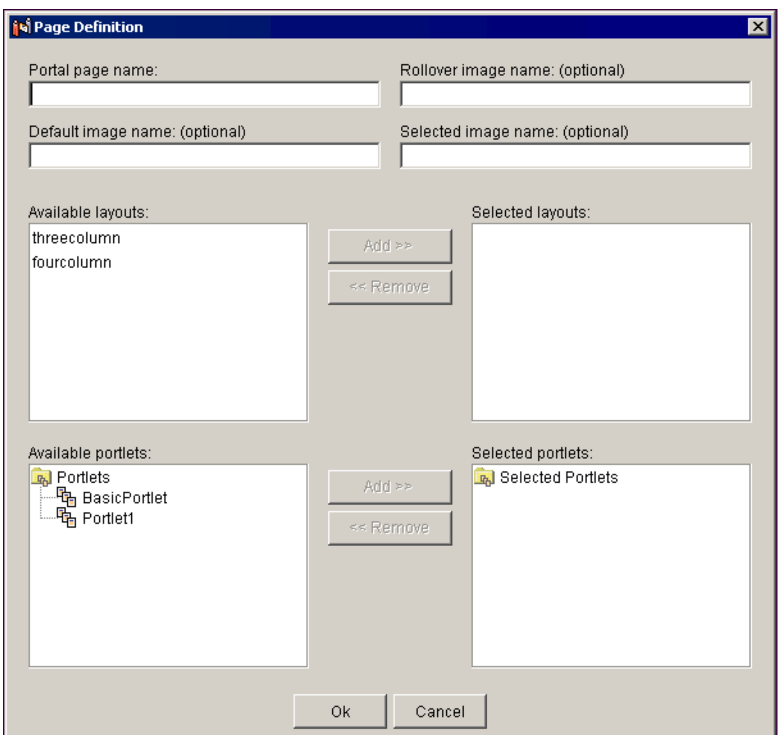
1. In the portal editor, click the **Pages** bar as shown in Figure 3-6.

Figure 3-6 Click the Pages Bar



2. Click **Add**. The Page Definition window appears, as shown in Figure 3-7.

Figure 3-7 Setting the Page Definition



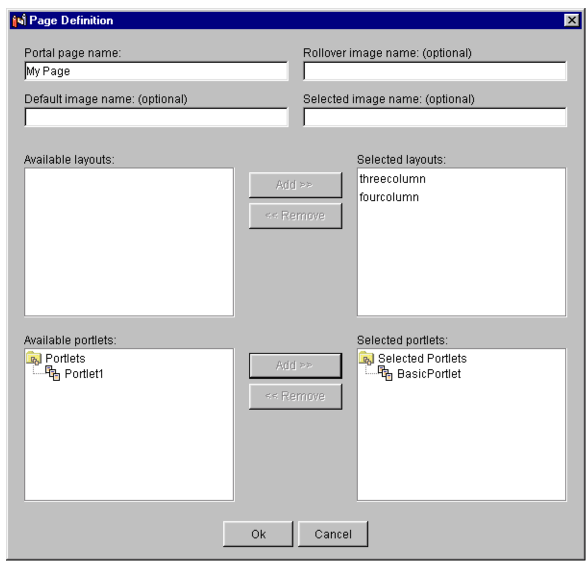
3. In the **Portal page name** field, enter the name for the page, such as **My Page** in this example.

4. In the **Available layouts** list, move the layouts you want to be able to use. In this example, move the **threecolumn** and **fourcolumn** layouts to the **Selected layouts** list. Selecting more than one layout lets you switch between these layouts later.

5. In the **Available portlets** list, move the portlets you want to the **Selected Portlets** list. In this example, move **BasicPortlet** to the **Selected portlets** list.

6. Verify that the window looks like Figure 3-8, then click **OK**. The name of the new page is listed in the Pages pane.

Figure 3-8 Page Definition Page After Making Changes



7. On the E-Business Control Center toolbar, click the **Save** icon as shown in Figure 3-9.

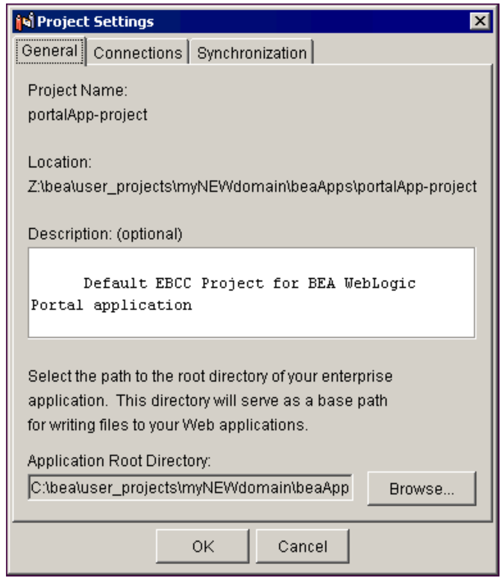
Figure 3-9 Save Icon

Step 4: Synchronize the Modified Portal

To use the new portal configuration, you must synchronize the E-Business Control Center data stored on your hard drive to the server.

1. In the E-Business Control Center, make sure your synchronization settings are correct. Choose **Tools > Project Settings**. The Project Settings window appears, as shown in Figure 3-10.

Figure 3-10 Verifying Project Settings



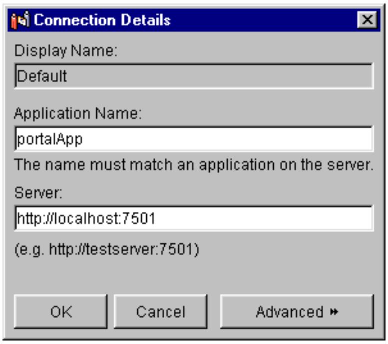
2. Make sure the following project settings are correct:

   a. On the General tab, make sure your Application Root Directory path is set to the **`portalApp`** enterprise application directory, at `<BEA_HOME>\user_projects\<your_new_domain>\beaApps\portalApp`. In this example, the directory should be `<BEA_HOME>\user_projects\myNewDomain\beaApps\portalApp`.

   b. On the Connections tab, click **Edit Connections**, select the **Default** connection, click **Edit**, make sure the **Application Name** field contains `portalApp`, and make sure the Server field contains the correct `http://<hostname>:<port>` information. If you are running the server on your local machine, the setting should probably be `http://localhost:7501`, as shown in Figure 3-11.

      Click **OK** in the Connection Details and Edit Connections windows.

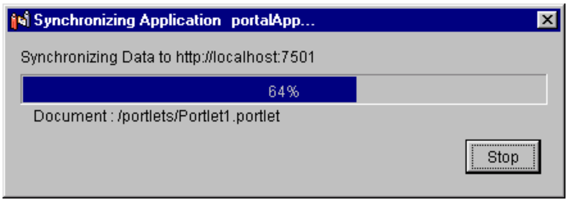
Figure 3-11 Verifying Connection Details



c. On the Synchronization tab, deselect **Validate the project** and **Show reset options for active campaigns**. Click **OK**.

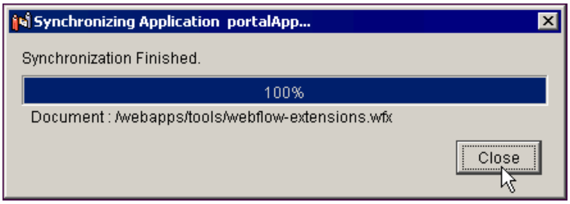
3. On the E-Business Control Center toolbar, click the **Synchronize** button. The E-Business Control Center runs the necessary processing tasks, as shown in Figure 3-12.

Figure 3-12 Synchronization in Progress



4. When the Synchronizing Application window shows that synchronization is complete, click **Close**, as shown in Figure 3-13.

Figure 3-13 Synchronization Complete



Step 5: Use the New Skins, Layouts, and Portlets

Now that you have modified the portal to include new skins, layouts, and a portal page with a portlet, you will use these resources to make live modifications to the portal with the WebLogic Portal Administration Tools. To make these modifications, you log in as the portal administrator you created in the previous procedure (**portaladmin** in this example).

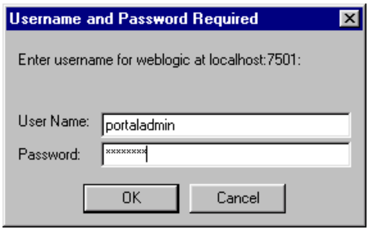
1. Close all open browsers, open a new browser, and launch the WebLogic Portal Administration Tools with the following URL: http://<hostname>:<port>/portalAppTools. If you are running the server on your local machine, the URL will probably be http://localhost:7501/portalAppTools.

2. At the login prompt, enter the appropriate username and password information for the portal administrator you created; in this example, use the following, as shown in Figure 3-14.

   Username: **portaladmin**

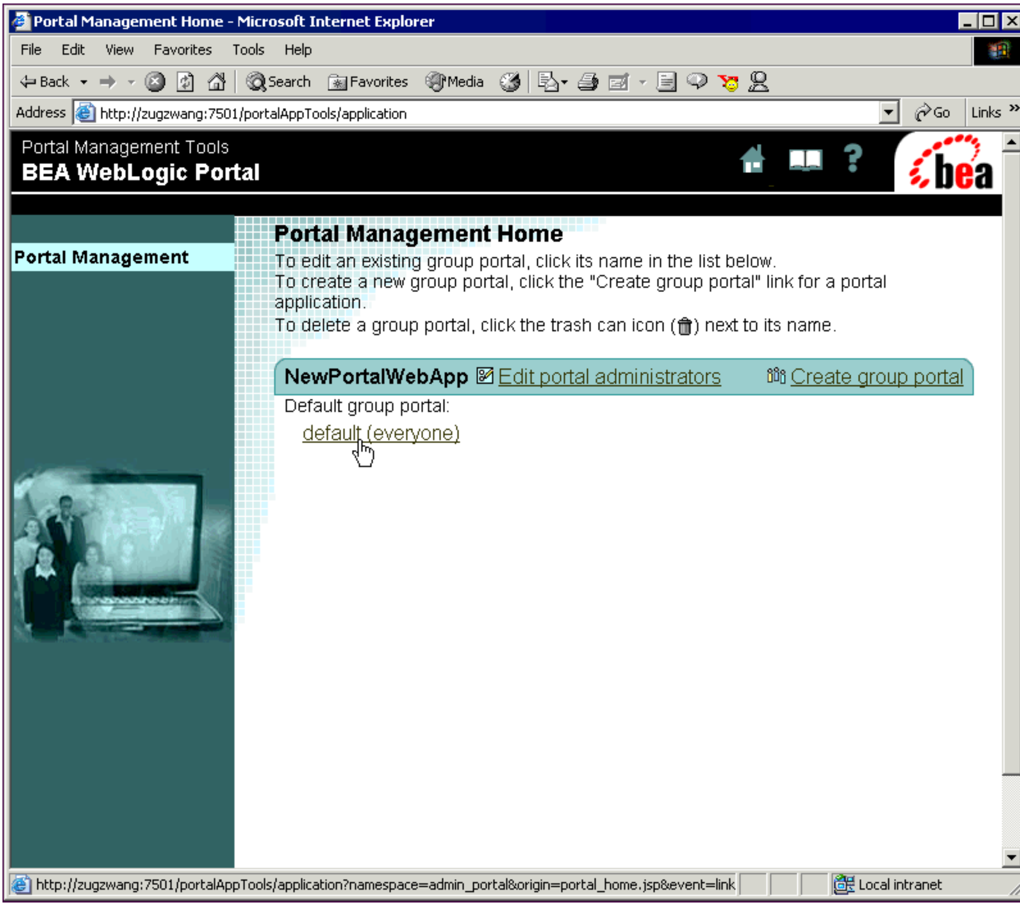
   Password: **password**

Figure 3-14 Log Into the Administration Tools as the Portal Administrator You Created



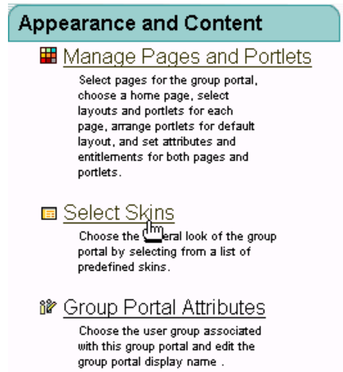
3. On the Portal Management Home page, click the **default (everyone)** link, as shown in Figure 3-15.

Figure 3-15 Portal Management Home Page



4. On the Group Portal Management Home page, click **Select Skins** as shown in Figure 3-17.

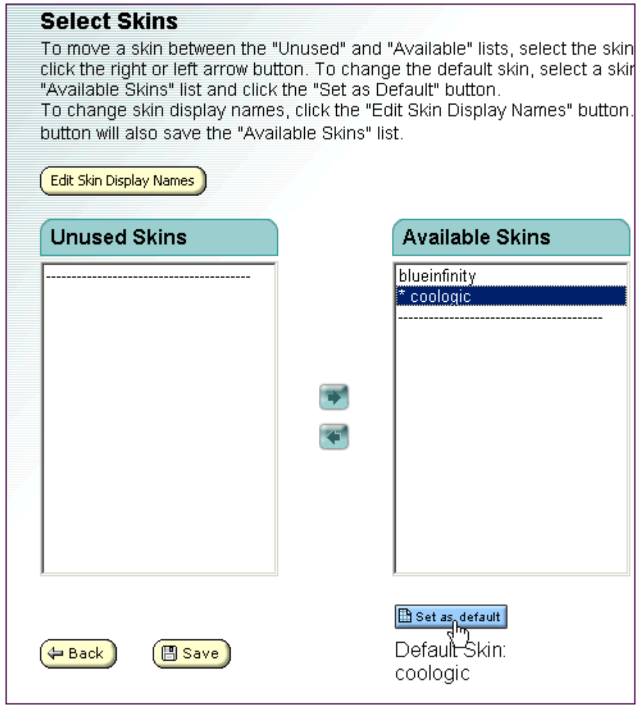
Figure 3-16 Clicking Select Skins



5. On the Select Skins page, in the **Unused Skins** list, move the **coologic** skin into the **Available Skins** list.

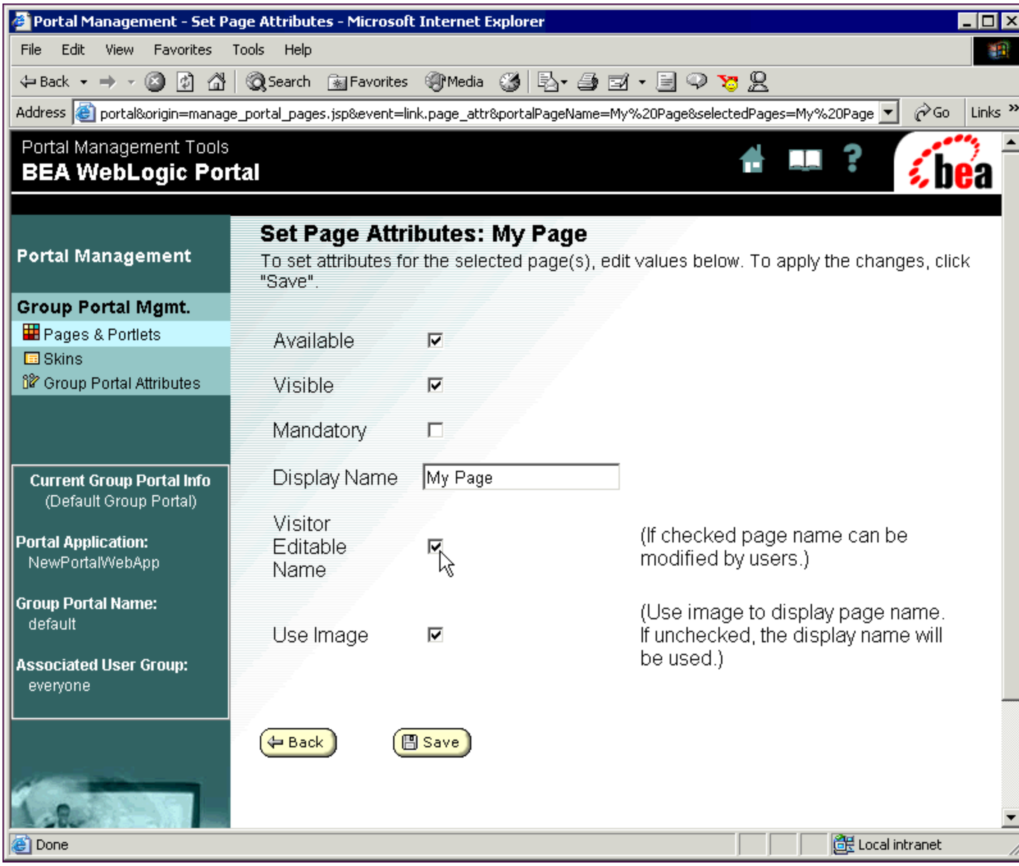
6. With **coologic** selected in the **Available Skins** list, click the **Set as Default** button below the list to make **coologic** the default skin, as shown in Figure 3-17.

Figure 3-17 Setting the Default Skin



7. Click **Save**. You are returned to the Group Portal Management Home page.
8. Click the **Manage Pages and Portlets** link.
9. On the Pages and Portlets page, select **My Page** in the **Unused Pages** list and click **Attributes**.
10. In the Set Page Attributes window, select the following options, as shown in Figure 3-18.
    - **Available**
    - **Visible**
    - **Visitor Editable Name**

Figure 3-18 Setting Page Options



11. Click **Save**. You are returned to the Pages and Portlets page. Notice that **My Page** now appears in the **Available Pages** list.

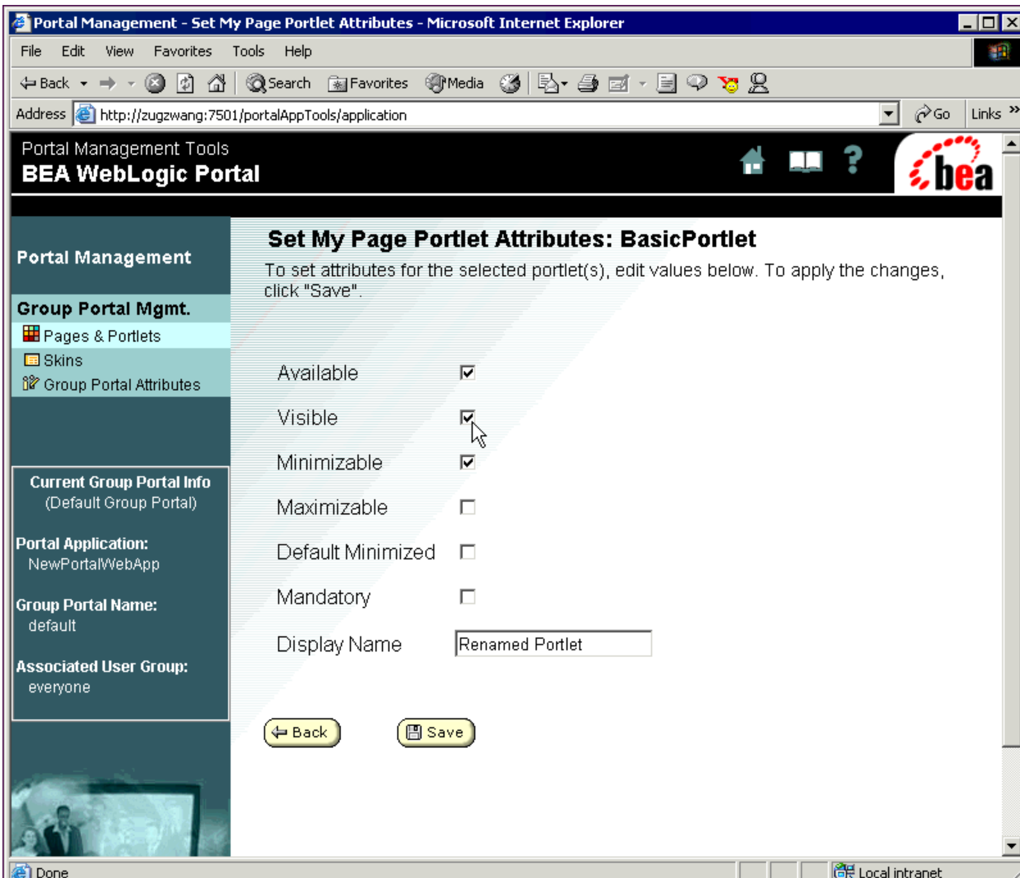
12. Next to My Page, click **Layouts**.

13. On the **Select Page Layouts** page, move **fourcolumn** from the **Unused Layouts** list to the **Available Layouts** list and click **Save**.

14. Next to **My Page**, click **Edit Portlets**. In the **Portlets** list, select **BasicPortlet** and click **Set Attributes**.

15. On the Set My Page Portlet Attributes page, set the following options, as shown in Figure 3-19:
    - **Available**
    - **Visible**
    - Change the **Display Name** to **Renamed Portlet**.

Figure 3-19 Making a Portlet Visible



16. Click **Save**, and in the page that appears, click **Back** at the bottom of the page. You are returned to the Pages and Portlets page.

Your portal modifications are complete. You have:

- Added a page called **My Page** to the portal
- Added a portlet to the new portal page with a renamed title
- Changed the default skin used in the portal
- Added a layout to the portal page that you can later switch to

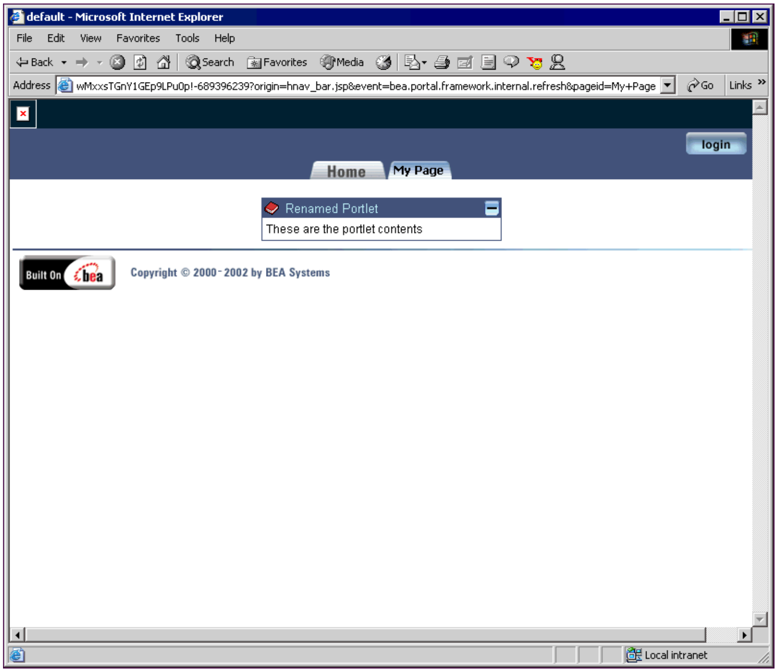
Now you can view the modified portal.

Step 6: View the Modified Portal

In a browser, go to http://<hostname>:<port>/<webappname>/index.jsp. If you are running the server on your local machine, the URL is probably http://localhost:7501/NewPWApp/index.jsp.

Figure 3-20 shows the modified portal. Notice the new look and feel, the new "My Page" tab, and the renamed portlet. Compare this to the original portal in Figure 3-1.

Figure 3-20 Viewing the Modified Portal



You have successfully completed this tutorial, which has shown you a few ways that administrators can manage portals. There are many more tasks administrators can perform, including creating Group Portals and Group Portal administrators, developing campaigns, targeting visitors with personalized content, and performing other traditional system administration tasks.

For procedures on these additional tasks, see "Administering Portals" on page -1.

CHAPTER

4 Tutorial – Creating a Portal and Group Portal

A Group Portal is one of the most powerful features of WebLogic Portal. A portal contains a potentially large number of pages and portlets. However, it may not be appropriate or useful for everyone who visits the portal to see all those pages and portlets.

With Group Portals you can create many different views of a portal for portal visitors. Each Group Portal can have its own look and feel, display specific pages and portlets, and have its own administrators, allowing different groups of visitors to see a customized portal that can be administered by a dedicated Group Portal administrator.

You can create a Group Portal in two ways:

- When you create a new portal, a default Group Portal is created automatically. This scenario is covered by this tutorial.
- You can create a Group Portal in an existing portal. For that tutorial, see "Tutorial – Creating a Group Portal" on page 5-1.

This tutorial includes the following steps:

- Step 1: Create and Deploy a Portal
- Step 2: Making the Default Portlet Visible
- Step 3: View the Default Group Portal Site

Step 1: Create and Deploy a Portal

When you create a new portal, a default Group Portal is created automatically. This step shows you how to create a new Group Portal by creating a portal. In this tutorial, you will create a portal in the Portal Example domain.

1. Start the server by choosing **Start →Programs →BEA WebLogic Platform 7.0 → WebLogic Portal 7.0 →Portal Examples →Portal Example →Launch Portal Server**.

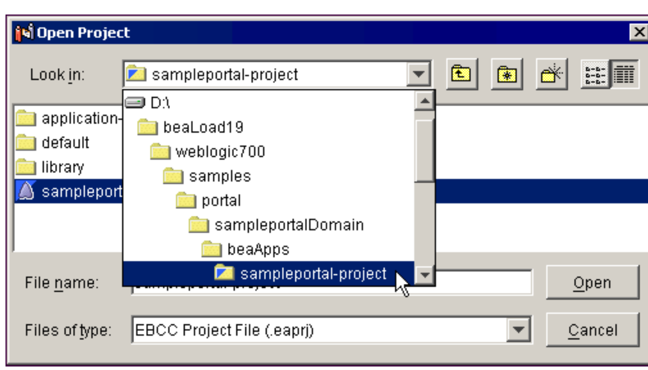
   On UNIX, run <BEA_HOME>/weblogic700/samples/portal/sampleportalDomain/startSamplePortal.sh.

   The server is running when you see the following message in the command window: `<Server started in RUNNING mode>`.

2. Open the E-Business Control Center; see "Starting the E-Business Control Center" on page 1-7.

3. When the E-Business Control Center has started, open the project file for the Portal Examples. Choose **File →Open** and open the <BEA_HOME>weblogic700/samples/portal/sampleportalDomain/beaApps/sampleportal-project/sampleportal-project file, as shown in Figure 4-1.

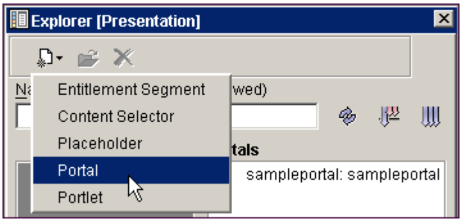
Figure 4-1 Opening a Project File



4. Click the **Presentation** tab on the E-Business Control Center Explorer window.

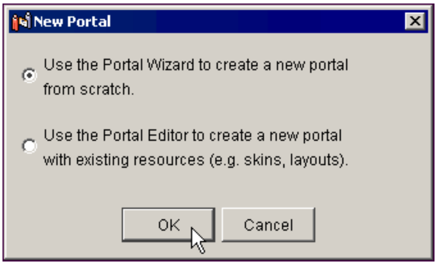
5. Click **New** →**Portal** on the Explorer window toolbar, as shown in Figure 4-2.

Figure 4-2 Opening the New Portal dialog



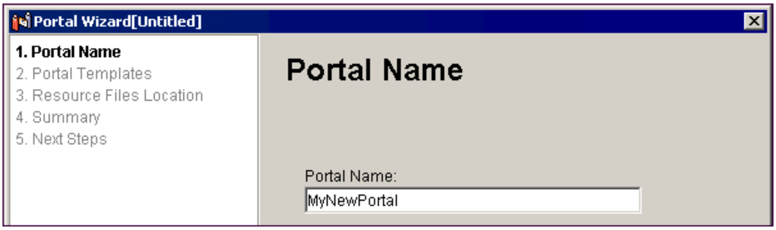
6. In the New Portal window, select the **Use the Portal Wizard** option, as shown in Figure 4-3, and click **OK**.

Figure 4-3 Portal Wizard Option



7. In the first window of the Portal Wizard, name the new portal, as shown in Figure 4-4. For this tutorial, use the name **MyNewPortal**.

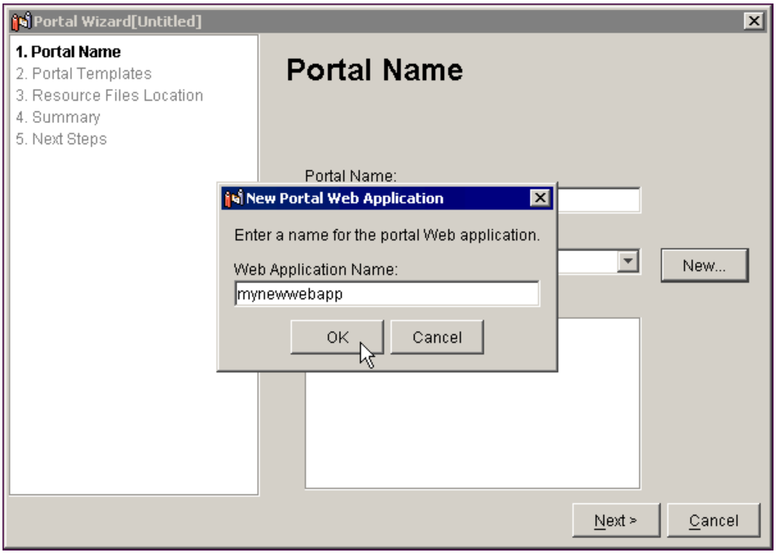
Figure 4-4 Naming the New Portal



8. A portal must run in a Web application. To create a Web application in which the new portal will run, click **New** next to the Web Application field. The New Portal Web Application window appears.

9. Enter the Web application name, and click **OK**. For this tutorial, use the name **mynewwebapp**, as shown in Figure 4-5. This name, which is case sensitive, will be used as the portal's URL. Click **Next**.

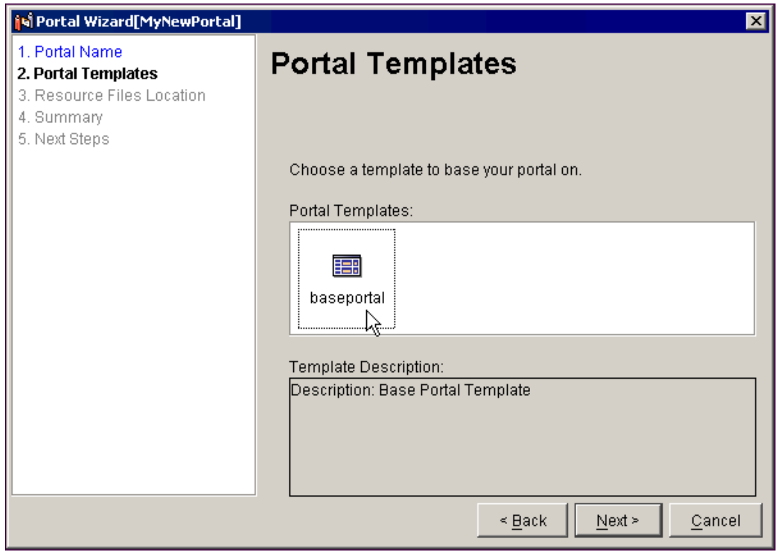
Figure 4-5 Naming the New Portal Web Application



10. In the Portal Templates window, click a portal template, as shown in Figure 4-6. Click **Next**.

    The template creates all the necessary files for the portal.

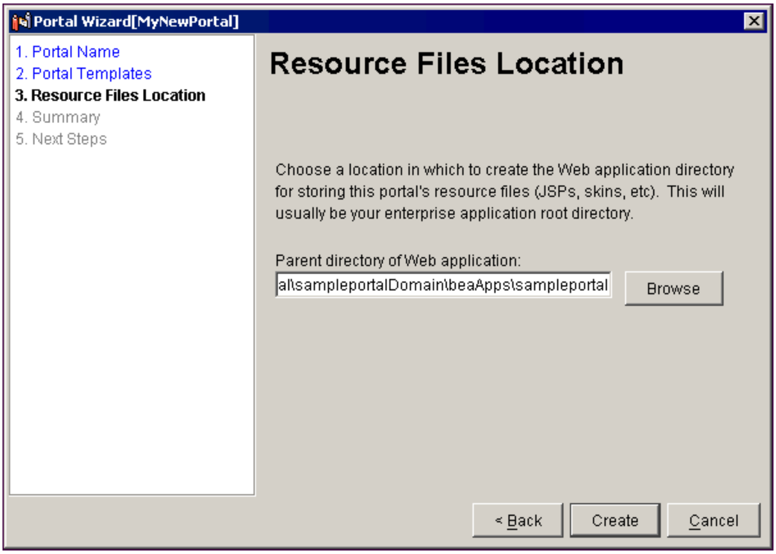
Figure 4-6 Select a Portal Template



11. Web applications are modules of enterprise applications. Common resources used by Web applications, such as Enterprise JavaBeans, are stored at the enterprise application level. In the Resource Files Location window, verify that the location for enterprise application is set to <BEA_HOME>\weblogic700\samples\portal\sampleportalDomain\beaApps\sampleportal, as shown in Figure 4-7.

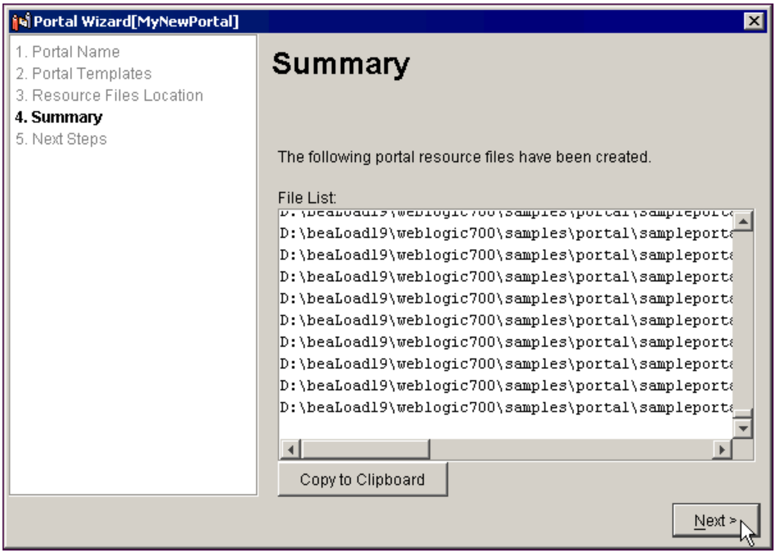
12. Click **Create**.

Figure 4-7 Select a Location for Resource Files



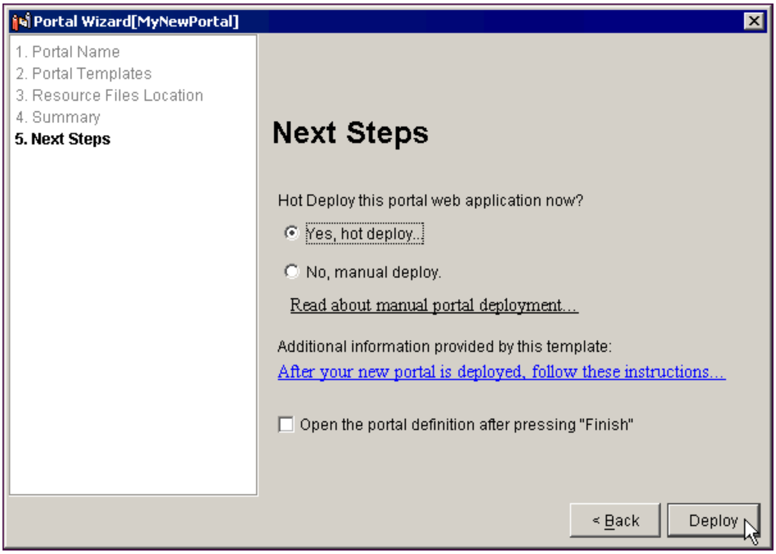
13. In the Summary window (Figure 4-8), click **Next**.

Figure 4-8 Summary



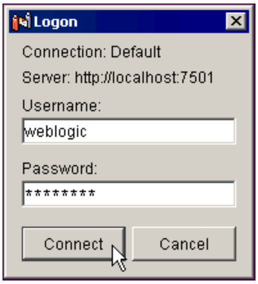
14. For portal visitors to be able to view the portal, you must deploy the Web application to the server. In the Next Steps window, select the **Yes, Hot Deploy Now** option and click **Deploy**, as shown in Figure 4-9.

Figure 4-9 Hot Deploying the New Portal



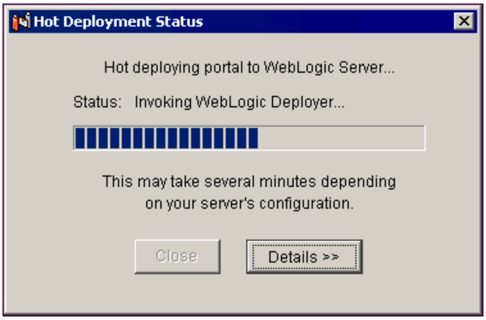
15. When prompted, enter the default WebLogic Server system administrator username and password **`weblogic`**/**`weblogic`**, as shown in Figure 4-10.

Figure 4-10 Enter the WebLogic Server System Administrator Username and Password



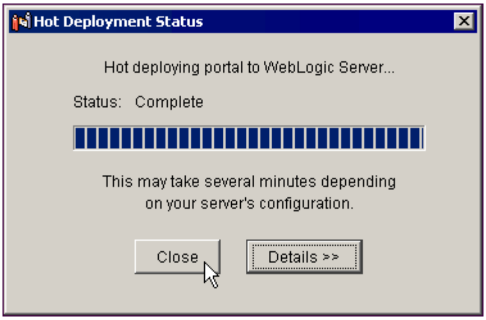
16. The deployment process runs, displaying the window in Figure 4-11.

Figure 4-11 Processing Message During Hot Deployment



17. When the new portal has been deployed successfully, as indicated in Figure 4-12, click **Close**.

Figure 4-12 Hot Deploy Success Message



Note: If hot deploy fails because of an incorrect login, close and restart the E-Business Control Center. The project file reloads automatically. Delete and recreate the new portal, and hot deploy again with the correct login.

Step 2: Making the Default Portlet Visible

After successful hot deployment of the Web application, you can access the WebLogic Portal Administration Tools for the portal. In this step, you will use the WebLogic Portal Administration Tools to make the default portlet visible to the portal visitors.

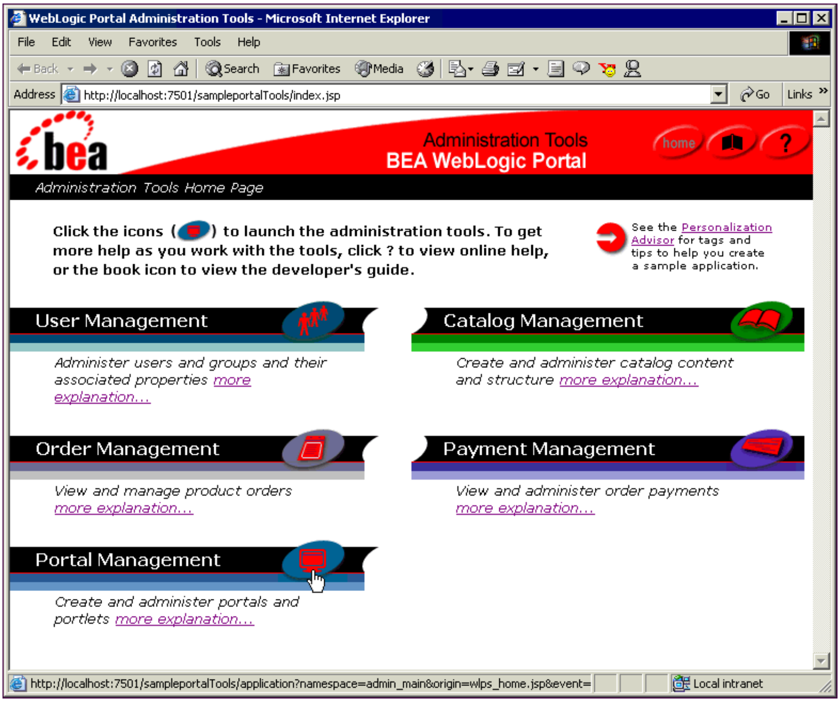
1. On Windows, start the WebLogic Portal Administration Tools by choosing **Start → Programs → BEA WebLogic Platform 7.0 → WebLogic Portal 7.0 → Portal Examples → Portal Example → Start Portal Admin Tools**.

   Or enter the following URL in your browser: `http://localhost:7501/sampleportalTools`.

   Substitute the correct `<hostname>:<port>` as appropriate.

2. When prompted to log in, log in as the default WebLogic Portal system administrator: **administrator**/**password**. The WebLogic Portal Administration Tools Home page appears, as shown in Figure 4-13.

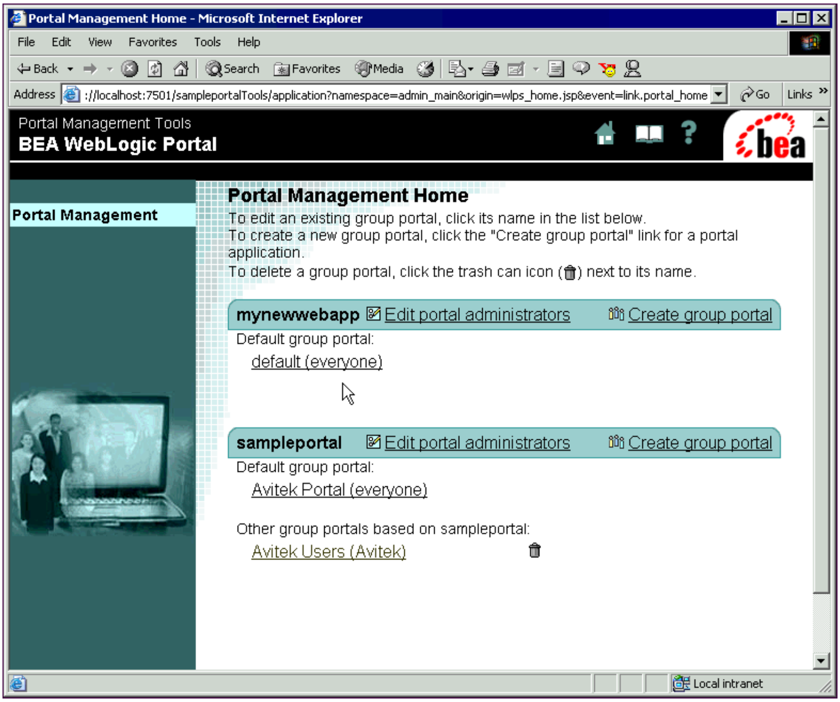
Figure 4-13 Clicking the Portal Management Icon



3. Click the **Portal Management** icon. The Portal Management Home page appears.

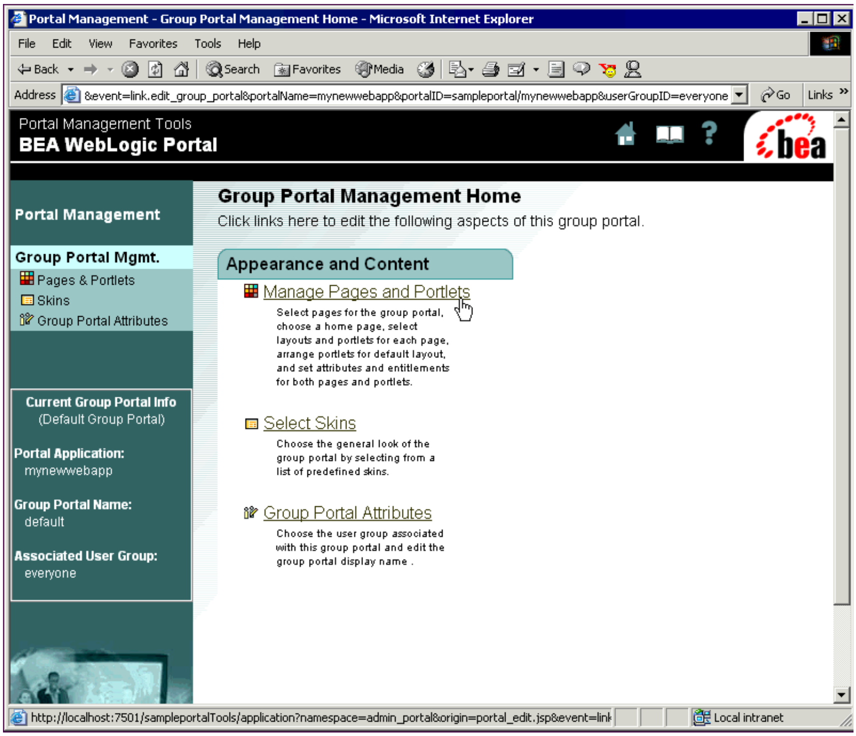
   The mynewwebapp Web application is shown, and the default (everyone) group portal is displayed, as shown in Figure 4-14.

Figure 4-14 Portal Management Home Page with New Group Portal



4. Click the **default (everyone)** Group Portal link. The Group Portal Management Home page appears, as shown in Figure 4-15.

Figure 4-15 Group Portal Management Home Page



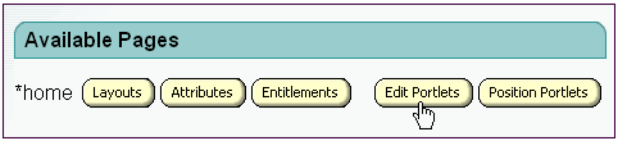
The default Group Portal is associated with the **everyone** user group, meaning that anyone who visits the portal Web site without logging in will be able to see the default view of the portal. From the Group Portal Management Home page, you can change the look and feel (skins and layouts) used by the Group Portal, administer the pages and portlets for the Group Portal, and set up Group Portal administrators.

In this tutorial, you will make the default portlet visible.

5. Click **Manage Pages and Portlets**.

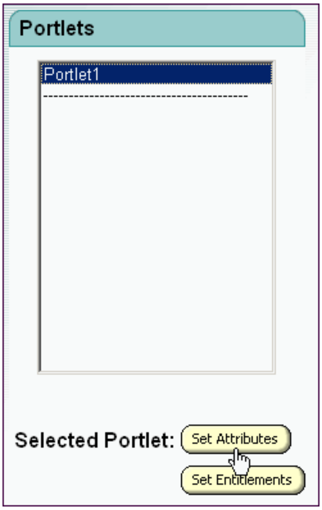
6. On the Pages and Portlets page that appears, click **Edit Portlets**, as shown in Figure 4-16.

Figure 4-16 Editing the Home Page Portlets



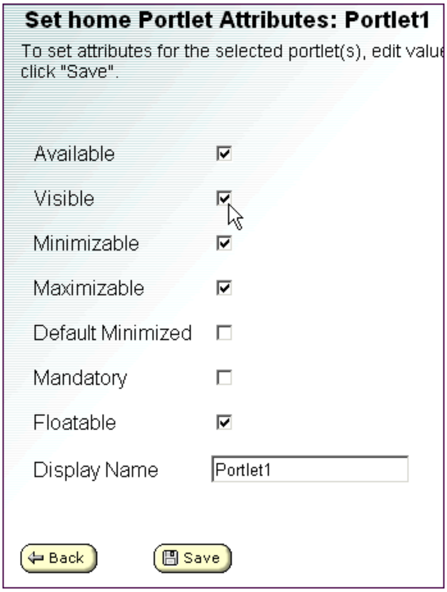
7. In the Edit Portlet Entitlements and Attributes page that appears, select **Portlet1**, and click **Set Attributes**, as shown in Figure 4-17.

Figure 4-17 Setting the Portlet's Attributes



8. In the Set home Portlet Attributes page that appears, select the **Available** and **Visible** options, as shown in Figure 4-18, and click **Save**.

Figure 4-18 Making the Portlet Visible



Now view the default Group Portal.

Step 3: View the Default Group Portal Site

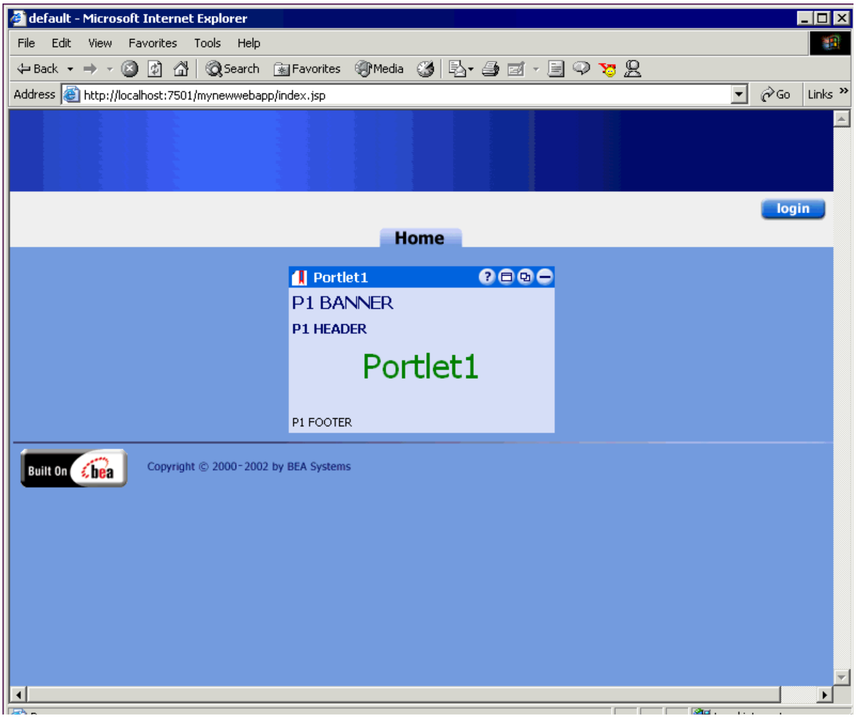
The new portal you created includes only a single page, a single, default portlet and default skins and layouts. Because the default Group Portal the was created is assigned to the **everyone** group, everyone who visits the portal without logging in will see the view provided by the default Group Portal.

To see the default Group Portal view of this portal, enter the following URL in your browser:

```
http://localhost:7501/mynewwebapp
```

Substitute the correct `<hostname>:<port>` as appropriate. The default view of the portal appears, as shown in Figure 4-19.

Figure 4-19 The Default Group Portal



5 Tutorial – Creating a Group Portal

A portal contains a potentially large number of pages and portlets. However, it may not be appropriate or useful for everyone who visits the portal to see all those pages and portlets.

With Group Portals you can create many different views of a portal for portal visitors. Each Group Portal can have its own look and feel, display specific pages and portlets, and have its own administrators, allowing different groups of visitors to see a customized portal that can be administered by a dedicated Group Portal administrator.

You can create a Group Portal in two ways:

- You can create a Group Portal in an existing portal. This scenario is covered by this tutorial. You will add a Group Portal to the Portal Example.
- When you create a new portal, a default Group Portal is created automatically. For that tutorial, see "Tutorial – Creating a Portal and Group Portal" on page 4-1.

This tutorial includes the following steps:

- Step 1: Create a Group on Which to Base the Group Portal
- Step 2: Create a Group Portal in an Existing Portal
- Step 3: Customize the Group Portal
- Step 4: View the Group Portal Site

Step 1: Create a Group on Which to Base the Group Portal

To create a Group Portal in an existing portal, you must associate the Group Portal with an existing user group. Then, when a visitor belonging to that user group logs in, the visitor sees the appearance and content of the portal that is defined by the Group Portal view.

This step shows you how to create a new group (and add a user to it) so you can create a Group Portal based on that group.

1. Start the server by selecting **Start →Programs →BEA WebLogic Platform 7.0 → WebLogic Portal 7.0 →Portal Examples →Portal Example →Launch Portal Server**.

   On UNIX, run `<BEA_HOME>/weblogic700/samples/portal/sampleportalDomain/startSamplePortal.sh`.

   The server is running when you see the following message in the command window: `<Server started in RUNNING mode>`.

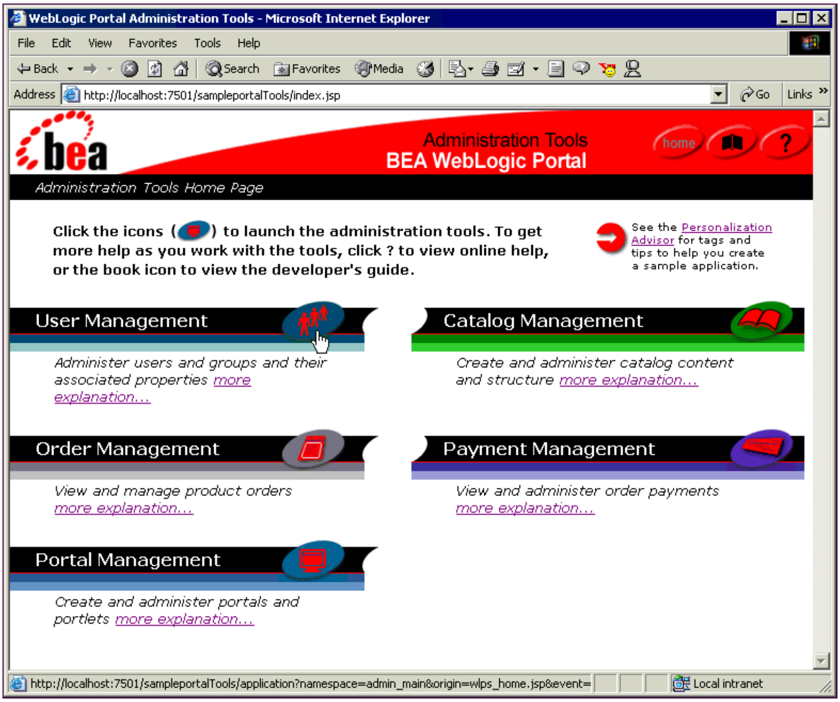
2. Start the WebLogic Portal Administration Tools. On Windows, choose **Start → Programs →BEA WebLogic Platform 7.0 →WebLogic Portal 7.0 →Portal Examples →Portal Example →Start Portal Admin Tools**.

   On UNIX, enter the following URL in your browser: `http://localhost:7501/sampleportalTools`.

   Substitute the correct `<hostname>:<port>` as appropriate.

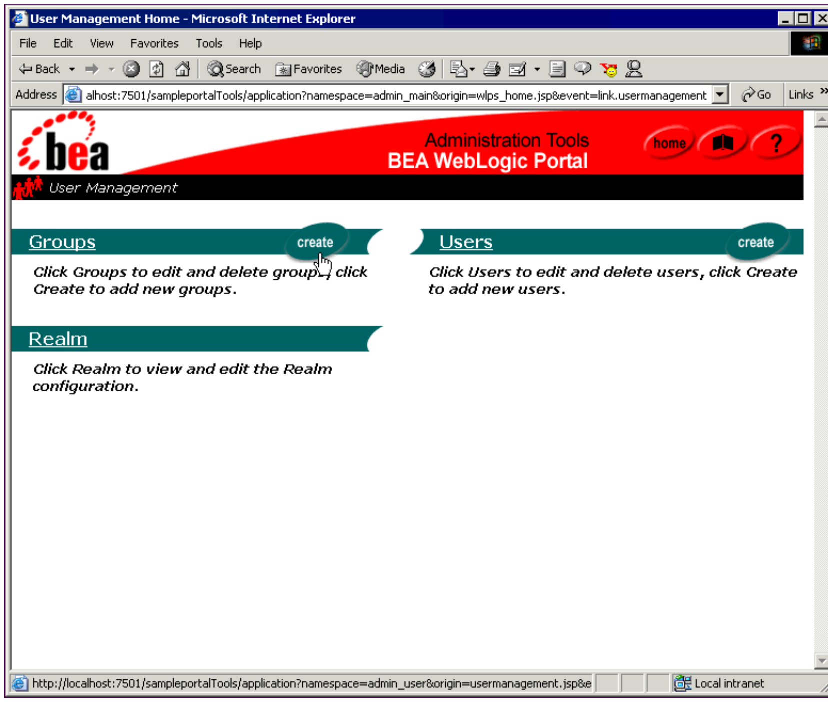
3. When prompted to log in, log in as the default WebLogic Portal system administrator: **administrator**/**password**. The WebLogic Portal Administration Tools Home page appears, as shown in Figure 5-1.

Figure 5-1 Clicking the User Management Icon



4. Click the **User Management** icon. The User Management Home page appears, as shown in Figure 5-2.

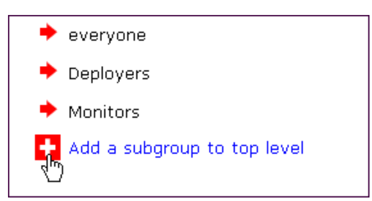
Figure 5-2 User Management Home Page



5. On the Groups bar, click **Create**. The Groups page appears.

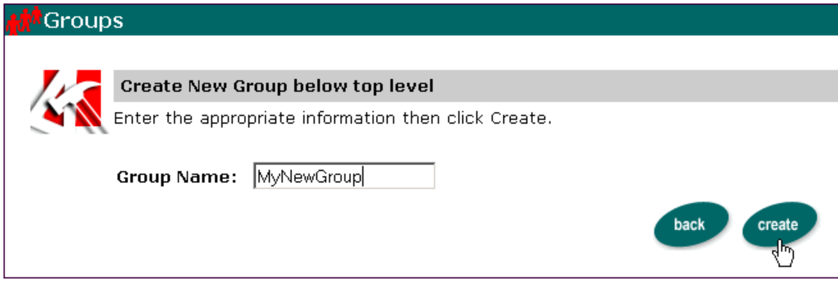
6. At the bottom of the Groups page, click the + icon next to **Add a subgroup to top level**, as shown in Figure 5-3.

Figure 5-3 Adding a Group



7. On the Create New Group page that appears, enter a name for the group, and click **Create**. For this tutorial, use **MyNewGroup**, as shown in Figure 5-4. A confirmation message appears at the top of the page.

Figure 5-4 Creating the New Group



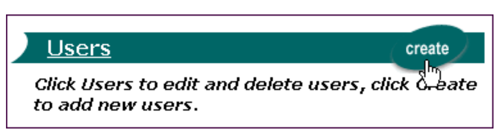
8. Click the **Back** icon at the bottom of the page to return to the Groups page. The new group appears in the list, as shown in Figure 5-5.

Figure 5-5 The New Group is Displayed

9. Now create a user and add the user to the new group. Click **Finished** at the bottom of the Groups page to return to the User Management Home page.

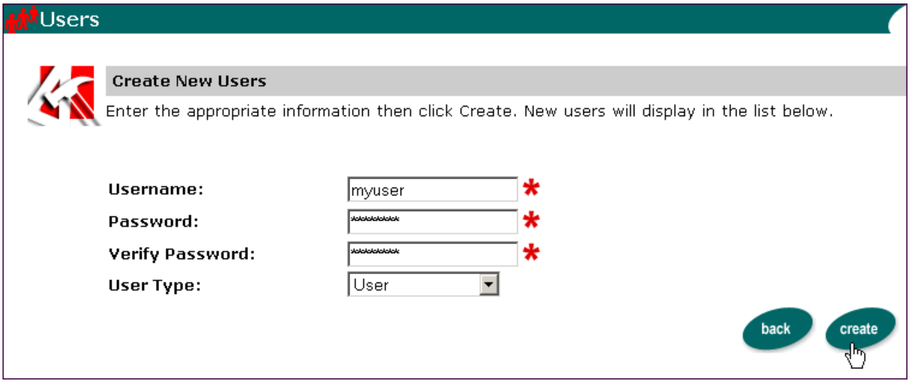
10. On the User Management Home page, click **Create** on the Users bar, as shown in Figure 5-6.

Figure 5-6 Creating a New User



11. On the Create New Users page that appears, enter a **Username** and **Password** for the new user, select a **User Type** of **User**, and click **Create**, as shown in Figure 5-7. Username and password are case sensitive. For this tutorial, use the username/password of **myuser**/**password**.

Figure 5-7 Entering a Username and Password for the New User



12. Click **Create**. A confirmation message appears at the top of the page.

13. Click the **Back** icon at the bottom of the page to return to the User Management Home page.

14. Now add the new user to the new group. Click the **Groups** link, as shown in Figure 5-8.

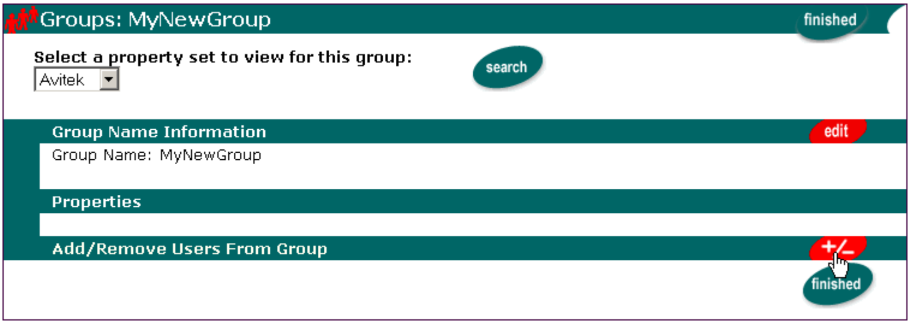
Figure 5-8 Accessing Groups

15. On the Groups page that appears, click the MyNewGroup link, as shown in Figure 5-9.

Figure 5-9 Editing the New Group

16. On the Groups: MyNewGroup page that appears, click the +/- icon on the Add/Remove Users From Group bar, as shown in Figure 5-10.

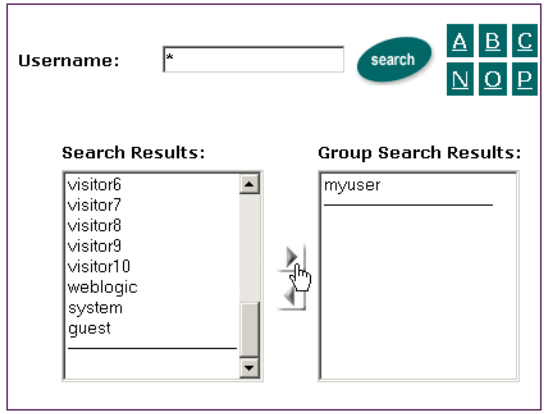
Figure 5-10 Clicking the +/- icon



17. On the Add/Remove Group Search Results page that appears, enter an asterisk (*) in the **Username** field, and click **Search**. A list of users appears in the Search Results list.

18. In the **Search Results** list, select **myuser** and click the right arrow to move the user into the **Group Search Results** list, as shown in Figure 5-11.

Figure 5-11 Adding the New User



19. Click **Save**. A confirmation message appears at the top of the page.

20. Click the **home** icon at the top of the page to return to the WebLogic Portal Administration Tools Home page.

Step 2: Create a Group Portal in an Existing Portal

Now that you have created a user group, you can create a Group Portal based on that group.

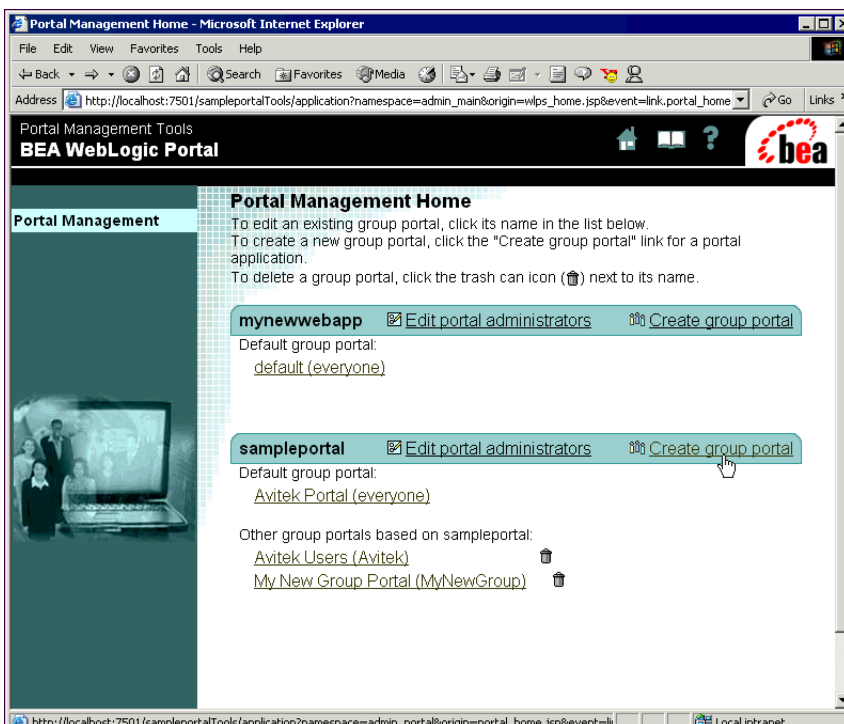
1. On the WebLogic Portal Administration Tools Home page, click the **Portal Management** icon, as shown in Figure 5-12. The Portal Management Home page appears.

Figure 5-12 Clicking the Portal Management Icon

The Portal Management Home page (Figure 5-13) shows all Web applications (portals) that have been deployed. Under each Web application is a list of the Group Portals that have been defined for each. In this example, the mynewwebapp portal was created in the previous tutorial.

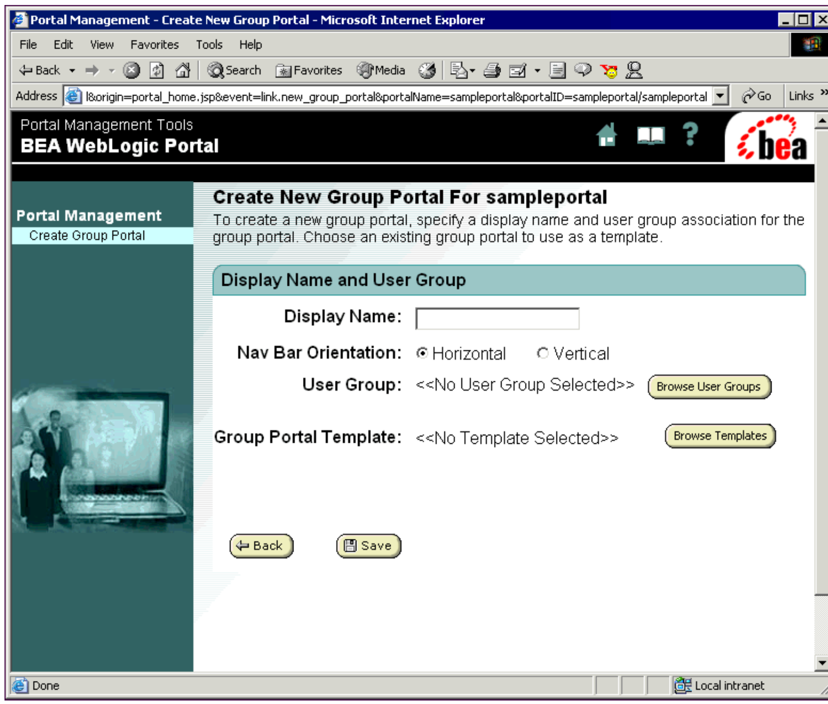
For this tutorial, however, you will add a Group Portal to the sampleportal portal.

Figure 5-13 Portal Management Home Page



2. On the sampleportal bar, click **Create Group Portal**. The Create New Group Portal page appears, as shown in Figure 5-14.

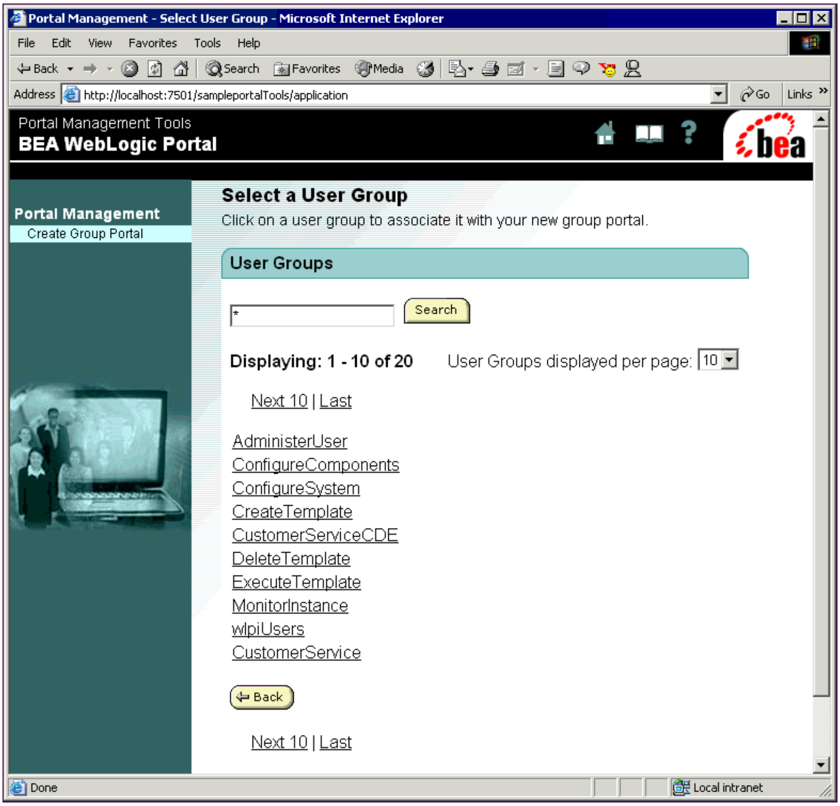
Figure 5-14 Creating a New Group Portal



3. In the **Display Name** field, enter a name for the group portal. For this tutorial, enter **My New Group Portal**.

4. Now associate the Group Portal with the user group you created in the previous steps. Click **Browse User Groups**. The Select a User Group page appears, as shown in Figure 5-15.

Figure 5-15 Associating a User Group with the Group Portal

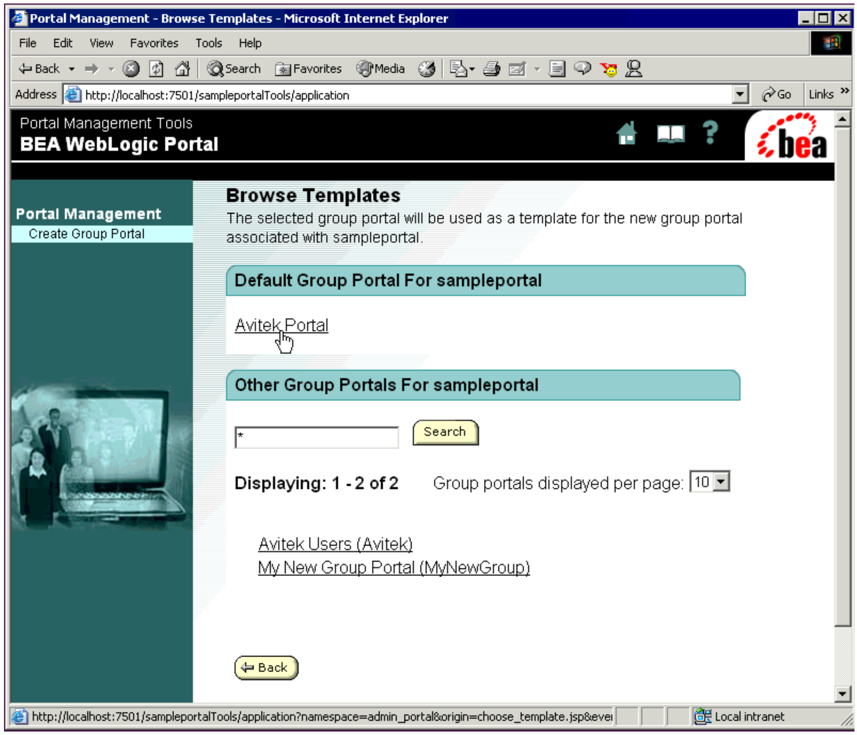


5. The Select a User Group page shows only the first 10 groups. To show all groups, select **50** in the **User Groups displayed per page** field. The page refreshes to show all groups.

6. Click **MyNewGroup** in the list. The group is selected, and the Create New Group Portal page appears.

7. Now select an existing Group Portal as a template with which to create the new Group Portal. Click **Browse Templates**. The Browse Templates page appears, as shown in Figure 5-16.

Figure 5-16 Selecting a Group Portal Template

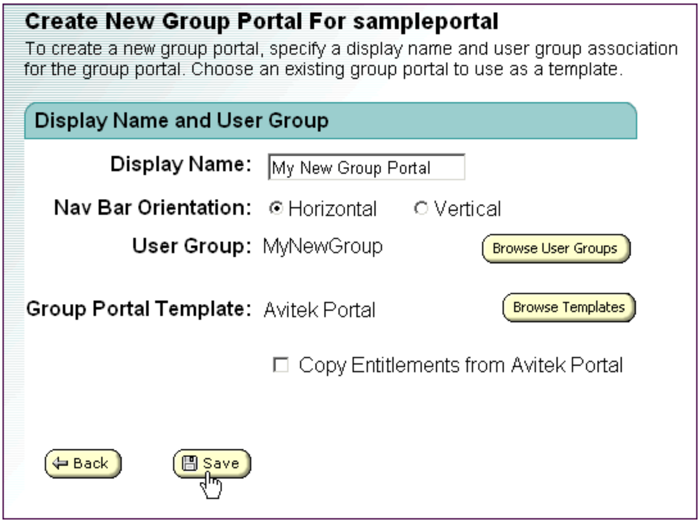


8. In the Default Group Portal section, click **Avitek Portal**. The template is selected and the Create New Group Portal page appears.

9. Click **Save** to save the new Group Portal, as shown in Figure 5-17.

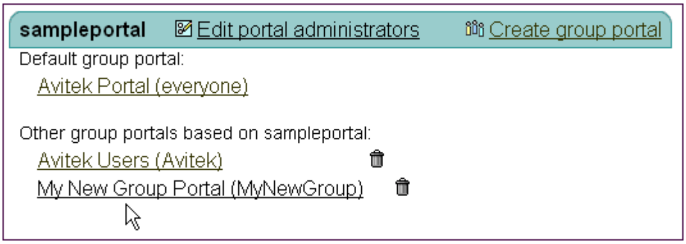
   Note: The Copy Entitlements option lets you use the entitlements defined for the Group Portal template in the new Group Portal. Entitlements further limit the pages and portlets to which Group Portal members have access.

Figure 5-17 Saving the Group Portal



The Portal Management Home page appears, displaying the name of the new Group Portal, as shown in Figure 5-18.

Figure 5-18 The New Group Portal



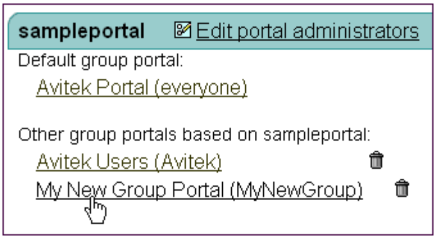
When a visitor belonging to MyNewGroup logs in, the visitor will see the view of the portal defined by My New Group Portal.

Step 3: Customize the Group Portal

In this step, you will modify My New Group Portal to define a different view of the portal. When a visitor belonging to the Group Portal logs in, the visitor will see this view of the portal.

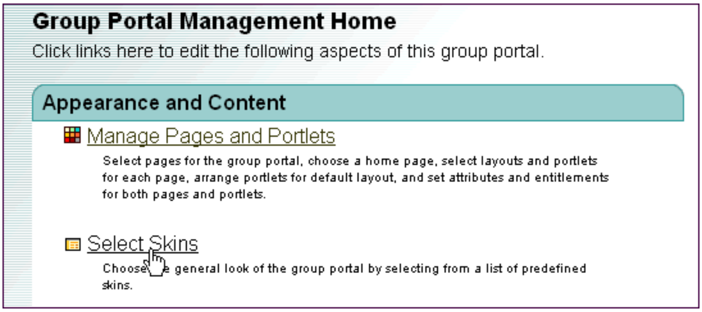
1. First, you will change the look and feel of the portal for this Group Portal by changing skins. On the Portal Management Home page, click **My New Group Portal**, as shown in Figure 5-19.

Figure 5-19 Modifying the New Group Portal



2. On the Group Portal Management Home page that appears, click Select Skins, as shown in Figure 5-20.

Figure 5-20 Changing Skins for the Group Portal



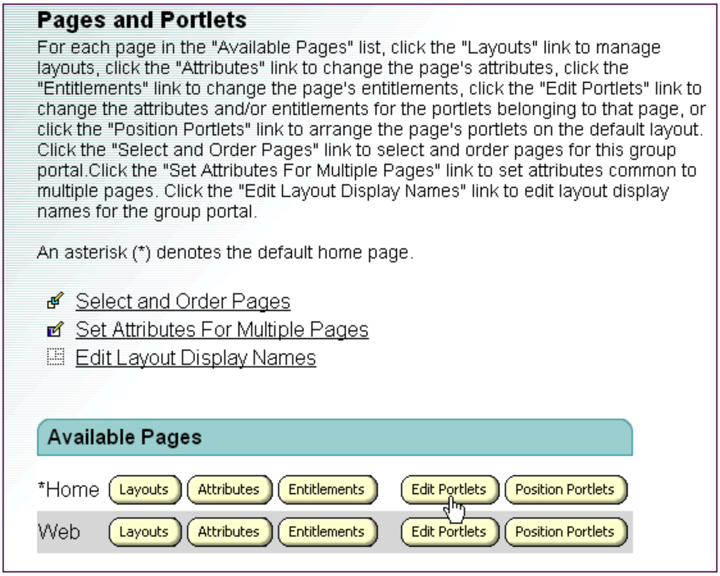
3. On the Select Skins page that appears, in the **Available Skins** list, select **lumiereorange** and click **Set as Default,** as shown in Figure 5-21. An asterisk appears in front of the lumiereorange skin, indicating that it is the default skin.

Figure 5-21 Changing the Default Skin

4. Click **Save**. The Group Portal Management Home page appears.
5. Now determine the portlets that will appear on the home page in the group portal. You will first make all portlets unavailable on the home page, then make available only the portlets you want to appear.

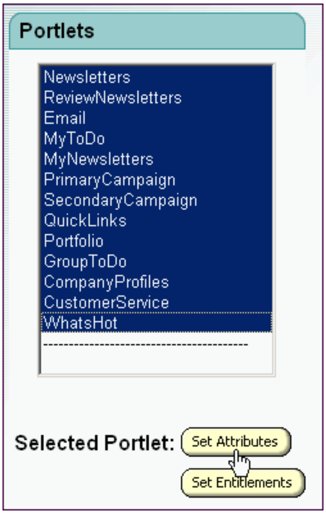
   On the Group Portal Management Home page, click **Manage Pages and Portlets**. The Pages and Portlets page appears.
6. In the Available Pages area, click **Edit Portlets** on the Home row, as shown in Figure 5-22.

Figure 5-22 Editing Portlets



7. On the Edit Portlet Entitlements and Attributes page that appears, select all the portlets in the list, as shown in Figure 5-23. To do this, select the first portlet in the list, hold down the **Shift** key, and select the last portlet in the list.

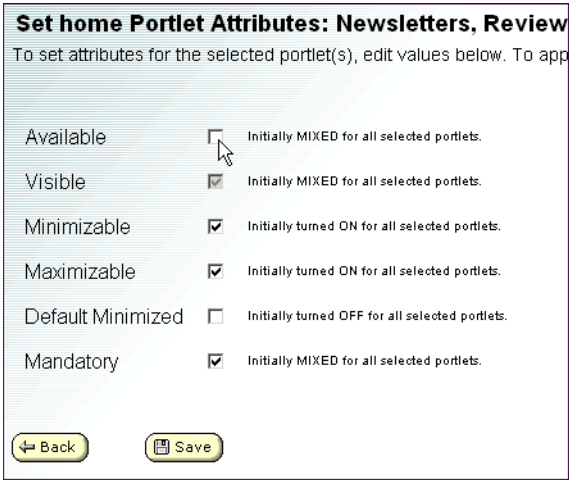
Figure 5-23 Selecting All Portlets to Make Them Unavailable



8. Click **Set Attributes**.

9. On the Set home Portlet Attributes page that appears, deselect the Available option, as shown in Figure 5-24, and click **Save**.

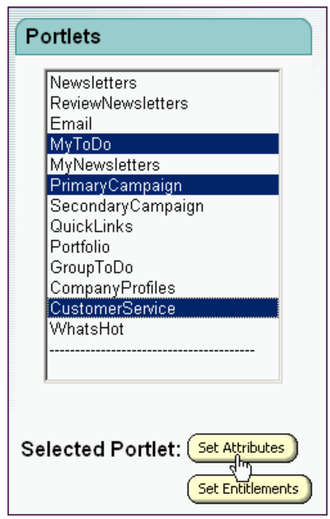
Figure 5-24 Making Portlets Unavailable on the Home Page



10. Now that no portlets are available for Home page, select only the portlets you want to be available. On the Edit Portlet Entitlements and Attributes page, hold down the **Ctrl** key and select the following portlets, as shown in Figure 5-25:

- MyToDo
- PrimaryCampaign
- CustomerService

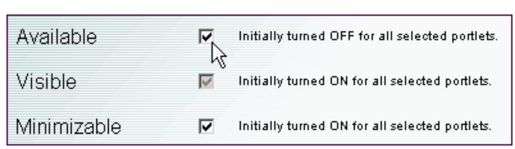
Figure 5-25 Selecting Portlets to Use on the Home Page



11. Click **Set Attributes**. The Set home Portlet Attributes page appears.

12. Select the **Available** option, as shown in Figure 5-26, and click **Save**.

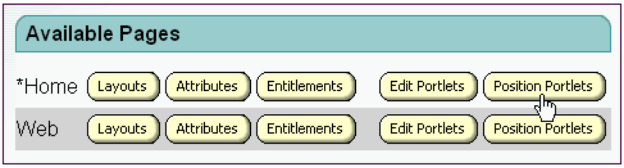
Figure 5-26 Making Portlets Available in the Group Portal



13. On the Edit Portlet Entitlements and Attributes page that appears, click the **Back** button at the bottom of the page to return to the Pages and Portlets page.

14. Now that you have made portlets available for the Group Portal, view how they will be laid out on the Home page. In the Available pages area, click **Position Portlets** in the Home row, as shown in Figure 5-27.

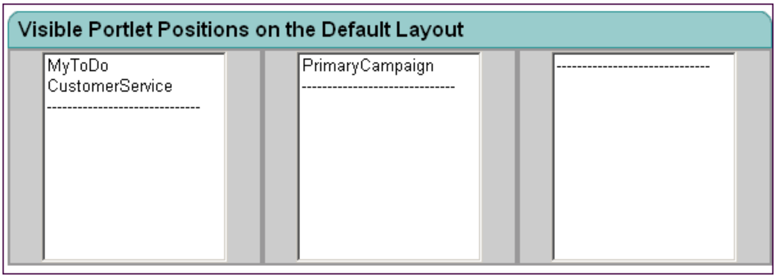
Figure 5-27 Positioning Portlets on the Home Page



15. If an information dialog box appears, click **OK**.

16. On the Position Portlets page that appears, view the default positions of the portlets as they will appear on the Home page of the Group Portal, as shown in Figure 5-28.

Figure 5-28 Viewing the Position of the Portlets



17. Click **Save**.

Now view your new Group Portal.

Step 4: View the Group Portal Site

Now that you have created and configured your new Group Portal, you can view the new Group Portal site. You will first access the default Group Portal by going to the portal's URL, then you will log in as the new user you created, which lets you view the Group Portal that the user can access.

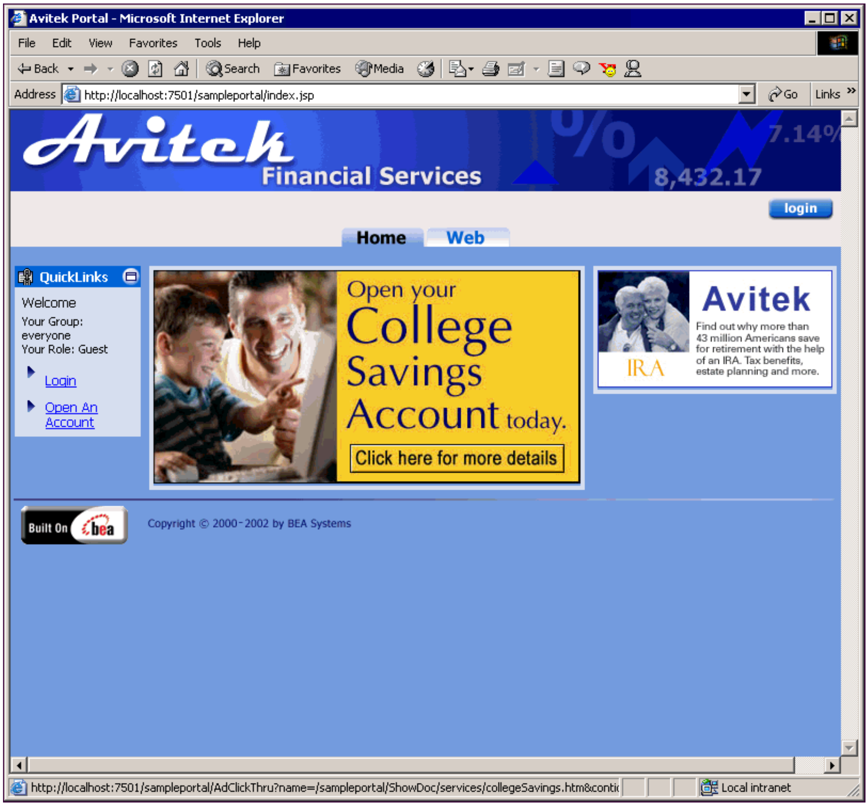
1. In your browser, enter the following URL:

   `http://localhost:7501/sampleportal`

   Substitute the correct `<hostname>:<port>` as appropriate.

   The default Group Portal appears, as shown in Figure 5-29. Notice the skin (the page design) and portlets.

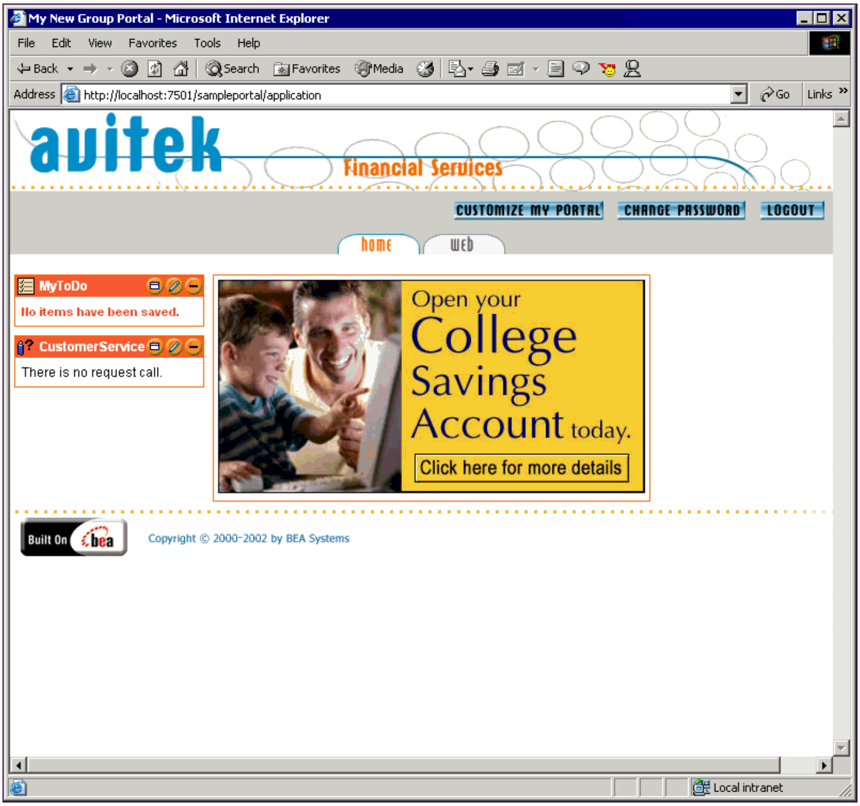
Figure 5-29 Default Group Portal



2. Now log in as the new user you created. Because the new user is a member of the MyNewGroup user group you created, and because MyNewGroup was assigned to the new Group Portal, you will see the new Group Portal when you log in.

   Click **Login** and enter the following username and password: **myuser**/**password**. The new Group Portal appears, as shown in Figure 5-30.

Figure 5-30 The New Group Portal



Notice the skin and the portlets on the home page. They are just as you configured them in this tutorial.

If you click the **web** tab, that page shows additional portlets. This is because you made portlet modifications to only the home page, not the web page. To make portlet modifications to the web page, follow "Step 3: Customize the Group Portal" on page 5-14 and click **Edit Portlets** and **Position Portlets** in the Web row (see Figure 5-22).

Part II Administering Portals

After developers build a portal and its resources such as graphics, content, skins, and portlets, you can use those resources to administer and modify portals, create personalization functionality, develop campaigns, and perform system administration tasks. This section provides procedures to help you perform those tasks, in addition to more traditional system administration tasks.

This section includes information on the following subjects:

- Administering Users and Groups
- Administering Portal and Portlet Attributes
- Personalization and Interaction Management
- Creating Campaigns
- Administering Commerce Services
- System Administration
- Database Schemas

6 Administering Users and Groups

In WebLogic Portal, users can be visitors or administrators of your Portal.

A user can be a visitor to a portal Web site and can be granted the authority to view or use specific Web portal content and personalize their portal views.

A user can also be an administrator in WebLogic Portal. Depending on the type of authority granted, an administrator can create new portals, modify the authority of visitors and other administrators, and modify many of the attributes displayed in the portal. You can find information about the different types of administrators and their authority attributes in "Creating Administrative Users" on page 6-23.

Users are also significant in that they can be divided into *Groups* to provide a customized view of your portal. A *Group Portal* is a specific view of a portal that is defined for a given group of users. You can create multiple Group Portals within a portal Web application. Group Portals can share portal resources, such as layouts and portlets, but can be configured differently to satisfy the needs of each group separately.

Note: WebLogic Portal can use preexisting users and groups in an existing WebLogic Portal database or in an external system such as an LDAP server. If you already have users and groups established, you can skip the "Creating and Managing Users" and "Creating and Managing User Groups" subjects in this section.

This section includes information on the following subjects:

- Before You Begin: Security for Users
- Creating and Managing Users
- Creating and Managing User Groups

- Creating and Managing Group Portals
- Creating Administrative Users
- Creating Groups to Control Page and Portlet Access
- Creating Groups to Target Content to Customers

Before You Begin: Security for Users

This section describes the administrative users who can launch and log into the administration tools.

If you are using an external security system to manage your users, such as an LDAP server, configure the authentication security in that system. For information on integrating with external security realms, see "Adding Security to a Portal" in the *Development Guide* at http://edocs.bea.com/wlp/docs70/dev/securty.htm.

Changing the Default Administrators and Passwords

Following are the default administrators and passwords that are created when you create a new domain. Using the procedures in this section, change these passwords to ensure administrative security, then create additional administrative users as needed.

Table 6-1 Default Administrators

User	Password	Description
system	weblogic	WebLogic Server system administrators with full privileges in the domain
weblogic	weblogic	
administrator	password	WebLogic Portal system administrator with full privileges in an enterprise application, which can include multiple portals

Creating and Managing Users

This section includes procedures for creating and managing users with the **User Management** tools in the WebLogic Portal Administration Tools. You can also create and manage users in the WebLogic Server Console and in Group Portals.

Note: In the WebLogic Server Console, which you can log into only as a WebLogic Server system administrator, create and manage users in the **Compatibility Security** area.

The procedures in this section assume that you can log in to the WebLogic Portal Administration Tools as a WebLogic Portal system administrator or a portal or Group Portal administrator with user management rights. See "Creating Administrative Users" on page 6-23 for more information.

This section includes information on the following subjects:

- Creating Users
- Modifying and Deleting Users

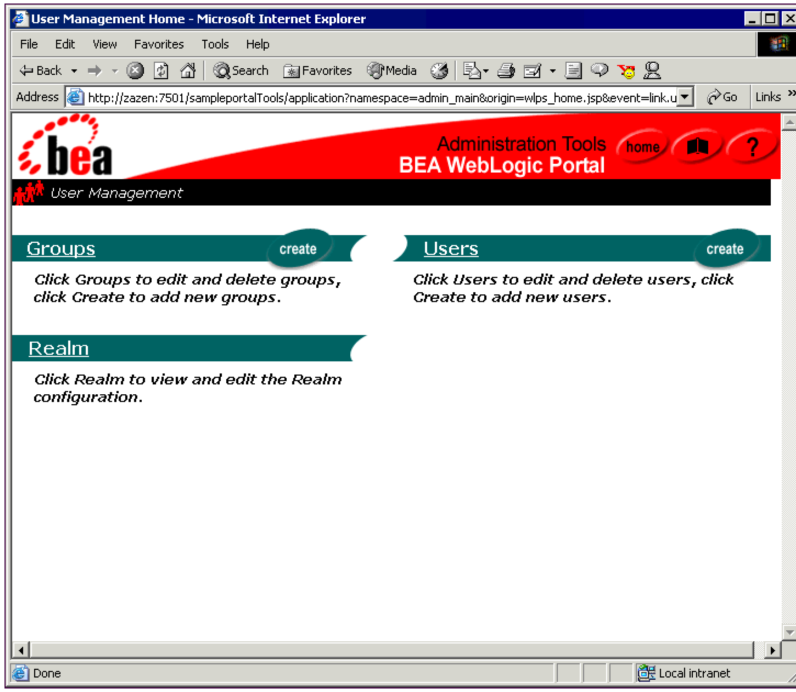
Creating Users

When you create users, those users are stored in the domain and are automatically available for all applications in that domain.

Use the following procedure to create new users:

1. Start the WebLogic Portal Administration Tools, see "Starting the WebLogic Portal Administration Tools" on page 1-6.
2. On the Administration Tools Home page, click the **User Management** icon. The User Management Home page appears (Figure 6-1).

Figure 6-1 User Management Home Page



3. Click **Create** on the Users bar.

4. On the **Create New Users** page, enter the username and password.

   Usernames are case sensitive, and the administration tools do not allow the creation of a users "system" or "guest", as these are reserved WebLogic Server names.

   For **User Type**, select a profile type. The user will be an instance of this profile type. This allows the system to access explicit properties in a Unified User Profile type and ensures proper data cleanup when the user is removed.

5. Click **Create**. A confirmation message appears below the page banner, and the new user appears at the bottom of the page.

6. If necessary, create additional users on the page.

7. Click **Back** at the bottom of the page to return to the User Management Home page.

Note: Unexpected results may occur if the same value is used for a user name and a group name. To prevent this, add the following system property to your start script:

```
-D"com.bea.p13n.RestrictSameNameForUsrAndGroup=true"
```

This system property prevents the creation of a user name and a group name with the same value.

Modifying and Deleting Users

This section includes information on the following subjects:

- Changing User Passwords
- Changing User Properties
- Deleting Users

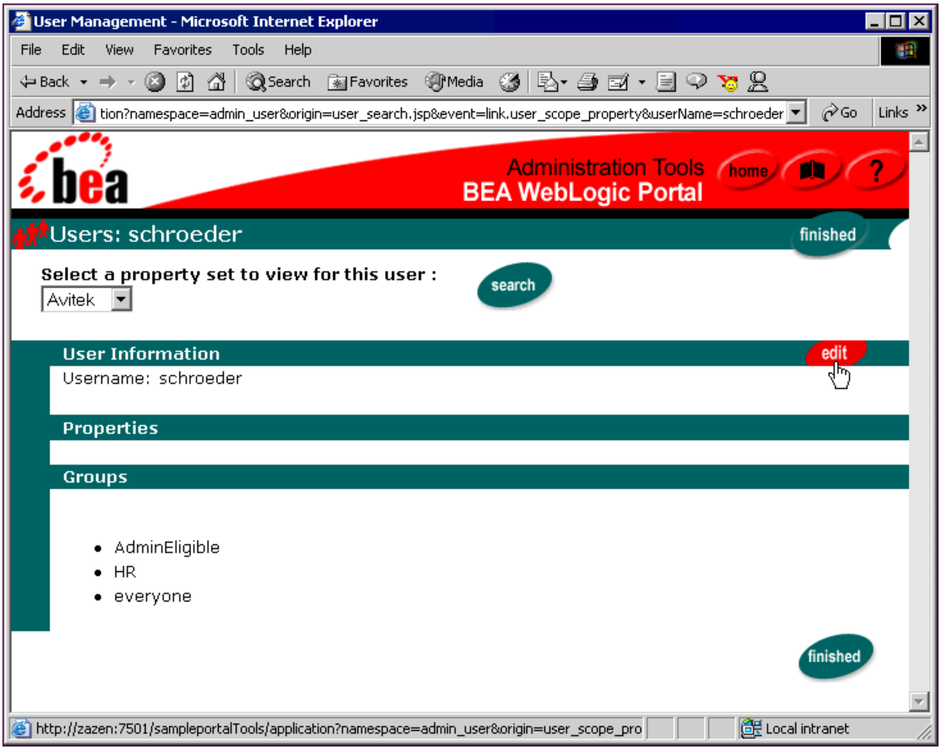
Changing User Passwords

Use the following procedure to change a user's password:

1. Launch the WebLogic Portal Administration Tools. See "Starting the WebLogic Portal Administration Tools" on page 1-6 for the procedure.
2. On the Administration Tools Home page, click the **User Management** icon. The User Management Home page appears (Figure 6-1).
3. On the User Management Home page, click the **Users** label.
4. On the Search for a User page, find the user whose password you want to change by clicking the letter that the username begins with.

   Optionally, in the **Username** field, enter the user's name, enter a partial name with an asterisk (for example, `jo*`), or enter just an asterisk (`*`) and click **Search**.
5. In the list of users that appears, click the name of the user you want.
6. On the Users: <user> page (Figure 6-2), click **Edit**.

Figure 6-2 Changing a User's Password



7. On the Edit User Information page, enter the new password and click **Save**. A confirmation message appears below the page banner.

Changing User Properties

Users have characteristics, or properties, that are used to target them with personalized content. These properties, such as address information, employment details, personal interests, and investing characteristics, for example, appear as editable fields in the WebLogic Portal Administration Tools.

These properties and their default values are defined in the development process. For more information, see "Implementing User Profiles" in the *Development Guide* at http://edocs.bea.com/wlp/docs70/dev/usrgrp.htm.

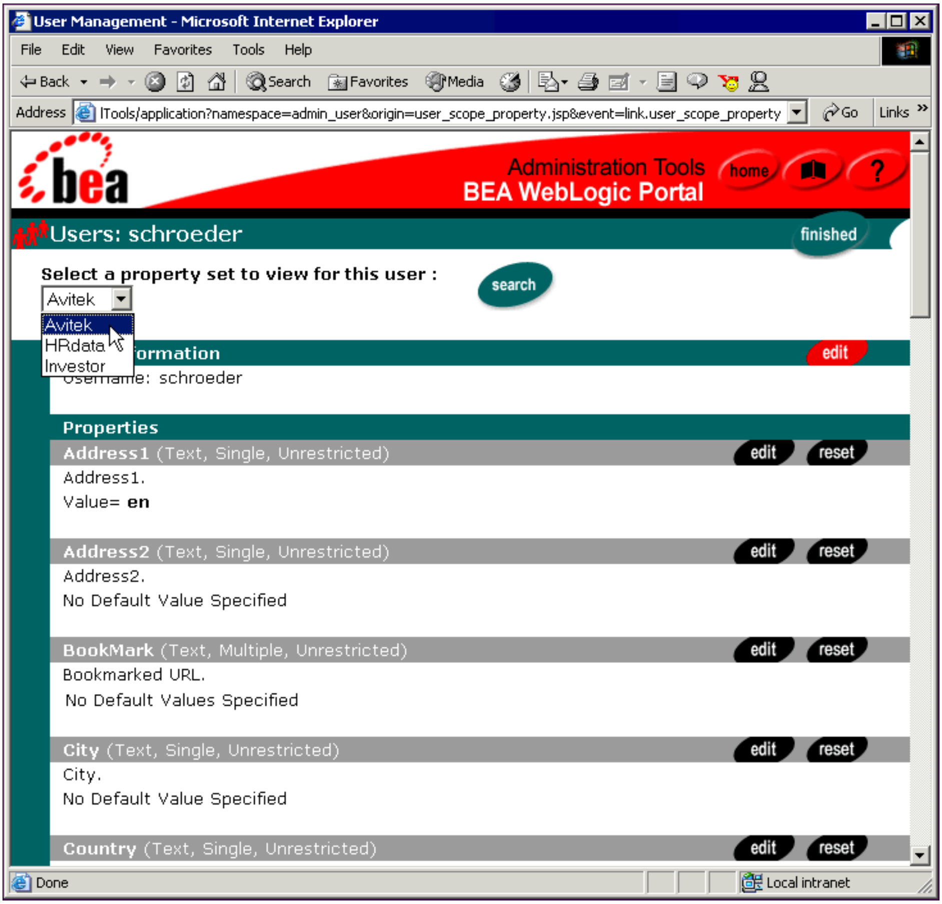
To change user properties:

1. Start the WebLogic Portal Administration Tools for your application and log in. See "Starting the WebLogic Portal Administration Tools" on page 1-6.
2. On the Administration Tools Home page, click the **User Management** icon. The User Management Home page appears (Figure 6-1).
3. On the User Management Home page, click the **Users** label.
4. On the Search for a User page, find the user whose password you want to change by clicking the letter that the username begins with.

   Optionally, in the **Username** field, enter the user's name, enter a partial name with an asterisk (for example, `jo*`), or enter just an asterisk (`*`) and click **Search**.
5. In the list of users that appears, click the name of the user you want.
6. On the Users: <user> page, the **Select a property set to view for this user** field lets you select a grouping of properties to view or change. Select the property set containing the user properties you want to change, and click **Search**.

   The properties for that property set appear on the page, as shown in Figure 6-3.

Figure 6-3 Selecting a Set of Properties to Change



7. Click **Edit** next to the property whose value you want to change.

8. On the Edit Property Values page, change the value and click **Save**.

Deleting Users

When you delete a user from the domain, you delete the user from all applications residing on that domain, and they can no longer sign in to portals if authentication is required.

Use the following procedure to delete a user from the domain.

1. Start the WebLogic Portal Administration Tools. See "Starting the WebLogic Portal Administration Tools" on page 1-6.
2. If the user is a portal or Group Portal administrator, remove the user from portal or Group Portal administrative membership. Follow the procedure for "Removing Portal Administrators" on page 6-28 or "Removing Group Portal Administrators" on page 6-32.
3. On the Administration Tools Home page, click the **User Management** icon. The User Management Home page appears (Figure 6-1).
4. On the User Management Home page, click the **Users** label.
5. On the Search for a User page, find the user to delete by clicking the letter that the username begins with.

   You can also, in the **Username** field, enter the user's name, enter a partial name with an asterisk (for example, `jo*`), or enter just an asterisk (`*`) and click **Search**.
6. In the list of users that appears, click the **delete** icon (**X**) next to the name of the user you want to delete, and click **OK** in the confirmation window.

Creating and Managing User Groups

Groups in WebLogic Portal provide a means for organizing users with common characteristics within a single category. Adding users to groups makes it possible for administrators to create Group Portals, which control visitor access to portal content. Groups also gives developers a single entry point for tasks such as sending bulk e-mail, setting up security, and managing group characteristics.

This section includes information on the following subjects:

- Creating User Groups
- Adding Users to User Groups
- Removing Users from Groups

- Modifying and Deleting User Groups

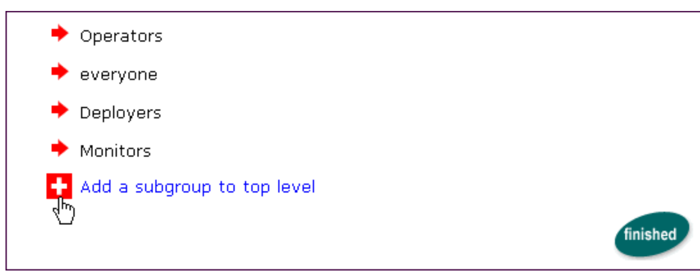
Creating User Groups

To create a user group:

1. Start the WebLogic Portal Administration Tools. See "Starting the WebLogic Portal Administration Tools" on page 1-6.
2. On the Administration Tools Home page, click the **User Management** icon. The User Management Home page appears (Figure 6-1).
3. On the User Management Home page, click **Create** on the Groups bar.
4. On the Groups page, click the + icon at the bottom of the page, as shown in Figure 6-4. The Create New Group page appears.

   If you want to create the new group as a sub-group that will inherit the characteristics of a parent group, click the **arrow** icon next to the parent group, then click the + icon beneath that group. Users added to a sub-group are automatic members of the parent group as well.

Figure 6-4 Creating a New Group



5. On the Create New Group page, enter the group name, and click **Create**.

   Group names are case sensitive and cannot contain spaces or other reserved characters.

6. Click **Back** at the bottom of the page to return to the Groups page, where the new group is displayed. If the new group is a sub-group, click the arrow icon next to the parent group to view the new group.

Note: Unexpected results may occur if the same value is used for a user name and a group name. To prevent this, add the following system property to your start script:

```
-D"com.bea.p13n.RestrictSameNameForUsrAndGroup=true"
```

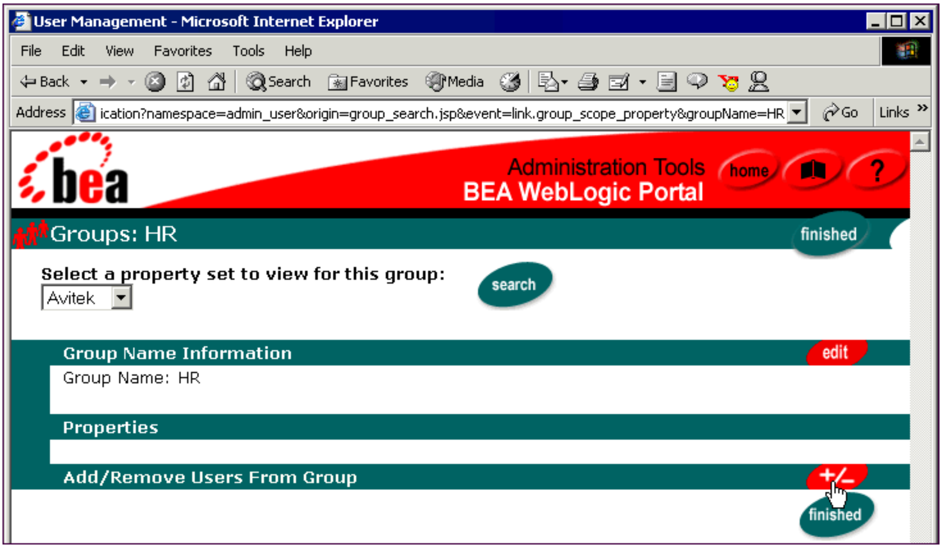
This system property prevents the creation of a user name and a group name with the same value.

Adding Users to User Groups

To add users to a group:

1. Start the WebLogic Portal Administration Tools. See "Starting the WebLogic Portal Administration Tools" on page 1-6.
2. On the Administration Tools Home page, click the **User Management** icon. The User Management Home page appears (Figure 6-1).
3. On the User Management Home page, click the **Groups** link.
4. On the Groups page, click the name of the group to which you want to add users. If the group is a sub-group, click the arrow icon next to the parent group to display the group you want.
5. On the group's page, click the **+/-** icon on the Add/Remove Users bar, as shown in Figure 6-5. You may have to scroll to the bottom of the page to see the icon.

Figure 6-5 Editing a Group

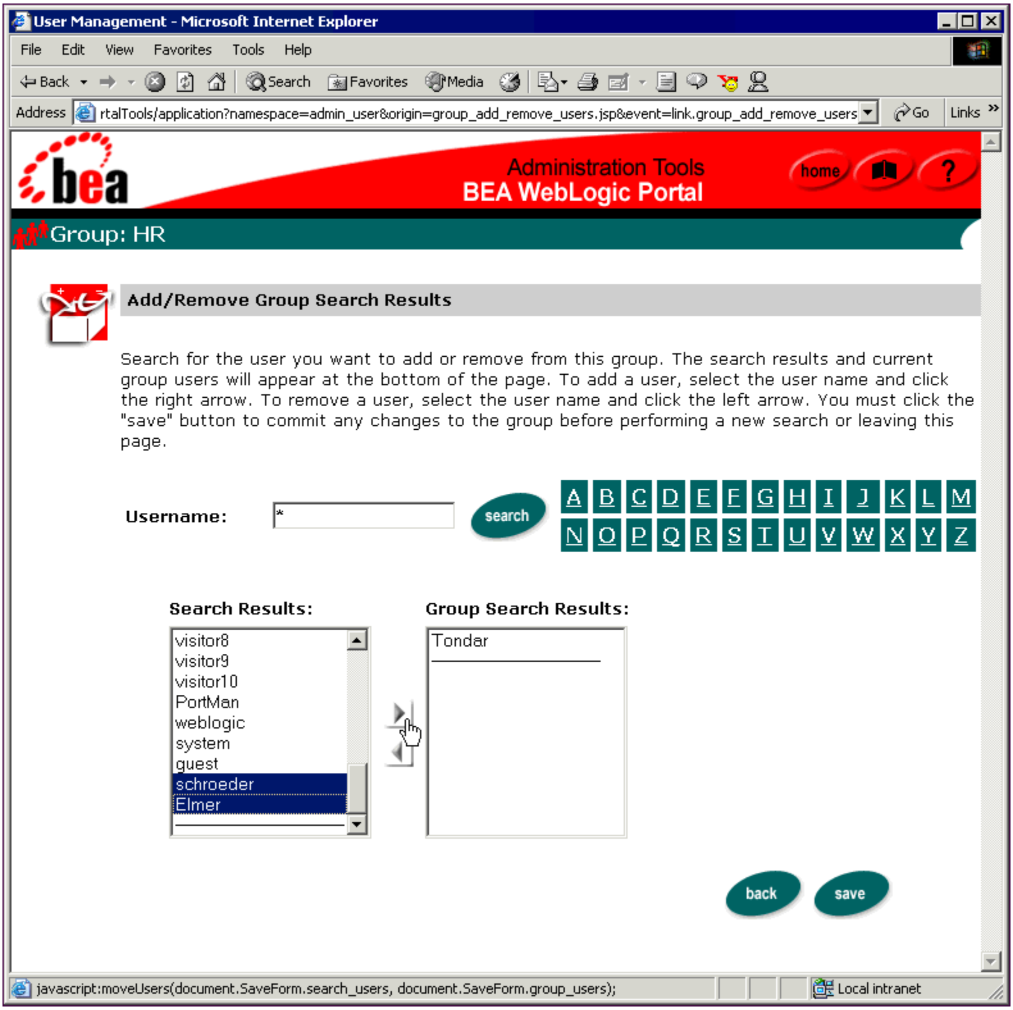


6. On the Add/Remove Group Search Results page, find the users you want to add to the group by clicking the letter that the username begins with.

   Optionally, in the **Username** field, enter the user's name, a partial name with an asterisk (for example, `sch*`), or just an asterisk (`*`) and click **Search**.

7. In the list of **Search Results** that appears, select the user(s) you want to add to the group and click the **arrow** icon to move those users into the **Group Search Results** list, as shown in Figure 6-6.

Figure 6-6 Adding Users to a Group



8. Click **Save**. A confirmation message appears below the page banner.

9. Click **Back** at the bottom of the page to return to the group's page.

Removing Users from Groups

When you remove users from a group, those users are not deleted from the domain. They continue to exist and stay members of any other groups they are associated with. You must repeat this procedure to remove users from other groups. For the procedure to delete users from the domain, see "Deleting Users" on page 6-8.

To remove users from a group, follow the same procedure for "Adding Users to User Groups" on page 6-11. When you get to the Add/Remove Group Search Results page (Figure 6-6), move the user(s) from the **Group Search Results** list to the **Search Results** list.

Modifying and Deleting User Groups

This section includes information on the following subjects:

- Viewing Group Members
- Changing Group Properties
- Adding Groups to Groups
- Deleting Groups

Viewing Group Members

To view the members of a group:

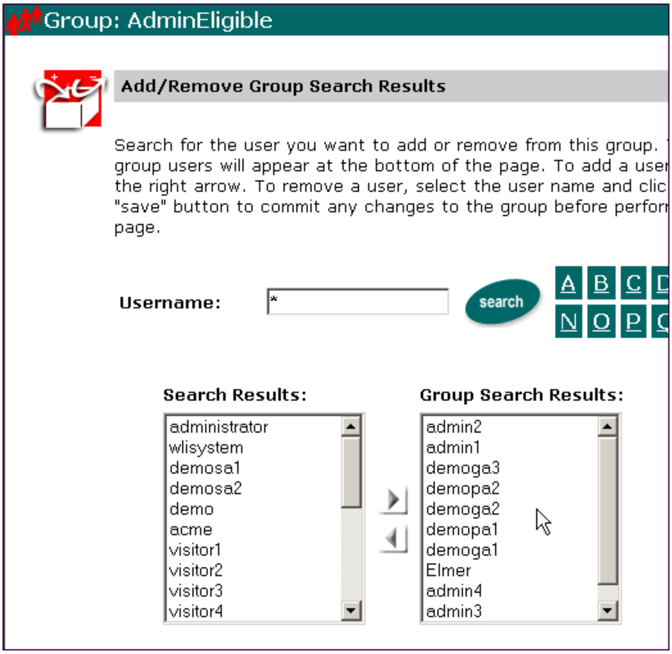
1. Start the WebLogic Portal Administration Tools. See "Starting the WebLogic Portal Administration Tools" on page 1-6.
2. On the Administration Tools Home page, click the **User Management** icon. The User Management Home page appears (Figure 6-1).
3. On the User Management Home page, click the **Groups** link.
4. On the Groups page, click the name of the group you want to view. If the group is a sub-group, click the arrow icon next to the parent group to display the group you want.

5. On the group's page, click the **+/-** icon on the Add/Remove Users bar (Figure 6-5).

6. On the Add/Remove Group Search Results page, enter an asterisk (*) in the **Username** field and click **Search**.

   The **Group Search Results** list (Figure 6-7) displays the members of that group.

Figure 6-7 Viewing Group Members



Changing Group Properties

Groups have the same characteristics, or properties, available to them as users do. Changing group characteristics is the same procedure as "Changing User Properties" on page 6-6. The difference is that you click the name of a group to change its property values.

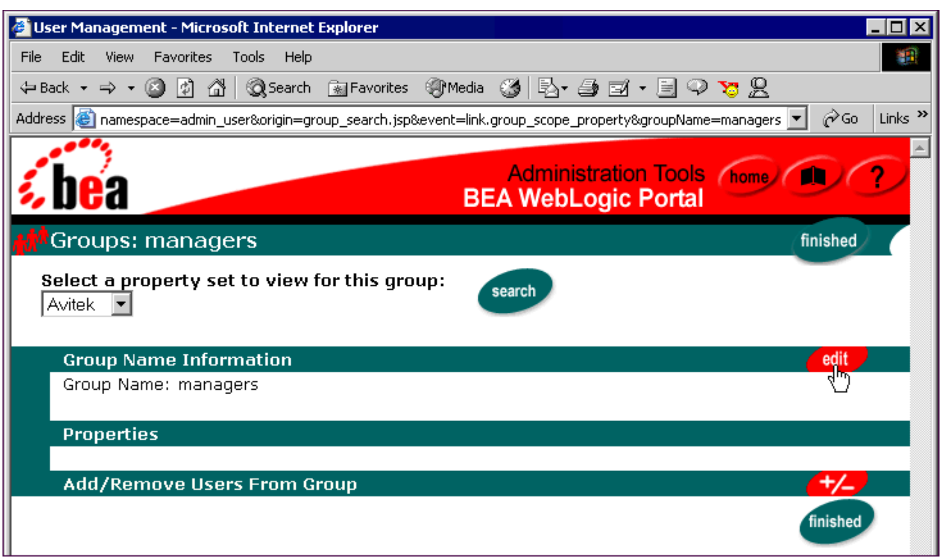
Adding Groups to Groups

Adding groups to groups is the equivalent of creating subdirectories on a file system. In WebLogic Portal, a sub-group automatically inherits the property values of the group it is added to, and users that belong to a sub-group automatically become members of the parent group.

"Creating User Groups" on page 6-10 contains instructions for adding a group to another group when first creating a group. After a group is created, follow this procedure to make it a sub-group.

1. Start the WebLogic Portal Administration Tools. See "Starting the WebLogic Portal Administration Tools" on page 1-6.
2. On the Administration Tools Home page, click the **User Management** icon. The User Management Home page appears (Figure 6-1).
3. On the User Management Home page, click the **Groups** link.
4. On the Groups page, click **Edit**, as shown in Figure 6-8.

Figure 6-8 Editing a Group



5. On the Change Group page, click the **arrow** icon next to the parent group, and click the + icon below it to add the group as a sub-group.

   A confirmation message appears below the page banner.

To move a group up to the top level, click the + icon next to **Move group to top level** at the bottom of the page.

Deleting Groups

Deleting a group deletes only the group, not the users in that group. When deleting a group, make sure no Group Portals are based on that group. Also, coordinate group deletion with your development team, because the group might be used in the code they have written.

1. Start the WebLogic Portal Administration Tools. See "Starting the WebLogic Portal Administration Tools" on page 1-6.
2. On the Administration Tools Home page, click the **User Management** icon. The User Management Home page appears (Figure 6-1).
3. On the User Management Home page, click the **Groups** link.
4. On the Groups page, click the **delete** icon (**X**) next to the group name, and click **OK** in the confirmation window.

If a group does not have a **delete** icon next to its name, it is a group provided by BEA that cannot be deleted.

Creating and Managing Group Portals

A Group Portal is a specific view of a portal defined for a specific group of users. You can create multiple Group Portals within a portal. Group Portals can share portal resources, such as layouts and portlets, but can be configured differently to satisfy the needs of each group separately.

For example, a portal can contain some portlets designated for managers and others designated for employees. You can define a Group Portal that shows only the manager portlets, and you can define another Group Portal that shows only the employee portlets. Because managers are made members of the Manager Group Portal, they can view the manager-related portlets when they log in. Because non-manager employees are not members of the Manager Group Portal, they will not see the manager-related portlets when they log in. Each Group Portal is a single administration unit that can have its own group administrator(s).

After you create user groups in WebLogic Portal (see "Creating User Groups" on page 6-10), grant these groups specific access to portals and portlets by creating a Group Portal.

You can use only one group in a Group Portal. You can, however, use a single group that contains sub-groups. All sub-groups will be considered members of the Group Portal.

This section includes information on the following subjects:

- Step 1: Create a Group to Be Used in a Group Portal
- Step 2: Create a Group Portal
- Step 3: Set up Group Portal Administrators

Step 1: Create a Group to Be Used in a Group Portal

To create a Group Portal, you must have a group to assign to the Group Portal. If you have existing groups, you can use one of those to define a Group Portal.

If you need to create a group for use in a Group Portal, follow the procedure for "Creating User Groups" on page 6-10, then follow the procedure for "Adding Users to User Groups" on page 6-11.

Be sure to add the users to the group that will administer the Group Portal. Group Portal administrators must also be members of the AdminEligible group.

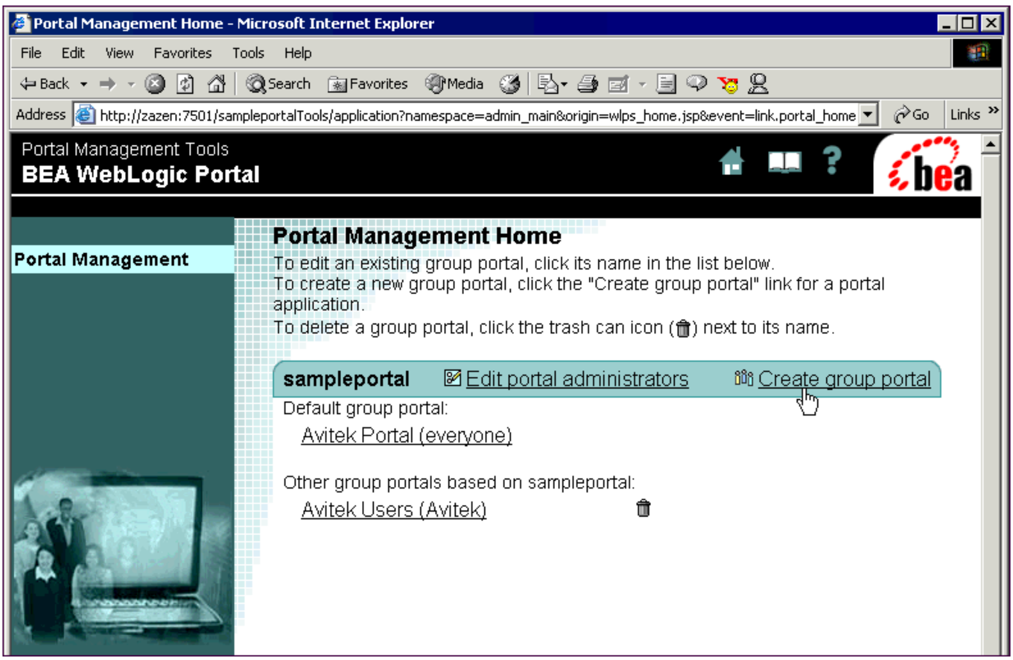
Step 2: Create a Group Portal

To create a Group Portal:

1. Start the WebLogic Portal Administration Tools. See "Starting the WebLogic Portal Administration Tools" on page 1-6.

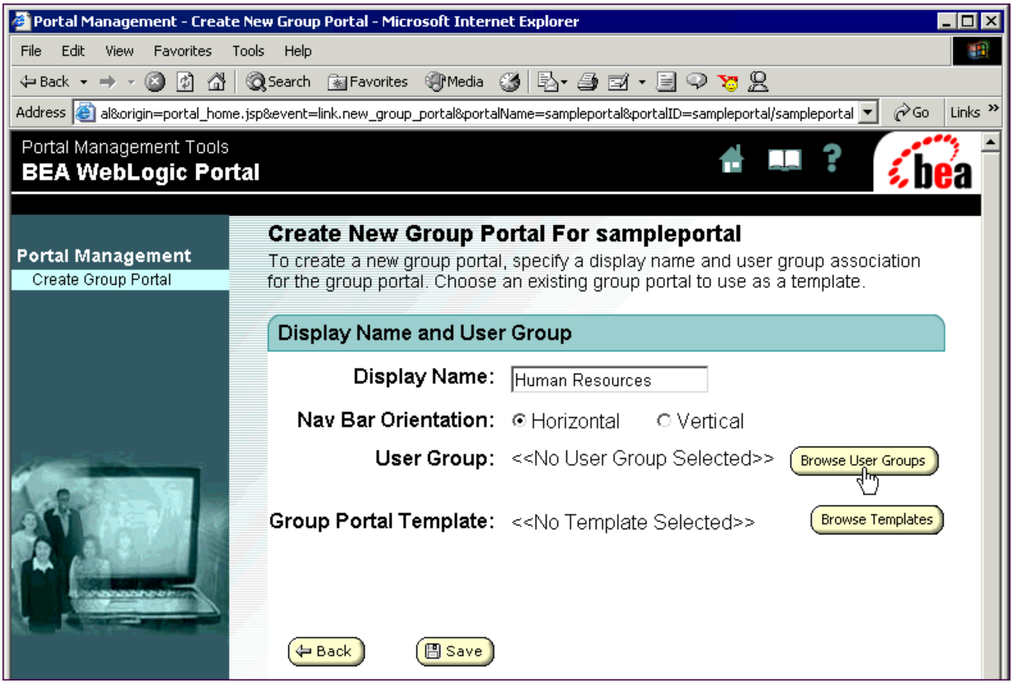
2. On the Administration Tools Home page, click the **Portal Management** icon. The Portal Management Home page appears (Figure 6-9).
3. On the Portal Management Home page, click **Create group portal**, as shown in Figure 6-9.

Figure 6-9 Creating a Group Portal



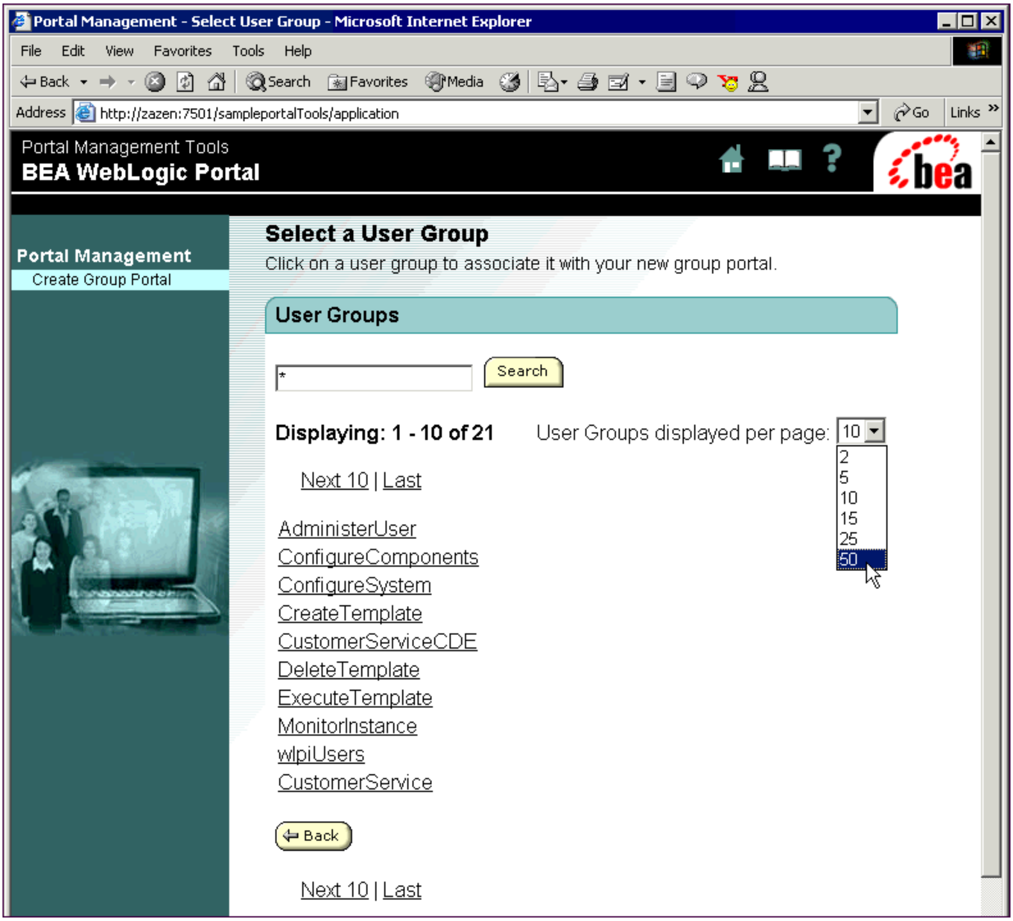
4. On the Create New Group Portal page, enter a name for the Group Portal, and select whether you want the portal's navigation bar to be vertical or horizontal, as shown in Figure 6-10.

Figure 6-10 Setting up the Group Portal



5. To choose the group that contains the users and/or sub-groups for the Group Portal, click **Browse User Groups**. The Select a User Group page appears, as shown in Figure 6-11.

Figure 6-11 Assigning a User Group to the Group Portal



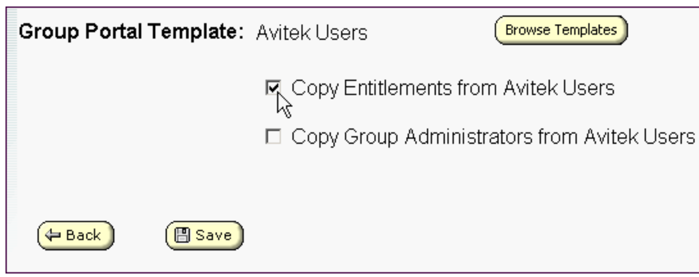
6. On the Select a User Group page, click the name of the group you want. You are returned to the Create New Group Portal page.

   If you do not see the name of the group you want, click the **Next** link at the bottom of the page, or change the number of **User Groups displayed per page**, as shown in Figure 6-11.

7. Select an existing Group Portal as a template on which to base the new Group Portal. On the Create New Group Portal page, click **Browse Templates**, and click the name of the Group Portal you want to use as a template. You are returned to the Create New Group Portal page.

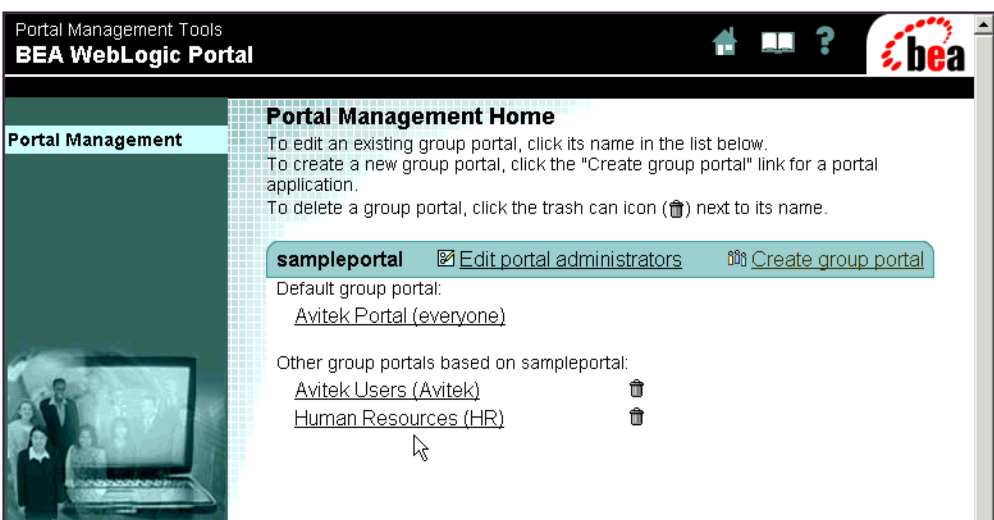
   On the Create New Group Portal page, two options appear that let you copy entitlements and group administrators from the template Group Portal, as shown in Figure 6-12.

Figure 6-12 Options for Copying Entitlements and Group Administrators



8. Click **Save**. You are returned to the Portal Management Home page, where the new Group Portal appears, as shown in Figure 6-13.

Figure 6-13 The New Group Portal Appears



For information on Entitlement Segments, see "Creating Groups to Control Page and Portlet Access" on page 6-32 and "Establishing Portal Access Using Group Portals" on page 7-24.

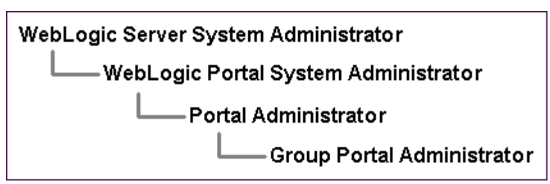
Step 3: Set up Group Portal Administrators

To set up administrators for a Group Portal, see "Creating Group Portal Administrators" on page 6-29.

Creating Administrative Users

There are four levels of administrators in WebLogic Portal, each at a lower level in the administrative hierarchy, as shown in Figure 6-14.

Figure 6-14 Administrative Hierarchy



- **WebLogic Server System Administrators** have full administrative rights in the domain, and can use the WebLogic Server Console tools; including access to the WebLogic Portal Administration Tools and the server-side functions of the E-Business Control Center.
- **WebLogic Portal System Administrators** have full administrative rights in an enterprise application, which can include multiple portals; including full access to the WebLogic Portal Administration Tools and the server-side functions of the E-Business Control Center.
- **Portal Administrators** have full or partial administrative rights for a single portal with the WebLogic Portal Administration Tools; has no default access to the server-side functions of the E-Business Control Center.

- **Group Portal Administrators** have full or partial administrative rights for one or more Group Portals within a portal with the WebLogic Portal Administration Tools; has no default access to the server-side functions of the E-Business Control Center.

This section includes information on the following subjects:

- Creating WebLogic Server System Administrators
- Creating Portal System Administrators
- Creating Portal Administrators
- Creating Group Portal Administrators

Creating WebLogic Server System Administrators

To create a WebLogic Server system administrator with full administrative rights in a domain, follow this procedure. To complete this procedure, you must have WebLogic Server system administration rights.

- Creating a WebLogic Server System Administrator
- Removing WebLogic Server System Administrators

Creating a WebLogic Server System Administrator

1. With the server running, launch the WebLogic Server Console. In a browser, enter the following URL:

   `http://<hostname>:<port>/console`

   For example, if you are using the server machine itself, the default URL is `http://localhost:7501/console`.

2. Log in as the WebLogic Server system administrator.

3. If necessary, create the user. In the left pane of the Console, select **Compatibility Security →Users**, and create a new user.

4. Select **Compatibility Security →Groups**.

5. Click the **Administrators** group.

6. In the **Add Users** field, enter the name of the user (the name is case sensitive) and click **Apply**.

The user is now a WebLogic Server system administrator.

Removing WebLogic Server System Administrators

Removing administrators does not delete the users themselves. It simply removes them from administrator group membership.

In the WebLogic Server Console, under **Compatibility Security →Groups**, click the **Administrators** username, select the check box next to the user you want to remove, and click **Apply**.

Creating Portal System Administrators

To create a Portal system administrator with full administrative rights in an enterprise application (multiple portals), follow this procedure. To complete this procedure, you must have WebLogic Server or Portal system administration rights.

- Creating a Portal System Administrator
- Removing Portal System Administrators

Creating a Portal System Administrator

1. Start the WebLogic Portal Administration Tools. See “Starting the WebLogic Portal Administration Tools” on page 1-6.
2. Log in as a Portal system administrator. If necessary, create the user. See “Creating Users” on page 6-3.
3. Add the user to the **SystemAdministrator** group. See “Adding Users to User Groups” on page 6-11.

The user is now a Portal system administrator.

Removing Portal System Administrators

Removing administrators does not delete the users themselves. It simply removes them from administrator group membership.

To remove a Portal system administrator, remove the user from the SystemAdministrator group. See "Removing Users from Groups" on page 6-14.

Creating Portal Administrators

To create a Portal administrator with full or partial administrative rights in a single portal, follow this procedure. To complete this procedure, you must have system administration or portal user management rights.

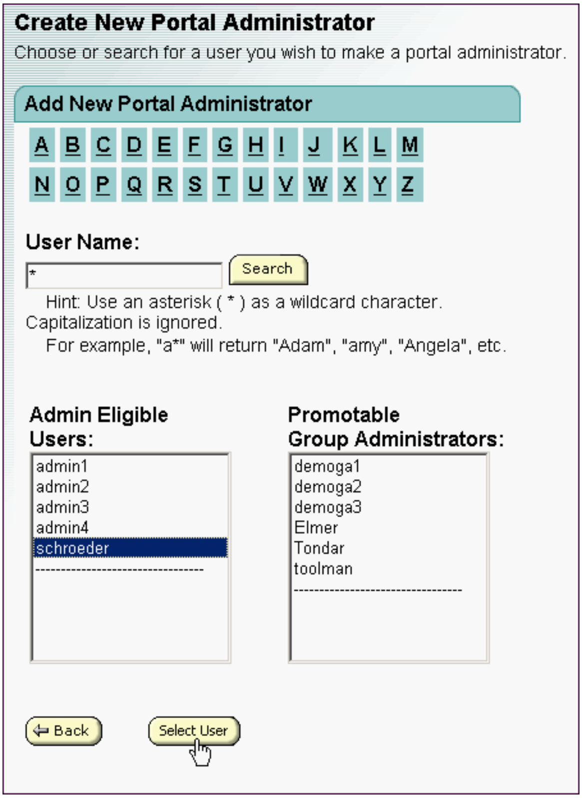
- Creating a Portal Administrator
- Removing Portal Administrators

Creating a Portal Administrator

1. Launch the WebLogic Portal Administration Tools. See "Starting the WebLogic Portal Administration Tools" on page 1-6 for the procedure.
2. Log in as a WebLogic Portal system administrator or portal administrator with user management rights.
3. If the user does not already exist in the system, add the user. See "Creating Users" on page 6-3.
4. Add the user to the **AdminEligible** group. See "Adding Users to User Groups" on page 6-11.
5. On the Portal Management Home page (Figure 6-13), click **Edit portal administrators**.
6. On the Edit Portal Administrator Settings page, click **Create New Administrator**.
7. On the Create New Portal Administrator page, select a user in the **Admin Eligible Users** list, and click **Select User**, as shown in Figure 6-15.

You can also promote an existing Group Portal administrator by selecting that user in the **Promotable Group Administrators** list.

Figure 6-15 Selecting a Portal Administrator

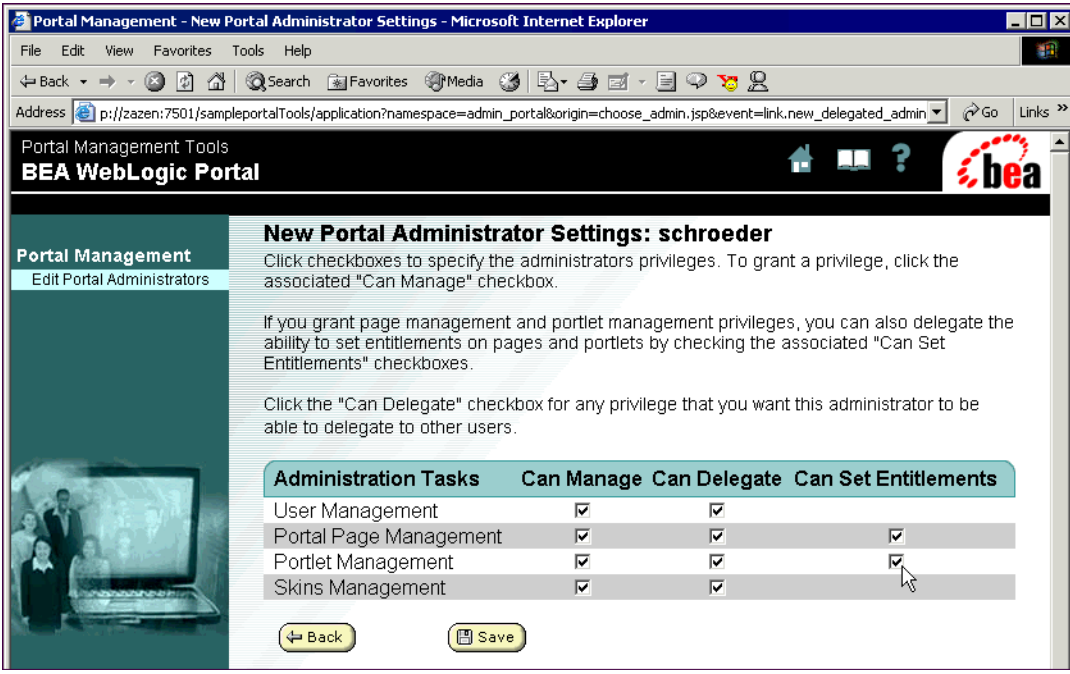


8. On the New Portal Administrator Settings page, select the options in the **Can Manage** column that the portal administrator has rights to, as shown in Figure 6-16.

   As you select options, additional options are made available to set:

   - **Can Delegate** – Lets the portal administrator delegate administration rights to other portal and Group Portal administrators.
   - **Can Set Entitlements** – Lets the portal administrator determine which pages and portlets that visitors belonging to specific entitlement segments can see.

Figure 6-16 Setting Portal Administrator Rights



9. Click **Save**.

When new portal administrators log in to the WebLogic Portal Administration Tools, they are taken directly to the Portal Management Home page, where they can modify only the aspects of the portal for which they were given rights.

Removing Portal Administrators

Removing administrators does not delete the users themselves. It simply removes them from administrator group membership.

To remove a portal administrator:

1. Launch the WebLogic Portal Administration Tools. See "Starting the WebLogic Portal Administration Tools" on page 1-6 for the procedure.
2. On the Portal Management Home page, click **Edit Portal Administrators**.

3. In the **Portal Admins** list, select the portal administrator you want to remove, and click **Select User**.
4. On the Edit Portal Administrator Settings page, click **Remove Administrator**, and click **OK** in the confirmation window.

Creating Group Portal Administrators

When you create a Group Portal ("Step 2: Create a Group Portal" on page 6-18), you have the opportunity to copy the administrators of an existing Group Portal for use in the new Group Portal. If you want to set up different or additional Group Portal administrators, follow this procedure.

Notes: You must have system administration or user management rights.

Users already assigned as portal administrators cannot be assigned as group administrators with less-powerful administrative rights.

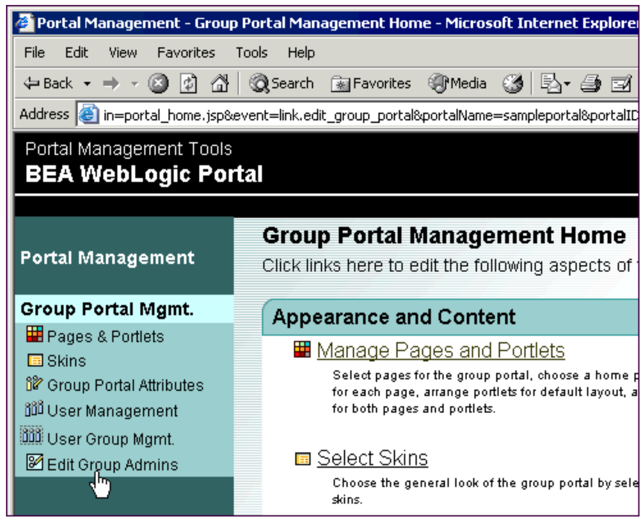
- Creating a Group Portal Administrator
- Changing Group Portal Administrators to Portal Administrators
- Removing Group Portal Administrators

Creating a Group Portal Administrator

1. Launch the WebLogic Portal Administration Tools. See "Starting the WebLogic Portal Administration Tools" on page 1-6 for the procedure.
2. Log in as a WebLogic Portal system administrator or administrator with user management rights.
3. If the user does not already exist in the system, add the user. See "Creating Users" on page 6-3.
4. Add the user to the **AdminEligible** group, and make sure the user is a member of the group assigned to the Group Portal. See "Adding Users to User Groups" on page 6-11.
5. On the Portal Management Home page (Figure 6-13), click the name of the Group Portal you want.

6. On the Group Portal Management Home page, click **Edit Group Admins**, as shown in Figure 6-17.

Figure 6-17 Editing Group Administrators



7. On the Edit Group Administrator Settings page, click **Create New Administrator**.

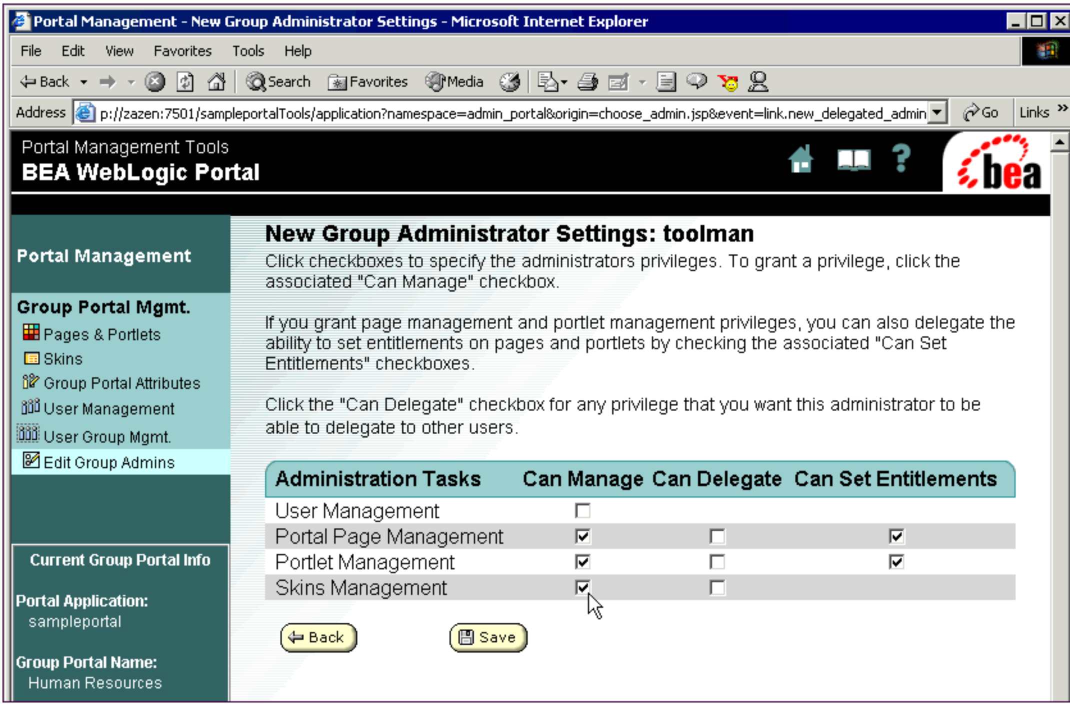
8. On the Create New Group Administrator page, select the name of the user in the **Admin Eligible Users** list, and click **Select User**.

9. On the New Group Administrator Settings page, select the options in the **Can Manage** column that the group administrator has rights to, as shown in Figure 6-18.

   As you select options, additional options are made available to set:

   - **Can Delegate** – Lets the group administrator delegate administration rights to other group administrators.
   - **Can Set Entitlements** – Lets the group administrator determine which pages and portlets that visitors belonging to specific entitlement segments can see.

Figure 6-18 Setting Group Administrator Rights



10. Click **Save**.

When new group administrators log in to the WebLogic Portal Administration Tools, they are taken directly to the Portal Management Home page, where they can modify only the Group Portals and only the aspects of those Group Portals for which they were given rights.

If given user management and delegation rights, Group Portal administrators can create users and make them Group Portal administrators (using the links on the left side of the Group Portal Management Home page).

Changing Group Portal Administrators to Portal Administrators

Follow the procedure for "Creating Portal Administrators" on page 6-26.

Removing Group Portal Administrators

Removing administrators does not delete the users themselves. It simply removes them from administrator group membership.

To remove a Group Portal administrator:

1. Launch the WebLogic Portal Administration Tools. See "Starting the WebLogic Portal Administration Tools" on page 1-6 for the procedure.
2. On the Portal Management Home page, click the name of the Group Portal containing the administrator you want to remove.
3. Click **Edit Group Admins** (Figure 6-17).
4. In the **Group Admins** list, select the group administrator you want to remove, and click **Select User**.
5. On the Edit Group Administrator Settings page, click **Remove Administrator**, and click **OK** in the confirmation window.

Creating Groups to Control Page and Portlet Access

You can determine the pages and portlets visitors see in a portal by defining and using groups called Entitlement Segments. Instead of being groups of users, Entitlement Segments are groupings of characteristics, such as visitor gender, the type of browser being used, and date or time information. If visitors match the characteristics, they are automatically and dynamically members of that entitlement segment, and they can see—or not see—the pages and portlets you designate.

This section includes information on the following subjects:

- Creating Entitlement Segments
- Modifying and Deleting Entitlement Segments

Creating Entitlement Segments

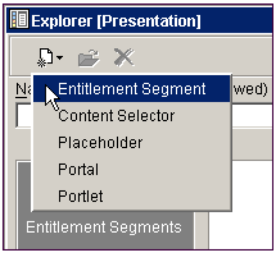
1. Launch the E-Business Control Center. See "Starting the E-Business Control Center" on page 1-7 for the procedure.

   For example, to open the default portalApp project file that is created when you create a new domain, open:

   ```
   <BEA_HOME>\user_projects\<your_domain>\beaApps\
   portalApp-project\portalApp-project
   ```

2. Click the Presentation tab on the E-Business Control Center Explorer window, and click **New > Entitlement Segment**, as shown in Figure 6-19. An Entitlement Segment editor window appears.

Figure 6-19 Creating a New Entitlement Segment



3. Enter a description for the new Entitlement Segment.

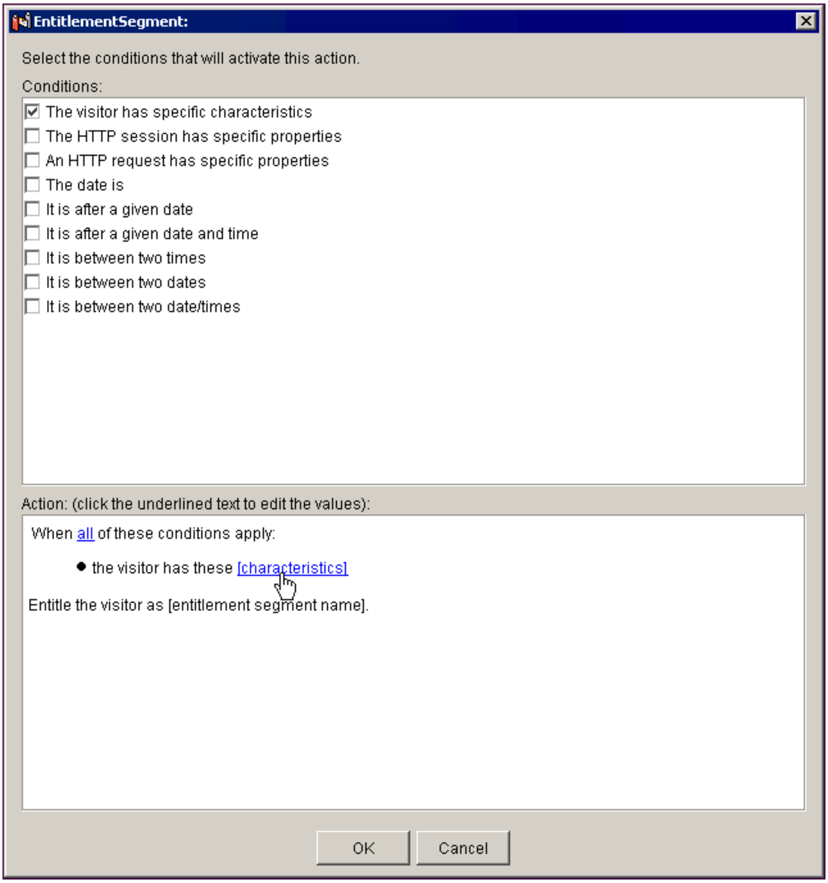
4. Click **Edit**.

5. In the **Entitlement Segment** window, you can establish the characteristics that define the Entitlement Segment. If a visitor meets the conditions defined for the Entitlement Segment, the visitor is a member of that Entitlement Segment, and the visitor's access can be limited to specific pages and portlets.

   In the **Conditions** pane, select the type(s) of characteristics that will define the Entitlement Segment, as shown in Figure 6-20.

   The visitor characteristics and HTTP session and request characteristics are defined by developers in the E-Business Control Center in the User Profiles, Request, and Session tools on the Site Infrastructure tab.

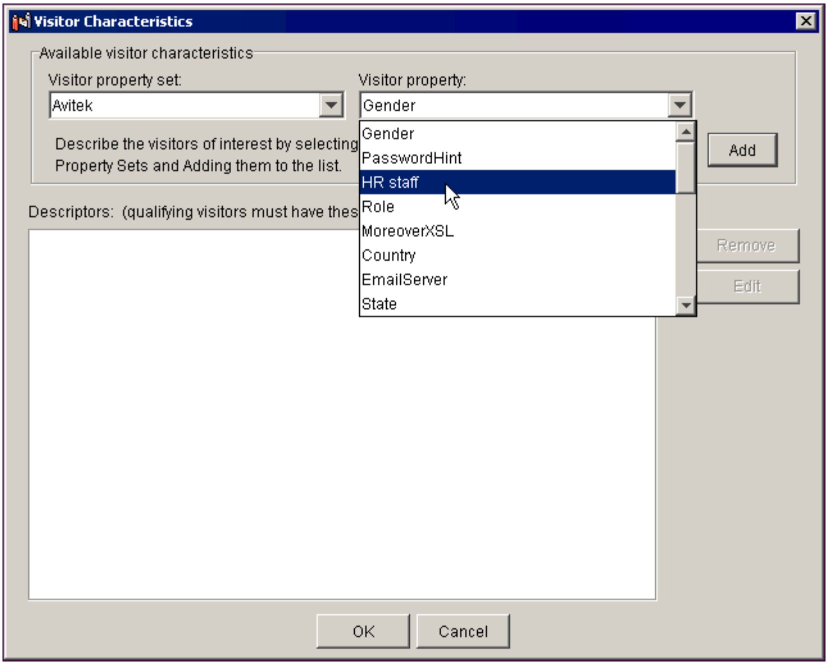
Figure 6-20 Setting Entitlement Segment Characteristics



6. For every type of condition you select, hyperlinked text appears in the **Action** pane.

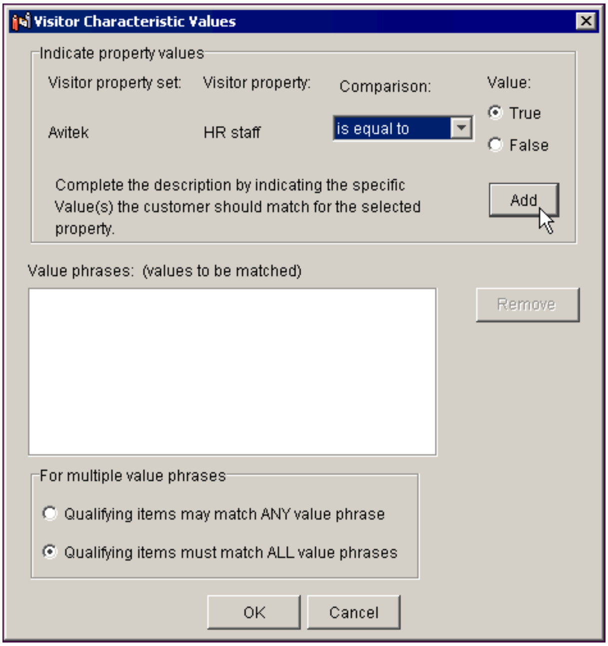
   Click each hyperlink to set the values for the condition. For example, when you select **The visitor has specific characteristics** condition and click the **characteristics** hyperlink, you can select the visitor characteristics that define the Entitlement Segment, as shown in Figure 6-21.

Figure 6-21 Selecting a Visitor Characteristic



7. After you select a property, click **Add**, and set the value of the property in the **Values** window, as shown in Figure 6-22.

Figure 6-22 Selecting a Value for the Characteristic



8. After you select a value, click **Add**. If the property allows multiple values, add as many values as you like, and select the **ANY** or **ALL** option at the bottom of the window.

9. Click **OK**.

10. Click **OK** in the **Visitor Characteristics** (or other type of properties) window.

11. In the **Entitlement Segment** window, click any undefined actions and set their values.

12. Click **OK** in the Entitlement Segment window.

13. Click **Save** on the E-Business Control Center toolbar, and name the Entitlement Segment.

    When you click the **Entitlement Segment** tool in the Explorer window, the name of the new Entitlement Segment appears in the list.

14. To use the Entitlement Segments to control which pages and portlets visitors can see, you must synchronize the entitlement segments from the E-Business Control Center to the server.

    Click the **Synchronize** button on the E-Business Control Center toolbar, and if prompted, log in as the WebLogic Portal system administrator.

Modifying and Deleting Entitlement Segments

Before modifying or deleting an Entitlement Segment, keep in mind that doing so will affect the Group Portals that use the Entitlement Segment.

Modifying – To modify an Entitlement Segment, select the **Entitlement Segments** tool in the E-Business Control Center Explorer window, double-click the name of the Entitlement Segment you want to modify, and click **Edit** in the **Entitlement Segment** window. Be sure to synchronize your changes.

Deleting – To delete an Entitlement Segment, select the **Entitlement Segments** tool in the E-Business Control Center Explorer window, select the Entitlement Segment you want to delete, click **Delete** on the Explorer toolbar, and click **Yes** in the confirmation window. Be sure to synchronize your change.

After you make your modifications or deletions, synchronize the data by clicking the **Synchronize** button on the E-Business Control Center toolbar, and if prompted, log in as the WebLogic Portal system administrator.

Creating Groups to Target Content to Customers

You can target visitors with Web content and campaigns by defining and using groups called Segments. Instead of being groups of users, Segments are groupings of characteristics, such as visitor gender, the type of browser being used, and date or time information. If visitors match the characteristics, they are automatically and dynamically members of that Segment and are shown the specific Web content you determine or are targeted with campaign actions you create.

This section includes information on the following subjects:

- Creating Customer Segments
- Modifying and Deleting Customer Segments

Creating Customer Segments

1. Launch the E-Business Control Center. See "Starting the E-Business Control Center" on page 1-7 for the procedure.

   For example, to open the default portalApp project file that is created when you create a new domain, open:

   ```
   <BEA_HOME>\user_projects\<your_domain>\beaApps\
   portalApp-project\portalApp-project
   ```

2. Click the Business Logic tab on the E-Business Control Center Explorer window, and click **New** →**Segment**. A Segment editor window appears.

3. From this point forward, the procedure for creating a Segment is identical to creating an Entitlement Segment. See "Creating Entitlement Segments" on page 6-33.

Modifying and Deleting Customer Segments

Before modifying or deleting Segments, keep in mind that doing so may affect the Content Selectors and campaigns you have created.

The procedures and considerations for modifying and deleting Segments are the same as those for Entitlement Segments. See "Modifying and Deleting Entitlement Segments" on page 6-37.

CHAPTER

7 Administering Portal and Portlet Attributes

WebLogic Portal provides you with a set of administration and customization tools that let you determine portal attributes such as the behavior, content, and user interaction of the portal Web site.

Working with attributes for your portal and portlets requires the use of two tools: the E-Business Control Center and the WebLogic Portal Administration Tools. You use the E-Business Control Center to define the appearance and behavior of your portals and portlets. Once these resources are defined, you use the WebLogic Portal Administration Tools to configure these resources. For more information about how these tools work together, see "How Do I Administer a Portal?" on page 1-4.

This section documents how to modify an existing portal. Using the E-Business Control Center and Portal Administration tools, you can do the following:

- Modifying Portal Characteristics
- Modifying Portlet Characteristics
- Synchronizing the New Portal Data to the Application
- Establishing Portal Access Using Group Portals

Modifying Portal Characteristics

Portal characteristics are the visual and behavioral aspects that a visitor experiences when accessing a portal. Examples of visual characteristics include portal page layouts, skins, and header graphics. An example of a behavior characteristic might be whether a portlet is viewed as a popup window or a smaller window within the page of origin.

Use the E-Business Control Center to define the desired portal characteristics. Using this tool, you can select and define the characteristics that then become available for administration by the WebLogic Portal Administration Tools.

Use the WebLogic Portal Administration Tools to administer the run-time characteristics that have been defined in the E-Business Control Center. Using this tool, you can determine which of the defined layouts, portals, and portlets can be viewed by the user.

- Modifying Portal Characteristic Definitions
- Modifying a Portal Look and Feel

Modifying Portal Characteristic Definitions

Use the E-Business Control Center to define the characteristics of your portal.

All of the procedures in this section are performed in the Portal Editor of the E-Business Control Center.

This section provides the following information:

- Modifying General Characteristic Definitions
- Modifying Availability of Characteristics for Portals
- Modifying Availability of Characteristics for Portal Pages

Modifying General Characteristic Definitions

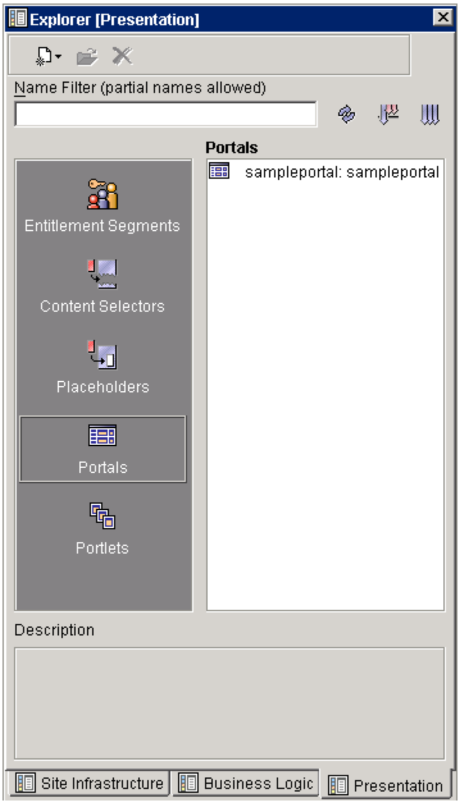
General portal characteristics include header and footer graphics, content, and icon graphics.

You also set the portal defaults. Portal defaults are characteristics, such as color schemes and HTML layouts, that you determine the visitor will view if the portal has not yet been configured in the WebLogic Portal Administration Tools.

To modify the general characteristics definitions of a portal:

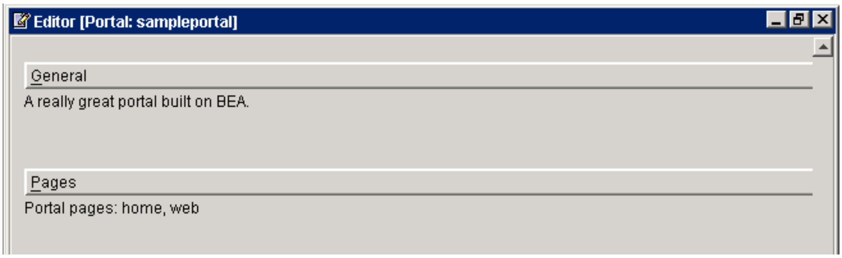
1. Open the E-Business Control Center. See "Starting the E-Business Control Center" on page 1-7.
2. In the Explorer window, click the **Presentation** tab at the bottom of the Explorer window, then click the **Portals** icon.

Figure 7-1 Explorer Pane of the E-Business Control Center



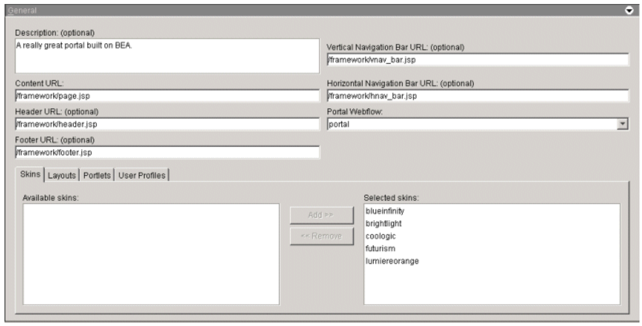
3. Select the portal you wish to edit. The Portal Editor displays.

Figure 7-2 The Portal Editor



4. In the Portal editor, click the **General** tab. The General pane of the Portal Editor appears.

Figure 7-3 General Tab in Portal Editor



5. You can edit any of the following attributes in the General pane of the Portal Editor:

   Note: The URLs should be the file system directory path to the JSPs that are located on the WebLogic Portal server. When you synchronize this data, the appropriate JSP is inserted as an `include` to the portlet. The location of these directories is determined by your organization.

Attribute	Description
Description	A description of the portal.
Content URL	A URL for the content that appears in the portal.
Header URL	A URL to the JSP used as the portal’s header content.
Footer URL	A URL to the JSP used as the portal’s footer content.
Vertical Navigation Bar URL (Optional)	You enter a URL if you wish to display a vertical navigation bar for your portal.
Horizontal Navigation Bar URL (Optional)	You enter a URL if you wish to display a horizontal navigation bar for your portal.

Attribute	Description
Portal Webflow	When you create a Portal, you must associate the new Portal with a predefined Webflow; in most cases, you would select the `portal` Webflow.

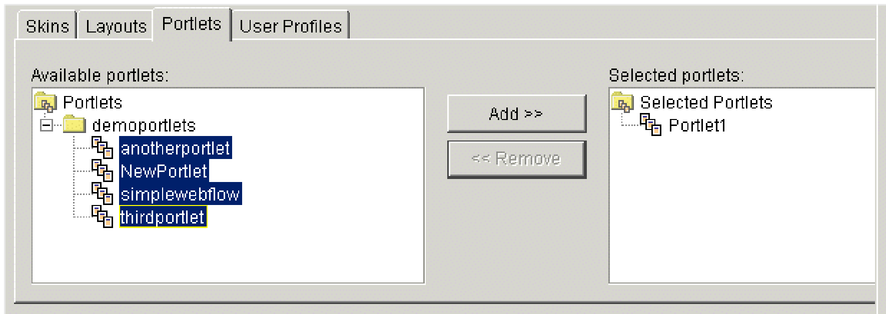
Modifying Availability of Characteristics for Portals

Use the E-Business Control Center to select the skins, pages, layouts, and user profiles that you want to be made available for your portal. After you select these characteristics in the E-Business Control Center, you can use the WebLogic Portal Administration Tools to determine which of the selected characteristics are used in the portal.

To modify characteristic availability, do the following:

1. Open the E-Business Control Center. See "Starting the E-Business Control Center" on page 1-7.
2. In the Explorer window, click the **Presentation** tab at the bottom of the explorer window, then click the **Portals** icon.
3. Select the portal you wish to edit. The Portal Editor appears.
4. In the Portal Editor, click the **General** tab. The General Portal Editor pane appears.
5. In the General pane of the Portal Editor, click the **Portlets** tab.
6. The Portlets tab displays a list of Available and Selected portlets.

Figure 7-4 Selecting Portlets



7. Select the portlets you wish to be made available to this portal. You can move these portlets by highlighting a portlet name in either window and using the **Add** and **Remove** buttons. Adding a portlet to the Selected category means that the portlet is available for use in the portal and can be configured in the WebLogic Portal Administration Tools.

8. Repeat these steps for each of the following tabs:

   - **Skins**: Select the skins that will be made available to this portal. Skins effect the visual style, for example, the icons and colors, of the portal as it appears to the visitor.
   - **Layouts**: Select the layouts that will be available to this portal for configuration.
   - **User Profiles**: Select the user profiles that will be available to this portal for configuration.

Modifying Availability of Characteristics for Portal Pages

You use the Portal Administration tools to select the images, layouts, and portlets that are available for each page in your portal. After you select these characteristics in the E-Business Control Center, you can use the WebLogic Portal Administration Tools to determine which of the selected characteristics are used in the page.

To modify characteristic availability, do the following:

1. Open the E-Business Control Center. See "Starting the E-Business Control Center" on page 1-7.

2. In the Explorer window, click the **Presentation** tab at the bottom of the Explorer window, then click the **Portals** icon.

3. Select the portal you wish to edit. The Portal Editor displays.

4. In the Portal Editor window, click the **Pages** tab. The Pages pane of the Portal Editor appears.

5. Select the page you wish to edit and click **New**. The Page Definition window appears.

6. You can edit any of the following attributes for the page:

Attribute	Description
Portal Page name	The name for the page.
Default Image name	Path for a image that shows as the default.
Rollover image name	Path for the rollover image that represents this page.
Selected image name	Path for an image that shows if the page is selected.
Available Layouts	List of layouts that can be used for this page.
Available Portlets	List of portlets that can added to this page.

7. To delete a page, select the desired page and click **Remove**. The page is no longer available to the portal.

Modifying a Portal Look and Feel

Once your portal characteristics have been defined and made available using the E-Business Control Center, use the WebLogic Portal Administration Tools to configure these characteristics as you want them to be experienced by the portal visitor.

This section provides the following information:

- Selecting Skins
- Selecting and Ordering Pages

- Editing Attributes for a Page
- Editing Layouts for a Page
- Selecting and Arranging Portlets on a Portal Page

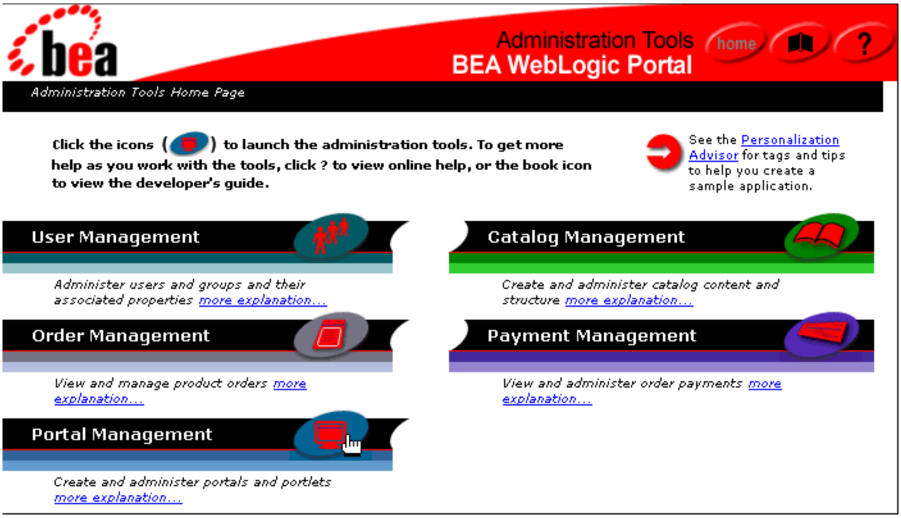
Selecting Skins

You can determine the appearance of your portal by selecting from the available skins that you have already defined in the E-Business Control Center. A skin is a collection of HTML code and graphics, that when applied to your portal, affect the appearance of your portal, for example, the colors and fonts used. The skins that you select for the portal are the skins that will be available for use by a visitor when they personalize their portal.

To use the WebLogic Portal Administration Tools to select skins for your portal, do the following:

1. Start the WebLogic Portal Administration Tools. See "Starting the WebLogic Portal Administration Tools" on page 1-6. The Portal Administration Tools Home page appears.

Figure 7-5 Portal Administration Tools Home page

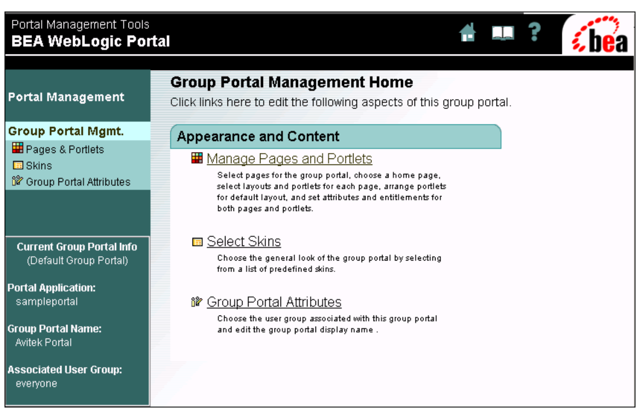


2. Click the **Portal Management** icon. The Portal Management Home page appears.

Figure 7-6 Portal Management Home page

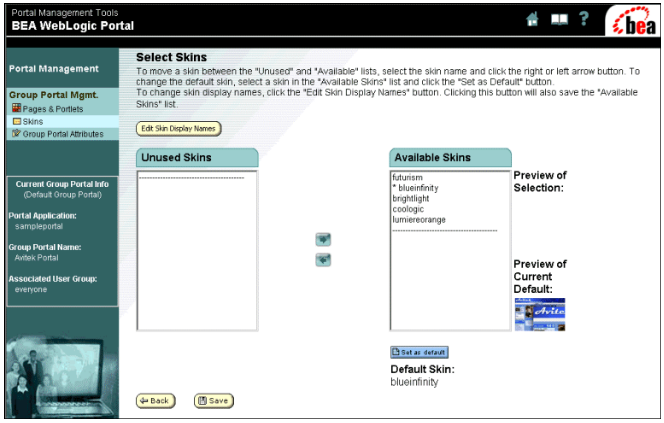
3. Click the portal you want to edit. The Group Portal Management Home page appears.

Figure 7-7 The Group Portal Management Home page



4. Click **Select Skins**. The Select Skins page displays a list of Unused and Available skins. The default skin is indicated by an asterisk (*).

Figure 7-8 The Select Skins page



5. To view a thumbnail of a skin, highlight the desired skin. A thumbnail of that skin appears under the Preview Skin heading.

6. To set a new default skin (the skin that appears in the portal until it is modified by a visitor) highlight the desired skin and click **Set as Default**. The new default skin is marked with an asterisk (*).

7. You can move skins between the Available and Unused lists by selecting the skin and clicking the **Left** and **Right** arrows. Making a skin available means that visitors can select that skin when personalizing their portal.

8. Click **Save** when you are finished.

Selecting and Ordering Pages

Use the WebLogic Portal Administration Tools to select pages for your portal from the list of available pages.

Making a page available means that visitors may choose to order their pages, with clickable tabs representing a page, when personalizing their portal.

Figure 7-9 Tabbed pages as they might appear to a visitor

To select and order pages for your portal, do the following:

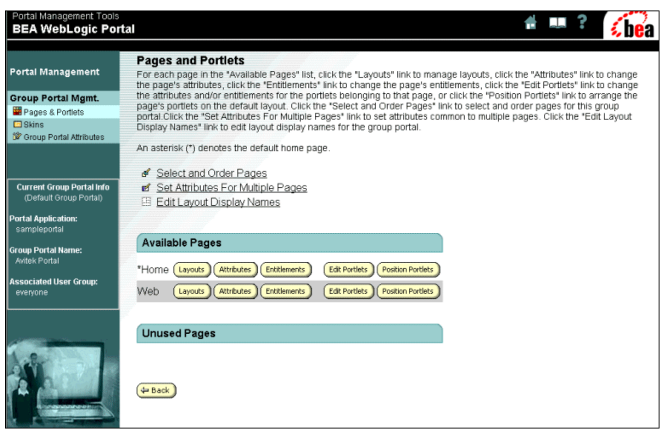
1. Start the WebLogic Portal Administration Tools. See "Starting the WebLogic Portal Administration Tools" on page 1-6.

2. Click the **Portal Management** icon in the Portal Administration Home page. The Portal Management Home page appears.

3. Click the **Group Portal** you wish to edit. The Group Portal Management home page appears.

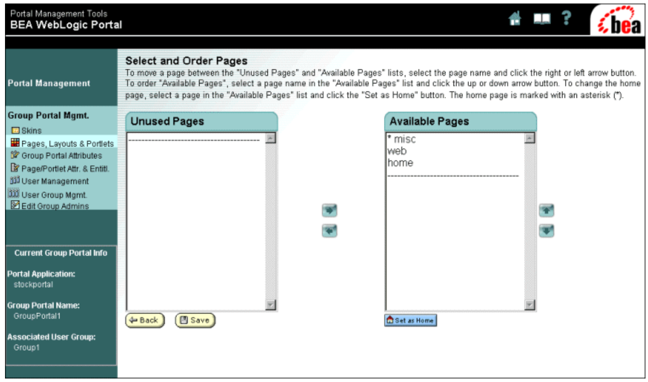
4. In the Group Portal Management Home page, click **Manage Pages and Portlets**. The Pages and Portlets page appears (Figure 7-10).

Figure 7-10 Pages and Portlets page



a. Click **Select and Order Pages**. The Select and Order Pages page displays a list of available and unused pages (Figure 7-11). The Home (default) page is indicated by an asterisk (*).

Figure 7-11 Select and Order Pages page



b. To set a new default Home page, highlight the desired page and click **Set as Home**. The new default home page is indicated by an asterisk (*).

c. You can move pages between the Available Pages and Unused Pages lists by selecting the page name and clicking the **Left** and **Right** arrows.

d. You can reorder pages by selecting a page in the Available Pages list and using the **Up** and **Down** arrows. This determines the order in which the page tabs will appear to a visitor to the portal.

e. Click **Save** when you are finished.

Editing Attributes for a Page

Page attributes are characteristics or behaviors that the page displays to a visitor to your web site. An example of an attribute is whether the user may remove that page from their personalized version of the portal.

To set page attributes, do the following:

1. Start the WebLogic Portal Administration Tools. See “Starting the WebLogic Portal Administration Tools” on page 1-6.

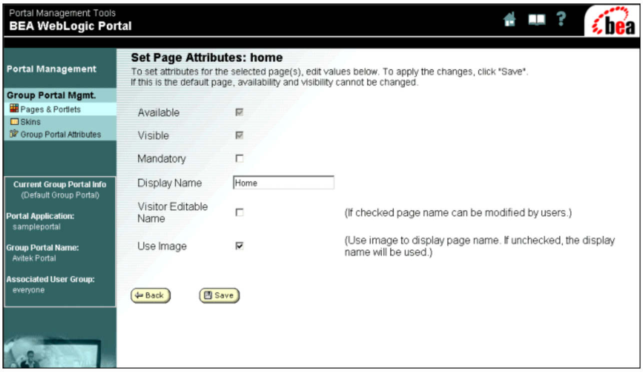
2. Click the **Portal Management** icon in the Portal Administration Home page. The Portal Management Home page appears.

3. Click the **Group Portal** you wish to edit. The Group Portal Management home page appears.

4. In the Group Portal Management Home page, click **Manage Pages and Portlets**. The Pages and Portlets page appears.

5. In the Pages and Portlets page, select the page you wish to edit and click **Attributes**. The Set Attributes page appears.

Figure 7-12 The Set Page Attributes Page



6. Set any or all of the following attributes:

Attribute	Description
Available	The page is available to the visitor.
Visible	The page should be visible to the visitor by default.
Mandatory	The visitor always sees this page. That is, they cannot remove it from their personalized portal.
Display Name	The display name for the page, this is the name that site visitors will see.

Attribute	Description
Visitor Editable Name	If this box is checked, the page name can be modified by a visitor when they personalize their portal.
Use Image	If this box is checked, an image will be used to display the page name, otherwise, the above display name will be used.

7. Click **Save** when you are finished.

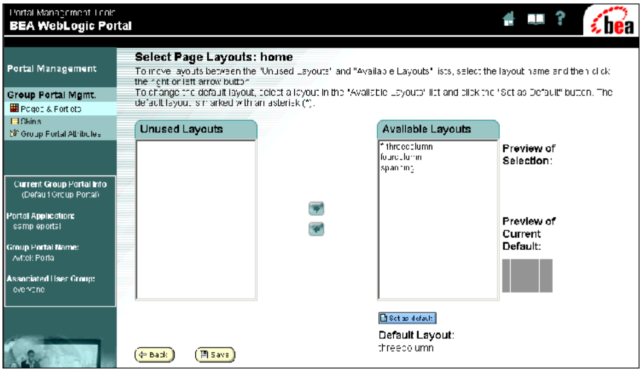
Editing Layouts for a Page

You can modify the layout of a page by selecting from a list of layouts previously made available in the E-Business Control Center.

To change the layouts for a page, do the following:

1. Start the WebLogic Portal Administration Tools. See "Starting the WebLogic Portal Administration Tools" on page 1-6.
2. Click the **Portal Management** icon in the home page. The Portal Management Home page appears.
3. Click the **Group Portal** you wish to edit. The Group Portal Management home page appears.
4. In the Group Portal Management Home page, click **Manage Pages and Portlets**. The Pages and Portlets page appears.
5. In the Pages and Portlets page, select the page you wish to edit and click **Layouts**. The Select Page Layouts page displays a list of Unused and Available Layouts.

Figure 7-13 The Select Page Layouts Page



6. Use the arrows to move the selected layouts between the Unused and Available categories.

7. Click **Save** when you are finished.

Selecting and Arranging Portlets on a Portal Page

You can select the portlets you wish to display in your page, then you can arrange where they display within the page.

To arrange portlets in your page, do the following:

1. Start the WebLogic Portal Administration Tools. See "Starting the WebLogic Portal Administration Tools" on page 1-6.

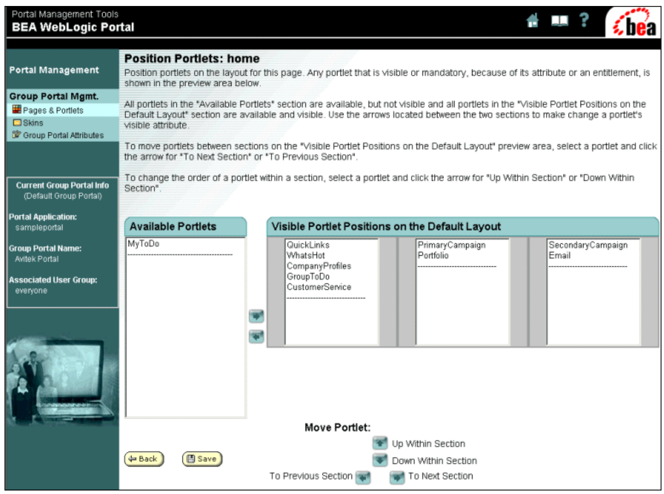
2. Click the **Portal Management** icon in the Portal Administration Home page. The Portal Management Home page appears.

3. Click the **Group Portal** you wish to edit. The Group Portal Management home page appears.

4. In the Group Portal Management Home page, click **Manage Pages and Portlets.** The Pages and Portlets page appears.

5. In the Pages and Portlets page, select the page you wish to edit and click **Position Portlets**. The Position Portlets page displays portlets that are available for the page in the Available Portlets column and portlets that are currently visible in your page in the Visible Portlets section.

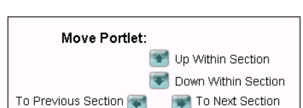
Figure 7-14 The Position Portlets page



6. To select portlets for your page or remove visible portlets, click the desired portlet and use the **Left** and **Right** arrows to move them between the Available and Visible sections.

7. To rearrange the way portlets appear on your page, select the desired portlet in the Visible section and use the arrows at the bottom of the page to move them left, right, up, or down.

Figure 7-15 Use the Move Portlets arrows to rearrange portlets in a page



8. Click **Save** when you are finished.

Modifying Portlet Characteristics

Like portal characteristics, portlet characteristics are the visual and behavior aspects that a visitor experiences when accessing a portlet. Examples of portlet characteristics are the default content that appears to a visitor, or whether online help will appear in the portlet.

Use the E-Business Control Center to define the desired portal characteristics, selecting and defining the characteristics available for administration by the WebLogic Portal Administration Tools. You then use the WebLogic Portal Administration Tools to administer the run-time characteristics that have been defined in the E-Business Control Center.

This section describes how to modify the characteristics of your portlets and contains the following information:

- Modifying Portlet Characteristic Definitions
- Modifying the Portlet Look and Feel

Modifying Portlet Characteristic Definitions

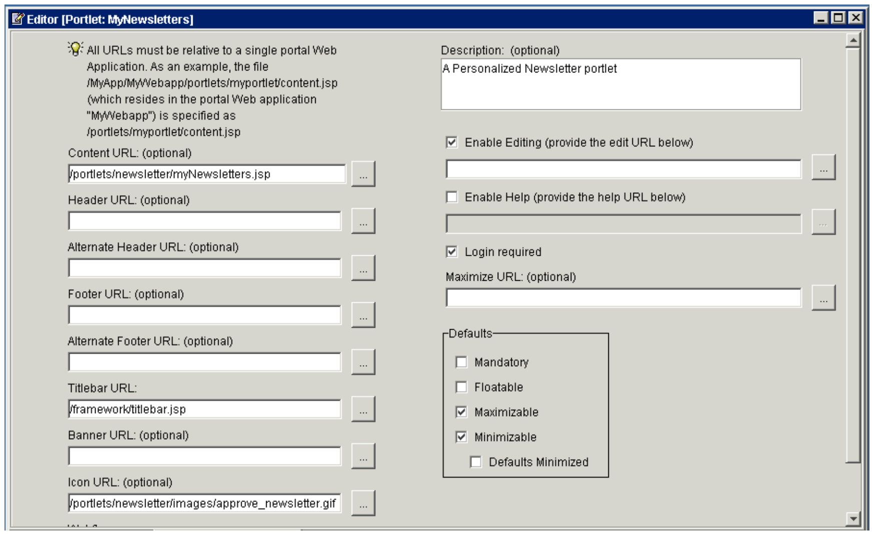
Use the Portlet Editor in the E-Business Control Center to define and modify the resources that will be available for your portlet. You can also set the portlet defaults. Defaults are characteristics, such as whether a portlet can be minimized, that the visitor experiences if the portlet has not yet been configured by the WebLogic Portal Administration Tools.

To modify portlet definitions, do the following:

1. Open the E-Business Control Center. See "Starting the E-Business Control Center" on page 1-7.
2. In the Explorer window, click the **Presentation** tab at the bottom of the Explorer window, then click the **Portlets** icon.

3. Select the portlet you wish to edit. The Portlet Editor appears.

Figure 7-16 The Portlet Editor



4. You can edit the information in any of the following fields:

Attribute	Description
Description	This is a simple description of the portlet.
Content URL	The URL to the JSP that appears by default.
Header URL	The URL to the header JSP you wish to appear by default.
Alternate Header URL	The URL to the header that should be used by default when the page is maximized.
Footer URL	The URL to the default footer JSP
Alternate Footer URL	The URL used for Maximized state
Titlebar URL	The URL to the default titlebar JSP
Banner URL	The URL to the banner JSP
Icon URL	The URL to the image for titlebar icon

Attribute	Description
Edit URL	The URL to the portlet editor JSP
Help URL	The URL to the portlet help JSP
Maximize URL	The URL to the maximized body JSP
Webflow	Portlet Webflow, if one is used.
Enable Editing	Check this checkbox if portlet content will be editable by the visitor in the portal.
Enable Help	Check this checkbox if the portlet will have a separate help file available to visitors.
Login Required	Check this checkbox if this portlet should not be displayed in the default group portal.
Mandatory	Determines whether this portlet must be included in the visitor experience and cannot be removed by the visitor.
Maximizable	Determines whether this portlet can be maximized by the visitor.
Floatable	Determines whether this portlet can be opened as a floating window.
Minimizable	Determines whether this portlet can be minimized by the visitor.
Defaults minimized	Determines whether this portlet appears minimized by default when the visitor views the page.

5. Click **Save** when you are finished.

Modifying the Portlet Look and Feel

Once your portlet characteristics have been defined and made available using the E-Business Control Center, you can use the WebLogic Portal Administration Tools to configure these characteristics as you want them to be experienced by the portal visitor.

This section provides the following information:

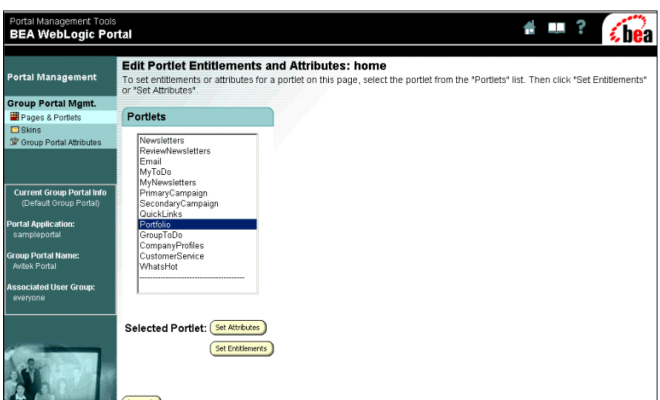
- Editing Portlet Attributes
- Selecting and Arranging Portlets on a Portal Page

Editing Portlet Attributes

Using the list of portlets selected for the page in the E-Business Control Center, you can select how you want the portlets to appear in your page.

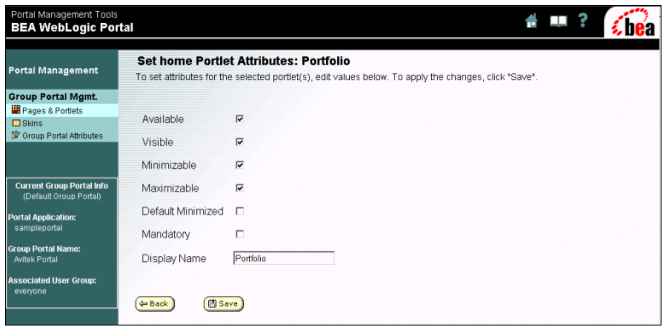
1. Start the WebLogic Portal Administration Tools. See "Starting the WebLogic Portal Administration Tools" on page 1-6.
2. Click the **Portal Management** icon in the home page. The Portal Management Home page for that group portal appears.
3. Click the **Group Portal** you wish to edit. The Group Portal Management home page appears.
4. In the Group Portal Management Home page, click **Manage Pages and Portlets**. The Pages and Portlets page appears.
5. In the Pages and Portlets page, select the page you wish to edit and click **Edit Portlets**. The Edit Portlet Entitlements and Attributes Page appears.

Figure 7-17 The Edit Portlet Entitlements and Attributes page



6. Select the desired portlet and click **Set Attributes**. The Set Portlet Attributes page appears.

Figure 7-18 The Set Portlet Attributes page



7. You can set the following attributes:

Attribute	Description
Available	Determines whether the portlet will be available to the visitor.
Visible	Determines whether the portlet should be visible to the visitor default.
Minimizable	Determines whether the portlet can be minimized by the visitor.
Maximizable	Determines whether the portlet can be maximized by the visitor.
Default Minimized	Determines whether the portlet is minimized for the visitor by default.
Mandatory	Determines whether the visitor will always see this portlet when they come to this page. That is, they cannot remove it from the page.
Display Name	The display name for the portlet that the visitors will see by default.

8. Click **Save** when you are finished.

Synchronizing the New Portal Data to the Application

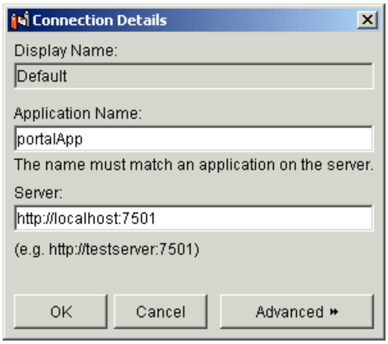
When you make changes to your portals and portlets in the E-Business Control Center, metadata is created that represents your newly defined characteristics. In order to apply your changes to the portal, you must synchronize the data to the application.

Note: Any modifications performed in the WebLogic Portal Administration Tools are performed at run time and update immediately.

Use the following procedure to synchronize E-Business Control Center data to a production server:

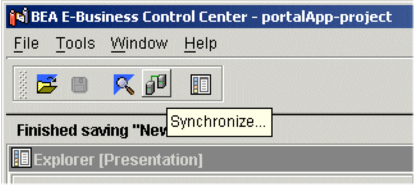
1. With your host server started, open the E-Business Control Center. See "Starting the E-Business Control Center" on page 1-7.
2. From the top menu of the E-Business Control Center, click **Tools** and select **Project Settings**.

Figure 7-19 Connection Details



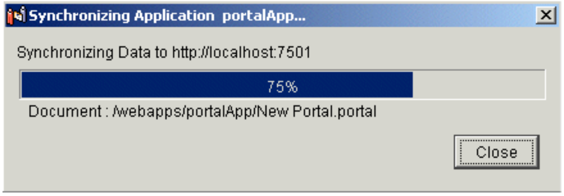
3. Verify your connection details as shown in Figure 7-19 and click **OK**.
4. Synchronize the new portal to your server by clicking the **Synchronization** icon at the top menu of the E-Business Control Center.

Figure 7-20 Synchronizing



5. The E-Business Control Center validates the files within the application, and then displays a synchronizing progress bar, as shown in Figure 7-21.

Figure 7-21 Synchronization progress bar



6. When the data synchronization is complete, click **Close**.

Establishing Portal Access Using Group Portals

Create group portals to establish visitor access to your portal. By assigning groups to your portals and then establishing entitlements for that group, you determine which users can access which aspects of your portal.

For more information about creating a group portal and defining entitlement segments, see "Creating and Managing Group Portals" on page 6-17.

Once you have created groups assigned to your portal and defined entitlement segments, you can use the WebLogic Portal Administration Tools to determine entitlement segments for portals, pages, and portlets.

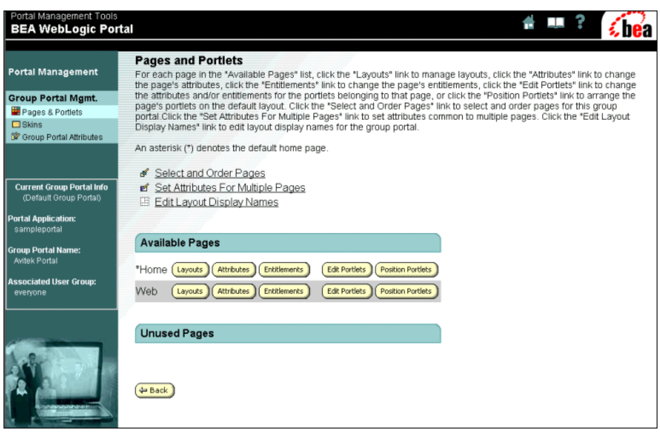
Set Entitlements for Portal Pages

Use the WebLogic Portal Administration Tools to set different levels of permissions and authority for predefined entitlement segments. For example, you might want to give the entitlement segment “Developer” the authority to delete a page, but restrict the entitlement segment “Administrator” to view-only access of the same page.

To determine entitlements for pages, do the following:

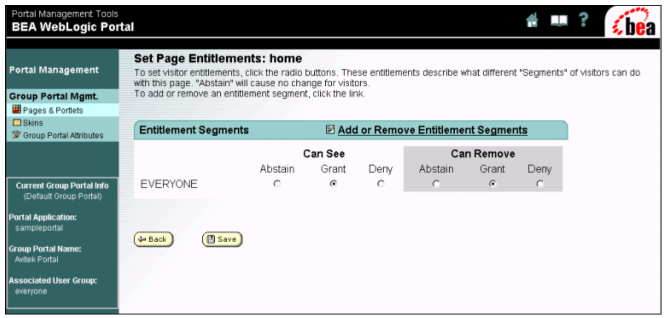
1. Start the WebLogic Portal Administration Tools. See “Starting the WebLogic Portal Administration Tools” on page 1-6.
2. Click the **Portal Management** icon in the home page. The Portal Management Home page appears.
3. Click the **Group Portal** you wish to edit. The Group Portal Management home page appears.
4. In the Group Portal Management Home page, click **Manage Pages and Portlets**. The Pages and Portlets page appears.

Figure 7-22 The Pages and Portlets page



5. In the Pages and Portlets page, select the page you wish to edit and click **Set Entitlements**. The Set Entitlements page appears.

Figure 7-23 The Set Page Entitlements page



6. To add or remove an entitlement segment for a page, click **Add or Remove Entitlement Segments**. The Add or Remove Entitlement Segments page displays all available entitlement segments in the All Entitlement Segments column and the selected segments in the Selected Entitlement Segments column.

Figure 7-24 The Add or Remove Entitlement Segments page

7. Select the desired segment and use the **Left** and **Right** arrows to add or remove a segment.

8. Click **Save** when you are finished. The Set Entitlements page appears.
9. You can edit the following authorities for selected entitlement segments:

Authority	Definition
Can See	Check the radio buttons to grant or deny availability of this page to the entitlement segment members.
Can Remove	Check the radio buttons to grant or deny the entitlement segment members the ability to remove the portal page from their view.

10. Click **Save** when you are finished.

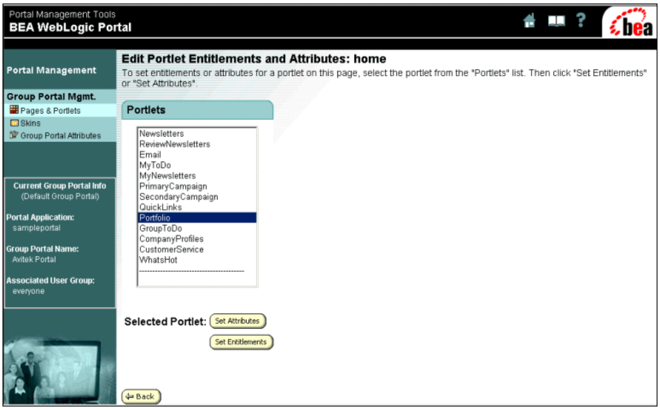
Set Entitlements For Portlets

As with pages, you can set different levels of permissions and authority for predefined entitlement segments.

To set entitlement segments for portlets, do the following:

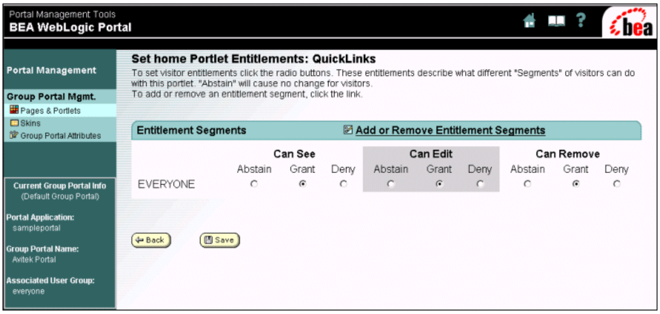
1. Start the WebLogic Portal Administration Tools. See "Starting the WebLogic Portal Administration Tools" on page 1-6.
2. Click the **Portal Management** icon in the home page. The Portal Management Home page appears.
3. Click the **Group Portal** you wish to edit. The Group Portal Management home page appears.
4. In the Group Portal Management Home page, click **Manage Pages and Portlets**. The Pages and Portlets page appears.
5. In the Pages and Portlets page, select the page you wish to edit and click **Edit Portlets**. The Edit Portlet Entitlements and Attributes Page appears.

Figure 7-25 The Edit Portlet Entitlements and Attributes page



6. Select the desired portlet and click **Set Entitlements**. The Set Portlet Entitlements page appears.

Figure 7-26 Set Portlet Entitlements Page



7. You can set any of the following entitlements for each group:

Authority	Definition
Can See	Check the radio buttons to grant or deny availability of the portlet to the entitlement segment member.
Can Edit	Check the radio buttons to grant or deny the entitlement segment members the ability to edit the portlet.
Can Remove	Check the radio buttons to grant or deny the entitlement segment members the ability to remove the portlet from their view.

8. Click **Save** when you are finished.

8 Personalization and Interaction Management

Targeting content to particular users allows you to market your products or web content to a desired audience. For example, you might have content in your portal about upcoming municipal elections that you only want visitors to access on or before the date of the election. Or you might wish to display an advertisement for new mystery novels to a visitor who has previously purchased mystery books online at your commerce portal.

The use of personalization greatly reduces the effort needed to maintain a personalized site. Users are grouped into user segments based on individual attributes (see "Creating Customer Segments" on page 6-38 for more information). Because personalization is based on rules, these user segments automatically reflect changes in user attributes.

Note: For more information about rules and their role in personalization see the *Developer's Guide* at http://edocs.bea.com/wlp/docs70/dev/index.htm.

As an administrator, you can use the Personalization tools to map content to users, enriching visitor experience while using your portal content to the best advantage possible. This chapter contains information on the following subjects:

- Targeting Customers with Portal Content
- Targeting Customers with Advertisements

Targeting Customers with Portal Content

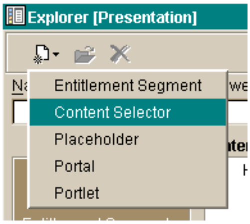
A Content Selector is a mechanism that allows you to define the conditions under which specific content can be viewed by a visitor. Using the Content Selector Editor, you define the type of visitor you want to target and show them the content you want them to see.

You use the BEA E-Business Control Center to define the conditions that trigger a Content Selector. You then define a query that retrieves the content to show the visitor.

To use the E-Business Control Center to define a content selector do the following:

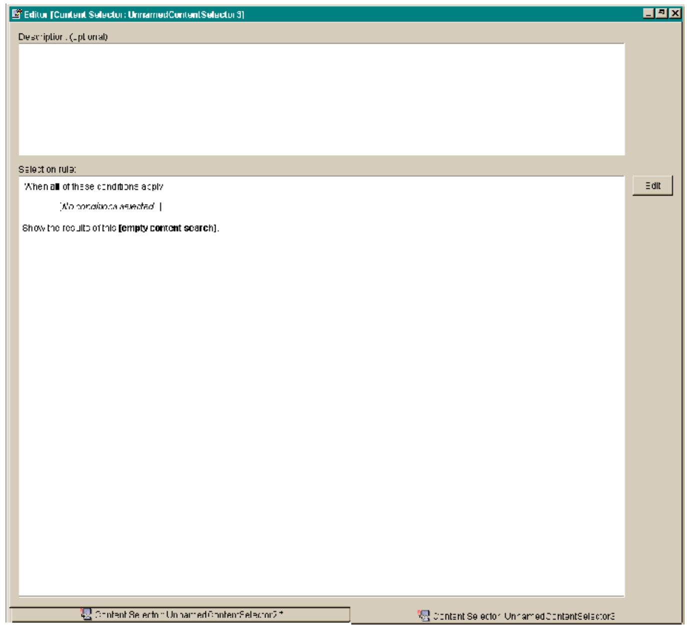
1. Open the E-Business Control Center, for the procedure, see "Starting the E-Business Control Center" on page 1-7.
2. Click the **Presentation** tab.
3. Click the **Content Selector** icon in the **Explorer** pane. Any existing content selectors appear in the right pane of the Explorer.

Figure 8-1 E-Business Control Center New Menu with Content Selector Selected



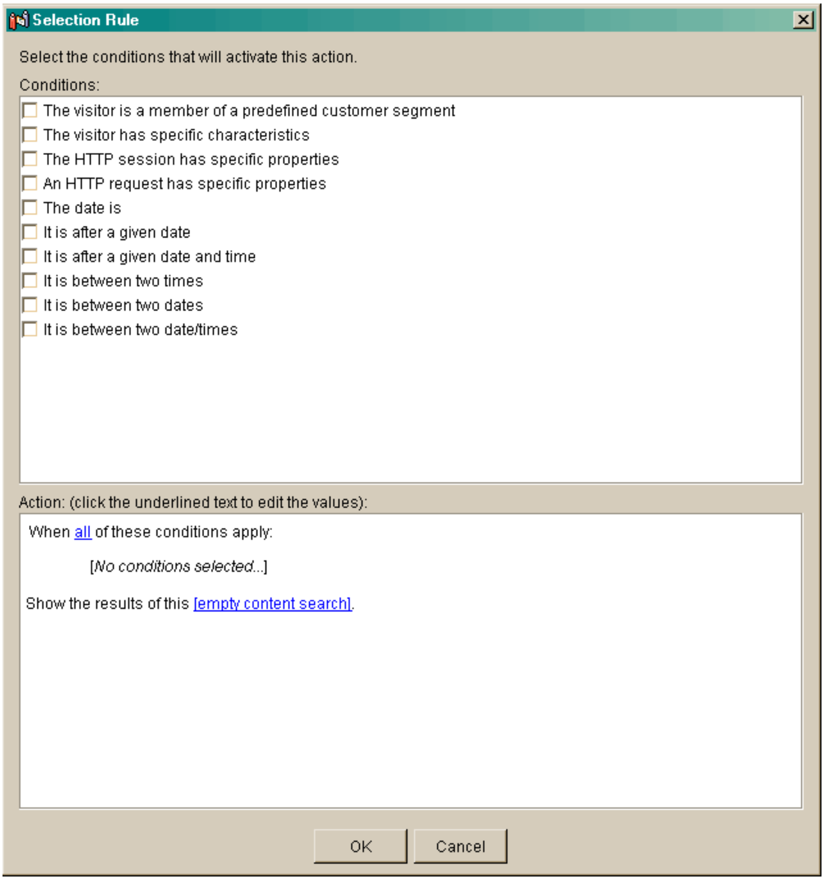
4. Click **New** and select **Content Selector**. The Content Selector Editor appears.

Figure 8-2 Content Selector Editor



5. Click **Edit** to open the Selection Rules editor:

Figure 8-3 Selection Rules Editor



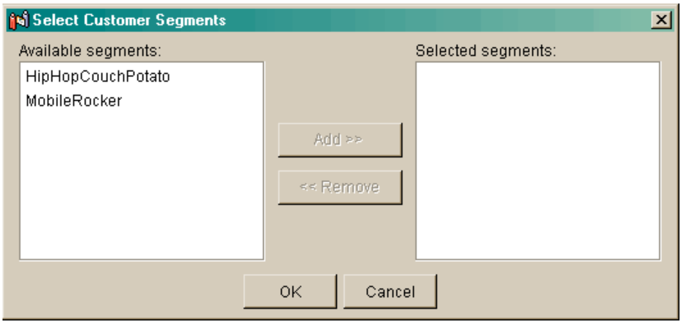
6. Click the checkbox next to each condition that you want to use to activate the content selector. For each condition selected, a related action is added to the Action pane.

7. In the Action pane, do the following:

   a. Determine how the conditions will apply. The default value is "all," which means that all conditions must be true before the content selector is activated. Click the word **all** to toggle the value to **any**, which means that at least one of the conditions must be true to activate the content selector.

b. Next, set the values for each condition by clicking the underlined text in the condition list; for example, if you selected the condition "The visitor is a member of a predefined customer segment", the action "The visitor is in customer segment [customer segment]" appears. Click **[customer segment]** to display the Select Customer Segments dialog box.

Figure 8-4 Select Customer Segments Dialog Box



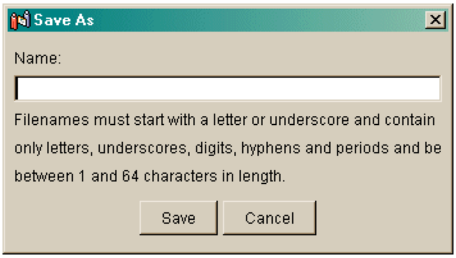
c. Select the customer segments of which the visitor must be a member and click **Add** to move them to the Selected segments list. When you've added all of the segments necessary, click **OK**.

d. Repeat step b for each condition selected.

e. When the values for all selected conditions have been set, click **OK**. The Selection Rules dialog box closes.

8. On the E-Business Control Center, open the File menu and select **Save as**. The Save as dialog box appears.

Figure 8-5 Save As Dialog Box



9. Enter a name for the content selector in the **Name** field and click **Save**. The new content selector will appear in the content selector list in the Explorer.

10. When you are finished click the **Synchronize** icon in the toolbar to persist the new information to your production server. Make sure that your connection setting are correct. See "Setting up the E-Business Control Center" on page 11-6.

Figure 8-6 Synchronize button

Targeting Customers with Advertisements

Ad Placeholders allow you to target content to the desired visitor. For example, in a Web site that sells tools and building materials online, you might want to create several advertisements for a sale on gardening tools and display it to visitors who access your Web site during the dates of the sale. You use the tools provided in the E-Business Control Center to create an ad placeholder as well as queries that determine the gardening tool advertisements that are displayed in a placeholder on a JSP page.

Note: Ad placeholders can be a very important aspect of creating campaign scenarios, for information about working with ads in relation to campaigns, see "Defining Campaigns" on page 9-6.

This procedure shows you how to create a placeholder file in the E-Business Control Center and how to set up default queries in that placeholder.

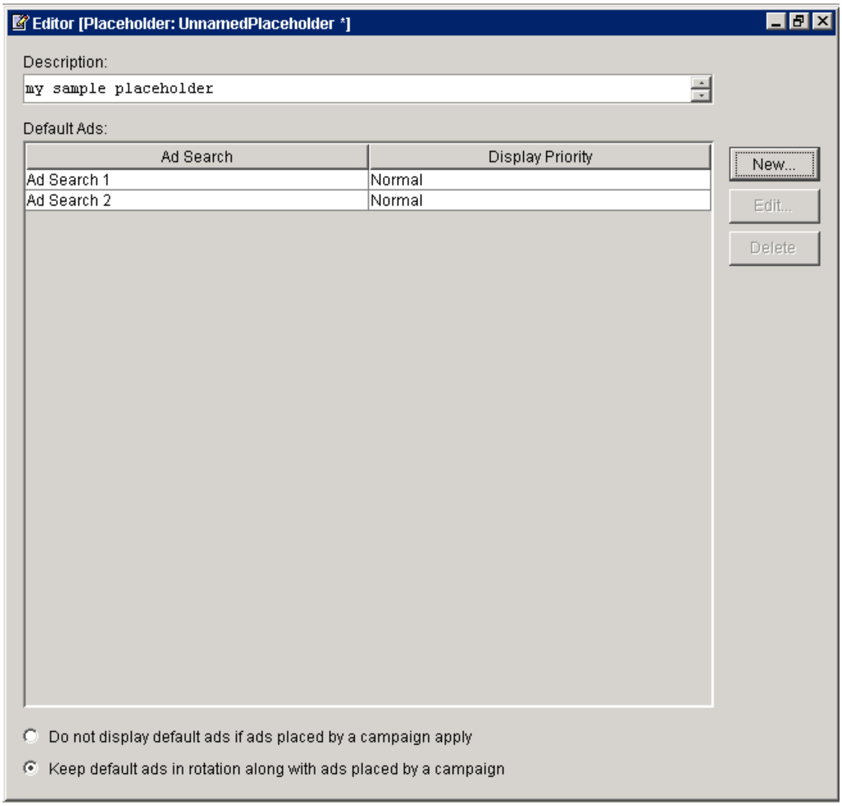
To create an ad placeholder file:

1. Open the E-Business Control Center, for the procedure, see "Starting the E-Business Control Center" on page 1-7.

2. Click the **Presentation** tab.

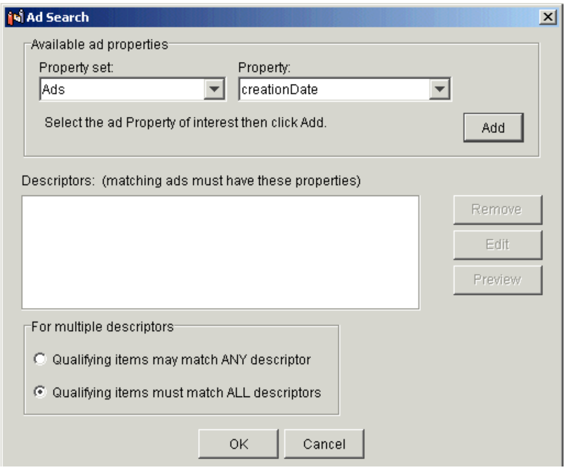
3. Click the **Placeholders** icon in **Explorer** pane. Any existing placeholders appears in the right pane of the Explorer.
4. Select **New > Placeholder**. The Placeholder Editor appears.

Figure 8-7 The Placeholder Editor



5. Enter a description for the placeholder.
6. Click **New** to define a default ad query. A placeholder file is considered incomplete if it does not have at least one default query (though you can still save the placeholder file). The Connection Setup window appears.
7. Select an existing connection in the **Display Name** field, and enter the username and password provided by your administrator. The Ad Search window appears.

Figure 8-8 The Ad Search Window

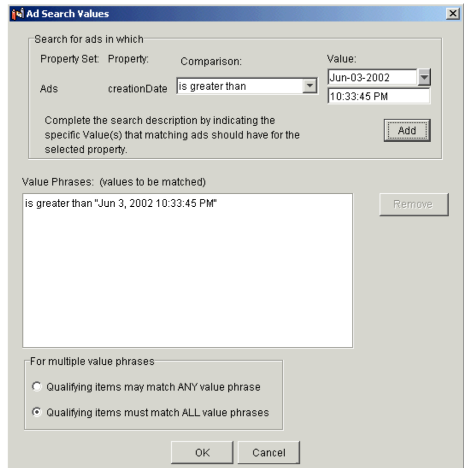


8. In the Ad Search window, do the following:

   a. Select the property set and corresponding properties that describe the query conditions.

   b. Click **Add** to define the descriptors for the selected parameters. The Ad Search Values window appears.

Figure 8-9 The Ad Search Values Window



c. Select a comparison you want to use and enter a corresponding value. A comparison defines whether a value will be "equal to," "greater than," etc. Depending on the property that you are comparing, the **Value** box might contain a list of values for you to select.

Note: If the property value requires text entry, you can use the "like" comparison with wild card characters (***** and **?**). If you set up a query based on filename and you are using the like comparison, begin the query with an asterisk (*****), because path information always precedes the filename in the query results.

d. Click **Add** to add the comparison and value. Repeat the preceding steps to add multiple values.

e. When you are finished constructing the query, click **OK** in the Ad Search window. You return to the Ad Value window.

9. In the Ad value window, click **Add** to add multiple descriptors. When you are finished, click **OK** to return to the Placeholder Editor.

10. To change the priority of an existing default ad query, click the **Display Priority** column for the query and select a priority.

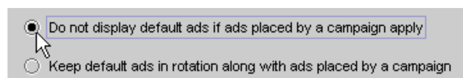
    The Display Priority determines the likelihood that the query runs relative to the priority of any other queries that are in the placeholder.

Note: If you do not define priorities for your query, the placeholder randomly selects and displays from the list of query results.

11. To prevent an ad placeholder from using default ad queries if it also contains campaign ad queries, select the option, "Do not display default ads if ads placed by a campaign apply."

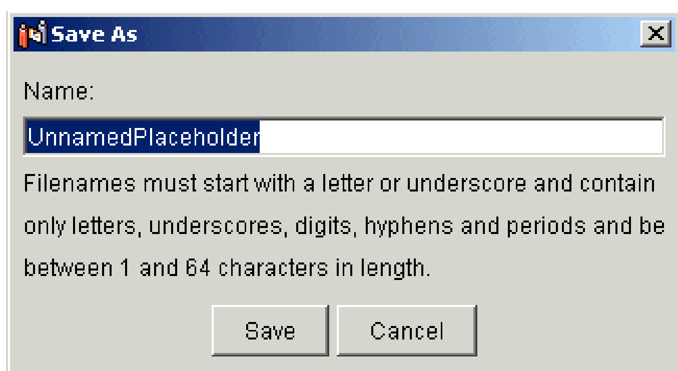
    If you want the placeholder to choose among default and campaign ad queries, select the option, "Keep default ads in rotation with ads placed by a campaign." This selection potentially reduces the chance that the placeholder displays a given ad that is part of a campaign.

Figure 8-10 Setting Default Query Options in the Placeholder Editor



12. Click the **Save** icon in the Main toolbar. The Save As window appears.

Figure 8-11 Save As window



13. In the Save As window, enter a name for the placeholder and click **Save**. Be sure to use the name of a placeholder that already exists or will exist on a JSP. You can get those names from your business engineer.

14. When you are finished click the **Synchronize** icon in the toolbar to persist the new information to your production server. Make sure that your connection setting are correct, see "Setting up the E-Business Control Center" on page 11-6.

Figure 8-12 Synchronize icon

CHAPTER

9 Creating Campaigns

Campaigns let you target your site visitors with three types of personalized actions: showing them specific pieces of Web content on a page or in a portlet, giving them a discount, or automatically sending them a predefined e-mail message.

Of the many personalization tools WebLogic Portal provides, campaigns offer the most options for targeting visitors with personalized actions. In addition to triggering personalization the same way other WebLogic Portal personalization tools do, campaigns can also trigger actions in other ways: with custom events created by your developers, based on the contents or value of items in a shopping cart, or by selecting visitors at random.

Campaigns not only let you target visitors with more pinpoint accuracy, they also let you trigger multiple actions—or even simultaneous actions—in a browsing session.

For example, when a visitor adds a particular item to the shopping cart or order, the visitor could see a targeted ad in a portlet, receive a discount on the order, and be sent an automatic e-mail message. The campaign could even be defined so that another visitor would receive the discount, but not see the ad or receive the e-mail message. In another example, when an employee clicks the Open Enrollment button on the Human Resources Intranet page, the employee could be shown a short video clip from the CEO in a portlet and be sent an automatic e-mail that describes a new fund in the 401K plan.

To see campaign functionality in action, run the WebLogic Portal Commerce Templates example and modify the existing campaigns.

This section includes information on the following subjects:

- Campaign Prerequisites
- Defining Campaigns
- Debugging and Modifying Campaigns
- Deactivating and Reactivating Campaigns

Campaign Prerequisites

The versatility and power of campaigns come from the pieces that make up campaigns. Before you create campaigns, which you do in the E-Business Control Center, you and your developers must create those prerequisite pieces. These pieces fall into the following basic categories, the names of which are presented for organizational purposes only.

- **Triggers** are the pieces that cause campaign actions to occur, such as a user property or an event.
- **Content** is the Web content, discounts, or e-mail messages that visitors see or receive when an action is triggered.

Aside from the visible results of campaigns (targeted Web content displayed on a page or in a portlet, a discount, or an e-mail message), campaign functionality is transparent to your visitors. Campaign functionality is integrated in specific parts of your site in the form of JSP tags, events that are created and used in JSPs, and rules and properties defined in the E-Business Control Center that are made available to your portals through synchronization to the server.

With the proper infrastructure already created to support your campaigns, as described in the following sections, your developers incorporate that infrastructure into your portal's pages and portlets. For example, if you are using a shopping cart, support for using and displaying discounts must be built in to your shopping cart JSPs.

The following sections describe the triggers and content that must be created before you can define your campaigns in the E-Business Control Center.

Create Triggers

When visitors use your site, campaign actions can be triggered by a number of factors that you define. Follow the links in Table 9-1 to create the campaign triggers you want to use. In many cases, setting up triggers is a development task that involves coding and JSP work. Development tasks are implied by the links to the instructions.

If you want to trigger campaign actions based solely on dates, times, or random samples of visitors, you can skip this section.

Table 9-1 Creating Campaign Triggers

Task	Description	...see these instructions
Create users and user profile properties	For triggering campaign actions based on specific information stored with users. When creating a campaign action, this task maps to **The visitor has specific characteristics** option.	■ "Creating and Managing Users" on page 6-3 in this guide. ■ "Creating a Property Set Definition" in the "Implementing User Profiles" section of the *Development Guide* at http://edocs.bea.com/wlp/docs70/dev/usrgrp.htm. ■ "Changing User Properties" on page 6-6 in this guide
Create Segments	For triggering campaign actions based on users who belong to a specific Segment. When creating a campaign action, this task maps to **The visitor is a member of a predefined customer segment** option.	"Creating Groups to Target Content to Customers" on page 6-37 in this guide.
Create custom events	For triggering campaign actions based on events that occur, such as a mouse click or a user registering. WebLogic Portal comes with a set of predefined events you can use. When creating a campaign action, this task maps to the options dealing with events.	"Event and Behavior Tracking" section of the *Development Guide* at http://edocs.bea.com/wlp/docs70/dev/evnttrak.htm.
Create HTTP Session and Request properties	For triggering campaign actions based on HTTP Session or Request properties, such as character encoding or the type of browser being used. When creating a campaign action, this task maps to the HTTP session and request options.	"Creating a Property Set Definition" in the "Implementing User Profiles" section of the *Development Guide* at http://edocs.bea.com/wlp/docs70/dev/usrgrp.htm.

Table 9-1 Creating Campaign Triggers (Continued)

Task	Description	...see these instructions
Create a catalog and set up a shopping cart	For triggering campaign actions based on shopping cart contents or value. When creating a campaign action, this task maps to the shopping cart options.	■ "Supporting a Product Catalog" in the "Setting up Commerce Services" section of the *Development Guide* at http://edocs.bea.com/wlp/docs70/dev/commerce.htm. ■ "Administering Commerce Services" on page 10-1 in this guide.

Create Content

Before you create campaigns, you must create the Web content and Placeholders, discounts, and e-mail messages you want to use in the campaigns. Follow the links in Table 9-2 for information on creating these. The links to the instructions imply which tasks are development and which are administrative.

Using graphics in campaigns requires connecting a content management system to WebLogic Portal or using WebLogic Portal's standard content management services. Once connected to a content management system, you will use the Web content metadata in drop-down lists in the E-Business Control Center to define the queries that put the Web content in Placeholders on JSPs.

Table 9-2 Creating Campaign Content

Task	Description	...see these instructions
Set content metadata, load content, and create Placeholders	To show visitors personalized Web content as part of a campaign, that Web content must be created and stored in a database or content management system; the graphics properties must be made available in the E-Business Control Center for defining queries that retrieve the graphics; and Placeholders must be defined in JSPs and in the E-Business Control Center.	■ Content: "Portal Content Management" in the *Development Guide* at http://edocs.bea.com/wlp/docs70/dev/conmgmt.htm. ■ Content: "Loading Ads Into Your Content Management System" in the "Setting up Campaign Services" section of the *Development Guide* at http://edocs.bea.com/wlp/docs70/dev/cmpaign.htm. ■ Placeholders: "Setting up Personalization and Interaction Management" in the *Development Guide* at http://edocs.bea.com/wlp/docs70/dev/p13n.htm ■ Placeholders: "Targeting Customers with Advertisements" on page 8-6 in this guide.
Create Discounts	To use discounts in campaigns, the discounts must already be defined in the E-Business Control Center and designated as campaign discounts.	"Administering Discounts" on page 10-29 in this guide.
Create e-mail messages	Developers create and store the e-mail messages that administrators use in campaigns.	"Creating Personalized E-mails for Campaigns" in the "Setting up Campaign Services" section of the *Development Guide* at http://edocs.bea.com/wlp/docs70/dev/cmpaign.htm.

Defining Campaigns

After you have created all the pieces you want to use in your campaigns, as described in the previous sections, you are ready to define your campaigns in the E-Business Control Center. The campaign definitions you create provide the rules that map the triggers to the content.

With your campaign infrastructure in place and your campaign rules defined, your campaign becomes active when you synchronize your campaigns from the E-Business Control Center to the server.

Campaigns actually begin and end based on the criteria you set. For example, when you synchronize a campaign on July 1, but the campaign start date is not until July 4, the campaign will not begin until July 4.

When creating campaigns, you should create and synchronize them in a test environment to work out the bugs before deploying them on your production site.

Note: Because campaigns rely on Placeholders, Discounts, Segments, events, catalog details, and various property sets that are created independently of campaigns, changes to any of these can affect your campaigns. Coordinate with your developers about changes that are made to any of these stand-alone items.

This section includes information on defining a campaign, which includes the following subjects:

- Step 1: Creating a Campaign File
- Step 2: Entering General Campaign Information
- Step 3: Creating Scenarios and Actions
- Step 4: Defining Campaign Start and Stop Criteria
- Step 5: Synchronizing the Campaign

Step 1: Creating a Campaign File

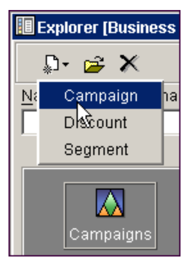
When you define a campaign in the E-Business Control Center, the rules for the campaign are stored in an XML file. Use this procedure to create your campaign file.

1. Open the E-Business Control Center; see "Starting the E-Business Control Center" on page 1-7.
2. Open the E-Business Control Center project file for the enterprise application. In a new domain, the default project file is:

   `<domain>/beaApps/portalApp-project/portalApp-project`

3. Click the **Business Logic** tab of the E-Business Control Center Explorer window.
4. In the E-Business Control Center Explorer window toolbar, click **New** → **Campaign**, as shown in Figure 9-1. A new campaign editor window appears.

Figure 9-1 Creating a New Campaign File



5. Choose **File** →**Save As**, and click **OK** in the Campaign Is Not Complete dialog box that appears.
6. In the Save As window, enter the name of the campaign and click **Save**. The name of the new campaign appears in the Explorer window.
7. Complete the following steps to define your campaign.

Creating and saving the file at the beginning of the process, even though the file is incomplete, allows you to save your work as you define the campaign.

Step 2: Entering General Campaign Information

1. In the campaign editor, click the **General** bar.
2. Enter the required **Campaign Sponsor** and **Description** information to describe the campaign.
3. Optionally enter a **Goal Description** that describes a successful campaign.
4. Click the **General** bar to close it.

Campaign sponsors are people or organizations that have commissioned a campaign and on whose behalf the campaign is run. In the E-Business Control Center, the campaign sponsor can be used as part of the search criteria to find a campaign when you click the **Campaign Search** icon in the Explorer window. The icon is available only on the Business Logic tab.

Step 3: Creating Scenarios and Actions

Campaigns contain one or more scenarios. Scenarios contain the actions that define the behavior of your campaigns. Use scenarios to create logical groupings of actions. For example, you can create a scenario to contain all your e-mail actions, or create one that contains different types of actions that support a common goal, such as open enrollment for benefits.

Creating Scenarios

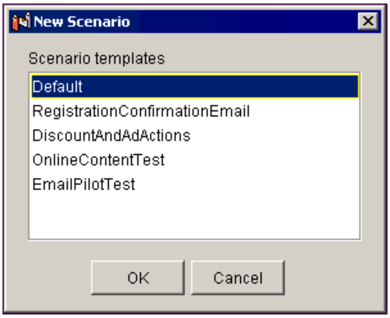
Use the following procedure to create a scenario.

1. In the campaign editor window, click the **Scenarios** bar.
2. Click **New Scenario**. The New Scenario window appears, displaying a list of scenario templates, as shown in Figure 9-2. The following list describes each scenario:
   - Default—A blank template.
   - RegistrationConfirmationEmail—Demonstrates how a registration confirmation email can be sent to visitors who register.

- DiscountAndAdActions—Displays a discount ad in conjunction with an associated discount action.
- OnlineContentTest—Tests content effectiveness using probability-based branching.
- EmailPilotTest—Pilot tests three different email messages.

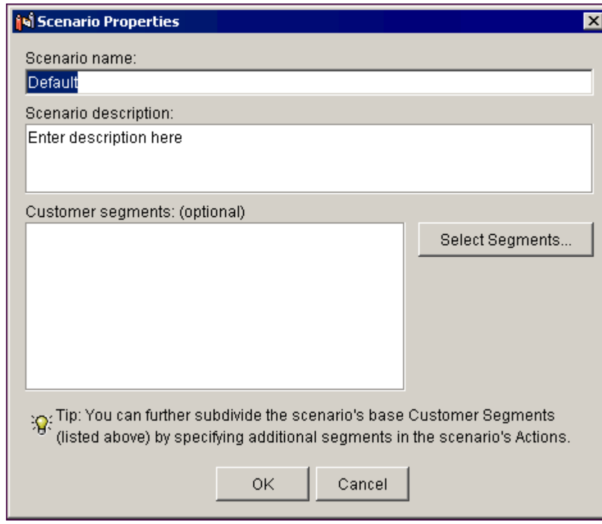
If you would rather create a scenario by copying an existing scenario, click an existing scenario name in the Scenarios list to select it and then click **Duplicate**. A copy of the scenario, along with its actions, appears in the Scenarios list. You can then click **Edit** to modify the scenario as appropriate.

Figure 9-2 Scenario Templates



3. Select the **Default** template and click **OK**. The Scenario Properties window appears, as shown in Figure 9-3.

Figure 9-3 Scenario Properties Window



4. Enter a name and description for the scenario.

5. If you want all the campaign actions in the scenario to be triggered when members of one or more Segments visit the site, click **Select Segments**, choose the Segments you want, and click **OK**.

6. Click **OK**.

7. Click **OK** in the confirmation window. The scenario name, along with any Segment names you selected, appear in the Scenarios list.

8. Create actions in the scenario.

Creating Scenario Actions

After you create a scenario, you must add actions to it. There are three types of actions you can add to a scenario: ad actions, e-mail actions, and discount actions.

This section includes information on the following subjects:

- Ad Actions
- E-mail Actions

- Discount Actions

Note: After you have created actions, you can save time creating future actions by duplicating actions you have already created. To do this, select the action you want to duplicate and click **Duplicate**.

Ad Actions

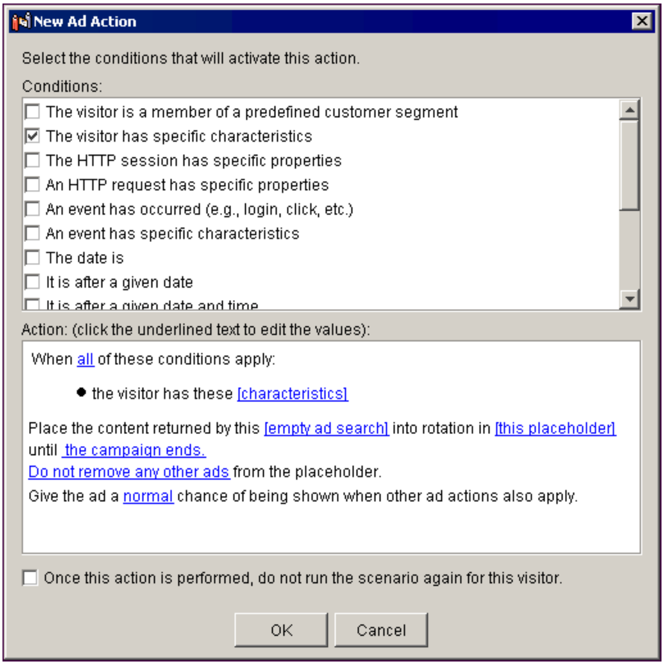
When you create an ad action, you are defining criteria that will select appropriate Web content from your content management system to be displayed on a page or in a portlet. Because you are defining a query, the query can return more than one set of Web content. If you want to pinpoint one specific piece of Web content rather than having WebLogic Portal select one from many returned pieces of content, define your query narrowly to pinpoint the exact content you want.

When you create this type of action, you must be able to log in to the running server.

Use the following procedure to create ad actions.

1. Select the name of the scenario to which you want to add the action.
2. Click **New Action →Ad**. The New Ad Action window appears, as shown in Figure 9-4.

Figure 9-4 New Ad Action Window



3. In the New Ad Action window, click the check boxes in the Conditions section to select the condition(s) under which the Web content will be displayed. Text describing the conditions you selected appears in the Action portion of the window.

   The conditions correspond to the prerequisite tasks shown in Table 9-1.

4. For each condition you select, you must specify values for any bracketed hyperlinked text that appears in the Action portion of the window. Click the hyperlinked text and set the appropriate values.

   For example, if you selected **The visitor has specific characteristics**, you must specify a value for the hyperlinked **[characteristics]** text in **the visitor has these [characteristics]** condition statement.

5. If you selected more than one condition, set the **When all of these conditions apply** option. When you click the word **all**, it changes to **any**. When you use the **any** option, only one of the conditions must be met to trigger the action.

The next steps rely on your having completed the content and placeholder prerequisite tasks described in Table 9-2.

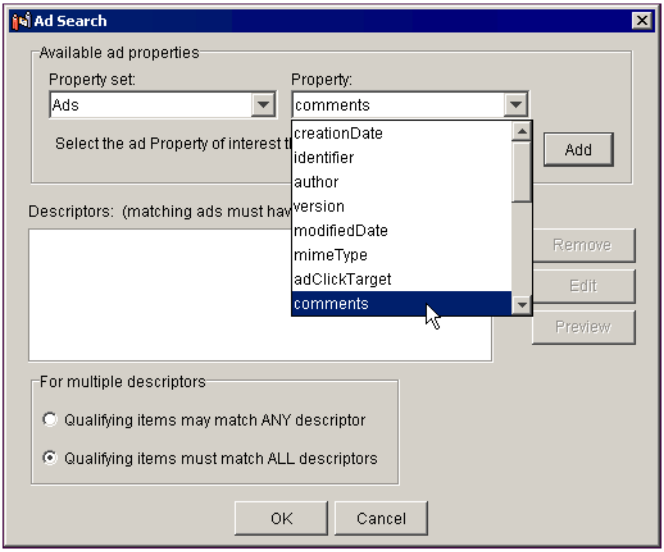
6. Now define the query that will determine which Web content from the content management system will be displayed. Click **[empty ad search]**.

   If you are prompted to log in, by default you must log in as a WebLogic Server system administrator or a WebLogic Portal system administrator.

   The Ad Search window appears.

7. In the Ad Search window, select a Web content property set and property for the query, as shown in Figure 9-5.

Figure 9-5 Selecting a Property to Use for the Query



8. Click **Add**. The Ad Search Values window appears.

9. In the Ad Search Values window, set the property value(s) and appropriate options. After you add a value, click **Add**. When you are finished adding values, set the appropriate **For multiple value phrases** option and click **OK**. The values appear in the Descriptors list in the Ad Search window.

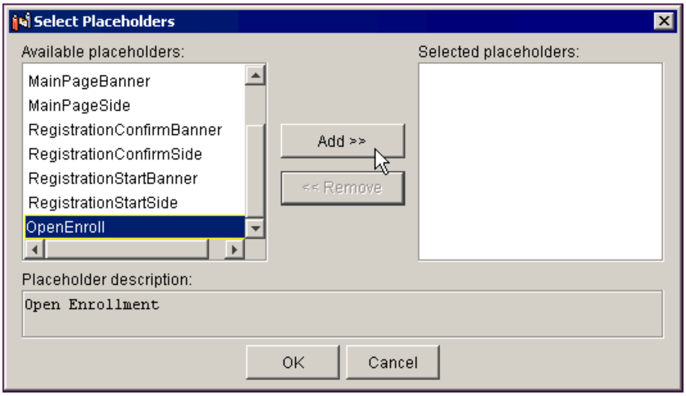
10. Add any additional properties and values required.

11. In the Ad Search window, select the appropriate **For multiple descriptors** option. If you select the **ANY** option, the query will return Web content matching any of the values you set. Selecting **ALL** narrows what the query will return, because any Web content to be displayed must match all of the criteria.

12. Click **OK**. Your query is defined.

13. Now determine where on the page or in a portlet the Web content will appear by selecting one or more predefined Placeholders for the query. Click **[this placeholder]**. The Select Placeholders window appears, as shown in Figure 9-6.

Figure 9-6 Select Placeholders Window



14. In the Select Placeholders window, move the placeholder(s) that will display the Web content into the Selected Placeholders list, and click OK.

15. If other campaign actions use the placeholder(s) you selected, set the relative priority for your Web content to be displayed by setting the **Give the ad a normal chance of being shown** option. Click the **normal** link to change priority.

    You can also improve the chances that your Web content will be shown in a placeholder by automatically removing queries put in the placeholder by other scenarios or campaigns. To do this, click **Do not remove any other ads** and set the appropriate query-clearing option.

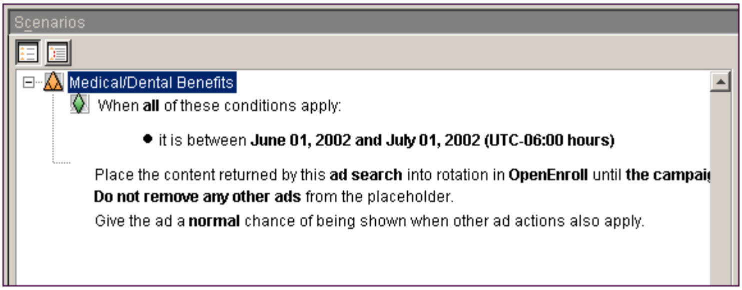
16. If you want the Web content to stop being displayed in the placeholder before the campaign ends, click **[the campaign ends]** and set the end time.

    Any dates and times you set are for your time zone. Visitors in other time zones experience the expiration of the Web content relative to your time zone.

17. If you want the scenario to run only once per visitor, for example, for display only when a visitor registers, select the **Once this action is performed, do not run the scenario again for this visitor** option.

18. Click **OK**. The New Ad Action window closes. In the campaign editor window, the conditions and corresponding actions you selected appear beneath the scenario name, as shown in Figure 9-7.

Figure 9-7 New Scenario



E-mail Actions

As part of specifying an e-mail action—an action that automatically sends an e-mail to a visitor when the action is triggered—you will need to reference a previously developed e-mail message. See the prerequisite tasks in Table 9-2 for more information.

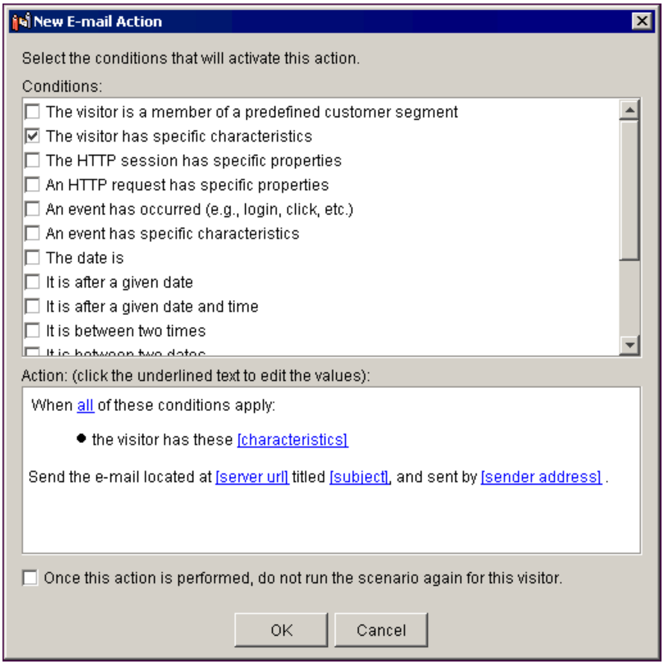
When you create this type of action, you must be able to log in to the running server.

Use the following procedure to create e-mail actions.

1. Select the name of the scenario to which you want to add the action.

2. Click **New Action →E-mail**. The New E-mail Action window appears, as shown in Figure 9-8.

Figure 9-8 New E-mail Action Window



3. In the New E-mail Action window, click the check boxes in the Conditions section to select the condition(s) under which the automatic e-mail will be sent. Text describing the conditions you selected appears in the Action portion of the window.

   The conditions correspond to the prerequisite tasks shown in Table 9-1.

4. For each condition you select, you must specify values for any bracketed hyperlinked text that appears in the Action portion of the window. Click the hyperlinked text and set the appropriate values.

   For example, if you selected **The visitor has specific characteristics**, you must specify a value for the hyperlinked **[characteristics]** text in **the visitor has these [characteristics]** condition statement.

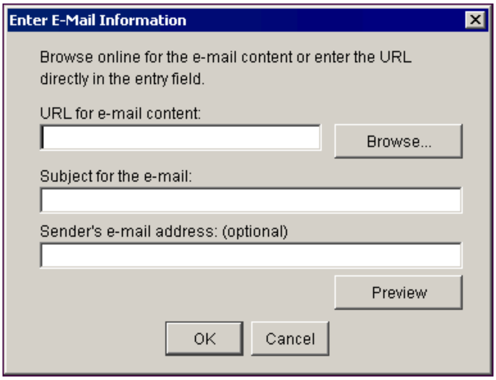
5. If you selected more than one condition, set the **When all of these conditions apply** option. When you click the word **all**, it changes to **any**. When you use the **any** option, only one of the conditions must be met to trigger the action.

6. Now select the e-mail message to send. Click **[server url]**, **[subject]**, or **[sender address]**.

   If you are prompted to log in, by default you must log in as a WebLogic Server system administrator or a WebLogic Portal system administrator.

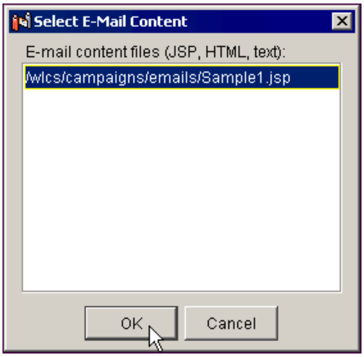
   The Enter E-mail Information window appears, as shown in Figure 9-9.

Figure 9-9 Enter E-mail Information Window



7. In the URL for E-mail Content field, click **Browse**. In the Select E-Mail Content window, select the e-mail file to use, and click **OK**, as shown in Figure 9-10.

Figure 9-10 Select E-mail Content Window



8. In the Enter E-Mail Information window, enter a subject for the e-mail and an optional sender's e-mail address. If visitors have e-mail information stored in their user profiles, the e-mail will be sent to those addresses.

Note: If you click **Preview** to see the e-mail message, you are prompted for a User ID. This is not a login requirement. The name you enter is the name that will appear in the greeting line of the preview.

9. Click **OK**.

10. If you want the scenario to run only once per visitor, select the **Once this action is performed, do not run the scenario again for this visitor** option.

    For example, if you wanted a given customer to receive only one e-mail, regardless of how many times that customer entered the site or matched the relevant conditions, you would select this option.

11. Click **OK**. The New E-mail Action window closes. In the campaign editor window, the conditions and corresponding actions you selected appear beneath the scenario name.

Discount Actions

Discount actions give visitors a discount during a purchasing session when certain conditions are met. For example, if a visitor puts a particular item in the shopping cart or logs in on a specific date, the visitor will receive a discount.

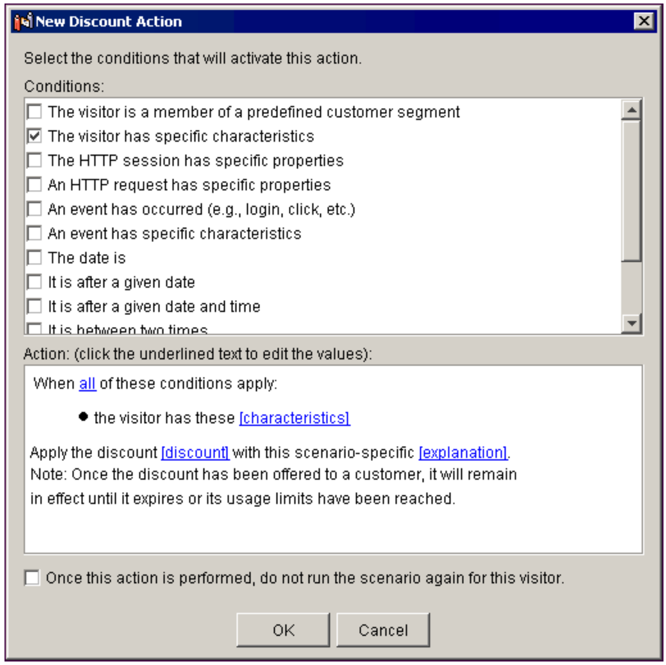
As part of specifying a discount action, you will need to select from a list of predefined discounts. Be sure that you have already defined the discounts you want to use. See the prerequisite tasks in Table 9-2 for more information.

Use the following procedure to create discount actions.

1. Select the name of the scenario to which you want to add the action.

2. Click **New Action →Discount**. The New Discount Action window appears, as shown in Figure 9-11.

Figure 9-11 New Discount Action Window



3. In the New Discount Action window, click the check boxes in the Conditions section to select the condition(s) under which the discount will be given. Text describing the conditions you selected appears in the Action portion of the window.

   The conditions correspond to the prerequisite tasks shown in Table 9-1.

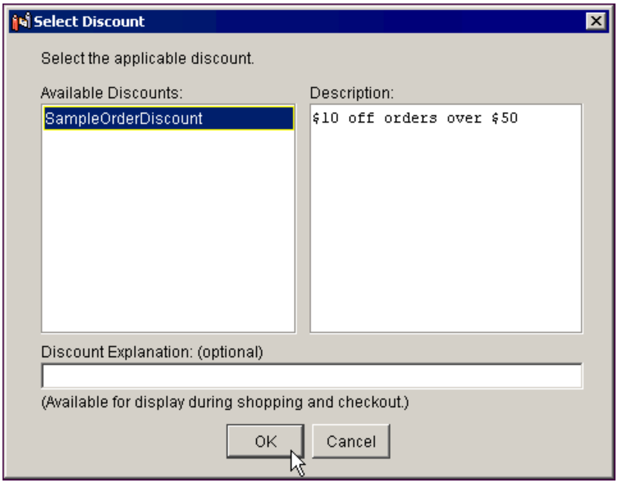
4. For each condition you select, you must specify values for any bracketed hyperlinked text that appears in the Action portion of the window. Click the hyperlinked text and set the appropriate values.

   For example, if you selected **The visitor has specific characteristics**, you must specify a value for the hyperlinked **[characteristics]** text in **the visitor has these [characteristics]** condition statement.

5. If you selected more than one condition, set the **When all of these conditions apply** option. When you click the word **all**, it changes to **any**. When you use the **any** option, only one of the conditions must be met to trigger the action.

6. Now select the discount you want to use. Click **[discount]** or **[explanation]**. The Select Discount window appears, as shown in Figure 9-12.

Figure 9-12 Select Discount Window



7. In the Select Discount window, select the discount you want, and optionally enter an optional explanation for the discount.

   The discount explanation can be displayed to customers receiving the discount if the shopping cart JSP supports this.

8. Click **OK**.

9. If you want the scenario to run only once per visitor, select the **Once this action is performed, do not run the scenario again for this visitor** option.

   For example, if you want your customers to receive the discount only when they register, regardless of how many times they have entered the site or matched the relevant conditions, you would select this option.

10. Click **OK**. The New Discount Action window closes. In the campaign editor window, the conditions and corresponding actions you selected appear beneath the scenario name.

Modifying and Deleting Scenarios and Actions

To modify a scenario or action, double-click it in the campaign editor window and modify its characteristics.

To delete a scenario or action, select it in the campaign editor window and click **Delete**.

Step 4: Defining Campaign Start and Stop Criteria

You can set a start date for a campaign, and you can end the campaign on a date and time or when certain campaign goals are met. Campaign goals are determined by the number of times Web content is viewed or clicked.

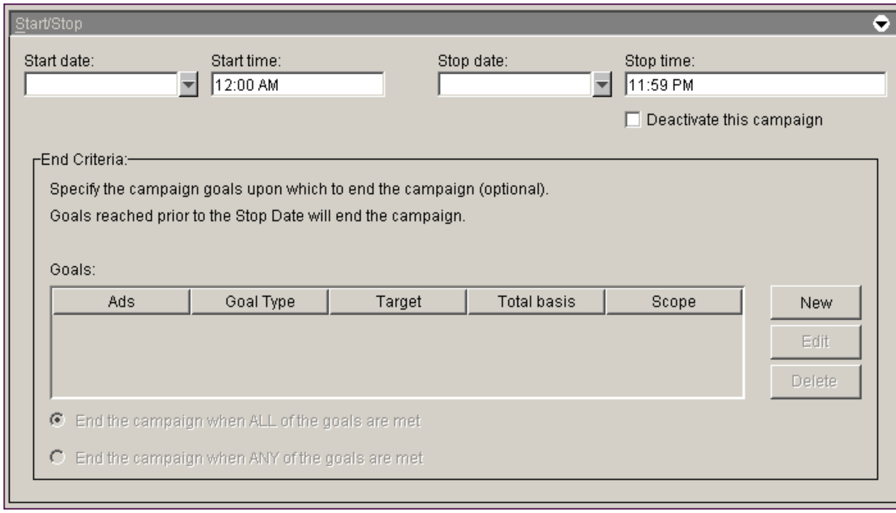
Notes: The dates and times you set are for your time zone. Visitors in other time zones experience the campaign start and stop relative to your time zone.

You may want to coordinate the start and stop times of your campaign with the start and stop times of your discounts.

Setting the Campaign Start Date and Time

1. In the campaign editor window, click the **Start/Stop** bar, as shown in Figure 9-13.

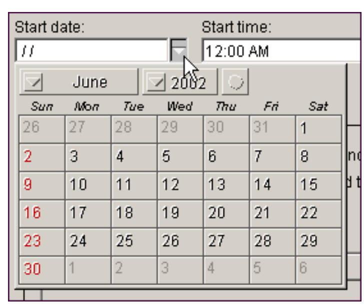
Figure 9-13 Campaign Start/Stop Pane



2. Click the down arrow in the **Start date** field, and set the campaign start date, as shown in Figure 9-14.

3. Enter a **Start time**.

Figure 9-14 Setting the Campaign Start Date



Ending a Campaign Using Dates and Times

In the Start/Stop pane (Figure 9-13), enter the appropriate **Stop date** and **Stop time**.

Using Goals to End a Campaign

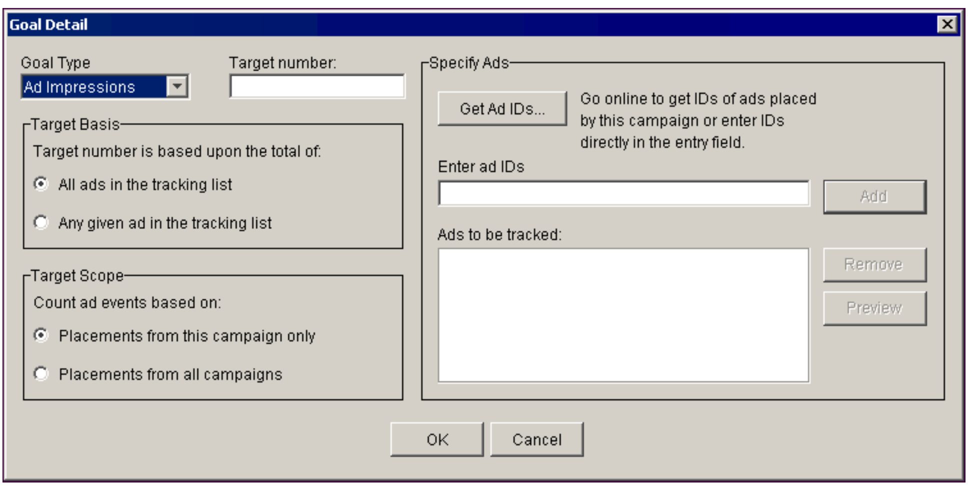
If you plan on using ad actions in your scenarios and want to end your campaign when certain Web-content-related goals are reached, you can end campaigns before the stop date when your goals are met.

You can specify campaign end criteria based on the number of impressions (views) associated with the Web content, the number of Web content clickthroughs, or a combination of both.

Use the following procedure to end campaigns when a certain number of impressions or clickthroughs occur:

1. In the End Criteria section of the Start/Stop pane, click **New**. The Goal Detail window appears, as shown in Figure 9-15.

Figure 9-15 Goal Detail Window



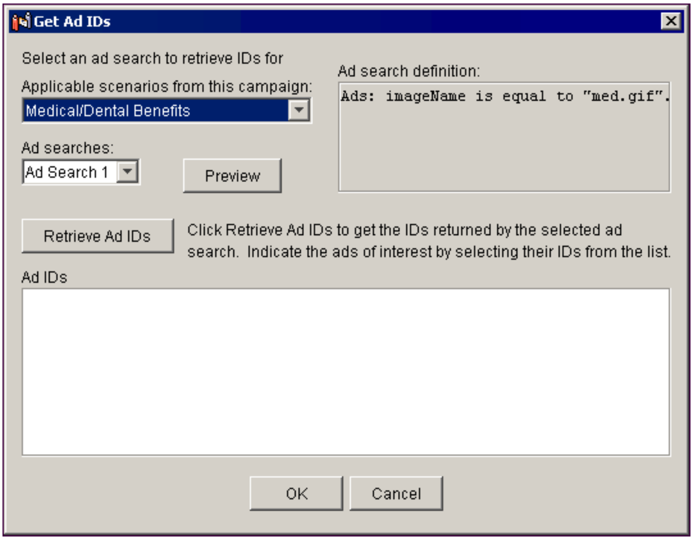
2. In the **Goal Type** field, select whether you want this end criterion to be based on Ad Impressions or Ad Clickthroughs.

3. In the **Target number** field, enter the number of impressions or clickthroughs required to meet the goal.

4. Now select the Web content that will be used to count impressions or clickthroughs. In the **Specify Ads** region, click **Get Ad IDs**. The Get Ad IDs window appears, as shown in Figure 9-16.

   The window lets you access only the scenarios and ad queries you have already defined.

Figure 9-16 The Get Ad IDs Window



5. In the **Applicable scenarios from this campaign** field, select the scenario containing the ad query that will display the Web content you want.

6. In the **Ad searches** field, select the number of the query that will retrieve the Web content you want.

7. Click **Retrieve Ad IDs**. The Web content retrieved by the query appear in the Ad IDs pane.

   If you are prompted to log in, by default you must log in as a WebLogic Server system administrator or WebLogic Portal system administrator.

8. Select the Web content you want to use for the campaign end criteria, and click **OK**.

9. If necessary, repeat the previous steps until all the Web content you want to use for end criteria is listed.

Note: If you want to remove an ad identifier from the list, select it and click Remove.

10. In the Target Basis region of the Goal Detail window, select whether the number you entered in the Target Number field can be reached by a total of **All** ads in the Tracking List, or when **Any** ad in the list reaches that number of clickthroughs or impressions.
11. In the Target Scope region, select whether you want to count the ads only within this campaign or across multiple campaigns.
12. Click **OK**.

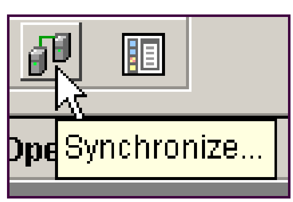
    Note: To modify a goal, select it in the Start/Stop pane and click **Edit**. To remove a goal, select it and click **Delete**.

13. If you set more than one goal, set the appropriate **End the campaign** option at the bottom of the window.
14. Save the campaign.

Step 5: Synchronizing the Campaign

After you create, modify, or delete a campaign, you must synchronize from the E-Business Control Center to the server for the changes to take place. Click the **Synchronize** button on the E-Business Control Center toolbar, as shown in Figure 9-17. If you are prompted to log in, you must log in as a WebLogic Server system administrator or a WebLogic Portal system administrator.

Figure 9-17 Synchronizing to the Server



For information on setting up the E-Business Control Center to connect with the server, see "Setting up the E-Business Control Center" on page 11-6 in the "System Administration" section of this guide.

Debugging and Modifying Campaigns

While testing the campaigns you have created, it is helpful to debug campaigns by resetting the campaigns so they behave as if they have been deployed for the first time. Then you can have a better idea of how to modify those campaigns.

Debugging Campaigns

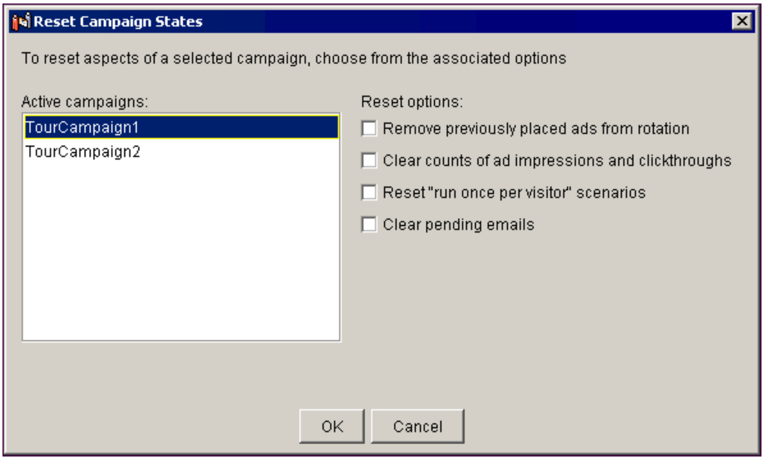
The E-Business Control Center has an option, designed primarily for debugging, that lets you do the following:

- Remove previously placed ads from rotation
- Clear counts of ad impressions and clickthroughs
- Reset "run once per visitor" scenarios
- Clear pending e-mails

Use the following procedure to reset campaign states. To use this procedure, you must be able to log in to the running server as a WebLogic Server system administrator or a WebLogic Portal system administrator.

1. In the E-Business Control Center, choose **Tools →Reset Campaigns**. The Reset Campaign States window appears, as shown in Figure 9-18.

Figure 9-18 The Reset Campaign States Window



2. In the Active Campaigns list, select the campaign you want to reset.

   Even Campaigns that have ended can be considered active and appear in the list. Only when the **Deactivate This Campaign** option is selected in the Start/Stop pane of a campaign does it not appear in the Active Campaigns list.

3. Select the appropriate reset options for the selected campaign.

4. Repeat the previous steps for all campaigns you want to reset.

5. Click **OK**.

   If you are prompted to log in, by default you must log in as a WebLogic Server system administrator or WebLogic Portal system administrator.

6. The Clearing Campaigns window appears, showing you the progress of the reset.

7. When the reset is complete, as displayed in the Clearing Campaigns window, click **OK**. You can begin debugging your campaign(s).

You can also set the E-Business Control Center to automatically display the Reset Campaign States window after you synchronize. To do this, choose **Tools →Project Settings**. On the Synchronization tab, select the **Show reset options for active campaigns** option and click **OK**. Each time you synchronize, after clicking the Close button in the Synchronizing status window when synchronization is complete, the Reset Campaign States window appears, letting you clear campaign states.

Modifying Campaigns

To modify a campaign, click the **Campaigns** icon in the E-Business Control Center Explorer window, and double-click the campaign you want to modify. Be sure to synchronize any changes you make by saving the campaign and clicking the **Synchronize** button on the E-Business Control Center toolbar.

For information on setting up the E-Business Control Center to connect with the server, see "Setting up the E-Business Control Center" on page 11-6 in the "System Administration" section of this guide.

Deleting Campaigns

Before you delete a campaign, consider the following alternatives that may address your needs:

- Deleting scenarios or actions
- Deactivating a campaign
- Modifying the campaign start or stop criteria

To delete a campaign, click the **Campaigns** icon in the E-Business Control Center Explorer window, select the campaign you want to delete, and click the **Delete** icon in the Explorer window toolbar.

Deactivating and Reactivating Campaigns

Once campaigns are saved, they are considered active. In other words, after synchronization, the campaign will be ready to run between the start/stop times you specified and when the appropriate conditions are met.

If for some reason you want to disqualify an active campaign from running or stop a running campaign prior to the specified stop date (or before end goals are reached, if your campaign contains them), follow this procedure.

1. Open the campaign.
2. Select the **Deactivate this campaign** option in the Start/Stop pane.
3. In the warning dialog box that appears, click **OK**.
4. Save the campaign.
5. Synchronize to the server by clicking the Synchronize button on the E-Business Control Center toolbar.

If at any time you want to reactivate a campaign, deselect the **Deactivate this campaign** option, click **OK** at the prompt, save the campaign, and synchronize.

Reactivating Campaigns That Have Ended Because of Goals Being Met

If a campaign that has ended because its goals were met prior to the end date of the campaign, you can reactivate that campaign by resetting the ad impressions or clickthroughs that caused it to reach its goals and end.

To use this procedure, you must be able to log in to the running server as a WebLogic Server system administrator or a WebLogic Portal system administrator.

1. In the E-Business Control Center, choose **Tools →Reset Campaigns**. The Reset Campaign States window appears, as shown in Figure 9-18.
2. In the Active Campaigns list, select the campaign you want to reset.
3. Select the **Reset counts of ad impressions and clickthroughs** option.
4. Click **OK**.
5. After the campaign states are reset, you must re-synchronize for the campaign to be reactivated by clicking the Synchronize button on the E-Business Control Center toolbar.

10 Administering Commerce Services

Using the WebLogic Portal Commerce tools, you can market your products effectively and efficiently. Once a developer has created and verified your product catalog database, you are ready to start administering your catalog for use by visitors. The product catalog administration tools are provided to let you easily manage and modify the presentation of catalog items.

Several types of commerce services are provided with WebLogic Portal: catalog services, order services, customer payment services, and discount services.

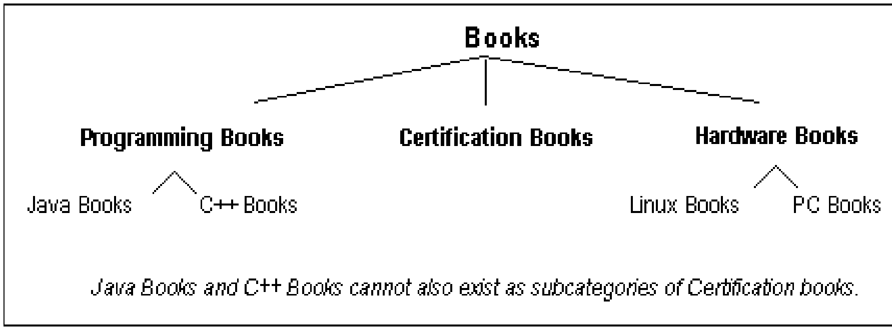
This section contains information on the following subjects:

- Creating and Administering a Catalog
- Administering Customer Order Information
- Administering Customer Payment Information
- Administering Discounts

Creating and Administering a Catalog

Through WebLogic Portal's catalog administration tools, you can divide your catalog items into categories for better presentation. These categories in the Product Catalog exist in a hierarchy.

Figure 10-1 Categories and Subcategories



A catalog can have the following components:

- The **Root directory**. In this example, the root is called "Books". This is the parent directory for the entire catalog. The root can have zero to many categories.
- **Categories**. If the category is already a top-level category in the hierarchy, then the parent category is the catalog's root category. Categories can be parent, children, and sibling categories based on their relationships to each other. Siblings are categories on the same hierarchy levels. Parent and child categories are categories under or above each other in the hierarchy.

  Categories cannot exist outside their hierarchical path. A subcategory of Java Books cannot be a subcategory of Programming Books and Certification Books.
- **Catalog items**. Catalog items represent a product for sale and can be placed in multiple categories or no category at all.

  In the above example, a Java Certification book could be in the categories "Certification Books" and "Java Books".

  If you delete an item in one category, it remains in any other categories it was already in. If you delete all the categories that an item belongs to, the item is moved to a separate, Uncategorized Items category in the catalog. (Sometimes these **uncategorized items** are referred to as **orphaned items**.) These items won't appear under the normal navigation by category; check Uncategorized Items regularly to verify whether items have become orphaned.

Starting the Catalog Management Tools

1. Start the WebLogic Portal Server, then start the WebLogic Portal Administration Tools. "Starting and Logging in to the Administration Tools" on page 1-6.
2. On the Portal Administration Tools Home page, click the **Catalog Management** icon.

Add Categories and Items to the Catalog

The following steps describe how to add data to the product catalog. It is assumed that the bulk of your data has been loaded into the catalog by a developer.

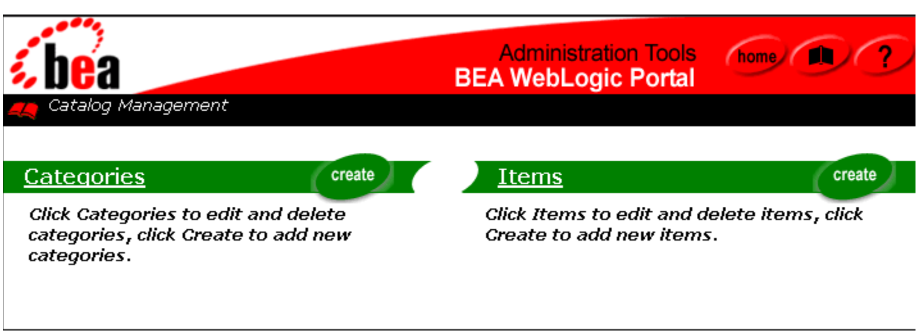
- Adding Categories to the Catalog
- Adding Items to the Catalog

Adding Categories to the Catalog

To add a category to the catalog, do the following:

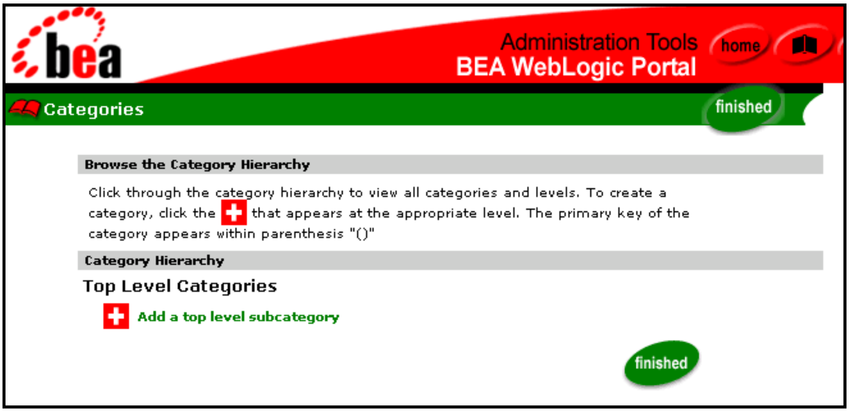
1. Make sure the WebLogic Portal server is running and that the Administration Tools are started. See "Starting and Logging in to the Administration Tools" on page 1-6.
2. On the Administration Tools Home Page, click the **Catalog Management** icon. The Catalog Management page appears.

Figure 10-2 Catalog Management Page



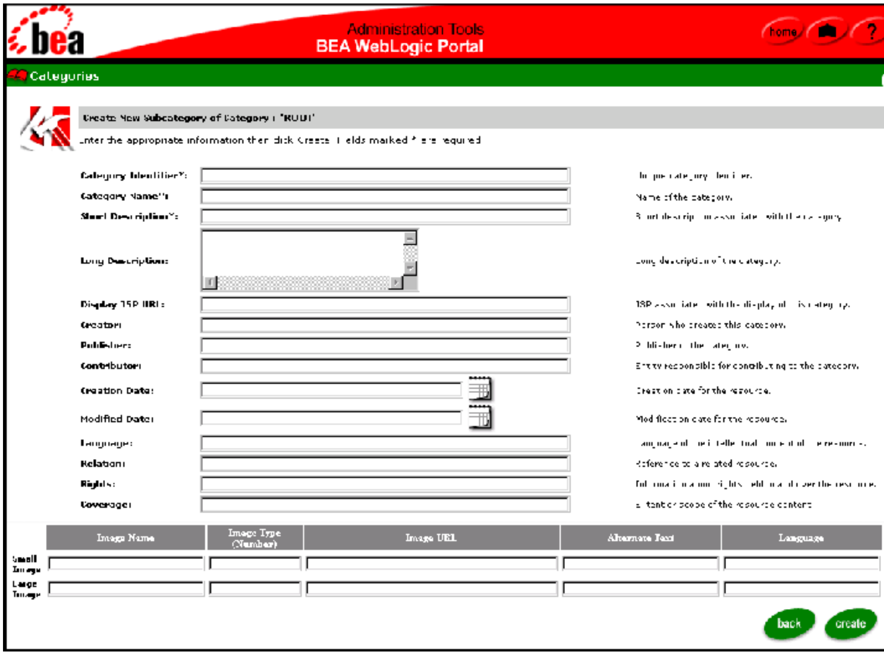
3. On the Catalog Management page, click the **Create** button on the Categories graphic. The Categories page appears.

Figure 10-3 Categories page



4. To add a new category at the current level in the hierarchy, **click the red and white plus sign icon** on the Categories page. Figure 10-4 shows the Create New Subcategory page, after you click the plus-sign icon.

Figure 10-4 Create New Subcategory page



5. Enter the necessary information, the required fields are indicated by the asterisk (*).

6. After you enter the field values, click **Create** to create the new category. A confirmation message appears at the top of the page.

7. Click **Back** at the bottom of the Create Category page. The Category Hierarchy page displays the new category.

To create subcategories in a existing category:

8. Click **the red arrow** to the left of the category name. The category expands to list all existing categories.

9. Click the **plus-sign** icon that appears next to the text: **Add a subcategory to category.**

10. The Create Category page appears, enter the desired information and click **Create**.

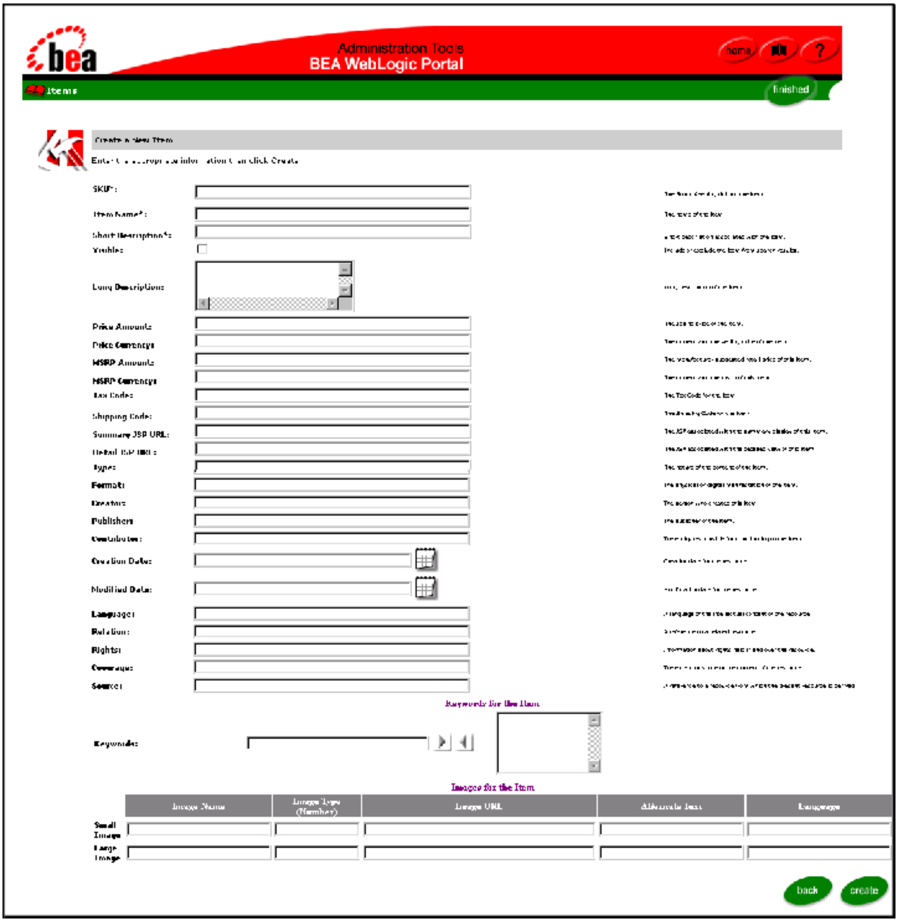
Repeat the previous steps to create additional categories and subcategories.

Adding Items to the Catalog

To add an item for display in the catalog, do the following:

1. Make sure the WebLogic Portal server is running and that the Administration Tools are started. For more information, see "Starting and Logging in to the Administration Tools" on page 1-6.
2. On the Portal Administration Tools Home page, click the **Catalog Management** icon.
3. On the main Catalog Management page, click **Create** in the Items section. The Create New Item page appears.

Figure 10-5 Create New Item page



4. Edit the product item fields. The required fields are indicated with an asterisk (*) next to the field name. SKU is the unique identifier.

5. Click the **Create** button to create the new item. A confirmation message is displayed on the Item page.

Modify Categories and Items in the Catalog

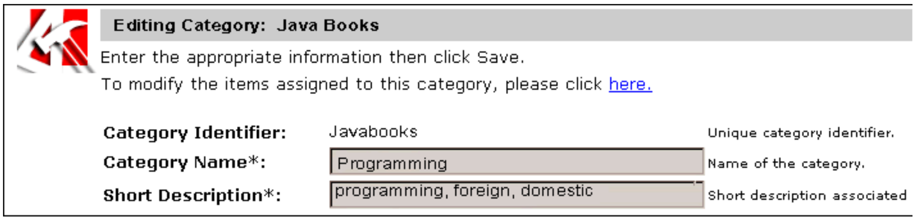
Once you have created items and categories, you can complete the following tasks:

- Assigning Items to Categories
- Editing the Attributes for Categories and Items
- Deleting Items or Removing Items from One or More Categories
- Deleting an Item from the Catalog
- Removing an Item From One or More Categories
- Removing Categories
- Moving Items from One Category to Another Category

Assigning Items to Categories

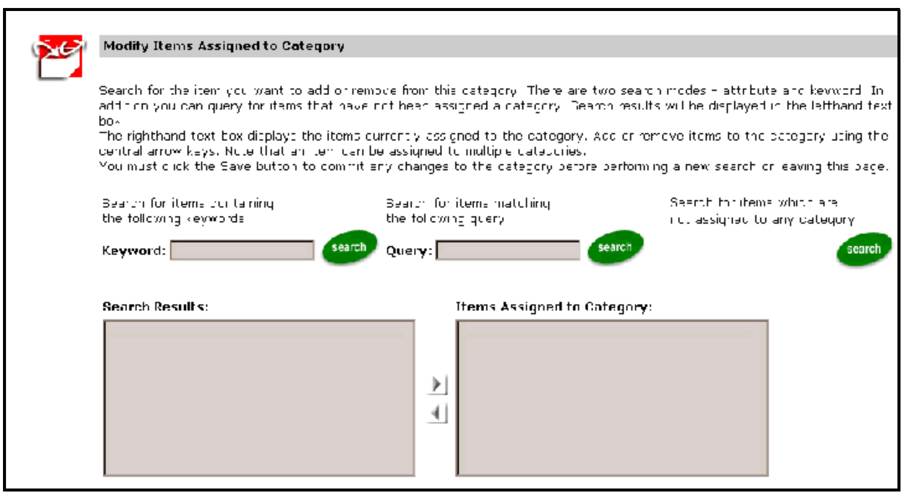
1. Make sure the WebLogic Portal server is running and that the Administration Tools are started. For more information, see "Starting and Logging in to the Administration Tools" on page 1-6.
2. On the Portal Administration Tools Home page, click **Catalog Management**.
3. On the Catalog Management page, click the **Categories** link.
4. In the Catalog hierarchy display, make sure the category or subcategory into which you want to add the item is checked. Expand a category and reveal its subcategories by clicking the **red arrow** to the left of a category name. (Clicking on the current category's underlined name takes you to the Edit Category page.)
5. Click the underlined link for the category or subcategory that you want to add items to. Figure 10-6 shows the top portion of a sample Editing Category: Java Books page.

Figure 10-6 Editing Category page



6. Click the link in the text "To modify the items assigned to this category, click **here."** A page is displayed that is similar to the one shown in Figure 10-7. In this particular page, there are currently no items assigned to the category.

Figure 10-7 Modify Items Assigned to Category page



7. The Items Assigned to Category text box shows the items that are already in this category. (In this example so far, there are no items in the Java Books category.) Search for the item you want to add or remove; the search results are displayed on the left-side text box.

   You can do so two ways: keyword or query-based.

   - In the Keyword input box, enter a keyword that you know is associated with the item you need to delete, and then click **Search**.
   - The following shows a query example:

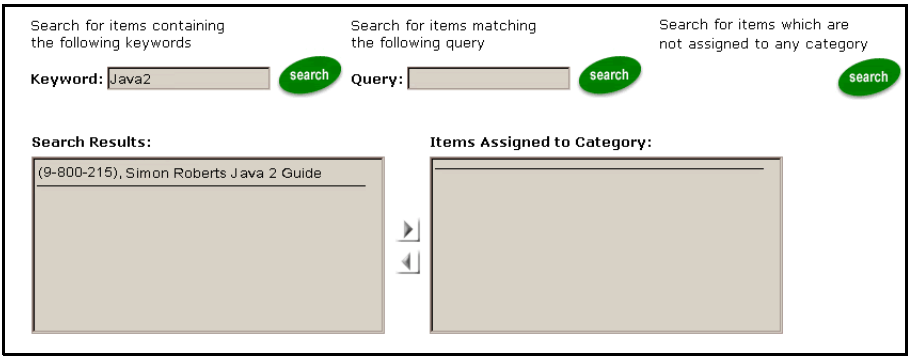
```
price > 100 && price <= 300

name like 'A*'

!(price > 100) || (msrpAmount >= 300)

modifiedDate < now
```

Figure 10-8 Sample Keyword Search Results on Modify Items Assigned to Category page



8. To assign an item to the category, select the item, then click the right arrow to move the item to Items Assigned to Category box.

9. Click the **Save** button to commit any changes to the category before performing a new search or leaving this page.

Editing the Attributes for Categories and Items

You can use the Catalog Management Administration Tools to edit the attributes for existing categories and items. This section documents the following tasks:

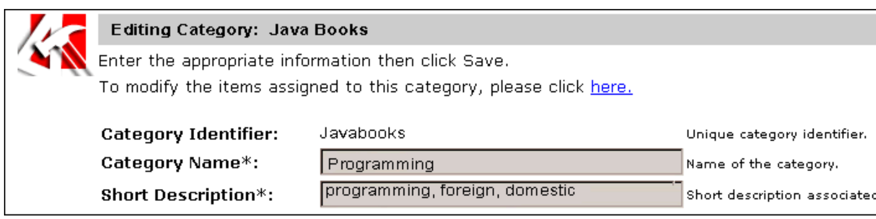
- Editing Category Attributes
- Editing Product Item Attributes
- Changing the Availability of an Item

Editing Category Attributes

To edit the attributes for a category, follow these steps:

1. Make sure the WebLogic Portal server is running and that the Administration Tools are started. For more information, see "Starting and Logging in to the Administration Tools" on page 1-6.
2. On the Portal Administration Tools Home page, click the **Catalog Management** icon.
3. On the Catalog Management page, click **Categories**.
4. On the Categories page, you can find the category you want to modify by browsing through the hierarchy of categories and subcategories, or entering its category identifier in the search input box.
5. When the category you want to modify is displayed, click on the name of the category. Figure 10-9 shows a portion of the resulting page from clicking the Java Books.

Figure 10-9 Editing Category: Java Books Sample page



6. On this page, you can add, change, or remove the category's attributes.

   Warning: You cannot modify the category's unique identifier. If you need to change a category identifier, you must delete the category and then create a new category with a new, unique identifier.

7. After you edit the attributes for the category, click the **Save** button. To exit the page without committing your changes, click the **Back** button.

Editing Product Item Attributes

1. Make sure the WebLogic Portal server is running and that the Administration Tools are started. For more information, see "Starting and Logging in to the Administration Tools" on page 1-6.
2. On the main administration page, click the **Catalog Management** icon.

3. On the main Catalog Management page, click the underlined **Items** button on the **Items** graphic.

4. Search for the product item in the Item Search page.

   You can find the product item by entering one of its keywords, entering a query-based search expression, or by searching for orphaned items.

   - Enter a keyword you know is associated with the item and click Search.
   - The following shows an example query:

     ```
     price > 10 && price <= 50
     name like 'H*'
     !(price > 20) || (msrpAmount >= 30)
     modifiedDate < now
     ```

   Figure 10-10 shows the search for `price > 10 && price <= 50`.

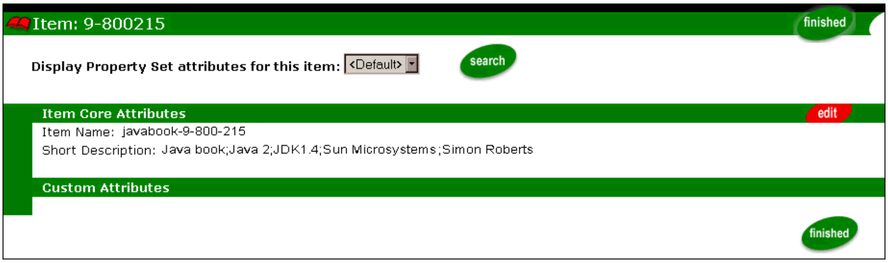
Figure 10-10 Sample Query-Based Search to Find a Product Item

   - Or click the **Search** button next to the text: **Search for items which are not assigned to any category**. Items who were never assigned to a category or whose categories have been deleted will be displayed.

   Click the underlined `Next` button or `Previous` button (if visible) to view additional items.

5. Click on the desired item to edit item attributes. Figure 10-11 shows the results for a search result for a Java book.

Figure 10-11 Sample Initial Edit Item Attributes page



6. Click the **Edit** button to display the Edit Item Information page. Use this page to add, change, or remove the item's attributes.

   Editable attributes include the item's price, short and long descriptions, its basic inventory setting, and its visibility in the catalog.

7. Before you save any changes on the Edit Item Information page, set the item's inventory status on the Item Inventory page.

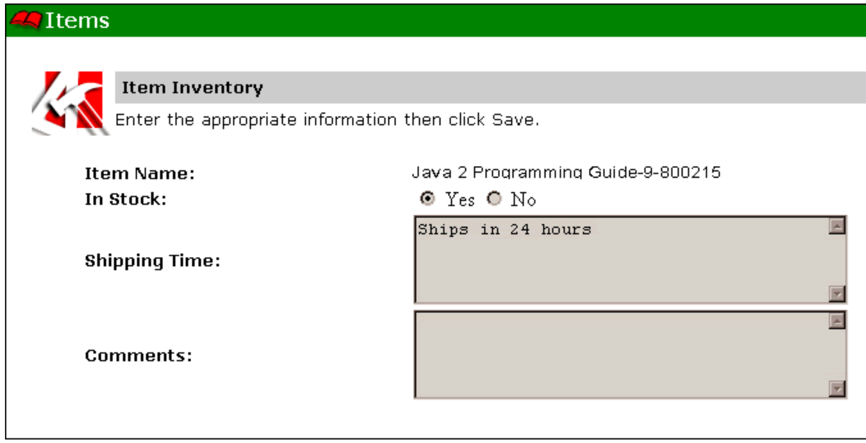
8. After you edit the attributes for the item, click the **Save** button to commit your changes to the database. A confirmation message appears. To exit the page without committing your changes, click the **Back** button.

Changing the Availability of an Item

The Edit Item Information page includes a link to the inventory function.

Figure 10-11 in the previous section shows the top portion of an Edit Item Information page. Figure 10-12 shows the Item Inventory page that is displayed when you click this link.

Figure 10-12 Sample Item Inventory page



9. Click **Yes** or **No** to indicate whether the specific product item is in stock. Enter a text string (which can be displayed to a visitor of your Web site on the item details page) to indicate the shipping time. You can also enter additional comments about the item's inventory.

10. If you made any changes on the Item Inventory page, click the **Save** button. Otherwise, click the **Back** button.

Deleting Items or Removing Items from One or More Categories

As previously mentioned, you can assign an item to one or more categories. You can use the administration tools to:

- Delete the item entirely from the catalog.
- Remove the item from one category while keeping its assignment to another category.
- Remove the item, one category at a time, from all categories, creating an orphaned item (also called an uncategorized item) that still resides in the database).

Deleting an Item from the Catalog

Perform Catalog Management operations during non-peak Web site usage. When you delete an item or remove an item from a category using the WebLogic Portal Administration Tools, the item record is automatically removed from the Web site, ensuring that subsequent Web site visitors get a valid view of the available, categorized items.

The steps to delete an item are as follows:

1. Make sure the WebLogic Portal server is running and that the WebLogic Portal Administration Tools are started. See "Starting and Logging in to the Administration Tools" on page 1-6 for instructions.
2. On the main administration page, click the Catalog Management icon.
3. On the main Catalog Management page, click the underlined `Items` link.
4. On the Item Search page, search for the item using a keyword search or query
5. In the Search Results list, when the item that you need to delete is displayed, click the red *X* to the right of the item name.

   Warning: When you click the red *X* icon, the delete operation is immediate and permanent; a confirmation page is not displayed.

Removing an Item From One or More Categories

You can remove (unassign) an item, one category at a time. If you remove the item from all categories, it remains in the Commerce database and is flagged as an uncategorized item, also known as an orphaned item.

Before you begin the following procedure, make sure you know the exact name of each category from which you want to remove an item.You can run the catalog's Web application and browse through the hierarchy of categories to find the item name.

1. Make sure the WebLogic Portal server is running and that the Administration Tools are started. For more information, see "Starting and Logging in to the Administration Tools" on page 1-6.
2. On the Portal Administration Tools Home page, click the **Catalog Management** icon.
3. On the Catalog Management page, click the underlined **Categories** link.

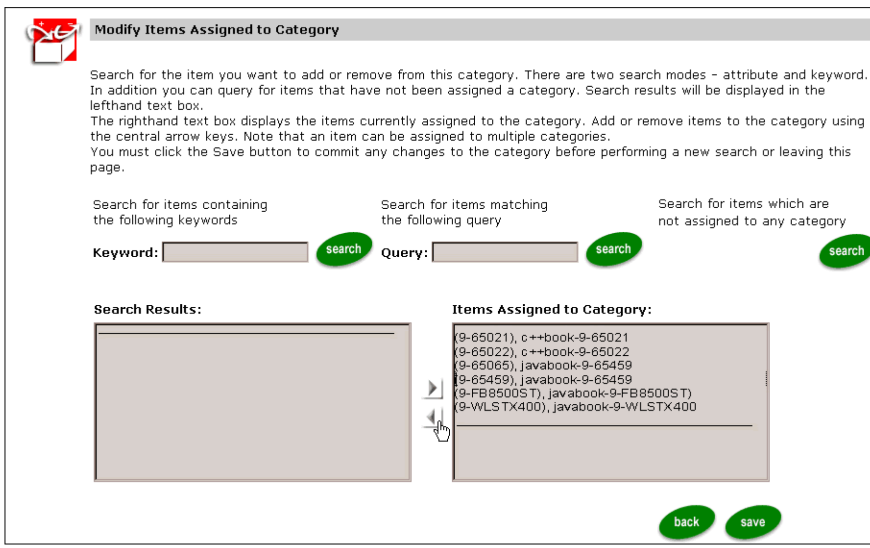
4. In the Catalog hierarchy display, click the category or subcategory from which you want to remove the item. To expand a current category and reveal its subcategories (if any), click the red arrow to the left of a category name.

5. When the category or subcategory name is shown in the hierarchy, click its underlined link.

6. On the Editing Category: <category name> page, click the link in the text: To modify the items assigned to this category, click **here**.

   Figure 10-13 shows a sample page.

Figure 10-13 Removing an Item from a Category



7. Select the item you wish to remove, then click the **left arrow** to remove the item from the category.

8. Click the **Save** button near the bottom of the page to make the change. You can also click the **Back** button near the bottom of the page to cancel any updates you made on the page.

Removing Categories

When you remove a category, any subcategories are also removed. Any items in the category or subcategories that are not assigned to another existing category become "orphaned items" and remain in the catalog, available for reassignment to another category.

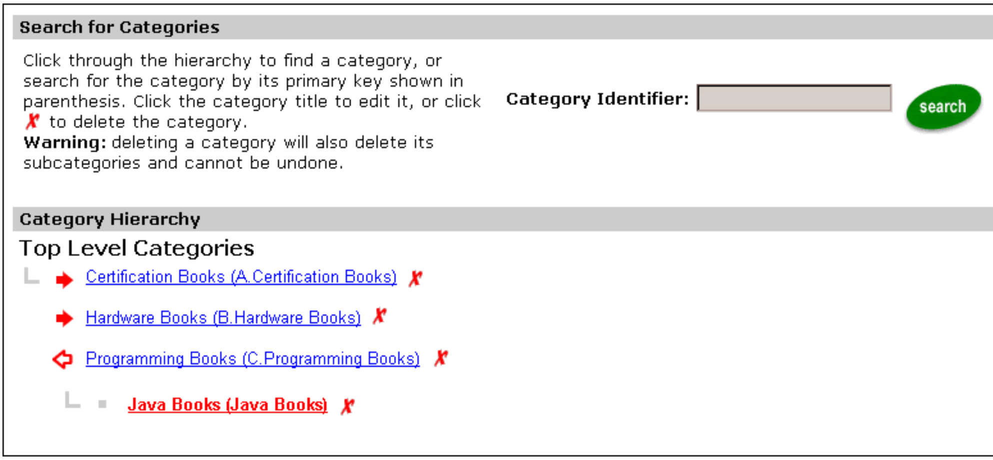
If you need to move existing subcategories to another category, do so now before proceeding.

To remove a category, do the following:

1. Make sure the WebLogic Portal server is running and that the Administration Tools are started. For more information, see "Starting and Logging in to the Administration Tools" on page 1-6.
2. On the Portal Administration Tools Home page, click the **Catalog Management** icon.
3. On the Catalog Management page, click the underlined **Categories** button on the Categories graphic.
4. Do one of the following to locate the category you want to modify:
   - Enter the category identifier in the search input box. In the sample data that comes with the catalog tables in the Commerce database, the category identifier is a letter of the alphabet followed by the category name.
   - Browse the hierarchy of categories and subcategories.

   Figure 10-14 shows a portion of the resulting Categories page after searching for a category identifier.

Figure 10-14 Sample Category Search Result



5. Click the red *X* icon to the right of the category you want to remove.

Warning: Be aware that deleting a category removes it and all of its subcategories (if any).

Moving Items from One Category to Another Category

To move an item from one category to another category:

- Assign the item to another category, as described in “Assigning Items to Categories” on page 10-8.
- Remove the item from the current category, as described in “Removing an Item From One or More Categories” on page 10-15.

Administering Customer Order Information

These services handle all of the tasks necessary to process customer orders, from the acceptance of items in their shopping cart to final order confirmation.

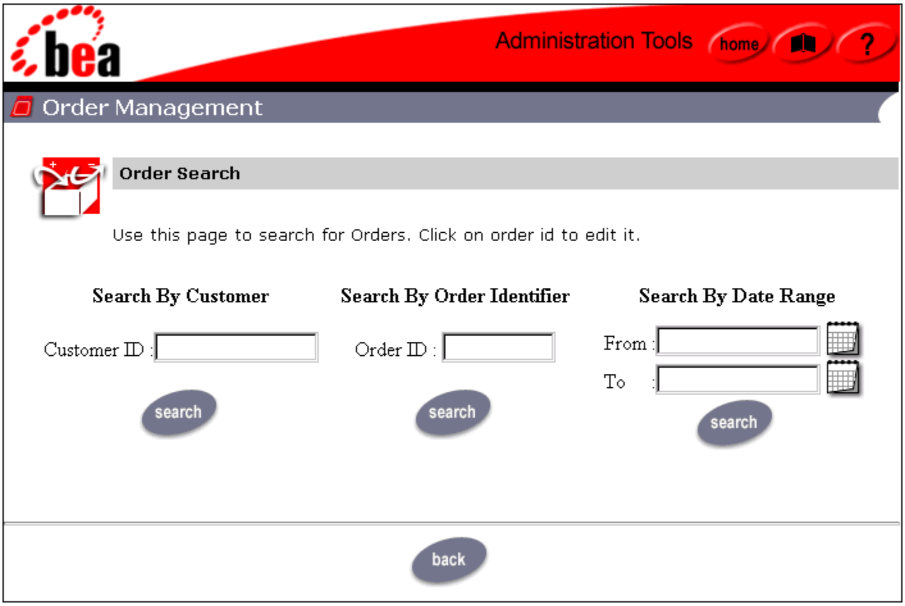
This section covers information on the following subjects:

- Locating Orders
- Updating Order Status

Locating Orders

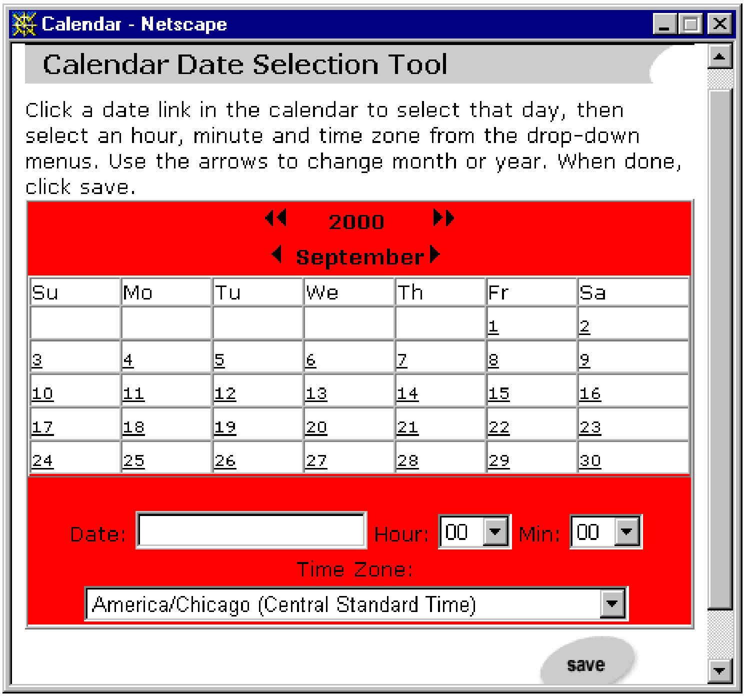
To access the Order Management tools, click the **Orders** icon in the Portal Administration Home page, the Order Management search page (shown in Figure 10-15) appears.

Figure 10-15 The Order Management Search Page



1. You may do any of the following:
   - Search by Customer ID: Enter the ID in the **Customer ID** field.
   - Search by Order ID: Enter the ID in the **Order Identifier** field.
   - Search by date range: Specify date ranges using the Calendar Date Selection Tool, shown in Figure 10-16.

Figure 10-16 The Calendar Date Selection Tool



2. Enter the range and click **Save**; You selection appears in the **From** and **To** fields.

3. Click the **Search** button.

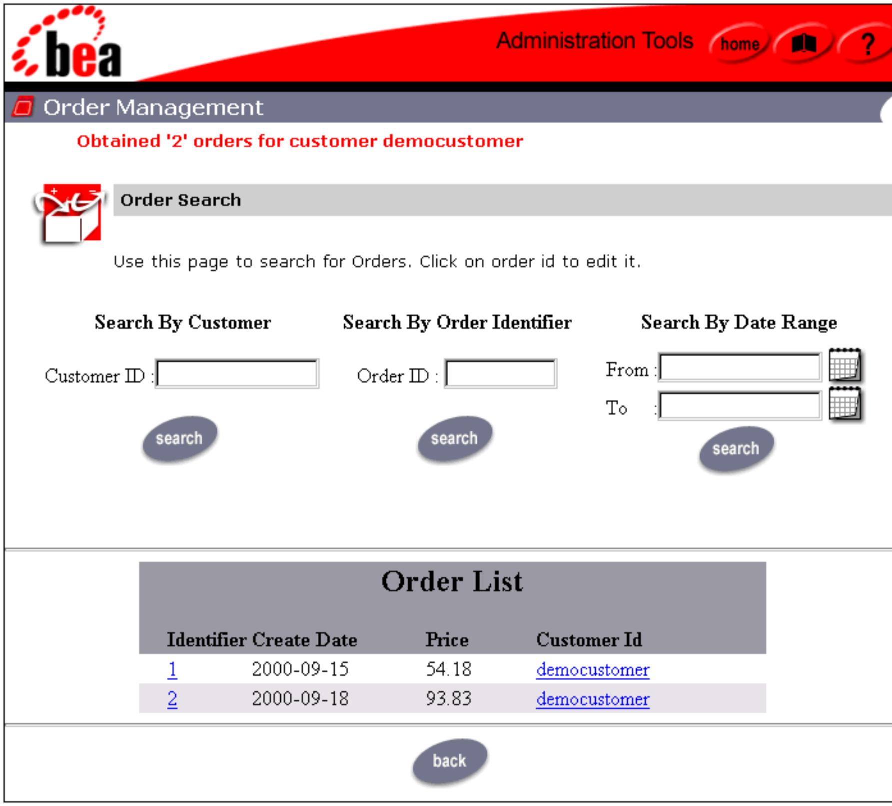
Note: The results for searches by date range are inclusive. That is, if you search for orders placed between July 22, 2002 and August 24, 2002, results will include orders placed on July 22 and orders placed on August 24.

4. Click the corresponding **Search** button.

5. View the text message that appears at the top of the page, indicating how many orders were found for the search.

   An example of a search by customer ID is shown in Figure 10-17. The Order List shows the Order Identifier number, the date the customer placed the order, and the price of the order.

Figure 10-17 Sample Results for Order Search by Customer ID



6. To see details for a particular order (for example, the product items ordered, shipping information, tax, etc.), click the hyperlinked **Order Identifier number** to load the Order Status page (shown in Figure 10-18).

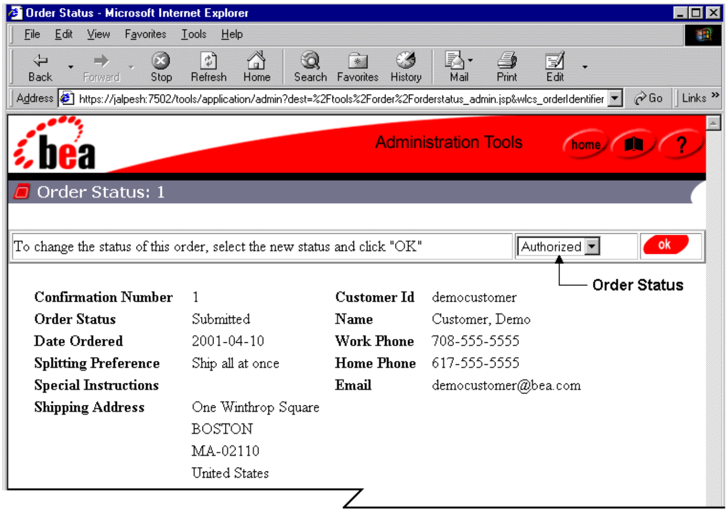
Figure 10-18 Sample Order Status Page

7. Click the **Back** button at the bottom of the Order Status page to return to the Order Management search/results page.

Updating Order Status

The Order Status Page (shown in Figure 10-19) appears after you click the hyperlinked **Order Identifier number** on the Order List page. This section describes how to change the status of an order.

Figure 10-19 Sample Order Status Page



1. Click the **drop-down arrow** on the Order Status list.

2. Select the new status and click **OK**.

   After a new status is entered, new entries appear in the Order Status list. These entries reflect the sequence of order status. For example, the initial Order Status list might contain the following:

   - Authorized
   - Cancelled
   - Rejected

   If you change the order status to Authorized, the Order Status list might contain the following options:

   - Backordered
   - Cancelled
   - Shipped

Administering Customer Payment Information

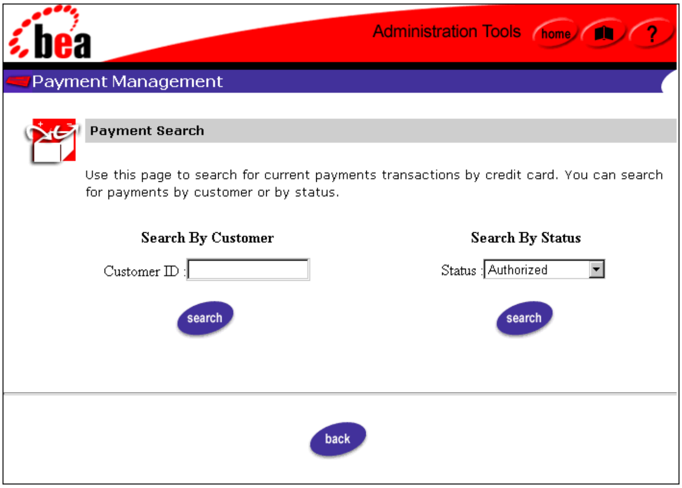
You can use the Portal Administration tools to search for payments and then troubleshoot that payment information if necessary. This section contains the following information:

- Searching for Payments
- Authorizing Transactions

Searching for Payments

1. Start the WebLogic Portal Administration Tools, see "Starting and Logging in to the Administration Tools" on page 1-6.
2. In Administration Tools Home page, click the Payment Management icon. The Payment Management search page (shown in Figure 10-20) appears.

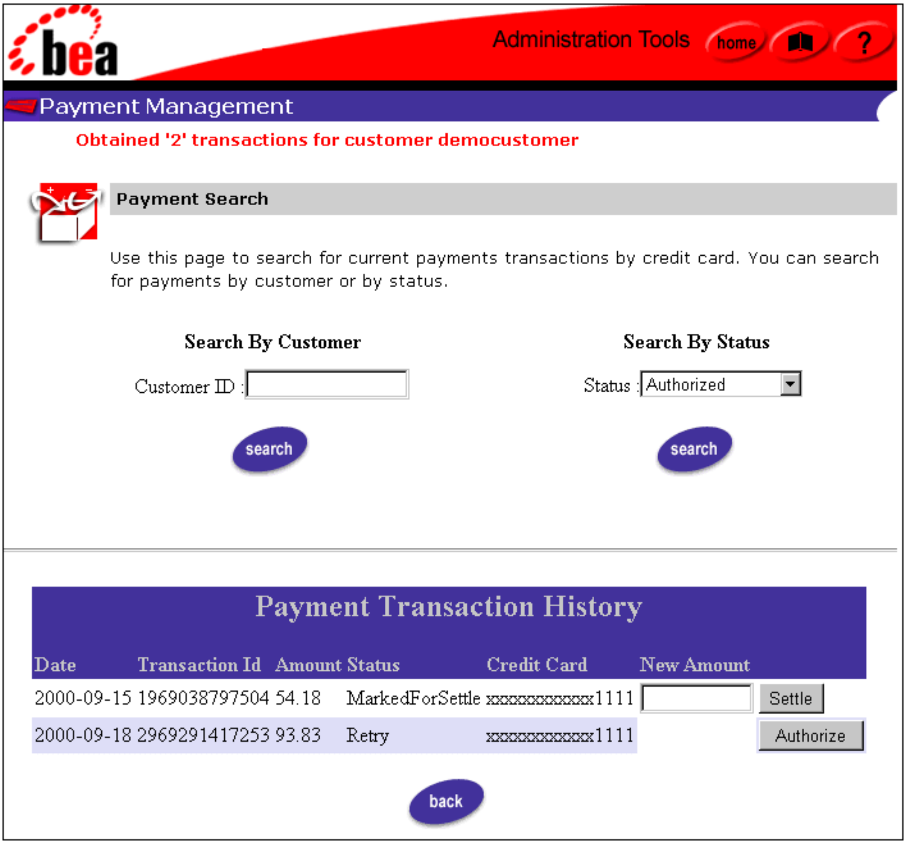
Figure 10-20 The Payment Management Search Page



3. Enter the search criterion.
   - Search by Customer ID – Enter the customer's ID in the **Customer ID** field.
   - Search by payment status – Select the status from the **Status** pull-down menu.
4. Click the **Search** button.
5. View the text message that appears at the top of the page, indicating how many payments were found for the status.

The actual results appear as shown in Figure 10-21.

Figure 10-21 Sample Results for Payment Search by Customer ID



Authorizing Transactions

The Payment Transaction History section (which appears in the lower portion of the Payment Management search page after a search is performed, see Figure 10-21) shows information about each payment transaction, including the date, the transaction ID, the payment amount, the payment status, and a masked version of the credit card that was used to complete the transaction.

Table 10-1 provides a description for each of the possible payment status values.

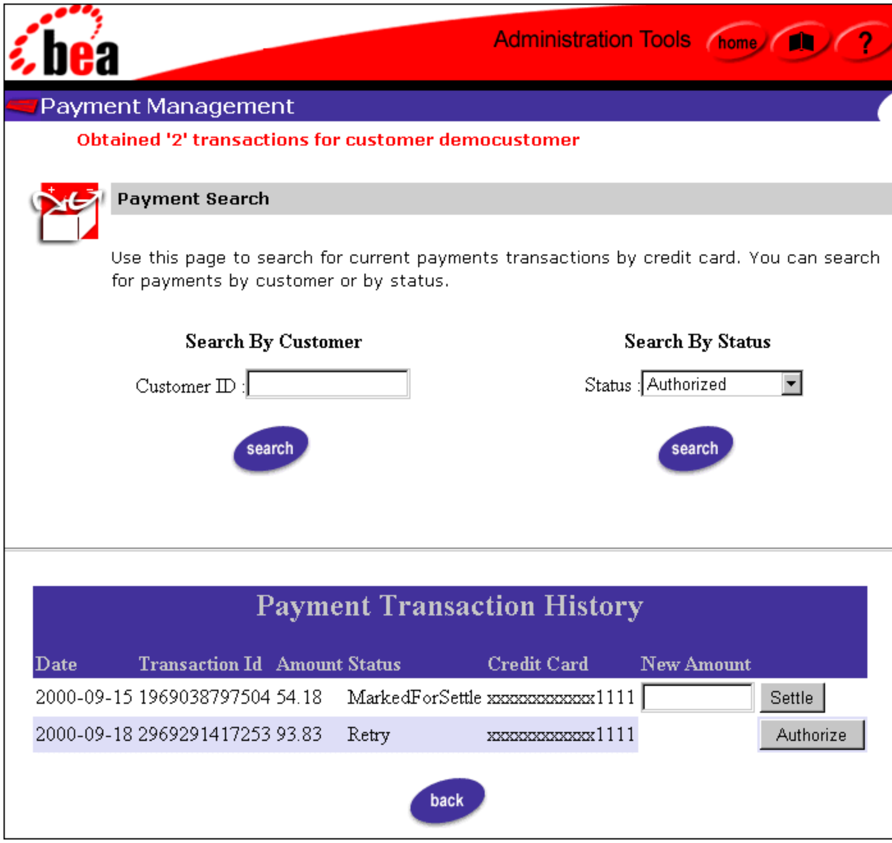
Table 10-1 Payment Status Values

Status	Description
Authorized	The transaction has been successfully authorized, and is awaiting capture and settlement.
MarkedForSettle	The transaction has been batched for settlement (captured).
PendingSettle	The transaction settlement process has been initiated.
Settled	The transaction has been settled.
Rejected	Authorization for the transaction was rejected.
Retry	The transaction has been recorded, but authorization was either unsuccessful or has been deferred.

Note: For a merchant to obtain the funds associated with a payment transaction, the transaction must be authorized, captured, and settled. Depending on the status of the transaction, a text field and associated button may appear at the end of the line in the Payment Transaction History section, making it possible to manually change the state of the transaction.

1. If the status of the order is set to Retry, an **Authorize** button appears (Figure 10-22).

Figure 10-22 Payment Transaction History With Authorize Button



2. Click the **Authorize** button; the WebLogic Portal product connects to the Payment Web service to reserve credit from the customer's account on behalf of the merchant.

   A transaction is placed in the Retry state if you have configured the server to defer authorization of payments, or if the Payment Service was unavailable due to a system failure. In such cases, the business will not fulfill the order until the status on the associated payment transaction has been set to Authorized.

Administering Discounts

Discounts enable you to put permanent or temporary price reductions on items, providing incentives to customers to buy additional products, buy products by a particular date, or by other criteria you use to define the discount.

This section includes the following information about administering discounts:

- Defining a New Discount and Attributes
- Saving, Finalizing, and Synchronizing a Discount
- Finding Existing Discounts and Items
- Modifying an Existing Discount
- Controlling Active Status and Deleting Discounts

Defining a New Discount and Attributes

This section provides the following information:

- Define a New Discount
- Specify General Discount Information
- Specify Discount Terms
- Establish the Discount Duration and Overall Limit

Define a New Discount

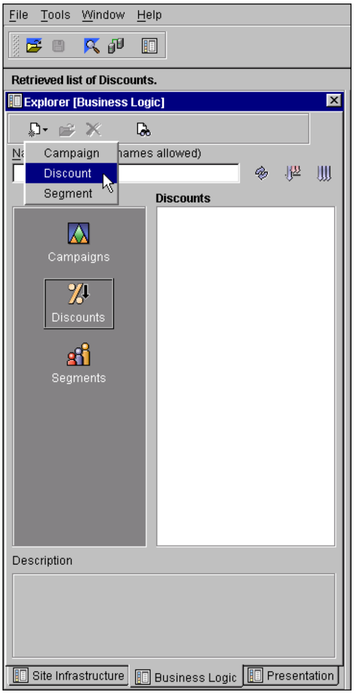
You can specify three kinds of discounts:

- **Per Item:** A discount attached to an individual item.
- **Set-based:** A discount attached to a grouping of specific items.
- **Per-order:** A discount attached to an order.

To define a new discount, do the following:

1. Start the E-Business Control Center if it is not already running. See "Starting the E-Business Control Center" on page 1-7. The Explorer panel appears on the left hand side of the screen.

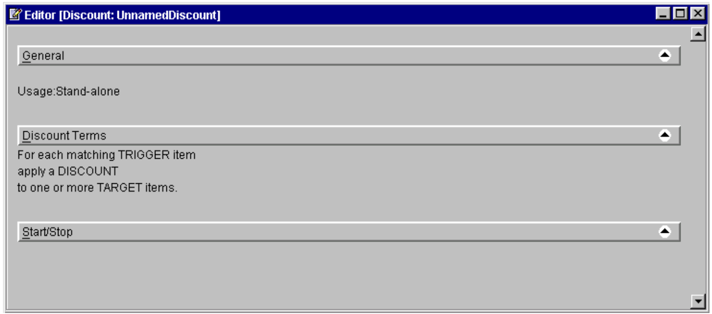
Figure 10-23 Choosing to Create a New Discount



2. In the Explorer window, click the Business Logic tab. (You can click the Discounts icon to see a list of existing discounts.)

3. Click the **New** button, and select **Discount**.

Figure 10-24 Discount Editor



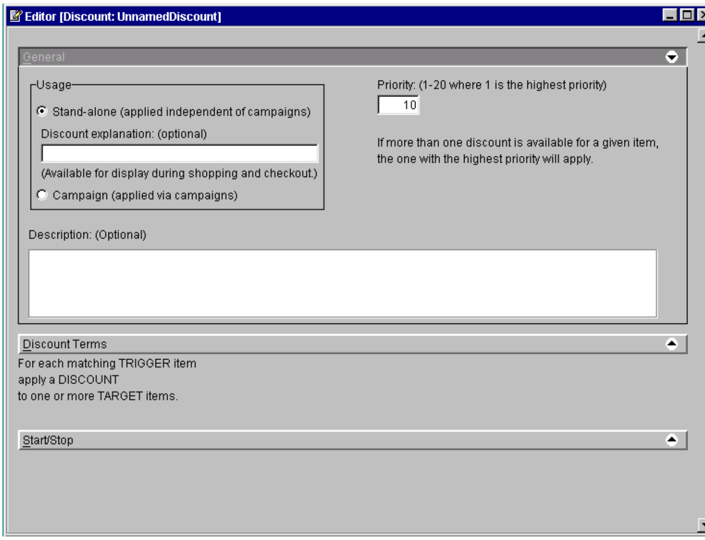
4. Using the Discount Editor window in Figure 10-24. Follow the steps provided in the next four sections. The sections walk you through the necessary steps to create discounts:

   - "Specify General Discount Information" on page 10-31
   - "Specify Discount Terms" on page 10-32
   - "Establish the Discount Duration and Overall Limit" on page 10-40
   - "Saving, Finalizing, and Synchronizing a Discount" on page 10-41

Specify General Discount Information

1. In the Discount Editor, click the **General** bar. The General pane opens.

Figure 10-25 General pane of the Discount Editor



2. Select whether you wish to create a **Stand-Alone** or **Campaign** discount.

   If you selected the Stand-Alone usage, you may want to enter an explanation of the discount for your customers in the corresponding field. If your page design (JavaServer Pages) shows the information in this field, it will be displayed to customers receiving the discount.

3. Specify the priority for the discount by entering a number in the **Priority** field.

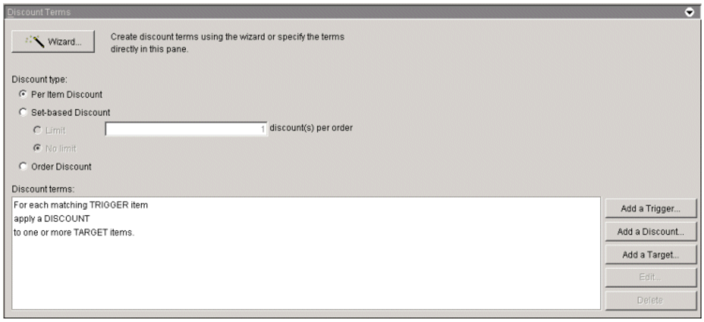
4. Provide a description of the discount in the Description text area.

5. To close the pane, click the **General** bar.

Specify Discount Terms

1. Click the **Discount Terms** bar. The Discount Terms pane opens.

Figure 10-26 Discount Terms pane in the Discount Editor



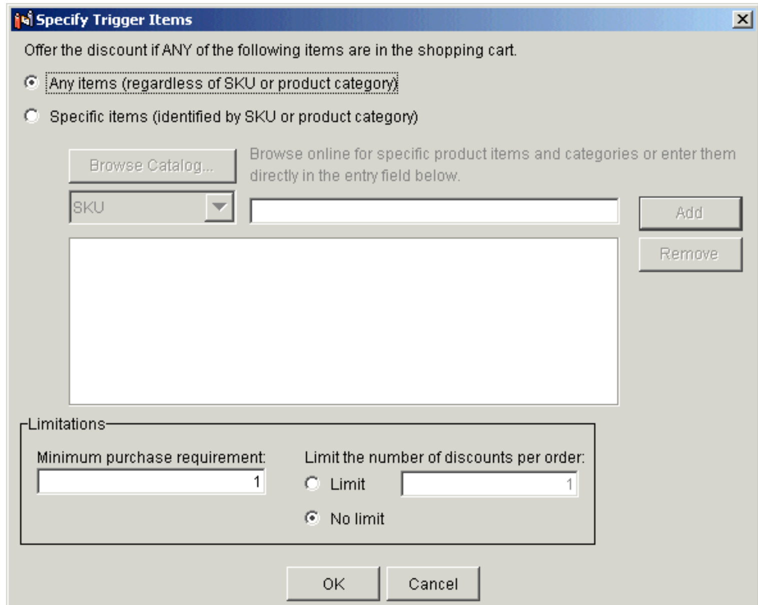
2. Select the corresponding radio button for **Per Item**, **Set-based**, or **Order** discount types.
3. Depending on the discount type you selected in the previous step, follow the steps described in:
   - A) Per Item Discounts
   - B) Set-Based Discounts
   - C) Order Discounts

A) Per Item Discounts

A Per Item discount is a discount attached to an individual item. To define the discount terms, use the Discount Terms Editor to complete the following steps:

1. In the Discount Terms Editor, click the **Add a Trigger** button. The Specify Trigger Items window appears.

Figure 10-27 Specify Trigger Items window



2. Select a discount trigger option by clicking either the **Any Items** or **Specific Items** radio button.

   For example, if you select the Any Items option, customers having *any* product items in their shopping cart (regardless of what these items are) would qualify for the discount. If you select the Specific Items option, customers having only the items you specify (by SKU number or product category) in their shopping cart would qualify for the discount.

3. If you selected **Specific Items** in the previous step, complete the following steps to specify which items trigger the discount:

   a. Select either **SKU** or **Category** from the drop-down list.

   b. Enter the **SKU** or **category** from your product catalog into the corresponding field.

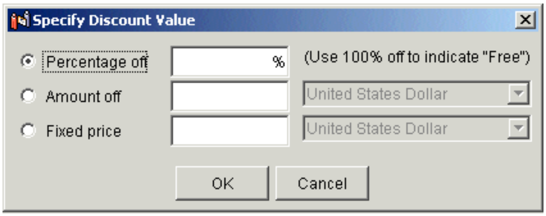
   c. Click the **Add** button. The trigger items that you specified appear in the text area below. Repeat this process for each item you want to use as a trigger item.

   Note: If you specify more than one trigger item (either by SKU or category), *any* of those items present in a customer's shopping cart qualifies the customer for the discount. In other words, multiple trigger items—those shown on the same line in the Discount Terms list—are treated as alternates.

4. Specify the order limit for the discount by selecting either the **Limit** or **No Limit** radio button. The order limit specifies how many times per order the discount can be applied.
5. If you specified an order limit, enter the **limit value** in the corresponding field.
6. If desired, change the value in the **Minimum Purchase Requirement** field from 1 to another numeric value. The order limit must be greater than or equal to the minimum purchase requirement.
7. Click **OK**. The Specify Trigger Items window closes, and the first phrase shown in the Discount Terms list changes to reflect your choices.

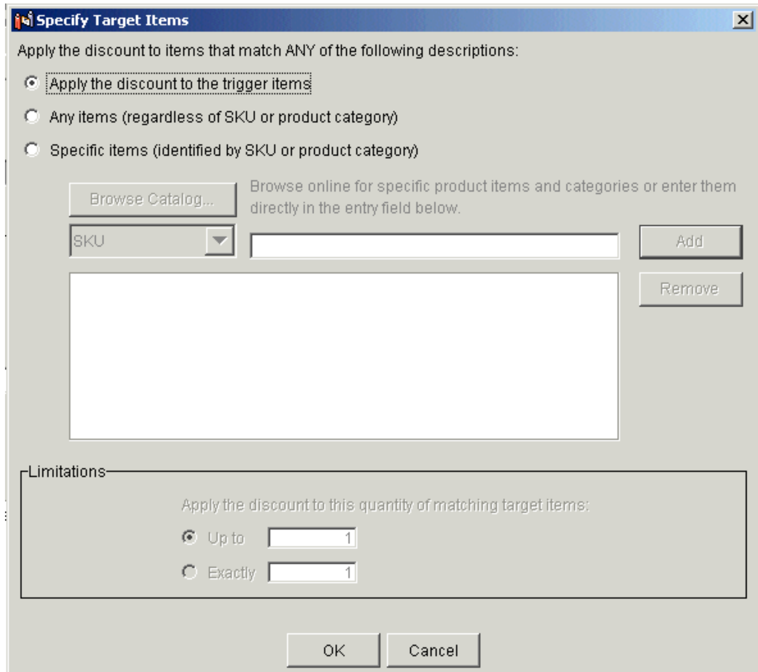
   To specify additional triggers, repeat steps 1 through 6.
8. Click the **Add a Discount** button. The Specify Discount Value window opens.

Figure 10-28 Specify Discount Value window



9. Select a discount value, and then enter the percent, amount, or price of the item in the corresponding field. You do not need to type the % or currency symbols into the fields. You can choose a Percentage off, an Amount off, or a Fixed Price discount.
10. If required, choose the type of currency from the corresponding drop-list. Be sure to select the same currency type that you use for the items in your catalog and for shipping charges.
11. Click **OK**. The Specify Discount Value window closes, and the second phrase shown in the Discount Terms list changes to reflect your choices.
12. Click **Add a Target**. The Specify Target Items window opens.

Figure 10-29 Specify Target Items window



13. Select whether you want the discount to target the same items that triggered the discount (specified in steps 2 and 3), to any items, or to specific items.

14. If you selected Specific Items in the previous step, complete the following steps to specify the items to which the discount will apply.

    a. Select SKU or Category from the drop-down list.

    b. Enter the SKU or category from your product catalog into the corresponding field.

    c. Click the **Add** button. The target items you specify appear in the text area below. Repeat this process for each item you want to use as a target item.

15. If you selected **Any Items** or **Specific Items** in step 13, select a **Limitation**. You can apply the discount to target items *up to* a certain limit or to *exactly* some number of target items. For either option, provide a numeric value in the appropriate field.

16. Click the **OK** button. The Specify Target Items window closes, and the third phrase shown in the Discount Terms list changes to reflect your choices. To specify additional targets, repeat steps 13 through 15.

17. To close the Discount Terms pane, click the **Discount Terms** bar.

B) Set-Based Discounts

A set-based discount is a discount based on a grouping of items. To define a set-based discount, complete the following steps:

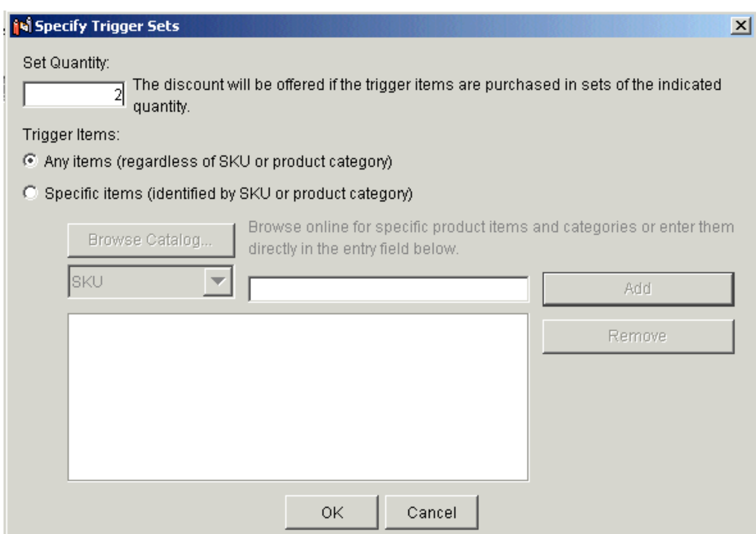
1. In the Select the radio button for “Set-based Discounts”.

2. Specify the order limit for the discount by selecting either the **Limit** or **No Limit** radio button.

3. If you chose an order limit, enter a limit value in the corresponding field.

4. Click the **Add a Trigger** button. The Specify Trigger Sets window appears.

Figure 10-30 Specify Trigger Sets window



5. Enter the number of items that constitutes a set into the field. This is the number of items that must be purchased to qualify for the discount.j

6. Specify how the discount is triggered by clicking the corresponding radio button. You can trigger the discount based on sets of any items or sets of specific items.
7. If you selected **Specific Items** in the previous step, you need to indicate which items will trigger the discount, as indicated in the following steps.
   a. Select SKU or Category from the drop-down list.
   b. Enter the SKU or category from your product catalog into the corresponding field.
   c. Click the **Add** button. The trigger items you specify appear in the text area below. Repeat this process for each item you want to use as a trigger item.
8. Click the **OK** button. The Specify Trigger Sets window closes, and the first phrase shown in the Discount Terms list changes to reflect your choices. To specify additional triggers, repeat steps 2 through 6.
9. Click the **Add a Discount** button. The Specify Discount Value window opens.
10. Select a discount value. You can choose a **Percentage Off**, an **Amount Off**, or a **Fixed Price** discount. Enter the percent, amount, or price of the item in the corresponding field.
11. If required, choose the type of currency from the corresponding drop-list. Be sure to select the same currency type that you use for the items in your catalog and for shipping charges.
12. Click **OK**. The Specify Discount Value window closes, and the second phrase shown in the Discount Terms list changes to reflect your choices.
13. Click **Add a Target**. The Specify Target Items window opens.
14. Select whether you want the discount to target the same items that triggered the discount (as specified in steps 4 and 5), to any items, or to specific items.
15. If you selected **Specific Items** in the previous step, complete the following steps to specify the items to which the discount will apply.
   a. Select **SKU** or **Category** from the drop-down list.
   b. Enter the SKU or category from your product catalog in the corresponding field.
   c. Click **Add**. The target items you specify appear in the text area below. Repeat this process for each item you want to use as a target item.

16. If you selected **Any Items** or **Specific Items**, select a **Limitation**. You can apply the discount to target product items *up to* a certain limit, or to *exactly* some number of target items. For either option, provide a numeric value in the appropriate field.

17. Click **OK**. The Specify Target Items window closes, and the third phrase shown in the Discount Terms list changes to reflect your choices. To specify additional targets, repeat steps 11 through 15.

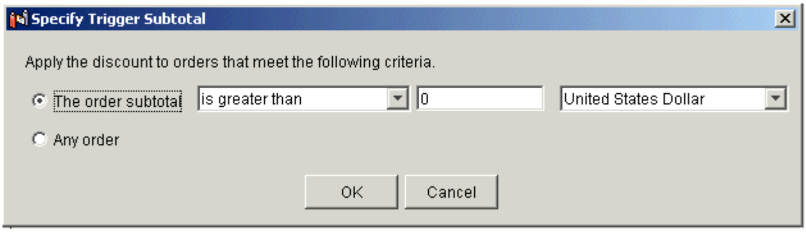
18. To close the Discount Terms pane, click the **Discount Terms** bar.

C) Order Discounts

An order discount is a discount attached to an order. If you selected the Order discount type, complete these steps to provide the specifics of the discount:

1. Click **Add a Trigger**. The Specify Trigger Subtotal window appears.

Figure 10-31 Specify Trigger Subtotal window



2. Specify that the discount should triggered when an order subtotal meets a certain criteria, or that the discount should apply to any order. If you select Order Subtotal, use the drop-down list and corresponding field to specify the comparison and subtotal value.

   Note: You do not need to type the $ symbol into the field.

3. Click **OK**. The Specify Trigger Subtotal window closes, and the first phrase shown in the Discount Terms list changes to reflect your choices.

4. Click **Add a Discount**. The Specify Discount Value window opens.

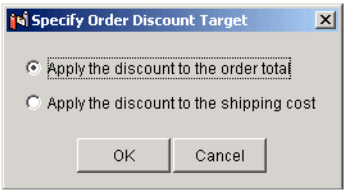
5. Select a discount value, and then enter the percent, amount, or price of the item in the corresponding field. You can choose a **Percentage off**, an **Amount off**, or a **Fixed Price** discount.

6. If required, choose the type of currency from the corresponding drop list. Be sure to select the same currency type that you use for the items in your catalog and for shipping charges.

7. Click the **OK** button. The Specify Discount Value window closes, and the second phrase shown in the Discount Terms list changes to reflect your choices.

8. Click the **Add a Target** button. The Specify Order Discount Target window opens.

Figure 10-32 Specify Order Discount Target window



9. Select a radio button to apply the discount to either the **order total** or to the **shipping cost**.

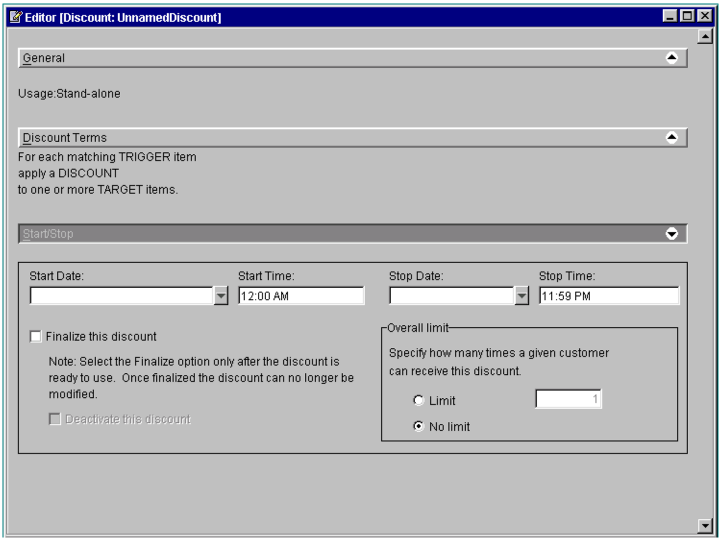
10. Click the **OK** button. The Specify Order Discount Target window closes, and the third phrase shown in the Discount Terms list changes to reflect your choices.

11. To close the Discount Terms pane, click the **Discount Terms** bar.

Establish the Discount Duration and Overall Limit

1. Click the **Start/Stop** bar. The Start/Stop pane opens.

Figure 10-33 Discounts Start/Stop Window



2. Enter a **start date**, **start time**, **stop date**, and **stop time** for your discount in the fields provided.

3. Specify the overall limit for the discount by selecting either the **Limit** or **No Limit** radio button.

4. If you chose an overall limit, enter a **limit value** in the corresponding field.

5. To close the pane, click the **Start/Stop** bar.

Saving, Finalizing, and Synchronizing a Discount

Once you've created and defined the discount, use the procedures in this section to make sure it persists in your system.

- Saving, Finalizing, and Synchronizing
- Requirements for Saving and Finalizing a Discount
- Saving a Discount
- Finalizing a Discount

- Synchronizing a Discount

Saving, Finalizing, and Synchronizing

This section discusses the differences among saving, finalizing, and synchronizing a discount.

- *Saving a discount* is like saving a file like in any other software program. Saving a discount saves the discount to your local file system. You can save a discount whether it is complete or not. The only requirement is that the discount has a unique name.
- *Finalizing a discount* prevents all parts of the discount definition from being changed except for the Discount Priority, the stop dates and time, and the Deactivate this discount option. Before a discount can be finalized, the discount must be complete. The E-Business Control Center does not allow incomplete discounts to be finalized.
- *Synchronizing a discount* copies the discount file to the server designated in the Synchronization Setup window. Synchronization deploys the discount to your enterprise application. If you synchronize a discount that has not been finalized, it will not function.

Requirements for Saving and Finalizing a Discount

To save a discount, the only information you need to specify is a unique name. To finalize a discount, however, you must be sure to specify each of the following:

- Name
- Discount usage (stand-alone or campaign)
- Discount priority (1-20)
- Overall limit
- Start/stop dates and times
- Discount trigger items
- Discount target items
- Discount value (percent off, amount off, or fixed price)

Saving a Discount

To save a discount, complete the following steps:

Figure 10-34 Save Icon

1. Click the **Save** icon on the E-Business Control Center toolbar. The Save As window appears.
2. In the Save As window, enter a unique name for the discount. The name of the new discount appears in the Discounts list of the Explorer window.

Finalizing a Discount

To finalize a discount, complete the following steps:

1. Be sure the discount is open. Start the E-Business Control Center if it is not already running. For more information, see "Starting the E-Business Control Center" on page 1-7.
2. Click the Business Logic tab, select the Discounts icon, and double-click an existing discount to open it in the Discount Editor window.
3. Open the **Start/Stop** pane in the Discount Editor window.
4. Select the **Finalize this discount** check box.

   Caution: Do not check the **Finalize This Discount** box unless you are absolutely positive that the discount you are defining is exactly as you want it. After discount definitions are finalized, modifications to the discount are extremely restrictive. For more information about the items you can change after finalizing and synchronizing the discount, see "Modifying an Existing Discount" on page 10-49. Remember, you can always return to the Start/Stop pane and finalize the discount at another time.

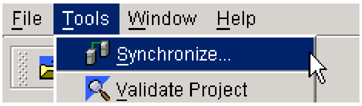
5. Save the discount by clicking **Save**.

Synchronizing a Discount

Before synchronizing a discount, make sure that the discount definition is complete, that the Finalize This Discount check box in the Start/Stop pane is checked, and the discount has been saved. If these requirements are not met, the discount will not work.

To synchronize a discount, use the Tools →Synchronize menu option in the E-Business Control Center. Synchronizing is an important step that requires well-thought-out planning and processes.

Figure 10-35 Synchronization menu option



Warning: If you and other developers concurrently synchronize data to a single enterprise application, it is possible to overwrite each others' work or create sets of changes that are incompatible and difficult to debug. To prevent this possibility, synchronize to separate instances of your application.

Finding Existing Discounts and Items

This section contains information on the following subjects:

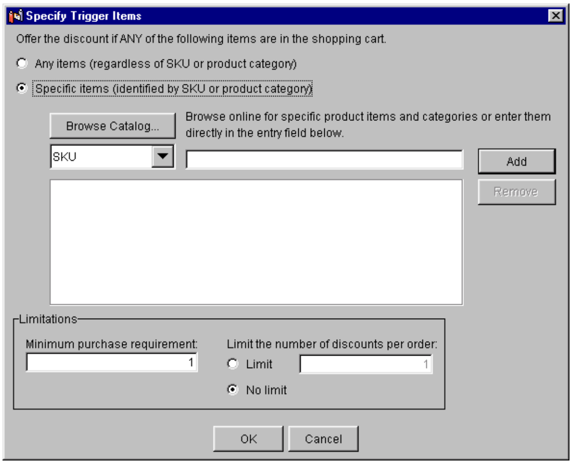
- Browsing a Catalog
- Browsing a Catalog
- Searching a Catalog
- Locating an Existing Discount Quickly

Browsing a Catalog

The browsing feature of the Catalog Browser allows you to select categories or specific items from your catalog.You can select one or more items or categories.

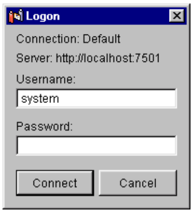
1. Start the E-Business Control Center if it is not already running. For more information, see "Starting the E-Business Control Center" on page 1-7.
2. Click the Business Logic tab of the E-Business Control Center Explorer window.
3. Create or edit a discount. Click the **New** icon and choose **Discount**, or select the Discounts icon and double-click an existing discount to open it.
4. Click the **Discount Terms** bar, click **Add a Trigger** or **Add a Target**, and select the **Specific Items** radio button. The window will look something like Figure 10-36.

Figure 10-36 Window for Accessing the Browse Catalog Feature



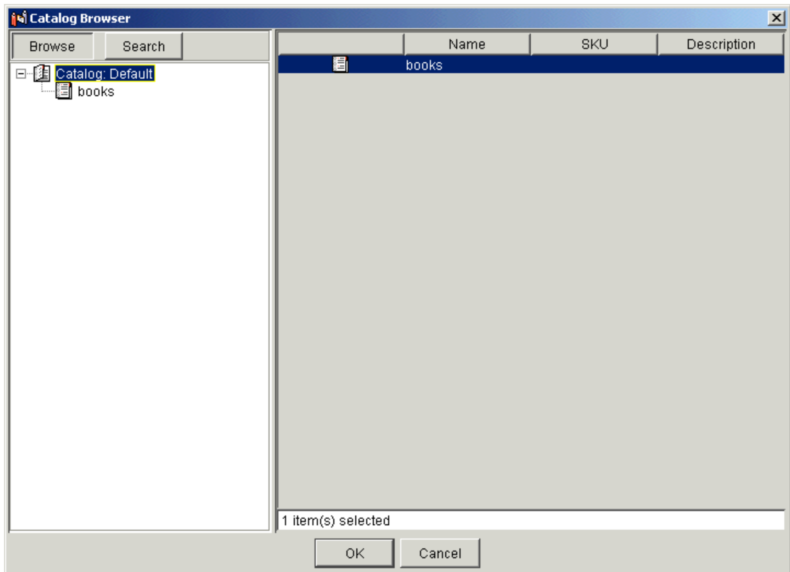
5. To open the Catalog Browser, click the **Browse Catalog** button (see "Browsing a Catalog" on page 10-44).

Figure 10-37 Logging Into the Browse Feature



6. In the Logon dialog window, enter your **Username** and **Password**, and then click the **Connect** button. The Catalog Browser opens.

Figure 10-38 The Catalog Browser



7. In the left navigation pane, navigate to the category that contains the item or product category that you want to add to your discount or campaign definition.
8. In the right pane, select one or more categories or items.
9. Click the **OK** button. The items or categories are added to your discount or campaign definition.

Searching a Catalog

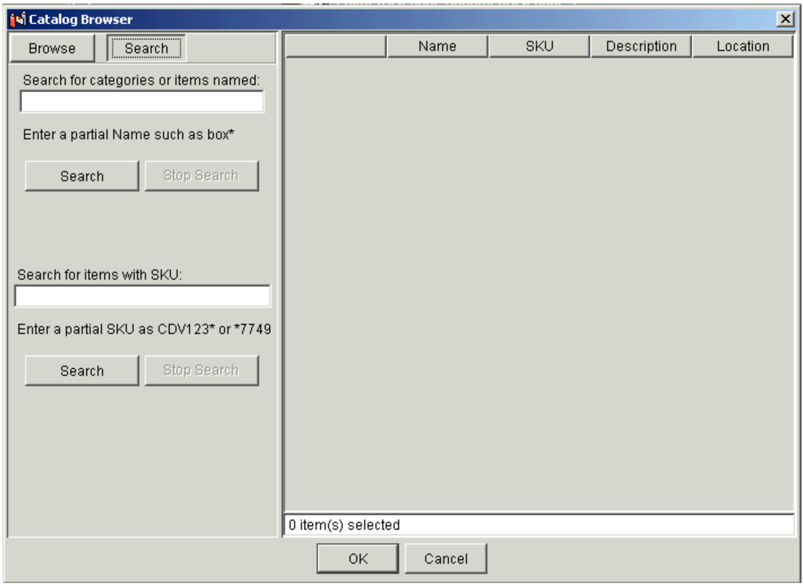
The search feature of the Catalog Browser allows you to find a specific item or category from your catalog. You can use a wildcard (*) to help you find items when you don't know the exact SKU.

1. Start the E-Business Control Center if it is not already running. For more information, see "Starting the E-Business Control Center" on page 1-7.

2. To open the Catalog Browser, click the Catalog Browser button (see "Browsing a Catalog" on page 10-44).

3. Click the **Search** button. The Search window opens.

Figure 10-39 Search window



4. Enter the **Category** or **SKU** in the corresponding field, and then click the **Search** button. Use an asterisk (*) for wildcard searches.

5. After the search list appears in the left pane, select the desired **Category** or **SKU** from the left pane.

6. Click **OK**. The items or categories are added to your discount or campaign definition.

Locating an Existing Discount Quickly

If you have defined numerous discounts, it can be time consuming to locate a particular discount by simply looking in the Discounts list. The WebLogic Portal provides you with a mechanism to filter existing discounts by name.

To locate an existing discount using the name filter, do the following:

1. Start the E-Business Control Center if it is not already running. For more information, see "Starting the E-Business Control Center" on page 1-7.

Figure 10-40 Explorer window with Filter icon highlighted

2. Click the Business Logic tab in the Explorer window of the E-Business Control Center.
3. Click the **Discount** icon in the Explorer window on the Business tab. This enables the Discounts view and a list of discounts appears in the Discounts list.
4. In the **Name Filter** field, type the name of the discount you want to locate.
5. Click the **Filter** icon. The discounts that have names beginning with the text you entered appear in the Discounts list.
6. To return to the full list of discounts, click the **Show All Objects** icon.

Modifying an Existing Discount

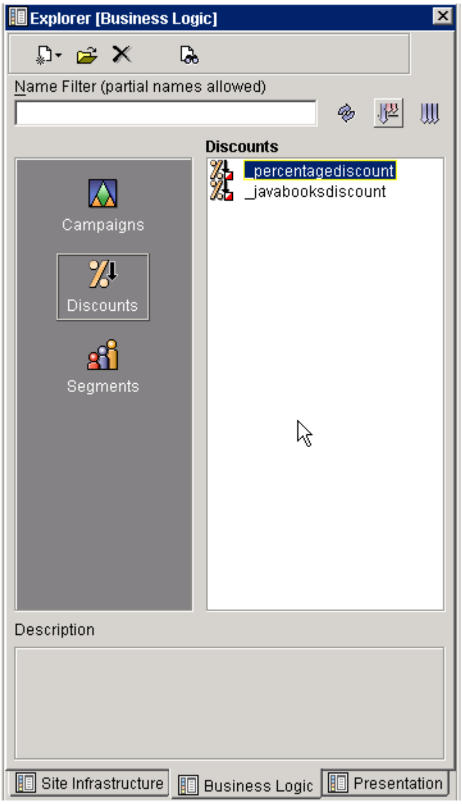
You can also view and modify existing discounts. If a discount has not yet been finalized, you can modify any information about the discount. If the discount has been finalized, you can only modify the following:

- Discount Priority
- Discount Stop Date/Time
- Activation State

Regardless of whether the discount has been finalized, you will need to open the discount for modification. To open an existing discount for modification, complete these steps:

1. Start the E-Business Control Center if it is not already running. For more information, see "Starting the E-Business Control Center" on page 1-7.
2. If you are not viewing discounts, switch to the Discounts view. (In the E-Business Control Center Explorer window, click the **Business Logic** Tab. Then click the **Discount** icon. A list of discounts appears in the Discounts list.)

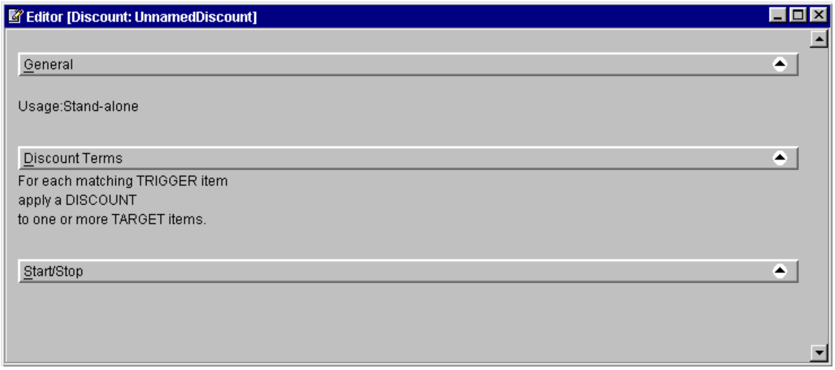
Figure 10-41 Explorer window with discounts listed



3. Click the name of the discount you want to modify. The discount is highlighted.

4. Click the **Open** icon on the Explorer toolbar. The Discount Editor opens.

Figure 10-42



5. If the discount you opened has not yet been finalized, you can modify any part of the discount definition, except for the discount name. See "Defining a New Discount and Attributes" on page 10-29.

6. If the discount you opened has already been finalized, follow these instructions:

   - To change the discount priority, open the **General** pane, and then enter a new priority in the **Priority** field.
   - To change the discount stop date or time, open the **Start/Stop** pane, and then enter a new stop date and/or stop time in the **Stop Date/Stop Time** fields.
   - To deactivate a discount, open the **Start/Stop** pane, and then click the **Deactivate This Discount** check box.

7. To save your modifications, click the **Save** button on the E-Business Control Center toolbar.

Caution: If the discount you modify is in use by a promotional campaign, saving modifications to the discount will affect every scenario action that refers to that discount. Be certain that the modifications you make are in line with your organization's established policies and that you entered the modifications correctly in the WebLogic Portal.

Controlling Active Status and Deleting Discounts

This section contains information on the following topics:

- Activating and Deactivating Discounts
- Deleting an Existing Discount

Activating and Deactivating Discounts

Once discounts are synchronized, they are considered active. In other words, synchronized discounts are working on your enterprise application.

Deactivating a Discount

To stop offering a discount, do the following:

1. Start the E-Business Control Center if it is not already running. For more information, see "Starting the E-Business Control Center" on page 1-7.
2. Click the **Business Logic** tab in the Explorer window of the E-Business Control Center.
3. Edit a discount. Select the **Discounts** icon and double-click an existing discount to open the Editor for that discount.
4. Open the **Start/Stop** pane and check the **Deactivate This Discount** check box.
5. **Save** the discount (see "Saving a Discount" on page 10-43).
6. **Synchronize** the discount (see "Synchronizing a Discount" on page 10-44).

   If a customer order was already associated with the discount you just deactivated, the system will still honor the discount. However, no new offers of the discount will be made.

Reactivating a Discount

To reactivate a discount, do the following:

1. Start the E-Business Control Center if it is not already running. For more information, see "Starting the E-Business Control Center" on page 1-7.
2. Click the **Business Logic** tab in the Explorer window of the E-Business Control Center.
3. Select the **Discounts** icon and double-click an existing discount to open the Editor for that discount.

4. Open the **Start/Stop** pane and click the **Deactivate This Discount** check box to remove the check mark.

5. **Save** the discount (see “Saving a Discount” on page 10-43).

6. **Synchronize** the discount (see “Synchronizing a Discount” on page 10-44). It is reactivated.

Note: Deactivating a discount will not release the modifications restrictions placed on finalized discounts.

Deleting an Existing Discount

If no pending offers or customer orders are associated with a discount, you can also delete existing discounts using the WebLogic Portal.

Warning: BEA recommends that you do not attempt to delete discounts until the discount has expired (that is, the end date associated with the discount is reached) and until any orders associated with the discount have cleared. And, as with any deletion you make, be absolutely certain that you select the correct discount and that you are sure you want to delete it. Deleted discounts cannot be retrieved.

To delete an existing discount, complete these steps:

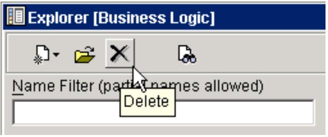
1. Start the E-Business Control Center if it is not already running. For more information, see “Starting the E-Business Control Center” on page 1-7.

2. Click the **Business Logic** tab in the Explorer window of the E-Business Control Center.

3. Highlight the **name of the discount** you want to delete.

4. Click the **Delete** icon on the Explorer toolbar, the discount is deleted.

Figure 10-43 The Delete icon



11 System Administration

System administration in WebLogic Portal involves traditional system administration tasks, such as backup and recovery, as well as tasks that are unique to WebLogic Portal, such as switching databases and helping configure a clustered environment.

This section includes information on the following subjects:

- Post Configuration Wizard Tasks
- Starting and Stopping the Server
- Setting up the E-Business Control Center
- Database Administration
- Backup and Recovery
- Performance Tuning
- Persisting Behavioral Tracking Data

Post Configuration Wizard Tasks

If you create a clustered WebLogic Portal domain with the Configuration Wizard, there are a few tasks to perform after the domain is created. See "WebLogic Portal Domain Template" at http://edocs.bea.com/platform/docs70/template/wlptemp.html#1008419.

Starting and Stopping the Server

This section, which provides instructions on starting and stopping a WebLogic Portal server, assumes that you created your WebLogic Portal domain with the Configuration Wizard.

Scripts for starting and stopping any WebLogic Portal server are located in your WebLogic Portal domain directory. The following sections show scripts and command-line arguments for stopping and starting a server in different server configurations.

This section also includes information on starting a WebLogic Portal server as a Windows service.

This section includes information on the following subjects:

- Starting and Stopping WebLogic Portal Sample Domains
- Starting and Stopping Domains Created with the Configuration Wizard
- Running WebLogic Portal as a Windows Service

Starting and Stopping WebLogic Portal Sample Domains

Table 11-1 shows the locations of the start and stop scripts for the WebLogic Portal sample applications that BEA provides.

In Windows, you can also start these sample servers from the Start menu, using the following base Start Menu path:

Start > Programs > BEA WebLogic Platform 7.0 > WebLogic Portal 7.0 > Portal Examples > ...

Table 11-1 Starting and Stopping the Sample Servers

Sample	Locations and Scripts
Portal Example	<BEA_HOME>\weblogic700\samples\portal\sampleportalDomain\ ■ `startSamplePortal.bat` or `startSamplePortal.sh` ■ `stopSamplePortal.bat` or `stopSamplePortal.sh`
Commerce Templates	<BEA_HOME>\weblogic700\samples\portal\wlcsDomain\ ■ `startWLCS.bat` or `startWLCS.sh` ■ `stopWLCS.bat` or `stopWLCS.sh`
Personalization Examples	<BEA_HOME>\weblogic700\samples\portal\p13nDomain\ ■ `startP13N.bat` or `startP13N.sh` ■ `stopP13N.bat` or `stopP13N.sh`

No login is required to start the example servers.

Note: You can also stop the server by clicking the close icon in the command window.

Starting and Stopping Domains Created with the Configuration Wizard

Table 11-1 shows the start and stop scripts for the WebLogic Portal domains you create with the Configuration Wizard. The default location for the start and stop scripts is <BEA_HOME>\user_projects\portalDomain.

If you created your domain on a Windows server, and you selected the option in the wizard for creating a Start Menu shortcut, you can start the server from the Start Menu. The default shortcut location is **Start > Programs > BEA WebLogic Platform 7.0 > User Projects >** ***`domain_name`*** **> Start Portal Server**.

Table 11-2 Starting and Stopping the Server with Different Server Configurations

Server Configuration	Scripts
Single Server (Standalone Server)	`startPortal.bat` / `startPortal.sh` `stopPortal.bat` / `stopPortal.sh`

Admin Server with Managed Server(s)
and
Admin Server with Clustered Managed Server(s)
	Admin Server
	`startPortal.bat` / `startPortal.sh`
	`stopPortal.bat` / `stopPortal.sh`
	Managed Server(s)
	`startManagedPortal.bat` / `startManagedPortal.sh` with the managed server name and admin server URL as command-line arguments. Following are Windows and UNIX examples:
	`startManagedPortal.bat managedServer1 http://localhost:7501`
	`sh startManagedPortal.sh managedServer1 http://localhost:7501`
	To stop a managed server, use the WebLogic Server Console.

Managed Server (with owning Admin Server configuration)	`startPortal.bat` / `startPortal.sh`
	`stopPortal.bat` / `stopPortal.sh`
	Starting Alternative: You can also use `startManagedPortal.bat` or `startManagedPortal.sh` by supplying the server name and admin URL. Following are Windows and UNIX examples:
	`startManagedPortal.bat managedServer1 http://localhost:7501`
	`sh startManagedPortal.sh managedServer1 http://localhost:7501`

When prompted to log in, log in as the WebLogic Server system administrator. The default usernames/passwords are:

- `system/weblogic` (login is `system`, password is `weblogic`)
- `weblogic/weblogic` (login is `weblogic`, password is `weblogic`)

To give users WebLogic Server system administration rights, add them to the **Administrators** group in the domain using the WebLogic Server Console tool. For more information, "Creating WebLogic Server System Administrators" on page 6-24.

Note: You can also stop the server by clicking the close icon in the command window.

Running WebLogic Portal as a Windows Service

You can run WebLogic Portal as a Windows NT or 2000 service so that WebLogic Portal domains start automatically when you boot your Windows server. This is recommended for production, not development.

About PointBase

When starting your server as a Windows service, the PointBase database server does not start automatically. Therefore, you must do one of the following:

- Switch to a different database type (see "Switching to Other Databases" on page 11-13), or
- Start the PointBase server before starting your server as a Windows Service

Installing as a Windows Service

As a best practice, start your server normally to make sure it starts successfully before installing it as a Windows service.

Use `-installService` on the command-line before any other command-line arguments. For example:

- `startPortal.bat -installService`, or
- `startManagedPortal.bat -installService myServer1 http://localhost:7501`

All start scripts in Table 11-1 and Table 11-2 support installing the designated server as a Windows Service.

Uninstalling as a Windows Service

To remove a previously installed service, use the `-uninstallService` command-line argument instead. For example:

- `startPortal.bat -uninstallService`, or
- `startManagedPortal.bat -uninstallService myServer1 http://localhost:7501`

Setting up the E-Business Control Center

The E-Business Control Center is an application that runs on your local machine. Much of the E-Business Control Center functionality does not require a server connection. However, some functionality, such as synchronizing data to the server and accessing server-side resources for creating personalization and campaign logic, require one or more server connections.

After you run the Configuration Wizard to create a new domain, the E-Business Control Center is configured correctly to run in a single-server environment with the E-Business Control Center running on the server machine.

This section provides guidelines for ensuring the E-Business Control Center can connect and synchronize to the server, especially if you are running the E-Business Control Center on a machine other than the server or if you are using a multi-server environment.

Many administration procedures involve synchronizing from the E-Business Control Center to the server by clicking the Synchronize button on the E-Business Control Center toolbar. This procedure ensures that when you click the Synchronize button, synchronization is successful.

1. Launch the E-Business Control Center using the `ebcc` command in the `<BEA_HOME>\weblogic700\ebcc\bin` directory.

   On Windows machines, you can use **Start > Programs > BEA WebLogic Platform 7.0 > WebLogic Portal 7.0 > E-Business Control Center**.

2. Open the enterprise application's project file.

   If you created a WebLogic Portal domain with the Configuration Wizard, the default location of this project file is `<domain>\beaApps\portalApp-project\portalApp-project`.

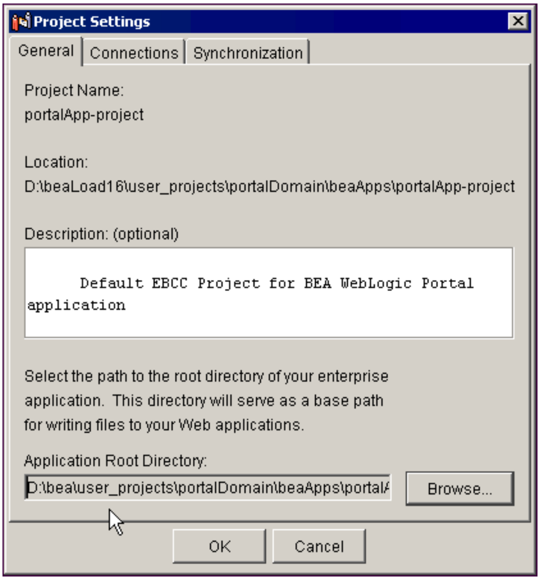
   If you are opening a project file for one of the sample applications, the location of the appropriate project file is

`<BEA_HOME>\weblogic700\samples\portal\<domain>\beaApps\`
`<app_name>-project\.`

3. Choose **Tools > Project Settings**.

4. In the **Project Settings** window, at the bottom of the **General** tab, make sure the **Application Root Directory** is set to the enterprise application folder on the server, as shown in Figure 11-1.

Figure 11-1 Setting the Path to the Enterprise Application Directory



5. On the **Connections** tab, click **Edit Connections** to define and set the server-side connections for data synchronization and other features. The **Edit Connections** window appears.

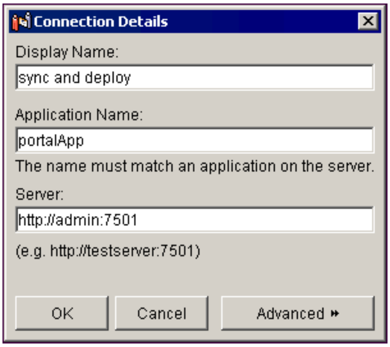
   If you are running WebLogic Portal in a cluster, or if you store server-side resources on more than one server, you must define more than one connection.

   Note: In a cluster, you must synchronize to the administration server or a separate synchronization server, and your other server-side resources must reside on your managed server(s).

6. To create a new connection, click **New** and set the connection details in the **Connection Details** window, as shown in Figure 11-2. To modify an existing connection, select it and click **Edit**.

   - **Display Name** field: Enter a name for the connection.
   - **Application Name** field: Enter the name of the enterprise application folder, such as portalApp.
   - **Server** field: Enter the base URL of the server using `http://<hostname>:<port>`, such as `http://admin:7501`.

Figure 11-2 Creating a Server Connection



7. Click **OK**.

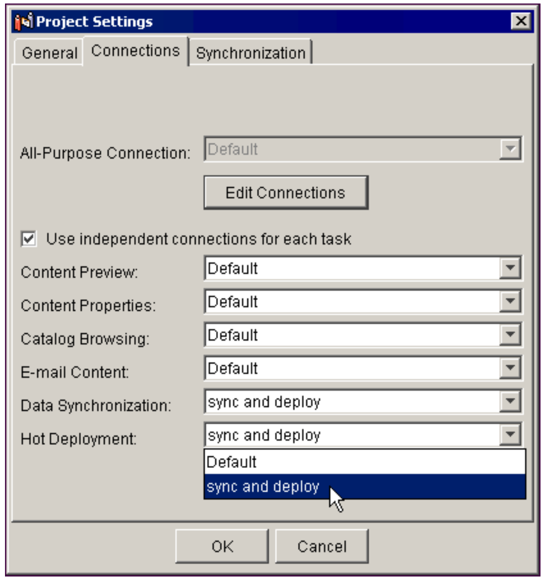
8. Create any additional connections needed. When you are finished, click **OK** in the **Edit Connections** window.

9. On the Connections tab in the **Project Settings** window, select the connections you will use.

   If you need only one connection, deselect the **Use independent connections for each task** option, and select the connection you want to use in the **All-Purpose Connection** field.

   If you need more than one connection, select the **Use independent connections for each task** option, and in each field, select the appropriate connection, as shown in Figure 11-3.

Figure 11-3 Setting Multiple Connections



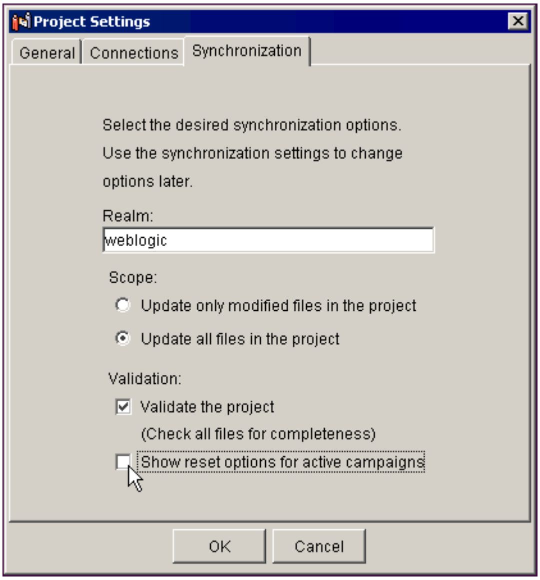
10. Click **OK**.

11. On the Synchronization tab in the Project Settings window, enter the following information:

- **Realm** field: Must contain `weblogic`.
- **Scope**: Synchronization occurs faster when you use the **Update only modified files in the project** option.
- **Validation**: The **Validate the project** option parses your E-Business Control Center files and notifies you of incomplete or invalid files prior to synchronization, letting you halt the synchronization process.

  The **Show reset options for active campaigns** option lets you clear advertisements, clickthrough counts, and other campaign activities that may have occurred. Use this option to reset campaigns for debugging.

Figure 11-4 Setting Synchronization Options



12. Click **OK**.

Database Administration

This section includes information on the following subjects:

- Supported Databases
- About PointBase
- Switching to Other Databases
- About Database Schemas

Supported Databases

For information on which databases are supported in this release, see “Supported Platforms” at http://edocs.bea.com/platform/docs70/support/index.html.

About PointBase

PointBase is the default database that BEA provides. It is used for the sample domains that BEA provides, and it is the default database used when you create a domain with the Configuration Wizard.

PointBase runs on its own server. The PointBase server must be running for your applications to access it. When you start WebLogic Portal server to run your applications, the PointBase server starts automatically.

Note: If you are running WebLogic Portal as a Windows service, PointBase will not start automatically. For more information, see “Running WebLogic Portal as a Windows Service” on page 11-5.

Starting and Stopping PointBase

If you want to start the PointBase database for maintenance without running the WebLogic Portal server, or if you need to start PointBase manually because you are running WebLogic Portal as a Windows service, follow this procedure.

1. In a command window, change directories to `<BEA_HOME>\weblogic700\portal\bin\<operating_system>`.
2. Run the following command:

   ```
   startPBServer.bat <path_to_domain>\db_settings.properties
   ```

   or

   ```
   sh startPBServer.sh <path_to_domain>\db_settings.properties
   ```

   where `<path_to_domain>` is an absolute path to your domain directory, where the `db_settings.properties` file is located.

To stop PointBase, run the `stopPBServer.bat` or `stopPBServer.sh` scripts from the same directory as the start scripts.

Starting the PointBase Console

PointBase includes a Console tool that lets you view and manage your PointBase database. To launch the PointBase Console, follow this procedure.

Note: On Windows systems, a Start Menu shortcut is provided for launching the PointBase Console for each WebLogic Portal sample domain.

1. In a command window, change directories to `<BEA_HOME>\weblogic700\portal\bin\<operating_system>`.
2. Run the following command:

   ```
   startPBConsole.bat <path_to_domain>\db_settings.properties
   ```

   or

   ```
   sh startPBConsole.sh <path_to_domain>\db_settings.properties
   ```

   where `<path_to_domain>` is an absolute path to your domain directory, where the `db_settings.properties` file is located.

Switching to Other Databases

This section walks you through the process of switching from one supported database, such as the default PointBase database, to another supported database, such as Oracle. Domains created with the Configuration Wizard include a PointBase database.

Step 1: Configure Your Database

Before you switch from the default PointBase database to another supported database, you must configure that database. For configuration instructions, see the README.html file for your database in the following location:

<BEA_HOME>\weblogic700\portal\db\<db_type>\<version>\admin.

Step 2: Edit db_settings.properties for Your Database Environment

In your domain directory, open the db_settings.properties file, and for the database type you are using, replace the @...@ variables with the actual values, and save the file.

For example, Listing 11-1 shows the Oracle section of the db_settings.properties file before and after modifications.

Listing 11-1 The db_settings.properties file

Before

```
#------Oracle Thin Driver------------------------#
#
#@IF_USING_ORACLE_THIN@
#database=ORACLE_THIN
#db_version=817
#jdbcdriver=oracle.jdbc.driver.OracleDriver
#server=@ORACLE_NET_SERVICE_NAME@
#port=@ORACLE_PORT@
#dblogin=@ORACLE_USER@
#dbpassword=@ORACLE_PASSWORD@
#connection=jdbc:oracle:thin:@@ORACLE_SERVER@:@ORACLE_PORT@:
@ORACLE_SID@
#@ENDIF_USING_ORACLE_THIN@
```

After

```
#------Oracle Thin Driver-----------------------#

#
#database=ORACLE_THIN
#db_version=817
#jdbcdriver=oracle.jdbc.driver.OracleDriver
#server=MY817SVC
#port=1521
#dblogin=WEBLOGIC
#dbpassword=WEBLOGIC
#connection=jdbc:oracle:thin:@myhost:1521:MY817SID
#@ENDIF_USING_ORACLE_THIN@
```

Note: Do not comment or uncomment (using the #) any lines in this file yet. You will do that in a later step.

The exact number of the `db_version` setting is important, because it controls which DDL is used. Table 11-3 shows which `db_version` number to use for each type of database.

Note: Table 11-3 shows databases that are not currently supported. For a list of currently supported databases, see “Supported Platforms” at http://edocs.bea.com/platform/docs70/support/index.html.

Table 11-3 `db_version` settings

Database version	`db_version` number to use
DB2 7.0	`7`
ORACLE 8.1.6	`817`
ORACLE 8.1.7	`817`
ORACLE 9i	`817`
POINTBASE 4.2	`42`
Microsoft SQL Server 7	`7`
Microsoft SQL Server 2000	`2000`

Table 11-3 `db_version` settings (Continued)

Database version	`db_version` number to use
SYBASE 12.0	12
SYBASE 12.5	125

Step 3: Start the Server

Start the server. See "Starting and Stopping the Server" on page 11-2.

Step 4: Set up the Connection Pools and Realm in the WebLogic Server Console

For this procedure, open the `db_settings.properties` file in your domain folder, and copy values from this file into the WebLogic Server Console.

1. With WebLogic Server running, go to the following URL in your browser to launch the WebLogic Server Console: `http://<hostname>:<port>/console`.

   For example, if you are working on the machine on which WebLogic Server is installed, go to `http://localhost:7501/console`.

2. Enter the WebLogic Server system administrator username and password (default is `weblogic/weblogic`).

3. In the Console, choose ***domain*** > **Services** > **JDBC** > **Connection Pools**.

4. Click and edit **commercePool** by pasting values from the `db_settings.properties` file. Use Table 11-4 for guidance.

5. Click **Apply** before clicking a hyperlinked field or moving to another secondary tab.

6. Click and edit **dataSyncPool** by pasting values from the `db_settings.properties` File. Use Table 11-4 for guidance.

7. Click **Apply** before clicking a hyperlinked field or moving to another secondary tab.

Table 11-4 Connection pool values for using Oracle or MSSQL thin drivers

Tab	Field	Value
General	URL	For the database type you are using, copy the value from `connection=` in the `db_settings.properties` file.
	Driver Classname	For the database type you are using, copy the value from `jdbcdriver=` in the `db_settings.properties` file.
	Properties (key=value)	`user=WEBLOGIC` Enter the list of properties passed to the JDBC Driver to use when creating physical database connections. The properties vary depending on the database driver you are using. For example, when using Oracle thin driver, only the `user` key is required. When using MS SQL, the `user` and `server` keys are required. Refer to the documentation for the driver you are using to determine which properties to use.
	ACLName	Leave blank.
	Password	Click **Change**. Enter and retype your system password. Enter `WEBLOGIC` if you are running the sample applications.

8. In the Console, go to ***domain_name*** > **Compatibility Security** > **Realms** > **wlcsRealm**.
9. On the Database tab, enter the same Driver Classname and URL you entered in the previous steps, as described in Table 11-4.
10. Click **Apply**.
11. In the Password field, click **Change**, and enter and retype your system password. Enter `WEBLOGIC` if you are running the sample applications.
12. Click **Apply**.
13. Click **Continue**.
14. On the Schema tab, in the Schema Properties (key=value) field, enter the same properties you entered in the previous steps, as described in Table 11-4.
15. Click **Apply**.

Step 5: Stop the Server

Stop the server. See "Starting and Stopping the Server" on page 11-2.

Step 6: Edit db_settings.properties to Uncomment Your Database

Open the `db_settings.properties` file, uncomment the properties for the database you are using (remove the # from the beginning of each line), comment out the PointBase database settings (put a # at the start of each line), and save the file.

Step 7: Run create_db

Run the `create_db` script in your domain folder to create and populate the database. Verify that the output written to `create_db.log` does not contain fatal errors.

If you receive a com.bea.p13n.db.internal.DbLoaderException, you probably have a configuration error. If you are using the Oracle thin driver, check the Oracle server listener configuration.

1. Verify the listener.ora file on your Oracle server against your db_settings.properties file.
2. Start the LSNRCTL utility on your Oracle server and run a status:

   ```
   LSNRCTL> status
   ```

3. Run the stop and start commands in LSNRCTL to bounce the listener:

   ```
   LSNRCTL> start
   LSNRCTL> stop
   ```

4. Re-run the create_db script in your domain folder to create and populate the database. Verify that the output written to create_db.log does not contain fatal errors.

Step 8: Start the Server

Start the server. See "Starting and Stopping the Server" on page 11-2.

Step 9: Run loadads and loaddocs

To load your content and metadata:

1. Run the `loadads` script in your domain folder.
2. Run the `loaddocs` script in your domain folder.

Step 10: Run sync

Run the `sync` command in your domain folder to update the server with the new database data.

Setup is now complete. You should now be able to start and run the Portal application against your database.

Step 11: Oracle Only - Rebuild Indexes

The `create_db` script places the WebLogic Portal domain indexes in the default tablespace (`WEBLOGIC_DATA`). To rebuild indexes in the `WEBLOGIC_INDEX` tablespace:

1. In a command window, change directories to:

   ```
   <PORTAL_HOME>/db/oracle/817/admin
   ```

2. Run the following command to start a SQL*Plus session:

   ```
   sqlplus username/password@net_service_name
   ```

   where `username` is the name of the Oracle user account (`WEBLOGIC` by default), `password` is the password for the Oracle user account (`WEBLOGIC` by default), and `net_service_name` is the Net Service name that you defined for the Oracle database.

3. Run the following command to rebuild indexes:

   ```
   @rebuild_indexes.sql
   ```

About Database Schemas

Use the information provided in the Database Schemas topic to learn how to restructure your database to better customize or extend the technologies provided in WebLogic Portal.

For a complete reference of database schemas, see Appendix A, “Database Schemas.”

Backup and Recovery

Use the same procedures for backup and recovery of WebLogic Portal as those you use for other data. Following are a few guidelines:

- Back up <BEA_HOME> on your server.
  - If you are running a cluster where managed servers are simply a replication of the administration server, back up just the administration server. The administration server data can be re-replicated on the managed servers.
  - If you are running an administrative server that uses managed servers with different data on each managed server, back up <BEA_HOME> on all servers.
- Store your E-Business Control Center data and J2EE resources in source control, and back up the source control database.
- Back up your WebLogic Portal database according to your DBMS vendor's recommendations.
- Perform periodic test restores to ensure your backups are sound.

Performance Tuning

Use the following guidelines to increase the performance of your applications.

This section includes information on the following subjects:

- Adjust Database Connections Available at Startup
- Catalog Size
- Campaigns
- Increase Ad Display-Count Buffer Size
- Location of Java Virtual Machines (JVMs)
- Using the JRockit Virtual Machine
- Using the HotSpot Virtual Machine
- Internationalization Performance Tuning

Adjust Database Connections Available at Startup

To optimize database pool performance for your Web site, do the following:

1. Start the WebLogic Server Administration Console by entering the following URL in a Web browser:

   ```
   http://<hostname>:<port>/console
   ```

   For example, if you started a server on a host named `admin` and it uses port 7001 as a listen port, enter:

   ```
   http://admin:7001/console
   ```

2. Log in as the WebLogic Server system administrator.
3. Choose **JDBC > Connection Pools**.
4. On the **JDBC Connection** page, click **commercePool**.

5. On the **commercePool** page, click the **Connections** tab and do the following:
   a. Increase the value in **Initial Capacity** to match the value in **Maximum Capacity**.
   b. Change **Login Delay Seconds** to `0`.
   c. Deselect the **Allow Shrinking** option.
   d. Click **Apply**.
6. Click the **Testing** tab and deselect the **Test Reserve Connections** option.
7. Click **Apply**.
8. Restart the server. See "Starting and Stopping the Server" on page 11-2.

For more information on database connection pools, refer to the WebLogic Server Console online help.

Catalog Size

The number of product items in the catalog tables and their corresponding attributes can have a significant effect on response time, especially for catalog queries. Because searching for products is a key aspect of the browsing experience, it is important to ensure that your database is large enough to handle this product information.

Campaigns

The following factors affect performance of campaigns and related items.

Referencing events– Always make scenario rules dependent on a particular event. This allows optimizations based on the event types referenced in the scenario rules.

Avoiding firing extraneous events– Whenever possible, avoid firing any extraneous events. The campaign services must listen to all events. Use events to signify important occurrences on the site.

Increase Ad Display-Count Buffer Size

The Campaign service uses display counts to determine whether a campaign has met its end goals. Each time an ad placeholder finds an ad to display as a result of a scenario action, the Campaign service updates the display count.

By default, the Campaign service does not update the display count in the database until an ad placeholder has found ten ads to display as a result of one or more scenario actions. If the server crashes before the Campaign service flushes this display-count buffer to the database, you can lose display-count updates, up to the number of display counts that are in the buffer.

Use the following procedure in the WebLogic Server Console to determine the number of display counts that are stored in memory before the Campaign service updates the database.

1. Start the WebLogic Server Administration Console by entering the following URL in a Web browser:

   ```
   http://<hostname>:<port>/console
   ```

   For example, if you started a server on a host named `admin` and it uses port 7001 as a listen port, enter:

   ```
   http://admin:7001/console
   ```

2. Log in as the WebLogic Server system administrator.
3. Choose **Deployments** > **Applications** > ***Application*** > **Service Configuration** > **Ad Service**.
4. In the **Display Flush Size** field, change the value. For sites with high traffic, increase this number to a range of 50 to 100.
5. Click **Apply**.

Location of Java Virtual Machines (JVMs)

Although clustered environments offer benefits in terms of both load balancing and failover, it is important to consider the location of clustered nodes as they relate to application scalability. If a single machine is assigned multiple IP addresses, scalability is improved because replication of HTTP session data does not require traversing the network. However, this is less desirable where failover is critical (for example, in situations where customers should never lose their shopping cart). If you choose to run Java Virtual Machines (JVMs) on different machines to ensure failover, the scalability of your application might be negatively affected.

Using the JRockit Virtual Machine

BEA WebLogic JRockit is a Virtual Machine with exceptional performance. JRockit is designed for large-scale, enterprise server-side execution of Java applications and includes technology that works with I/O, memory management, and multi-threading.

For JRockit information and downloads, go to http://www.bea.com/products/weblogic/jrockit. For JRockit documentation, go to http://edocs.bea.com.

Using the HotSpot Virtual Machine

Hot Spot enhances JDK 1.3 performance. It provides several implementations, which vary depending upon the operating system. HotSpot is an optimized VM with several variations.

The HotSpot variations are set using the following options. These options must appear before any other options in the command.

- `-hotspot` – Invokes the Java HotSpot client VM
- `-server` – Invokes the Java HotSpot server VM

To invoke hotspot when you start your server, you can add one of the following lines to the start script(s) you are using:

`set JAVA_VM=-hotspot`, or

`set JAVA_VM=-server`

WebLogic Portal is configured for PointBase and `-hotspot` client. You can switch to different versions of HotSpot by using the appropriate option. For a list of the variations supported on each platform, see "Supported Platforms" at http://edocs.bea.com/platform/docs70/support/index.html.

For more information on HotSpot, go to http://java.sun.com/products/hotspot.

Internationalization Performance Tuning

When you use the `<i18n>` JSP tags and resource bundles for presenting internationalized content, you can determine how often WebLogic Portal checks for updated content in resource bundles.

In the `<BEA_HOME>\weblogic700\portal\weblogiccommerce.properties` file, set the `i18n.bundle.reload.seconds` property to the desired value. For example:

```
# Personalization configuration for changing the timeout on
# resource bundles for the I18N tags
#
i18n.bundle.reload.seconds=300
```

The default value is 300 seconds (5 minutes). Changing the value is a balance between flexibility and performance. If your resource bundle content changes frequently, lowering the value makes WebLogic Portal update content more frequently, though at a cost to performance. If your resource bundle content stays relatively static, increase performance by choosing a higher value, such as 86400 (24 hours).

Persisting Behavioral Tracking Data

To record how online visitors are interacting with your Web site, you can record event information to a database. These kinds of events are called Behavior Tracking events. E-analytics and e-marketing systems can then analyze these events offline to evaluate visitor behavior and transactional data. You can use the knowledge gained from analysis to create and optimize personalization rules, set up product offers, and develop interactive marketing campaigns. This section describes the requirements and database schema needed to log event data for analytical use. The steps are listed below:

Step 1: Understanding Data Storage and Table Structure

Step 2: Create the Behavior Tracking Databases

Step 3: Enable the Behavior Tracking Listener

Step 4: Configure the Behavior Tracking Service

Step 1: Understanding Data Storage and Table Structure

Before setting up and using a database for recording Behavior Tracking data, you need some background information about how Behavior Tracking uses relational databases. The first step to persisting Behavior Tracking data is to understand the structure of Behavior Tracking database schemas and tables. This information is also useful to third-party vendors for extracting Behavior Tracking data to use in data mining.

The following sections provide information relevant to persisting Behavior Tracking data:

- Relational Databases
- Database Directory Paths
- Behavior Tracking Database Schema
- EVENT Database Table
- The EVENT_ACTION Database Table
- The EVENT_TYPE Database Table
- Constraints and Indexes

Relational Databases

Relational databases have both logical and physical structures. Logically you may define one or more databases. Each database may contain one or more tables and indexes, and each table may have multiple columns and rows. The logical structure of databases is quite similar between vendors. However, the physical structure of a database is very vendor-specific. Essentially, the physical structure defines areas on disk drives where the data is stored. Each database environment uses its own terminology and implementation for storing data at the operating system level. For example, Oracle uses the term *tablespace* and the Microsoft SQL Server uses the term *filegroup*.

Recommendation When a database structure is defined by a database administrator, you must be pay attention to the location of specific tables. Some tables are static in that they do not change much; some tables are dynamic in that many rows are being added and deleted; and some tables are read frequently and some rarely. Depending on their behavior, tables should be placed on different physical locations.

Some of the most highly-used tables in WebLogic Portal are used for Behavior Tracking. The activity of a single visitor moving around your site may generate multiple table entries. Therefore, it is recommended that you place these tables on the fastest drives in the computer.

Experienced database administrators are aware of many techniques for monitoring and configuring a database installation for optimal performance. If you do not have a database administrator working with your installation and you have a lot of activity on your site, bring in a well-qualified database administer for regular maintenance of your system.

Database Directory Paths

The default database directory paths are:

```
<BEA_HOME>\weblogic700\portal\db\db_vendor\db_version\...
```

For example, if you are using Oracle 8.1.7 on UNIX, the location is:

```
<BEA_HOME>/weblogic700/portal/db/oracle/817/...
```

Scripts BEA provides scripts to help set up the database schema needed for recording Behavior Tracking events, as well as the schema needed for recording data associated with WebLogic Portal. This data includes information from orders, catalogs, products, portals, and portlets. For more information about scripts, see, "Step 2: Create the Behavior Tracking Databases" on page 11-34.

For Oracle databases, the tablespaces created for WebLogic Portal data are the `WEBLOGIC_DATA` and `WEBLOGIC_INDEX`.

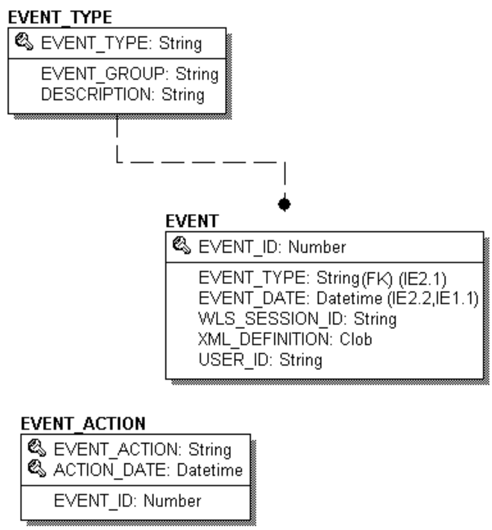
Note: `WEBLOGIC_DATA` and `WEBLOGIC_INDEX` are tablespace names created by BEA scripts. If you use a particular naming convention, you can rename them.

Behavior tracking uses a tablespace called `WEBLOGIC_EVENT_DATA`. This tablespace stores all Behavior Tracking tables, indexes, and constraints. Because of the potential for high volumes of data, this tablespace should be monitored closely.

Behavior Tracking Database Schema

Three tables are provided for the Behavior Tracking data. The `EVENT` table stores all event data. The `EVENT_ACTION` table logs actions used by third-party vendors against the recorded event data, and the `EVENT_TYPE` table references event types and categories in the `EVENT` table. Figure 11-5 shows a logical entity-relation diagram for the Behavior Tracking Database.

Figure 11-5 Entity-Relation Diagram for the Behavior Tracking Database



EVENT Database Table

Table 11-5 describes the metadata for the EVENT table. This table stores all Behavior Tracking event data. The EVENT table has six columns; each column corresponds to a specific event element. Five of the EVENT table's columns contain data common to every event type. The `XML_DEFINITION` column contains all information from these five columns plus event data that is unique to each event type.

See the section "Constraints and Indexes" on page 11-34 for information about the constraint defined for this table.

The Primary Key is `EVENT_ID`.

Table 11-5 EVENT Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
`APPLICATION`	`VARCHAR (30)`	NOT NULL	The application that created the event.
`EVENT_ID`	`NUMBER`	NOT NULL	A unique, system-generated number used as the record ID. This field is the table's primary key.
`EVENT_TYPE`	`VARCHAR(30)`	NOT NULL	A string identifier that shows which event was fired.
`EVENT_DATE`	`DATE`	NOT NULL	The date and time of the event.
`WLS_SESSION_ID`	`VARCHAR(254)`	NOT NULL	A unique, WebLogic Server-generated number assigned to the session.
`XML_DEFINITION`	`CLOB`	NULL	An XML document that contains the specific event information for each event type. It is stored as a CLOB (Character Large Object). See Table 11-6.
`USER_ID`	`VARCHAR(50)`	NULL	The user ID associated with the session and event. If the user has not logged in this column will be null.

An XML document is created specifically for each event type. The data elements corresponding to each event type are captured in the `XML_DEFINITION` column of the EVENT table. These elements are listed in Table 11-6.

Table 11-6 XML_DEFINITION Data Elements

Event	Data Element

AddToCartEvent
Schema:
`<BEA_HOME>\weblogic700\portal\lib\commerce\ejb\ebusiness.jar,`
`tracking-add-to-cart-1_0_1.xsd`
	`application`
	`event-date`
	`event-type`
	`session-id`
	`user-id`
	`sku`
	`quantity`
	`unit-list-price`
	`currency`
	`application-name`

BuyEvent
Schema:
`<BEA_HOME>\weblogic700\portal\lib\commerce\ejb\ebusiness.jar,`
`tracking-buy-1_0_1.xsd`
	`application`
	`event-date`
	`event-type`
	`session-id`
	`user-id`
	`sku`
	`quantity`
	`unit-price`
	`currency`
	`application-name`
	`order-line-id`

CampaignUserActivityEvent
Schema:
`<BEA_HOME>\weblogic700\portal\lib\campaign\ejb\campaign.jar,`
`tracking-campaign-user-activity-1_0_1.xsd`
	`application`
	`event-date`
	`event-type`
	`session-id`
	`user-id`
	`campaign-id`
	`scenario-id`

Table 11-6 XML_DEFINITION Data Elements (Continued)

Event	Data Element

ClickCampaignEvent
Schema:
`<BEA_HOME>\weblogic700\portal\lib\campaign\ejb\campaign.jar,`
`tracking-click-campaign-1_0_1.xsd`
	`application`
	`event-date`
	`event-type`
	`session-id`
	`user-id`
	`document-type`
	`document-id`
	`campaign-id`
	`scenario-id`
	`application-name`
	`placeholder-id`

ClickContentEvent
Schema:
`<BEA_HOME>\weblogic700\portal\lib\p13n\ejb\events.jar,`
`tracking-click-content-1_0_1.xsd`
	`application`
	`event-date`
	`event-type`
	`session-id`
	`user-id`
	`document-type`
	`document-id`

ClickProductEvent
Schema:
`<BEA_HOME>\weblogic700\portal\lib\commerce\ejb\ebusiness.jar,`
`tracking-click-product-1_0_1.xsd`
	`application`
	`event-date`
	`event-type`
	`session-id`
	`user-id`
	`document-type`
	`document-id`
	`sku`
	`category-id`
	`application-name`

DisplayCampaignEvent
Schema:
`<BEA_HOME>\weblogic700\portal\lib\campaign\ejb\campaign.jar,`
`tracking-display-campaign-1_0_1.xsd`
	`application`
	`event-date`
	`event-type`
	`session-id`
	`user-id`
	`document-type`
	`document-id`
	`campaign-id`
	`scenario-id`
	`application-name`
	`placeholder-id`

Table 11-6 XML_DEFINITION Data Elements (Continued)

Event	Data Element
DisplayContentEvent Schema: <BEA_HOME>\weblogic700\portal\lib\p13n\ejb\events.jar, tracking-display-content-1_0_1.xsd	application event-date event-type session-id user-id document-type document-id
DisplayProductEvent Schema: <BEA_HOME>\weblogic700\portal\lib\commerce\ejb\ebusiness .jar, tracking-display-product-1_0_1.xsd	application event-date event-type session-id user-id document-type document-id sku category-id application-name
PurchaseCartEvent Schema: <BEA_HOME>\weblogic700\portal\lib\commerce\ejb\ebusiness .jar, tracking-purchase-cart-1_0_1.xsd	application event-date event-type session-id user-id total-price order-id currency application-name
RemoveFromCartEvent Schema: <BEA_HOME>\weblogic700\portal\lib\commerce\ejb\ebusiness .jar, tracking-remove-from-cart-1_0_1.xsd	application event-date event-type session-id user-id sku quantity unit-price currency application-name

Table 11-6 XML_DEFINITION Data Elements (Continued)

Event	Data Element
RuleEvent Schema: <BEA_HOME>\weblogic700\portal\lib\p13n\ejb\events.jar, tracking-rule-1_0_1.xsd	application event-date event-type session-id user-id ruleset-name rule-name
SessionBeginEvent Schema: <BEA_HOME>\weblogic700\portal\lib\p13n\ejb\events.jar, tracking-session-begin-1_0_1.xsd	application event-date event-type session-id user-id
SessionEndEvent Schema: <BEA_HOME>\weblogic700\portal\lib\p13n\ejb\events.jar, tracking-session-end-1_0_1.xsd	application event-date event-type session-id user-id
SessionLoginEvent Schema: <BEA_HOME>\weblogic700\portal\lib\p13n\ejb\events.jar, tracking-session-login-1_0_1.xsd	application event-date event-type session-id user-id
UserRegistrationEvent Schema: <BEA_HOME>\weblogic700\portal\lib\p13n\ejb\events.jar, tracking-user-registration-1_0_1.xsd	application event-date event-type session-id user-id

The EVENT_ACTION Database Table

Table 11-7 describes the metadata for the EVENT_ACTION table. This table logs actions used by third-party vendors against the recorded event data. It is a fairly static.

The Primary Key is composed of of EVENT_ACTION and ACTION_DATE.

Table 11-7 EVENT_ACTION Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
EVENT_ACTION	VARCHAR(30)	NOT NULL	The event action taken such as BEGIN EXPORT or END EXPORT. This field is one of the table's primary keys.
ACTION_DATE	DATE	NOT NULL	The date and time of the event. This field is one of the table's primary keys.
EVENT_ID	NUMBER	NULL	The ID of the event that corresponds with the event action taken.

The EVENT_TYPE Database Table

Table 11-8 describes the metadata for the EVENT_TYPE table. This table references event types and categories in the EVENT table. This table is static.

See the section "Constraints and Indexes" on page 11-34 for information about the constraint defined for this table.

The Primary Key is EVENT_TYPE.

Table 11-8 EVENT_TYPE Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
EVENT_TYPE	VARCHAR(30)	NOT NULL	A unique, system-generated number used as the record ID. This field is the table's primary key.
EVENT_GROUP	VARCHAR(10)	NOT NULL	The event category group associated with the event type.
DESCRIPTION	VARCHAR(50)	NULL	A description of the EVENT_TYPE.

Note: To record custom events, you must create an entry in this table. If a custom event does not have a record in this table, you cannot persist it to the EVENT table.

Constraints and Indexes

There is a single foreign key constraint between the `EVENT_TYPE` columns in the `EVENT` and `EVENT_TYPE` tables. As previously mentioned, if a custom event does not have a record in the `EVENT_TYPE` table, it cannot be persisted to the `EVENT` table.

Other than Primary Keys on each of the tables, there are only two indexes on the `EVENT` table. One index is on the `EVENT.EVENT_DATE` column and the other index is comprised of the `EVENT.EVENT_TYPE and EVENT.EVENT_DATE` columns.

Step 2: Create the Behavior Tracking Databases

BEA provides scripts to create the Behavior Tracking database schema and tables for all databases except PointBase. (Behavior Tracking database objects already exist for PointBase; executing `create_db.bat/sh` recreates them.) This step provides information about the database structures for the following environments:

- Creating a Database for a Development Environment
- Creating Databases for a Production Environment

Creating a Database for a Development Environment

In a development environment, you may not want or need separate databases or tablespaces for recording Behavior Tracking events from the databases or tablespaces used for WebLogic Portal. Accordingly, you can include the Behavior Tracking database objects along side the database objects of these products. The easiest way to accomplish this is to execute the `create_all` script found in the `event` directory of your database installation.

Log into Oracle using SQL*Plus and execute the `create_all.sql` script in this location:

`%`*`BEA_HOME`*`%/weblogic700/portal/db/oracle/817/event/create_all.sql`

The `create_all` scripts in the `event` subdirectory executes the following scripts:

- **`drop_event.sql`**: Drops all the Behavior Tracking database objects.
- **`create_event.sql`**: Creates all the Behavior Tracking database objects.
- **`insert_event_type.sql`**: Populates the `EVENT_TYPE` table with base data.

Creating Databases for a Production Environment

This scenario is intended for use in an Oracle production environment where multiple tablespaces and their corresponding elements, such as tables and indexes, can reside in separate tablespaces and potentially on a different database server than WebLogic Portal database objects.

Before enabling the Behavior Tracking events, complete the following steps:

1. Identify the server and database used for recording Behavior Tracking events.
2. In the `<BEA_HOME>\weblogic700\portal\/db/oracle/817/event` directory:
   a. Edit the `create_event_tablespaces.sql` script to properly define the tablespace path and data filenames.
   b. Execute the `create_event_tablespaces.sql` to create the tablespaces.
   c. Edit the `create_event_users.sql` to ensure the correct user account will be created when this script is executed (the account name by default is `WEBLOGIC_EVENT`).
   d. Execute the `create_event_users.sql`.
3. Using SQL*Plus, connect as the user defined in `create_event_users.sql` and execute the script `create_all.sql`. This script will call `drop_event.sql`, `create_event.sql`, and `insert_event_type.sql`.
4. Change your Data Source information to point to this host, database instance, and user account. For more information, see "Configure a Data Source (Optional)" on page 11-38.

Step 3: Enable the Behavior Tracking Listener

Before Behavior Tracking events can be recorded to a database, you must enable the Behavior Tracking listener. This is accomplished by adding a listener class.

Notes: This step provides information on how to add a listener class in the Sample Portal. For your application, you would use similar steps.

If the Event service does not exist as a service for your application, use WebLogic Server Administration Console to add it.

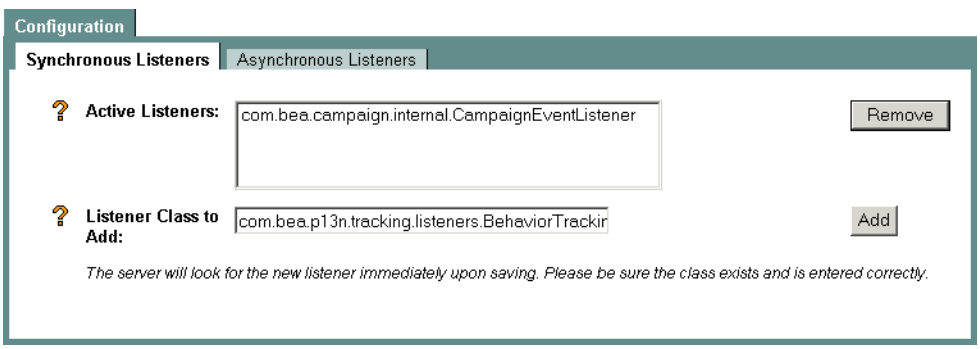
To add the Behavior Tracking listener, take the following steps:

1. In the WebLogic Server Administration Console, navigate to Synchronous or Asynchronous Listeners tab in the node tree for sampleportalDomain as follows:

   `http://hostname:port/console > sampleportalDomain > Deployments > Applications > sampleportal > Service Configurations > Event Service > Configuration Tab > Synchronous Listeners`

2. Add the Behavior Tracking listener (`com.bea.p13n.tracking.listeners.BehaviorTrackingListener`) to the **Listen Class to Add** field, and then click the **Add** button. See Figure 11-6.

Figure 11-6 WebLogic Server Administration Console—Event Service



Note: You must configure your database before activating Behavior Tracking. For information on how to do this, see "Creating Databases for a Production Environment" on page 11-35.

Step 4: Configure the Behavior Tracking Service

Behavior Tracking events are placed in a buffer and then intermittently persisted to the Event tables in the database where they can be analyzed offline. An asynchronous service is used so that long-running event handlers can execute without delaying the application from a Web site visitor's perspective.

Note: Each Behavior Tracking event property must be configured in the WebLogic Server Administration Console.

Connection pool The buffered Behavior Tracking events are swept into the database using a pool of data connections. The default data source is `weblogic.jdbc.jts.commercePool`. You can use a different data source. To do this, create and configure the new data source (see "Configure a Data Source (Optional)" on page 11-38) and substitute the name of the default data source with the name of the new data source in the WebLogic Server Administration Console.

Properties The particular events that are persisted to the database are specified in the `PersistEventTypes` property. You can view and alter the list of the persisted events in the WebLogic Server Administration Console. The types in this list must match the type specified in the event; for example, the `SessionBeginEvent` has as its type the string "`SessionBeginEvent`".

Optimize performance The frequency of sweeping of events from the buffer is controlled by the following properties the Behavior Tracking service:

- `MaxBufferSize`
- `SweepInterval`
- `SweepMaxTime`

Tune these properties to optimize performance. A buffer sweep should be performed often enough that writing to the database is not too time consuming but not so frequent that the operation is wasteful.

Steps To configure the Behavior Tracking Service, do the following:

Notes: These steps provide information on how optimize performance in the Sample Portal. For your application, you would use similar steps.

If the Event service does not exist as a service for your application, use WebLogic Server Administration Console to add it.

1. In the WebLogic Server Administration Console, navigate to the Behavior Tracking Service (shown in Figure 11-6) in the node tree for sampleportalDomain, as follows:

   http://hostname:port/console > sampleportalDomain > Deployments > Applications > sampleportal > Service Configurations > Behavior Tracking Service

Figure 11-7 WebLogic Server Administration Console—Behavior Tracking Service

2. To change the Data Source, enter the fully-qualified name of the Data Source in the Data Source JNDI Name field.
3. To change the sweeping of events from the buffer, enter the new buffer values in the appropriate fields.
4. To specify whether a particular event is persisted, add or remove the event from the Persisted Event Types list box.

Configure a Data Source (Optional)

This section provides a brief description about configuring a new data source for a connection pool used for persisting events in the Sample Portal. For your application, you would use similar steps.

To configure a new data source, take the following steps.

Note: For more information on using the WebLogic Server Administration Console, see the WebLogic Server documentation at http://edocs.bea.com/wls/docs70/index.html.

1. In the WebLogic Server Administration Console, navigate to the Behavior Tracking Service (shown in Figure 11-6) in the node tree for sampleportalDomain, as follows:

   `http://hostname:port/console > sampleportal > Services > JDBC > Data Sources > JDBCData Source Factories`

Figure 11-8 WebLogic Server Administration Console—JDBC Data Sources

2. In the right pane, click **Configure a new JDBC Data Source Factory**.
3. Enter the appropriate values for the new data source in the appropriate tabs and fields.

A Database Schemas

This section describes the database schemas for WebLogic Portal. This information is provided to help you restructure your database to better customize or extend the technologies provided in WebLogic Portal.

This section includes information on the following subjects:

- Campaign Database Schemas
- Event Database Schemas
- Catalog Database Schemas
- Order and Discount Database Schemas
- Personalization Database Schemas
- Portal Database Schemas

Campaign Database Schemas

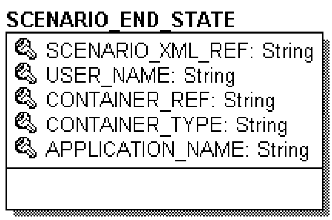
This section describes the database schema for the Campaign services.

- The Entity-Relation Diagram for Campaign Manager Database Tables
- List of Tables Composing the BEA Campaign Manager
- The Campaign Manager Data Dictionary

The Entity-Relation Diagram for Campaign Manager Database Tables

Figure A-1 shows the Entity-Relation diagram for the E-Business Control Center for the Campaign services database. See the subsequent sections in this chapter for information about the data type syntax.

Figure A-1 Entity-Relation Diagram for Campaign Manager Database Tables



List of Tables Composing the BEA Campaign Manager

The BEA Campaign Manager is composed of the following table:

Campaign and Scenarios

- The SCENARIO_END_STATE Database Table

The Campaign Manager Data Dictionary

At this time, there is only one database table pertaining to the Campaign Manager.

The SCENARIO_END_STATE Database Table

Table A-1 describes the metadata for the E-Business Control Center SCENARIO_END_STATE table. This table identifies when a user is no longer eligible to participate in a particular scenario.

The Primary Key is comprised of SCENARIO_XML_REF, USER_NAME, CONTAINER_REF, CONTAINER_TYPE and APPLICATION_NAME.

Table A-1 SCENARIO_END_STATE Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
SCENARIO_XML_REF	VARCHAR(20)	NOT NULL	PK—The identifier for the XML-based scenario definition file.
USER_NAME	VARCHAR(200)	NOT NULL	PK—the user ID. (FK to WLCS_USER.IDENTIFIER)
CONTAINER_REF	VARCHAR(254)	NOT NULL	PK—the campaign unique identifier. (FK to CAMPAIGN.CAMPAIGN_UID)
CONTAINER_TYPE	VARCHAR(50)	NOT NULL	PK—At this time this column will always hold the string 'Campaign'.
APPLICATION_NAME	VARCHAR(100)	NOT NULL	PK—The deployed J2EE application name. This should match the name in the WebLogic Server console.)

Event Database Schemas

To record how online visitors are interacting with your Web site, you can record event information to a database. These kinds of events are called Behavior Tracking events. E-analytics and e-marketing systems can then analyze these events offline to evaluate visitor behavior and transactional data. You can use the knowledge gained from analysis to create and optimize personalization rules, set up product offers, and develop interactive marketing campaigns. This section describes the requirements and database schema needed to log event data for analytical use.

This section includes information on the following subjects:

- Data Storage
- Constraints and Indexes

Data Storage

This section provides an overview of relational databases and the database schemas and tables that are required for recording Behavior Tracking events.

Relational Databases

Relational databases have both logical and physical structures. Logically you may define one or more databases. Each database may contain one or more tables and indexes, and each table may have multiple columns and rows. The logical structure of databases is quite similar between vendors. However, the physical structure of a database is very vendor-specific. Essentially, the physical structure defines areas on disk drives where the data is stored. Each database environment uses its own terminology and implementation for storing data at the operating system level. For example, Oracle uses the term *tablespace* and the Microsoft SQL Server uses the term *filegroup*.

Recommendation When a database structure is defined by a database administrator, attention must be paid to the location of specific tables. Some tables are static in that they do not change much; some tables are dynamic in that many rows are being added and deleted; and some tables are read frequently and some rarely. Depending on their behavior, tables should be placed on different physical locations. Some of the most highly-used tables in WebLogic Portal are used for Behavior Tracking. The activity of a single visitor moving around your site may generate multiple table entries. Therefore, it is recommended that you place these tables on the fastest drives in the computer. Experienced database administrators are aware of many techniques for monitoring and configuring a database installation for optimal performance. If you do not have a database administrator working with your installation and you have a lot of activity on your site, you should bring in a well-qualified database administer for regular maintenance of your system.

Database Directory Paths

The default database directory paths are:

- `%PORTAL_HOME%\db\<db vendor>\<db version>\...` (Windows)
- `$PORTAL_HOME/db/<db vendor>/<db version>/...` (UNIX)

where `PORTAL_HOME` is the directory in which you installed WebLogic Portal.

For example, if you are using Oracle 8.1.7 on UNIX, the location would be `$PORTAL_HOME/db/oracle/817/....`

Scripts BEA provides scripts to help set up the database schema needed for recording Behavior Tracking events, as well as the schema needed for recording data associated with WebLogic Portal. This data includes information from orders, catalogs, products, portals, and portlets.

For Oracle databases, the tablespaces created for WebLogic Portal data are the `WEBLOGIC_DATA` and `WEBLOGIC_INDEX`.

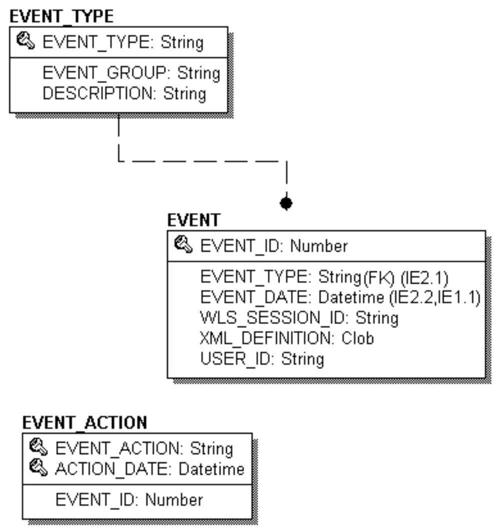
Note: `WEBLOGIC_DATA` and `WEBLOGIC_INDEX` are tablespace names created by BEA scripts. If you use a particular naming convention, you can rename them.

Behavior tracking uses a tablespace called `WEBLOGIC_EVENT_DATA`. This tablespace stores all Behavior Tracking tables, indexes, and constraints. Because of the potential for high volumes of data, this tablespace should be monitored closely.

Behavior Tracking Database Schema

Three tables are provided for the Behavior Tracking data. The `EVENT` table stores all event data. The `EVENT_ACTION` table logs actions used by third-party vendors against the recorded event data, and the `EVENT_TYPE` table references event types and categories in the `EVENT` table. Figure A-2 shows a logical entity-relation diagram for the Behavior Tracking Database.

Figure A-2 Entity-Relation Diagram for the Behavior Tracking Database



The EVENT Database Table

Table A-2 describes the metadata for the EVENT table. This table stores all Behavior Tracking event data.

The Primary Key is `EVENT_ID`.

Table A-2 The EVENT Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
`APPLICATION`	`VARCHAR (30)`	NOT NULL	The application that created the event.
`EVENT_ID`	`NUMBER`	NOT NULL	A unique, system-generated number used as the record ID. This field is the table's primary key.
`EVENT_TYPE`	`VARCHAR(30)`	NOT NULL	A string identifier that shows which event was fired.
`EVENT_DATE`	`DATE`	NOT NULL	The date and time of the event.
`WLS_SESSION_ID`	`VARCHAR(254)`	NOT NULL	A unique, WebLogic Server-generated number assigned to the session.

Table A-2 The EVENT Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
`XML_DEFINITION`	`CLOB`	NULL	An XML document that contains the specific event information for each event type. It is stored as a CLOB (Character Large Object). See Table A-3.
`USER_ID`	`VARCHAR(50)`	NULL	The user ID associated with the session and event. If the user has not logged in this column will be null.

As shown in Table A-2, the EVENT table has six columns; each column corresponds to a specific event element. Five of the EVENT table's columns contain data common to every event type. The `XML_DEFINITION` column contains all information from these five columns plus event data that is unique to each event type. An XML document is created specifically for each event type. The data elements corresponding to each event type are captured in the `XML_DEFINITION` column of the EVENT table. These elements are listed in Table A-3.

Table A-3 XML_DEFINITION Data Elements

Event	Data Element

AddToCartEvent	`application`
	`event-date`
	`event-type`
	`session-id`
	`user-id`
	`sku`
	`quantity`
	`unit-list-price`
	`currency`
	`application-name`

Table A-3 XML_DEFINITION Data Elements (Continued)

Event	Data Element
BuyEvent	application event-date event-type session-id user-id sku quantity unit-price currency application-name order-line-id
CampaignUserActivityEvent	application event-date event-type session-id user-id campaign-id scenario-id
ClickCampaignEvent	application event-date event-type session-id user-id document-type document-id campaign-id scenario-id application-name placeholder-id
ClickContentEvent	application event-date event-type session-id user-id document-type document-id

Table A-3 XML_DEFINITION Data Elements (Continued)

Event	Data Element

ClickProductEvent	`application`
	`event-date`
	`event-type`
	`session-id`
	`user-id`
	`document-type`
	`document-id`
	`sku`
	`category-id`
	`application-name`

DisplayCampaignEvent	`application`
	`event-date`
	`event-type`
	`session-id`
	`user-id`
	`document-type`
	`document-id`
	`campaign-id`
	`scenario-id`
	`application-name`
	`placeholder-id`

DisplayContentEvent	`application`
	`event-date`
	`event-type`
	`session-id`
	`user-id`
	`document-type`
	`document-id`

DisplayProductEvent	`application`
	`event-date`
	`event-type`
	`session-id`
	`user-id`
	`document-type`
	`document-id`
	`sku`
	`category-id`
	`application-name`

Table A-3 XML_DEFINITION Data Elements (Continued)

Event	Data Element

PurchaseCartEvent	`application`
	`event-date`
	`event-type`
	`session-id`
	`user-id`
	`total-price`
	`order-id`
	`currency`
	`application-name`

RemoveFromCartEvent	`application`
	`event-date`
	`event-type`
	`session-id`
	`user-id`
	`sku`
	`quantity`
	`unit-price`
	`currency`
	`application-name`

RuleEvent	`application`
	`event-date`
	`event-type`
	`session-id`
	`user-id`
	`ruleset-name`
	`rule-name`

SessionBeginEvent	`application`
	`event-date`
	`event-type`
	`session-id`
	`user-id`

SessionEndEvent	`application`
	`event-date`
	`event-type`
	`session-id`
	`user-id`

Table A-3 XML_DEFINITION Data Elements (Continued)

Event	Data Element

SessionLoginEvent	`application`
	`event-date`
	`event-type`
	`session-id`
	`user-id`

UserRegistrationEvent	`application`
	`event-date`
	`event-type`
	`session-id`
	`user-id`

The EVENT_ACTION Database Table

Table A-4 describes the metadata for the `EVENT_ACTION` table. This table logs actions used by third-party vendors against the recorded event data. It is a fairly static.

The Primary Key is comprised of `EVENT_ACTION` and `ACTION_DATE`.

Table A-4 EVENT_ACTION Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
`EVENT_ACTION`	`VARCHAR(30)`	NOT NULL	The event action taken such as `BEGIN EXPORT` or `END EXPORT`. This field is one of the table's primary keys.
`ACTION_DATE`	`DATE`	NOT NULL	The date and time of the event. This field is one of the table's primary keys.
`EVENT_ID`	`NUMBER`	NULL	The ID of the event that corresponds with the event action taken.

The EVENT_TYPE Database Table

Table A-5 describes the metadata for the `EVENT_TYPE` table. This table references event types and categories in the `EVENT` table. This table is static.

The Primary Key is `EVENT_TYPE`.

Table A-5 EVENT_TYPE Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
EVENT_TYPE	VARCHAR(30)	NOT NULL	A unique, system-generated number used as the record ID. This field is the table's primary key.
EVENT_GROUP	VARCHAR(10)	NOT NULL	The event category group associated with the event type.
DESCRIPTION	VARCHAR(50)	NULL	A description of the EVENT_TYPE.

Note: To record custom events, you must create an entry in this table. If a custom event does not have a record in this table, you cannot persist it to the EVENT table.

Constraints and Indexes

There is a single foreign key constraint between the EVENT_TYPE columns in the EVENT and EVENT_TYPE tables. As previously mentioned, if a custom event does not have a record in the EVENT_TYPE table, it cannot be persisted to the EVENT table.

Other than Primary Keys on each of the tables, there are only two indexes on the EVENT table. One index is on the EVENT.EVENT_DATE column and the other index is comprised of the EVENT.EVENT_TYPE and EVENT.EVENT_DATE columns.

Catalog Database Schemas

This section documents the database schema for the Commerce services Product Catalog.

This section includes information on the following subjects:

- The Entity-Relation Diagram for the Core Product Catalog Tables
- The Campaign Manager Data Dictionary

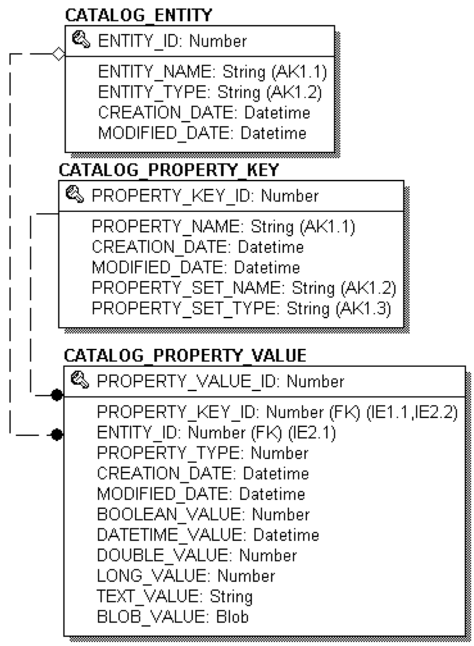
- Defined Constraints for Product Catalog Tables
- Defined Constraints for Product Catalog Tables

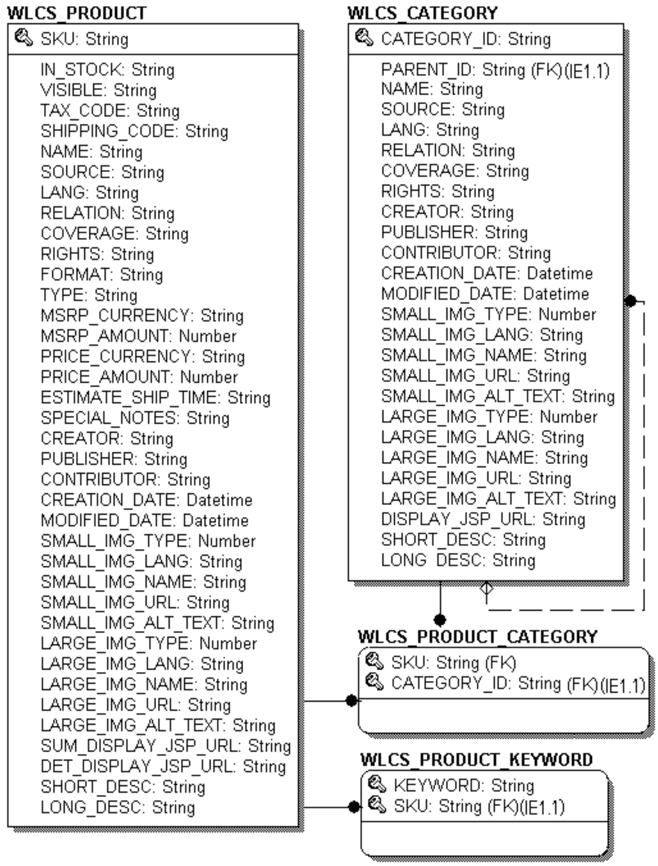
The metadata for items in Commerce services Product Catalog are based on the Dublin Core Metadata Open Standard. This standard offers a number of advantages for a Web-based catalog. For more information about the Dublin Core Metadata Open Standard, please see http://purl.org/dc.

The Entity-Relation Diagram for the Core Product Catalog Tables

Figure A-3 shows the logical Entity-Relation diagram for the Commerce services core Product Catalog tables in the Commerce database.

Figure A-3 Entity-Relation Diagram for the Core Product Catalog Tables


CATALOG_ENTITY
ENTITY_ID: Number
ENTITY_NAME: String (AK1.1)
ENTITY_TYPE: String (AK1.2)
CREATION_DATE: Datetime
MODIFIED_DATE: Datetime
CATALOG_PROPERTY_KEY
PROPERTY_KEY_ID: Number
PROPERTY_NAME: String (AK1.1)
CREATION_DATE: Datetime
MODIFIED_DATE: Datetime
PROPERTY_SET_NAME: String (AK1.2)
PROPERTY_SET_TYPE: String (AK1.3)
CATALOG_PROPERTY_VALUE
PROPERTY_VALUE_ID: Number
PROPERTY_KEY_ID: Number (FK) (IE1.1,IE2.2)
ENTITY_ID: Number (FK) (IE2.1)
PROPERTY_TYPE: Number
CREATION_DATE: Datetime
MODIFIED_DATE: Datetime
BOOLEAN_VALUE: Number
DATETIME_VALUE: Datetime
DOUBLE_VALUE: Number
LONG_VALUE: Number
TEXT_VALUE: String
BLOB_VALUE: Blob



Product Catalog Tables

The following tables compose the product catalog database.

- The CATALOG_ENTITY Database Table
- The CATALOG_PROPERTY_KEY Database Table
- The CATALOG_PROPERTY_VALUE Database Table

- The WLCS_CATEGORY Database Table
- The WLCS_PRODUCT Database Table
- The WLCS_PRODUCT_CATEGORY Database Table
- The WLCS_PRODUCT_KEYWORD Database Table

The CATALOG_ENTITY Database Table

Contents: Unique identification numbers for configurable entities.

Primary key: `ENTITY_ID`.

Table A-6 CATALOG_ENTITY Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
ENTITY_ID	NUMBER(15)	NOT NULL	PK—a unique, system-generated number used as a record identifier.
ENTITY_NAME	VARCHAR(200)	NOT NULL	The name of the entity.
ENTITY_TYPE	VARCHAR(100)	NOT NULL	The type of entity (e.g., User, Group, etc.)
CREATION_DATE	DATE	NOT NULL	The time and date the record was created.
MODIFIED_DATE	DATE	NOT NULL	The time and date the record was last modified.

The CATALOG_PROPERTY_KEY Database Table

Contents: Unique identification numbers for scoped property names that are associated with configurable entities.

Primary key: `PROPERTY_KEY_ID`.

Table A-7 CATALOG_PROPERTY_KEY Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
PROPERTY_KEY_ID	NUMBER(15)	NOT NULL	PK—a unique, system-generated number used as a record identifier.

Table A-7 CATALOG_PROPERTY_KEY Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
PROPERTY_NAME	VARCHAR(100)	NOT NULL	The name of the property (formerly PROPERTY_NAME from the WLCS_PROP_ID table).
CREATION_DATE	DATE	NOT NULL	The time and date the record was created.
MODIFIED_DATE	DATE	NOT NULL	The time and date the record was last modified.
PROPERTY_SET_NAME	VARCHAR(100)	NULL	The name of the property set (formerly the SCOPE_NAME from WLCS_PROP_ID).
PROPERTY_SET_TYPE	VARCHAR(100)	NULL	The type of property set (for example, USER)

The CATALOG_PROPERTY_VALUE Database Table

Contents: Boolean, timestamp, float, integer, text, and user-defined (object) property values that are associated with configurable entities.

Primary key: PROPERTY_VALUE_ID.

Table A-8 CATALOG_PROPERTY_VALUE Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
PROPERTY_VALUE_ID	NUMBER(15)	NOT NULL	PK—a unique, system-generated number used as a record identifier.
PROPERTY_KEY_ID	NUMBER(15)	NOT NULL	A system-generated value and foreign key to the PROPERTY_KEY column.
ENTITY_ID	NUMBER(15)	NOT NULL	A system-generated value and foreign key to the ENTITY column.
PROPERTY_TYPE	NUMBER(1)	NOT NULL	Valid entries are: 0=Boolean, 1=Integer, 2=Float, 3=Text, 4=Date and Time, 5=User-Defined (BLOB)

Table A-8 CATALOG_PROPERTY_VALUE Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
CREATION_DATE	DATE	NOT NULL	The time and date the record was created.
MODIFIED_DATE	DATE	NOT NULL	The time and date the record was last modified.
BOOLEAN_VALUE	NUMBER(1)	NULL	The value for each boolean property identifier.
DATETIME_VALUE	DATE	NULL	The value for each date and time property identifier.
DOUBLE_VALUE	NUMBER	NULL	The value associated with each float property identifier.
LONG_VALUE	NUMBER(20)	NULL	The value associated with the integer property.
TEXT_VALUE	VARCHAR(254)	NULL	The value associated with the text property.
BLOB_VALUE	BLOB	NULL	The value associated with the user-defined property.

The WLCS_CATEGORY Database Table

Contents: Categories in the Commerce database. The descriptions shown in the table reflect the "recommended best practice" for the use of that field by the Dublin Core standard.

Primary key: CATEGORY_ID.

Table A-9 WLCS_CATEGORY Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
CATEGORY_ID	VARCHAR(20)	NOT NULL	A unique identifier for a category; the primary key for this table. This field cannot be NULL. All other fields in the WLCS_CATEGORY table can be NULL.

Table A-9 WLCS_CATEGORY Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
PARENT_ID	VARCHAR(20)	NULL	The value of the CATEGORY_ID of the parent category in the hierarchy of categories that comprise your product catalog. If this is a top-level user-defined category, the PARENT_ID will be com.beasys.ROOT.
NAME	VARCHAR(50)	NULL	The name of the category in the product catalog.
SOURCE	VARCHAR(30)	NULL	A reference to a category from which the present category is derived.
LANG	VARCHAR(30)	NULL	A language of the intellectual content of the category. The recommended best practice for the values of the language element is defined by RFC 1766, which includes a two-letter Language Code (taken from the ISO 639 standard), such as: en for English; fr for French, or de for German. The language code can, optionally, be followed by a two-letter Country Code (taken from the ISO 3166 standard [ISO3166]). For example, en-uk for English used in the United Kingdom.
RELATION	VARCHAR(30)	NULL	A reference to a related category.
COVERAGE	VARCHAR(30)	NULL	The extent or scope of the content of the category.
RIGHTS	VARCHAR(30)	NULL	Information about rights held in and over the category.
CREATOR	VARCHAR(50)	NULL	An entity primarily responsible for making the content of the category.
PUBLISHER	VARCHAR(50)	NULL	An entity responsible for making the category available.

Table A-9 WLCS_CATEGORY Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
CONTRIBUTOR	VARCHAR(50)	NULL	An entity responsible for making contributions to the content of the category.
CREATION_DATE	DATE	NULL	A date associated with an event in the life cycle of the category. Recommended best practice for encoding the date value is defined in a profile of ISO 8601 and follows the YYYY-MM-DD format.
MODIFIED_DATE	DATE	NULL	A date associated with an event in the life cycle of the category, such as an update or insert by the DBLoader program that is provided with the Commerce services. The recommended best practice for encoding the date value is defined in a profile of ISO 8601 and follows the YYYY-MM-DD format.
SMALL_IMG_TYPE	NUMBER(3)	NULL	A type field of your own design that relates to the graphic. For example, you can implement your own numbering scheme, such as: 0 = display a low resolution graphic for users with low bandwidth. 1 = display a high resolution graphic for users with high bandwidth.
SMALL_IMG_LANG	VARCHAR(30)	NULL	The language of the thumbnail image for the category. For related information, see the description of the LANG column.
SMALL_IMG_NAME	VARCHAR(50)	NULL	The name of the thumbnail image for the category.
SMALL_IMG_URL	VARCHAR(254)	NULL	The URL of the thumbnail image for the category.

Table A-9 WLCS_CATEGORY Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
SMALL_IMG_ALT_TEXT	VARCHAR(254)	NULL	The alternate text to display when the user has their cursor over the thumbnail image for the category, or if they have disabled the display of graphics in their browser settings.
LARGE_IMG_TYPE	NUMBER(3)	NULL	A type field of your own design that relates to the graphic. For example, you can implement your own numbering scheme, such as: 0 = display a low resolution graphic for users with low bandwidth. 1 = display a high resolution graphic for users with high bandwidth.
LARGE_IMG_LANG	VARCHAR(30)	NULL	The language of the full-size image for the category. For related information, see the description of the LANG column.
LARGE_IMG_NAME	VARCHAR(50)	NULL	The name of the full-size image for the category.
LARGE_IMG_URL	VARCHAR(254)	NULL	The URL of the full-size image for the category.
LARGE_IMG_ALT_TEXT	VARCHAR(254)	NULL	The alternate text to display when the user has their cursor over the full-size image for the category, or if they have disabled the display of graphics in their browser settings.
DISPLAY_JSP_URL	VARCHAR(254)	NULL	The URL to the JSP used to display the category. For example: /commerce/catalog/includes/category.jsp
SHORT_DESC	VARCHAR(50)	NULL	A short description of the content of the category.
LONG_DESC	VARCHAR(254)	NULL	A long description of the content of the category.

The WLCS_PRODUCT Database Table

Contents: Item records in the Commerce database.

Primary key: SKU.

Table A-10 WLCS_PRODUCT Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
SKU	VARCHAR(40)	NOT NULL	A unique identifier (the "Stock Keeping Unit," or SKU) for a product item. This field is the table's primary key and cannot be NULL. All other fields in the WLCS_PRODUCT table can be NULL.
IN_STOCK	VARCHAR(1)	NULL	A flag to indicate whether the product item is in stock. 0 equates to false, 1 equates to true.
VISIBLE	VARCHAR(1)	NULL	Indicates whether the item should be displayed to the user. Enter 1 if visible or 0 if not visible. If not specified in the database, the default is 1.
TAX_CODE	VARCHAR(10)	NULL	The code used by the TAXWARE system to identify the specific tax category to which this item belongs.
SHIPPING_CODE	VARCHAR(10)	NULL	The code used by the shipping company for this item.
NAME	VARCHAR(100)	NULL	A name given to the product item.
SOURCE	VARCHAR(30)	NULL	A reference to another product item from which the present item is derived.

Table A-10 WLCS_PRODUCT Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
LANG	VARCHAR(30)	NULL	A language of the intellectual content of the category. The recommended best practice for the values of the language element is defined by RFC 1766, which includes a two-letter Language Code (taken from the ISO 639 standard), such as: `en` for English; `fr` for French, or `de` for German. The language code can, optionally, be followed by a two-letter Country Code (taken from the ISO 3166 standard [ISO3166]). For example, `en-uk` for English used in the United Kingdom.
RELATION	VARCHAR(30)	NULL	A reference to a related product item.
COVERAGE	VARCHAR(30)	NULL	The extent or scope of the content of the product item.
RIGHTS	VARCHAR(30)	NULL	Information about rights held in and over the item.
FORMAT	VARCHAR(30)	NULL	The physical or digital manifestation of the item.
TYPE	VARCHAR(30)	NULL	The nature or genre of the content of the item.
MSRP_CURRENCY	VARCHAR(30)	NULL	The currency type of the manufacturer's recommended price.
MSRP_AMOUNT	NUMBER(16,4)	NULL	The manufacturer's recommended price.
PRICE_CURRENCY	VARCHAR(30)	NULL	The currency type of our catalog price for this item.
PRICE_AMOUNT	NUMBER(16,4)	NULL	Our current price for this item in the catalog.
ESTIMATE_SHIP_TIME	VARCHAR(100)	NULL	Inventory: number of days/weeks before the item can be shipped.
SPECIAL_NOTES	VARCHAR(100)	NULL	Inventory related message to display with the item.

Table A-10 WLCS_PRODUCT Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
CREATOR	VARCHAR(50)	NULL	An entity primarily responsible for making the content of the product item.
PUBLISHER	VARCHAR(50)	NULL	An entity responsible for making the product item available.
CONTRIBUTOR	VARCHAR(50)	NULL	An entity responsible for making contributions to the content of the product item.
CREATION_DATE	DATE	NULL	A date associated with an event in the life cycle of the product item. Recommended best practice for encoding the date value is defined in a profile of ISO 8601 and follows the `YYYY-MM-DD` format.
MODIFIED_DATE	DATE	NULL	A date associated with an event in the life cycle of the item, such as an update or insert by the DBLoader program that is provided with the Commerce services. The recommended best practice for encoding the date value is defined in a profile of ISO 8601 and follows the `YYYY-MM-DD` format.
SMALL_IMG_TYPE	NUMBER(3)	NULL	A type field of your own design that relates to the graphic. For example, you can implement your own numbering scheme, such as: 0 = display a low resolution graphic for users with low bandwidth. 1 = display a high resolution graphic for users with high bandwidth.
SMALL_IMG_LANG	VARCHAR(30)	NULL	The language of the thumbnail image for the item. For related information, see the description of the `LANG` column.
SMALL_IMG_NAME	VARCHAR(50)	NULL	The name of the thumbnail image for the item.

Table A-10 WLCS_PRODUCT Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
SMALL_IMG_URL	VARCHAR(254)	NULL	The URL of the thumbnail image for the category.
SMALL_IMG_ALT_TEXT	VARCHAR(254)	NULL	The alternate text to display when the user has their cursor over the thumbnail image for the item, or if they have disabled the display of graphics in their browser settings.
LARGE_IMG_TYPE	NUMBER(3)	NULL	A type field of your own design that relates to the graphic. For example, you can implement your own numbering scheme, such as: 0 = display a low resolution graphic for users with low bandwidth. 1 = display a high resolution graphic for users with high bandwidth.
LARGE_IMG_LANG	VARCHAR(30)	NULL	The language of the full-size image for the item. For related information, see the description of the LANG column.
LARGE_IMG_NAME	VARCHAR(50)	NULL	The name of the full-size image for the item.
LARGE_IMG_URL	VARCHAR(254)	NULL	The URL of the full-size image for the item.
LARGE_IMG_ALT_TEXT	VARCHAR(254)	NULL	The alternate text to display when the user has their cursor over the full-size image of the item, or if they have disabled the display of graphics in their browser settings.
SUM_DISPLAY_JSP_URL	VARCHAR(254)	NULL	The URL to the JSP used to display the item in summary form. For example: `/commerce/catalog/includes/itemsummary.jsp`

Table A-10 WLCS_PRODUCT Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
DET_DISPLAY_JSP_URL	VARCHAR(254)	NULL	The URL to the JSP used to display the item in detailed form. For example: /commerce/catalog/includes/itemdetails.jsp
SHORT_DESC	VARCHAR(254)	NULL	A short description of the content of the product item.
LONG_DESC	VARCHAR(2000)	NULL	A long description of the content of the product item.

The WLCS_PRODUCT_CATEGORY Database Table

Contents: Shows which product items are associated with product categories.

Primary key: SKU and CATEGORY_ID.

Table A-11 WLCS_PRODUCT_CATEGORY Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
SKU	VARCHAR(40)	NOT NULL	A unique identifier (the "Stock Keeping Unit," or SKU) for an item.
CATEGORY_ID	VARCHAR(20)	NOT NULL	A unique identifier for a category.

The WLCS_PRODUCT_KEYWORD Database Table

Contents: Keywords that you associate with each product item. The keywords enable rapid retrieval of item records via the search functions on the Web site's pages or Administration pages.

Primary key: KEYWORD and SKU.

Table A-12 WLCS_PRODUCT_KEYWORD Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
`KEYWORD`	`VARCHAR(30)`	NOT NULL	Contains a keyword that you associate with the product item assigned to the unique SKU. Recommendation—for a given item, select a value from a controlled vocabulary or formal classification scheme implemented in your company.
`SKU`	`VARCHAR(40)`	NOT NULL	A unique identifier (the "Stock Keeping Unit," or SKU) for an item.

Defined Constraints for Product Catalog Tables

Various constraints are defined and used in the Product Catalog database schema. These constraints can be found in the following scripts:

`wlcs_create_fkeys.sql`—contains the Foreign Keys

`wlcs_create_tables.sql`—contains the Check Constraints

Table A-13 Constraints Defined on Product Catalog Database Tables

Table Name	Constraints
CATALOG_PROPERTY_VALUE	**Column**—ENTITY_ID **Constraint**—FK1_CAT_PROP_V **Constraint Type**—FOREIGN KEY Ensures that each CATALOG_PROPERTY_VALUE references an existing CATALOG_ENTITY via the ENTITY_ID column. **Column**—PROPERTY_KEY_ID **Constraint**—FK2_CAT_PROP_V **Constraint Type**—FOREIGN KEY Ensures that each CATALOG_PROPERTY_VALUE references an existing CATALOG_PROPERTY_KEY via the PROPERTY_KEY_ID column. **Column**—BOOLEAN_VALUE **Constraint**—CC1_CAT_PROP_V **Constraint Type**—CHECK Ensures the value of the BOOLEAN_VALUE column is either 0 (false) or 1 (true).
WLCS_CATEGORY	**Column**—CATEGORY_ID **Constraint**—FK1_CATEGORY **Constraint Type**—FOREIGN KEY Ensures that each PARENT_ID references an existing WLCS_CATEGORY via the CATEGORY_ID column.
WLCS_PRODUCT_CATEGORY	**Column**— CATEGORY_ID **Constraint**— FK1_PRODUCT_CAT **Constraint Type**—FOREIGN KEY Ensures that each CATEGORY_ID references an existing WLCS_CATEGORY via the CATEGORY_ID column. **Column**—SKU **Constraint**—FK2_PRODUCT_CAT **Constraint Type**—FOREIGN KEY Ensures that each SKU references an existing WLCS_PRODUCT via the SKU column.
WLCS_PRODUCT_KEYWORD	**Column**—SKU **Constraint**—FK1_PRODUCT_KEY **Constraint Type**—FOREIGN KEY Ensures that each SKU references an existing WLCS_PRODUCT via the SKU column.

Order and Discount Database Schemas

This section describes the database schema for Order services.

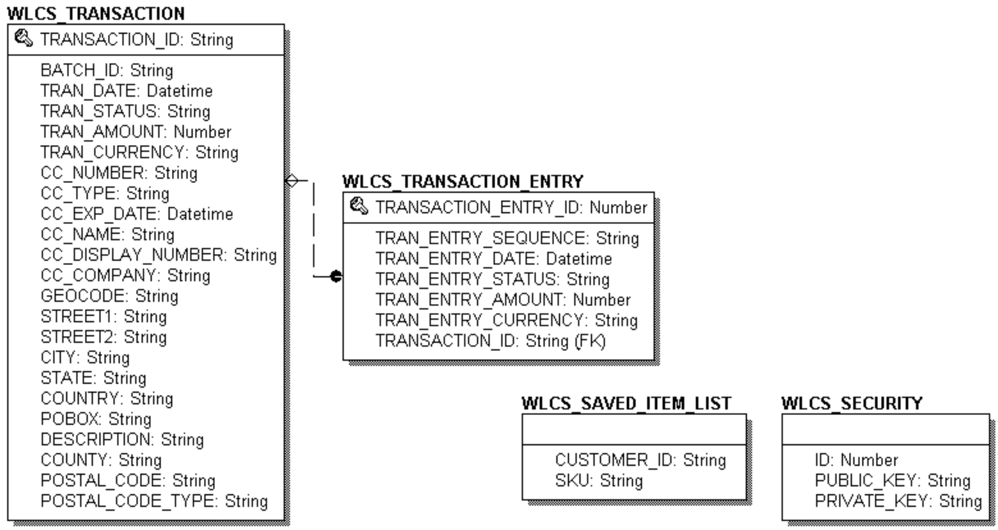
This section includes information on the following subjects:

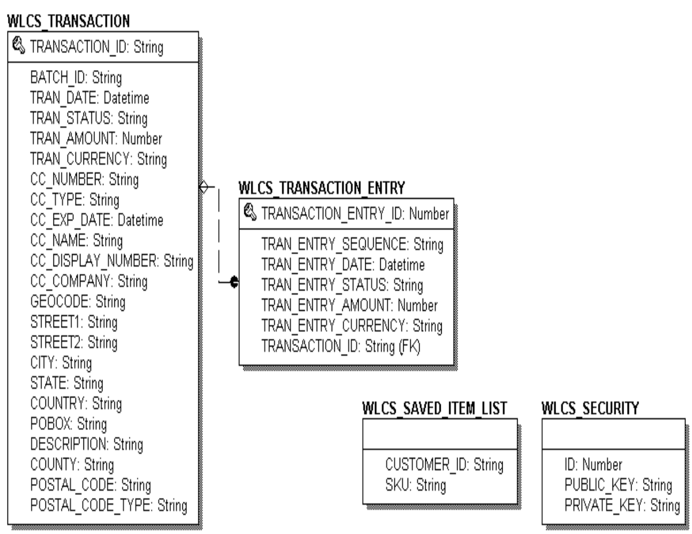
- The Entity-Relation Diagram for Campaign Manager Database Tables
- The Order Processing Data Dictionary Tables
- Defined Constraints in the Order Database Schema

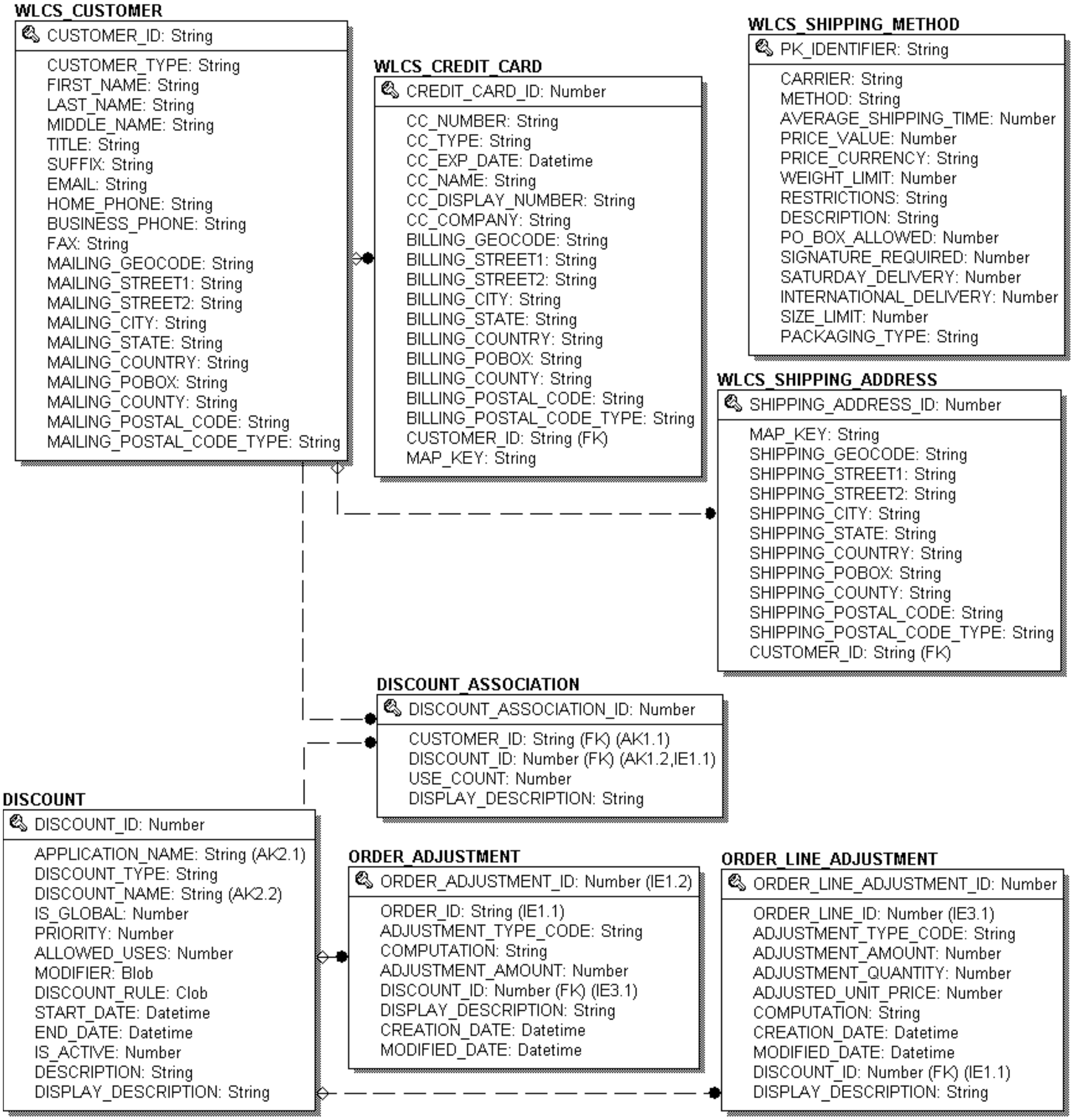
The Entity-Relation Diagram for the Order and Discount Tables

Figure A-3 shows the logical Entity-Relation diagram for the WebLogic Portal order and discount tables in the WebLogic Portal database. See the subsequent sections in this chapter for information about the data type syntax.

Figure A-4 Entity-Relation Diagram for the Order and Discount Tables






WLCS_CUSTOMER
CUSTOMER_ID: String
CUSTOMER_TYPE: String
FIRST_NAME: String
LAST_NAME: String
MIDDLE_NAME: String
TITLE: String
SUFFIX: String
EMAIL: String
HOME_PHONE: String
BUSINESS_PHONE: String
FAX: String
MAILING_GEOCODE: String
MAILING_STREET1: String
MAILING_STREET2: String
MAILING_CITY: String
MAILING_STATE: String
MAILING_COUNTRY: String
MAILING_POBOX: String
MAILING_COUNTY: String
MAILING_POSTAL_CODE: String
MAILING_POSTAL_CODE_TYPE: String
WLCS_CREDIT_CARD
CREDIT_CARD_ID: Number
CC_NUMBER: String
CC_TYPE: String
CC_EXP_DATE: Datetime
CC_NAME: String
CC_DISPLAY_NUMBER: String
CC_COMPANY: String
BILLING_GEOCODE: String
BILLING_STREET1: String
BILLING_STREET2: String
BILLING_CITY: String
BILLING_STATE: String
BILLING_COUNTRY: String
BILLING_POBOX: String
BILLING_COUNTY: String
BILLING_POSTAL_CODE: String
BILLING_POSTAL_CODE_TYPE: String
CUSTOMER_ID: String (FK)
MAP_KEY: String
WLCS_SHIPPING_METHOD
PK_IDENTIFIER: String
CARRIER: String
METHOD: String
AVERAGE_SHIPPING_TIME: Number
PRICE_VALUE: Number
PRICE_CURRENCY: String
WEIGHT_LIMIT: Number
RESTRICTIONS: String
DESCRIPTION: String
PO_BOX_ALLOWED: Number
SIGNATURE_REQUIRED: Number
SATURDAY_DELIVERY: Number
INTERNATIONAL_DELIVERY: Number
SIZE_LIMIT: Number
PACKAGING_TYPE: String
WLCS_SHIPPING_ADDRESS
SHIPPING_ADDRESS_ID: Number
MAP_KEY: String
SHIPPING_GEOCODE: String
SHIPPING_STREET1: String
SHIPPING_STREET2: String
SHIPPING_CITY: String
SHIPPING_STATE: String
SHIPPING_COUNTRY: String
SHIPPING_POBOX: String
SHIPPING_COUNTY: String
SHIPPING_POSTAL_CODE: String
SHIPPING_POSTAL_CODE_TYPE: String
CUSTOMER_ID: String (FK)
DISCOUNT_ASSOCIATION
DISCOUNT_ASSOCIATION_ID: Number
CUSTOMER_ID: String (FK) (AK1.1)
DISCOUNT_ID: Number (FK) (AK1.2,IE1.1)
USE_COUNT: Number
DISPLAY_DESCRIPTION: String
DISCOUNT
DISCOUNT_ID: Number
APPLICATION_NAME: String (AK2.1)
DISCOUNT_TYPE: String
DISCOUNT_NAME: String (AK2.2)
IS_GLOBAL: Number
PRIORITY: Number
ALLOWED_USES: Number
MODIFIER: Blob
DISCOUNT_RULE: Clob
START_DATE: Datetime
END_DATE: Datetime
IS_ACTIVE: Number
DESCRIPTION: String
DISPLAY_DESCRIPTION: String
ORDER_ADJUSTMENT
ORDER_ADJUSTMENT_ID: Number (IE1.2)
ORDER_ID: String (IE1.1)
ADJUSTMENT_TYPE_CODE: String
COMPUTATION: String
ADJUSTMENT_AMOUNT: Number
DISCOUNT_ID: Number (FK) (IE3.1)
DISPLAY_DESCRIPTION: String
CREATION_DATE: Datetime
MODIFIED_DATE: Datetime
ORDER_LINE_ADJUSTMENT
ORDER_LINE_ADJUSTMENT_ID: Number
ORDER_LINE_ID: Number (IE3.1)
ADJUSTMENT_TYPE_CODE: String
ADJUSTMENT_AMOUNT: Number
ADJUSTMENT_QUANTITY: Number
ADJUSTED_UNIT_PRICE: Number
COMPUTATION: String
CREATION_DATE: Datetime
MODIFIED_DATE: Datetime
DISCOUNT_ID: Number (FK) (IE1.1)
DISPLAY_DESCRIPTION: String

The Order Processing Data Dictionary Tables

Note: Even though the following documentation references "foreign keys" to various tables, these constraints do not currently exist in this release of Commerce services. However, they will be in place in future versions of Commerce services and we want you to be aware of these relationships now.

The Commerce services order management system has the following tables:

- The DISCOUNT Database Table
- The DISCOUNT_ASSOCIATION Database Table
- The ORDER_ADJUSTMENT Database Table
- The ORDER_LINE_ADJUSTMENT Database Table
- The WLCS_CREDIT_CARD Database Table
- The WLCS_CUSTOMER Database Table
- The WLCS_ORDER Database Table
- The WLCS_ORDER_LINE Database Table
- The WLCS_SAVED_ITEM_LIST Database Table
- The WLCS_SECURITY Database Table
- The WLCS_SHIPPING_ADDRESS Database Table
- The WLCS_SHIPPING_METHOD Database Table
- The WLCS_TRANSACTION Database Table
- The WLCS_TRANSACTION_ENTRY Database Table

The DISCOUNT Database Table

Contents: One or more discount records for every `DISCOUNT_SET` record.

Primary key: `DISCOUNT_ID`.

Table A-14 DISCOUNT

Column Name	Data Type	Null Value	Description and Recommendations
DISCOUNT_ID	NUMBER(15)	NOT NULL	PK—a unique, system-generated number to be used as the record ID.
APPLICATION_NAME	VARCHAR(100)	NOT NULL	FK—foreign key to the DISCOUNT_SET table.
DISCOUNT_TYPE	VARCHAR(10)	NOT NULL	The type of discount offered. It is used for an *order* or for an *order line item*.
DISCOUNT_NAME	VARCHAR(254)	NOT NULL	The name of the discount.
IS_GLOBAL	NUMBER(1)	NOT NULL	A flag showing whether or not this discount can be used globally.
PRIORITY	NUMBER(3)	NOT NULL	The level of priority this discount has over other discounts.
ALLOWED_USERS	NUMBER(10)	NOT NULL	The number of times the discount may be used.
MODIFIER	VARCHAR(254)	NOT NULL	Describes the actual discount to be applied. This is XML.
DISCOUNT_RULE	CLOB	NOT NULL	The method used to select items for discount. This is XML.
START_DATE	DATE	NOT NULL	The starting date and time of the discount
END_DATE	DATE	NOT NULL	The ending date and time of the discount.
IS_ACTIVE	NUMBER(1)	NOT NULL	A flag that determines whether the discount is active or not. Active=1, Not active=0
DESCRIPTION	VARCHAR(254)	NULL	The discount description.
DISPLAY_DESCRIPTION	VARCHAR(254)	NULL	The discount description used for display purposes only.

The DISCOUNT_ASSOCIATION Database Table

Function: Associates each customer with a discount and maintains information regarding the times the customer has used each discount.

Primary key: `DISCOUNT_ASSOCIATION_ID`.

Table A-15 DISCOUNT_ASSOCIATION

Column Name	Data Type	Null Value	Description and Recommendations
DISCOUNT_ASSOCIATION_ID	NUMBER(15)	NOT NULL	PK—a unique, system-generated number to be used as the record ID.
CUSTOMER_ID	VARCHAR(20)	NOT NULL	FK—foreign key to the DISCOUNT_SET table.
DISCOUNT_ID	NUMBER(15)	NOT NULL	FK—foreign key to the DISCOUNT_SET table.
USE_COUNT	NUMBER(10)	NOT NULL	The number of times the discount has been used.
DISPLAY_DESCRIPTION	VARCHAR(254)	NULL	The discount description used for display purposes only.

The ORDER_ADJUSTMENT Database Table

Contents: Information about a discount taken at the order level (for example, $20.00 off any order between 1/1/02 and 1/31/02.)

Primary key: `ORDER_ADJUSTMENT_ID`.

Table A-16 ORDER_ADJUSTMENT

Column Name	Data Type	Null Value	Description and Recommendations
ORDER_ADJUSTMENT_ID	NUMBER(15)	NOT NULL	PK—a unique, system-generated number to be used as the record ID.
ORDER_ID	VARCHAR(20)	NOT NULL	FK—foreign key to the DISCOUNT_SET table.

Table A-16 ORDER_ADJUSTMENT (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
ADJUSTMENT_TYPE	VARCHAR(20)	NULL	The type of adjustment being made to the order line item (e.g., order line discount, shipping discount, etc.)
COMPUTATION	VARCHAR(254)	NOT NULL	The number of times the discount has been used.
ADJUSTMENT_AMOUNT	NUMBER(16,4)	NOT NULL	The discount description used for display purposes only.
DISCOUNT_ID	NUMBER(15)	NULL	FK—foreign key to the DISCOUNT table.
DISPLAY_DESCRIPTION	VARCHAR(254)	NULL	The description used for display purposes only. Depending on the nature of the discount, the DISPLAY_DESCRIPTION is generated from either the Discount service or Campaign service.
CREATION_DATE	DATE	NOT NULL	The date and time the order adjustment was created.
MODIFIED_DATE	DATE	NULL	The date and time the order adjustment record was last modified.

The ORDER_LINE_ADJUSTMENT Database Table

Contents: Information about a discount taken at the order line item level (for example, 10% off SKU “Power Drill”).

Primary key: ORDER_LINE_ADJUSTMENT_ID.

Table A-17 ORDER_LINE_ADJUSTMENT Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
ORDER_LINE_ADJUSTMENT_ID	NUMBER(15)	NOT NULL	PK—a unique, system-generated number to be used as the record ID.

Table A-17 ORDER_LINE_ADJUSTMENT Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
ORDER_LINE_ID	NUMBER(15)	NOT NULL	A unique identifier for each line in a customer's shopping cart. This field is the table's primary key and cannot be NULL. All other fields in the WLCS_ORDERLINE table can be NULL.
ADJUSTMENT_TYPE	VARCHAR(20)	NULL	The type of adjustment being made to the order line item (e.g., order line discount, shipping discount, etc.)
ADJUSTMENT_AMOUNT	NUMBER(16,4)	NOT NULL	The dollar amount of the adjustment.
ADJUSTMENT_QUANTITY	NUMBER(16,4)	NOT NULL	The quantity amount for the adjustment.
ADJUSTED_UNIT_PRICE	NUMBER(16,4)	NOT NULL	The adjusted unit price of the specific line item.
COMPUTATION	VARCHAR(254)	NOT NULL	The computation for determining ADJUSTED_UNIT_PRICE.
CREATION_DATE	DATE	NOT NULL	The date and time the adjustment record was created.
MODIFIED_DATE	DATE	NULL	The date and time the adjustment record was last modified.
DISCOUNT_ID	NUMBER(15)	NULL	FK—a foreign key to the discount used from the DISCOUNT table.
DISPLAY_DESCRIPTION	VARCHAR(254)	NULL	The adjustment description used for display purposes.

The WLCS_CREDIT_CARD Database Table

Contents: Information related to a customer's credit card(s) in the order processing database.

Primary key: CREDIT_CARD_ID.

Table A-18 WLCS_CREDIT_CARD Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
CREDIT_CARD_ID	NUMBER(15)	NOT NULL	A unique identifier for the credit card. This field is the table's primary key and cannot be NULL. All other fields in the WLCS_CREDIT_CARD table can be NULL.
CC_NUMBER	VARCHAR(200)	NULL	The customer's credit card number. This is encrypted if is.encryption.enable is set to true in the weblogiccommerce.properties file.
CC_TYPE	VARCHAR(20)	NULL	The customer's credit card type, such as VISA or MasterCard.
CC_EXP_DATE	DATE	NULL	The expiration date on the customer's credit card.
CC_NAME	VARCHAR(50)	NULL	The credit card holder's name.
CC_DISPLAY_NUMBER	VARCHAR(20)	NULL	The version of the credit card number that is displayed (all Xs except last 4-digits).
CC_COMPANY	VARCHAR(50)	NULL	The name of the credit card company.
BILLING_GEOCODE	VARCHAR(2)	NULL	The code used by the TAXWARE system to identify taxes for the order based on jurisdiction.
BILLING_STREET1	VARCHAR(30)	NULL	The first line in the customer's billing address.
BILLING_STREET2	VARCHAR(30)	NULL	The second line in the customer's billing address.
BILLING_CITY	VARCHAR(30)	NULL	The city in the customer's billing address.

Table A-18 WLCS_CREDIT_CARD Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
BILLING_STATE	VARCHAR(40)	NULL	The state in the customer's billing address.
BILLING_COUNTRY	VARCHAR(40)	NULL	The country in the customer's billing address.
BILLING_POBOX	VARCHAR(30)	NULL	The post office box in the customer's billing address.
BILLING_COUNTY	VARCHAR(50)	NULL	The county in the customer's billing address.
BILLING_POSTAL_CODE	VARCHAR(10)	NULL	The postal (ZIP) code in the customer's billing address.
BILLING_POSTAL_CODE_TYPE	VARCHAR(10)	NULL	Format or type of postal code, generally determined by country (such as ZIP code in the United States).
CUSTOMER_ID	VARCHAR(20)	NULL	A unique identifier for the customer.
MAP_KEY	VARCHAR(60)	NULL	Key that maps multiple credit cards with a single customer.

The WLCS_CUSTOMER Database Table

Contents: Information about the customer in the order processing database.

Primary key: CUSTOMER_ID.

Table A-19 WLCS_CUSTOMER Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
CUSTOMER_ID	VARCHAR(20)	NOT NULL	A unique identifier for the customer. This field is the table's primary key and cannot be NULL. All other fields in the WLCS_CUSTOMER table can be NULL.

Table A-19 WLCS_CUSTOMER Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
CUSTOMER_TYPE	VARCHAR(20)	NULL	A label for the customer (such as preferred, standard, or business).
FIRST_NAME	VARCHAR(30)	NULL	The customer's first name.
LAST_NAME	VARCHAR(30)	NULL	The customer's last name.
MIDDLE_NAME	VARCHAR(30)	NULL	The customer's middle name.
TITLE	VARCHAR(10)	NULL	The customer's preferred title, such as Mr., Mrs., or Ms.
SUFFIX	VARCHAR(10)	NULL	The customer's preferred suffix, such as Jr.or Sr.
EMAIL	VARCHAR(80)	NULL	The customer's email address.
HOME_PHONE	VARCHAR(15)	NULL	The customer's home phone number.
BUSINESS_PHONE	VARCHAR(20)	NULL	The customer's business phone number.
FAX	VARCHAR(15)	NULL	The customer's fax number.
MAILING_GEOCODE	VARCHAR(2)	NULL	The code used by the TAXWARE system to identify taxes for the order based on jurisdiction.
MAILING_STREET1	VARCHAR(30)	NULL	The first line in the customer's street address.
MAILING_STREET2	VARCHAR(30)	NULL	The second line in the customer's street address.
MAILING_CITY	VARCHAR(30)	NULL	The city in the customer's address.
MAILING_STATE	VARCHAR(40)	NULL	The state in the customer's address.
MAILING_COUNTRY	VARCHAR(40)	NULL	The country in the customer's address.
MAILING_POBOX	VARCHAR(30)	NULL	The post office box in the customer's address.
MAILING_COUNTY	VARCHAR(50)	NULL	The county in the customer's address.

Table A-19 WLCS_CUSTOMER Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
MAILING_POSTAL_CODE	VARCHAR(10)	NULL	The postal (ZIP) code in the customer's address.
MAILING_POSTAL_CODE_TYPE	VARCHAR(10)	NULL	Format or type of postal code, generally determined by country (such as ZIP code in the United States).

The WLCS_ORDER Database Table

Contents: Information about a customer's specific order in the order-processing database.

Note: The Commerce services product does not populate the SHIPPING_AMOUNT, SHIPPING_CURRENCY, PRICE_AMOUNT, or PRICE_CURRENCY columns.

Primary key: `ORDER_ID`.

Table A-20 WLCS_ORDER Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
ORDER_ID	VARCHAR(20)	NOT NULL	A unique identifier for the order. This field is the table's primary key and cannot be `NULL`. All other fields in the `WLCS_ORDER` table can be `NULL`.
CUSTOMER_ID	VARCHAR(20)	NULL	A unique identifier for the customer.
TRANSACTION_ID	VARCHAR(25)	NULL	A unique identifier for the transaction.
STATUS	VARCHAR(20)	NULL	The status of the order.
ORDER_DATE	DATE	NULL	The date the order was placed.
SHIPPING_METHOD	VARCHAR(40)	NULL	The method by which the order is to be shipped.

Table A-20 WLCS_ORDER Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
SHIPPING_AMOUNT	NUMBER(16,4)	NULL	The shipping amount for the order.
SHIPPING_CURRENCY	VARCHAR(10)	NULL	The currency associated with the shipping amount.
PRICE_AMOUNT	NUMBER(16,4)	NULL	The price of the order.
PRICE_CURRENCY	VARCHAR(10)	NULL	The currency associated with the price.
SHIPPING_GEOGODE	VARCHAR(2)	NULL	The code used by the TAXWARE system to identify taxes for the order based on jurisdiction.
SHIPPING_STREET1	VARCHAR(30)	NULL	The first line in the customer's shipping address.
SHIPPING_STREET2	VARCHAR(30)	NULL	The second line in the customer's shipping address.
SHIPPING_CITY	VARCHAR(30)	NULL	The city in the customer's shipping address.
SHIPPING_STATE	VARCHAR(40)	NULL	The state in the customer's shipping address.
SHIPPING_COUNTRY	VARCHAR(40)	NULL	The country in the customer's shipping address.
SHIPPING_POBOX	VARCHAR(30)	NULL	The post office box in the customer's shipping address.
SHIPPING_COUNTY	VARCHAR(50)	NULL	The county in the customer's shipping address.
SHIPPING_POSTAL_CODE	VARCHAR(10)	NULL	The postal (ZIP) code in the customer's shipping address.
SHIPPING_POSTAL_CODE_TYPE	VARCHAR(10)	NULL	Format or type of postal code, generally determined by country, such as ZIP code in the United States.

Table A-20 WLCS_ORDER Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
SPECIAL_INSTRUCTIONS	VARCHAR(254)	NULL	Any special shipping instructions associated with the order.
SPLITTING_PREFERENCE	VARCHAR(254)	NULL	The splitting preferences for the customer's order.
ORDER_SUBTOTAL	NUMBER(16,4)	NULL	The sum of all the TOTAL_LINE_AMOUNT columns in the WLCS_ORDER_LINE table for that specific order.

The WLCS_ORDER_LINE Database Table

Contents: Information about each line of a customer's shopping cart in the order processing database.

Primary key: ORDER_LINE_ID.

Table A-21 WLCS_ORDER_LINE Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
ORDER_LINE_ID	NUMBER(15)	NOT NULL	A unique identifier for each line in a customer's shopping cart. This field is the table's primary key and cannot be NULL. All other fields in the WLCS_ORDERLINE table can be NULL.
QUANTITY	NUMBER(16,4)	NULL	The quantity of the item in the shopping cart.
PRODUCT_ID	VARCHAR(40)	NULL	An identification number for the item in the shopping cart.
TAX_AMOUNT	NUMBER(16,4)	NULL	The tax amount for the order.
TAX_CURRENCY	VARCHAR(10)	NULL	The currency associated with the tax amount.
SHIPPING_AMOUNT	NUMBER(16,4)	NULL	The shipping amount for the order.

Table A-21 WLCS_ORDER_LINE Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
SHIPPING_CURRENCY	VARCHAR(10)	NULL	The currency associated with the shipping amount.
UNIT_PRICE_AMOUNT	NUMBER(16,4)	NULL	The unit price amount for the item.
UNIT_PRICE_CURRENCY	VARCHAR(10)	NULL	The currency associated with the unit price.
MSRP_AMOUNT	NUMBER(16,4)	NULL	The MSRP amount for the item.
MSRP_CURRENCY	VARCHAR(10)	NULL	The currency associated with the MSRP amount.
DESCRIPTION	VARCHAR(254)	NULL	The name of the item that is part of the order.
ORDER_ID	VARCHAR(20)	NULL	A unique identifier for the order.
TOTAL_LINE_AMOUNT	NUMBER(16,4)	NULL	The total discounted price for the line item. UNIT_PRICE_AMOUNT (less any discount) times the QUANTITY.

The WLCS_SAVED_ITEM_LIST Database Table

Contents: Information about the customer's saved shopping cart items in the order processing database.

Primary key: None.

Table A-22 WLCS_SAVED_ITEM_LIST Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
CUSTOMER_ID	VARCHAR(20)	NULL	A unique identifier for the customer.
SKU	VARCHAR(40)	NULL	A unique identifier (the Stock Keeping Unit or SKU) for a product item.

The WLCS_SECURITY Database Table

Function: Persists public and private keys for encryption and decryption purposes in the order processing database. This table is meant for internal use by the Commerce services product.

Primary key: None.

Table A-23 WLCS_SECURITY Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
`ID`	`NUMBER(5)`	NULL	A unique identifier for the key pair. This field is the table's primary key and cannot be `NULL`.
`PUBLIC_KEY`	`VARCHAR(2000)`	NULL	The public key to be used for encryption/decryption of credit cards.
`PRIVATE_KEY`	`VARCHAR(2000)`	NULL	The private key to be used for encryption/decryption of credit cards.

The WLCS_SHIPPING_ADDRESS Database Table

Contents: Information related to a customer's shipping address(es) in the order processing database.

Primary key: `SHIPPING_ADDRESS_ID`.

Table A-24 WLCS_SHIPPING_ADDRESS Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
`SHIPPING_ADDRESS_ID`	`NUMBER(15)`	NOT NULL	A unique identifier for the shipping address. This field is the table's primary key and cannot be `NULL`. All other fields in the `WLCS_SHIPPING_ADDRESS` table can be `NULL`.
`MAP_KEY`	`VARCHAR(60)`	NULL	Key that maps multiple shipping addresses with a single customer.

Table A-24 WLCS_SHIPPING_ADDRESS Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
SHIPPING_GEOCODE	VARCHAR(2)	NULL	The code used by the TAXWARE system to identify taxes for the order based on jurisdiction.
SHIPPING_STREET1	VARCHAR(30)	NULL	The first line in the customer's shipping address.
SHIPPING_STREET2	VARCHAR(30)	NULL	The second line in the customer's shipping address.
SHIPPING_CITY	VARCHAR(30)	NULL	The city in the customer's shipping address.
SHIPPING_STATE	VARCHAR(40)	NULL	The state in the customer's shipping address.
SHIPPING_COUNTRY	VARCHAR(40)	NULL	The country in the customer's shipping address.
SHIPPING_POBOX	VARCHAR(30)	NULL	The post office box in the customer's shipping address.
SHIPPING_COUNTY	VARCHAR(50)	NULL	The county in the customer's shipping address.
SHIPPING_POSTAL_CODE	VARCHAR(10)	NULL	The postal (zip) code in the customer's shipping address.
SHIPPING_POSTAL_CODE_TYPE	VARCHAR(10)	NULL	Format or type of postal code, generally determined by country, such as ZIP code in the United States.
CUSTOMER_ID	VARCHAR(20)	NULL	A unique identifier for the customer.

The WLCS_SHIPPING_METHOD Database Table

Contents: Information about the shipping method in the order processing database.

Primary key: PK_IDENTIFIER.

Table A-25 WLCS_SHIPPING_METHOD Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
PK_IDENTIFIER	VARCHAR(20)	NOT NULL	A unique identifier for the shipping method. This field is the table's primary key and cannot be NULL. All other fields in the WLCS_SHIPPING_ METHOD table can be NULL.
CARRIER	VARCHAR(40)	NULL	The carrier being used to ship the order, such as UPS or FedEx.
METHOD	VARCHAR(40)	NULL	The method by which the order is to be shipped, such as Air, 2nd Day Air, or Parcel Post.
AVERAGE_SHIPPING_TIME	NUMBER	NULL	The average number of days it will take the order to arrive.
PRICE_VALUE	NUMBER(16,4)	NULL	The amount it will cost to ship the order.
PRICE_CURRENCY	VARCHAR(10)	NULL	The currency associated with the PRICE_VALUE column, such as dollars, pounds, or lira.
WEIGHT_LIMIT	NUMBER(16,4)	NULL	The weight limit for the shipment.
RESTRICTIONS	VARCHAR(254)	NULL	Any restrictions associated with the shipment.
DESCRIPTION	VARCHAR(254)	NULL	A description of the shipping method, such as FedEx Overnight or Standard.
PO_BOX_ALLOWED	NUMBER	NULL	Specifies whether or not the shipment can be left at a post office box.
SIGNATURE_REQUIRED	NUMBER	NULL	Specifies whether or not a signature is required upon receipt of the shipment.
SATURDAY_DELIVERY	NUMBER	NULL	Specifies whether or not the shipment can be delivered on Saturday.
INTERNATIONAL_DELIVERY	NUMBER	NULL	Specifies whether or not international delivery is an option.

Table A-25 WLCS_SHIPPING_METHOD Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
SIZE_LIMIT	NUMBER(16,4)	NULL	The size limit for the shipment.
PACKAGING_TYPE	VARCHAR(50)	NULL	The packaging type for the shipment.

The WLCS_TRANSACTION Database Table

Contents: Data for every payment transaction in the order processing database.

Primary key: TRANSACTION_ID.

Table A-26 WLCS_TRANSACTION Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
TRANSACTION_ID	VARCHAR(25)	NOT NULL	A unique identifier for the transaction. This field is the table's primary key and cannot be NULL. All other fields in the WLCS_ TRANSACTION table can be NULL.
BATCH_ID	VARCHAR(15)	NULL	A unique identifier of a batch submitted for settlement, as returned by the Payment Web service. This field need not be populated for other external payment services.
TRAN_DATE	DATE	NULL	The date of the transaction (that is, date on which the transaction was first started).
TRAN_STATUS	VARCHAR(20)	NULL	The current status of the transaction (Settled, Authorized, MarkedForSettle, PendingSettle, Retry, or Settled).
TRAN_AMOUNT	NUMBER(16,4)	NULL	The most recent amount applied to the transaction. MarkForSettle amounts can be different from the authorization amount.
TRAN_CURRENCY	VARCHAR(30)	NULL	The currency of the transaction.

Table A-26 WLCS_TRANSACTION Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
CC_NUMBER	VARCHAR(200)	NULL	The customer's credit card number. This is encrypted if `is.encryption.enable` is set to `true` in the `weblogiccommerce.properties` file.
CC_TYPE	VARCHAR(20)	NULL	The customer's credit card type, such as VISA or MasterCard.
CC_EXP_DATE	DATE	NULL	The expiration date on the customer's credit card.
CC_NAME	VARCHAR(50)	NULL	The credit card holder's name.
CC_DISPLAY_NUMBER	VARCHAR(20)	NULL	The version of the credit card number that is displayed (displays all Xs except last 4-digits).
CC_COMPANY	VARCHAR(50)	NULL	The name of the credit card company.
GEOCODE	VARCHAR(2)	NULL	The code used by the TAXWARE system to identify taxes for the order based on jurisdiction.
STREET1	VARCHAR(30)	NULL	The first line in the customer's street address.
STREET2	VARCHAR(30)	NULL	The second line in the customer's street address.
CITY	VARCHAR(30)	NULL	The city in the customer's address.
STATE	VARCHAR(40)	NULL	The state in the customer's address.
COUNTRY	VARCHAR(40)	NULL	The country in the customer's address.
POBOX	VARCHAR(30)	NULL	The post office box in the customer's address.
DESCRIPTION	VARCHAR(30)	NULL	Any additional data. Can be `NULL`.
COUNTY	VARCHAR(50)	NULL	The county in the customer's address.

Table A-26 WLCS_TRANSACTION Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
`POSTAL_CODE`	`VARCHAR(10)`	NULL	The postal (ZIP) code in the customer's address.
`POSTAL_CODE_TYPE`	`VARCHAR(10)`	NULL	Format or type of postal code, generally determined by country, such as Zip code in the United States.

The WLCS_TRANSACTION_ENTRY Database Table

Function: Logs the different states a payment transaction has passed through in the order processing database.

Primary key: `TRANSACTION_ENTRY_ID`.

Table A-27 WLCS_TRANSACTION_ENTRY Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
`TRANSACTION_ENTRY_ID`	`NUMBER(25)`	NOT NULL	A unique identifier for the transaction entry. This field is the table's primary key and cannot be `NULL`. All other fields in the `WLCS_TRANSACTION_ENTRY` table can be `NULL`.
`TRAN_ENTRY_SEQUENCE`	`VARCHAR(30)`	NULL	Represents the running count per transaction.
`TRAN_ENTRY_DATE`	`DATE`	NULL	The date of the log entry.
`TRAN_ENTRY_STATUS`	`VARCHAR(20)`	NULL	The status of the transaction when this entry was made.
`TRAN_ENTRY_AMOUNT`	`NUMBER(16,4)`	NULL	The amount of the transaction when the log entry was made.
`TRAN_ENTRY_CURRENCY`	`VARCHAR(30)`	NULL	The currency of the transaction.
`TRANSACTION_ID`	`VARCHAR(25)`	NULL	A unique identifier for the transaction.

Defined Constraints in the Order Database Schema

Various constraints are defined and used in the Order database schema. These constraints can be found in the following scripts:

`wlcs_create_fkeys.sql` – Contains the Foreign Keys

`wlcs_create_tables.sql` – Contains the Check Constraints

Table A-28 Constraints Defined on Order Database Tables

Table Name	Constraints
`DISCOUNT_ASSOCIATION`	**Column**—CUSTOMER_ID **Constraint—**FK1_DISC_ASSOC **Constraint Type—**FOREIGN KEY Ensures that each `CUSTOMER_ID` references an existing `WLCS_CUSTOMER` via the `CUSTOMER_ID` column. **Column**—DISCOUNT_ID **Constraint—**FK2_DISC_ASSOC **Constraint Type—**FOREIGN KEY Ensures that each `DISCOUNT_ID` references an existing `DISCOUNT` via the `DISCOUNT_ID` column.
`WLCS_CREDIT_CARD`	**Column**—CUSTOMER_ID **Constraint—**FK1_CREDIT_CARD **Constraint Type—**FOREIGN KEY Ensures that each `CUSTOMER_ID` references an existing `WLCS_CUSTOMER` via the `CUSTOMER_ID` column
`WLCS_ORDER_LINE`	**Column**—ORDER_ID **Constraint—**FK1_ORDER_LINE **Constraint Type—**FOREIGN KEY Ensures that each `ORDER_ID` references an existing `WLCS_ORDER` via the `ORDER_ID` column.
`ORDER_ADJUSTMENT`	**Column**—DISCOUNT_ID **Constraint—**FK1_ORDER_ADJ **Constraint Type—**FOREIGN KEY Ensures that each `DISCOUNT_ID` references an existing `DISCOUNT` via the `DISCOUNT_ID` column.

Table A-28 Constraints Defined on Order Database Tables (Continued)

Table Name	Constraints
ORDER_LINE_ADJUSTMENT	**Column**—DISCOUNT_ID **Constraint**—FK1_ORDER_L_ADJ **Constraint Type**—FOREIGN KEY Ensures that each DISCOUNT_ID references an existing DISCOUNT via the DISCOUNT_ID column
WLCS_SHIPPING_ADDRESS	**Column**—CUSTOMER_ID **Constraint**— FK1_SHIP_ADDR **Constraint Type**—FOREIGN KEY Ensures that each CUSTOMER_ID references an existing WLCS_CUSTOMER via the CUSTOMER_ID column.
WLCS_TRANSACTION_ENTRY	**Column**—TRANSACTION_ID **Constraint**—FK1_TRANS_ENTRY **Constraint Type**—FOREIGN KEY Ensures that each TRANSACTION_ID references an existing WLCS_TRANSACTION via the TRANSACTION_ID column.
DISCOUNT	**Column**—IS_GLOBAL **Constraint**— CC1_DISCOUNT **Constraint Type**—CHECK Ensures the value of the IS_GLOBAL column is either 0 (false) or 1 (true). **Column**—IS_ACTIVE **Constraint**— CC2_DISCOUNT **Constraint Type**—CHECK Ensures the value of the IS_ACTIVE column is either 0 (false) or 1 (true).

Personalization Database Schemas

This section documents the database schema for WebLogic Portal personalization features.

This section includes information on the following subjects:

- The Entity-Relation Diagram for Campaign Manager Database Tables

- List of WebLogic Portal Personalization Tables
- The Campaign Manager Data Dictionary
- Defined Constraints

The Entity-Relation Diagram for WebLogic Portal Personalization

Figure 12-1 shows the logical Entity-Relation diagram for the WebLogic Portal personalization database.

Figure A-5 Entity-Relation Diagram for WebLogic Portal Personalization

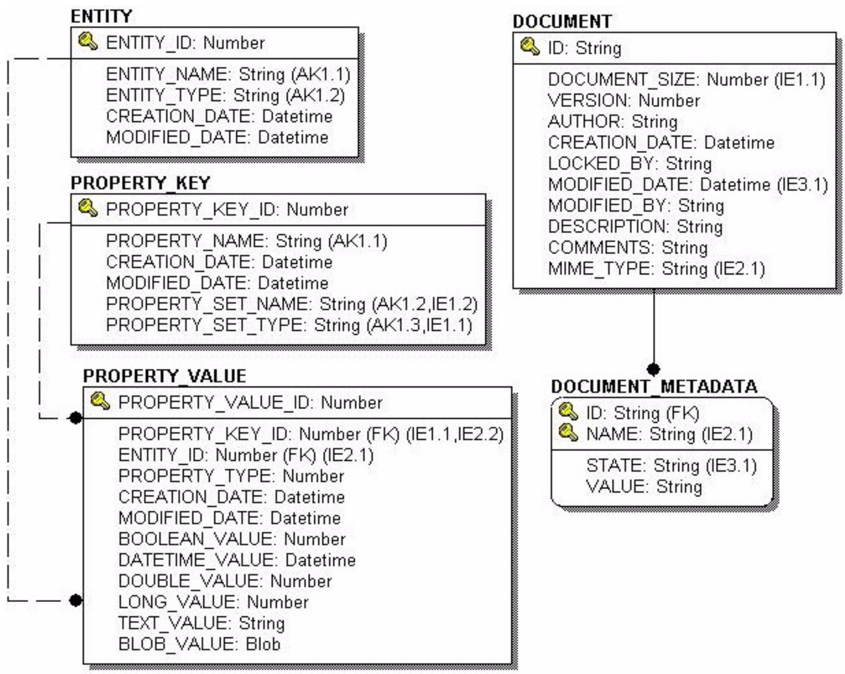
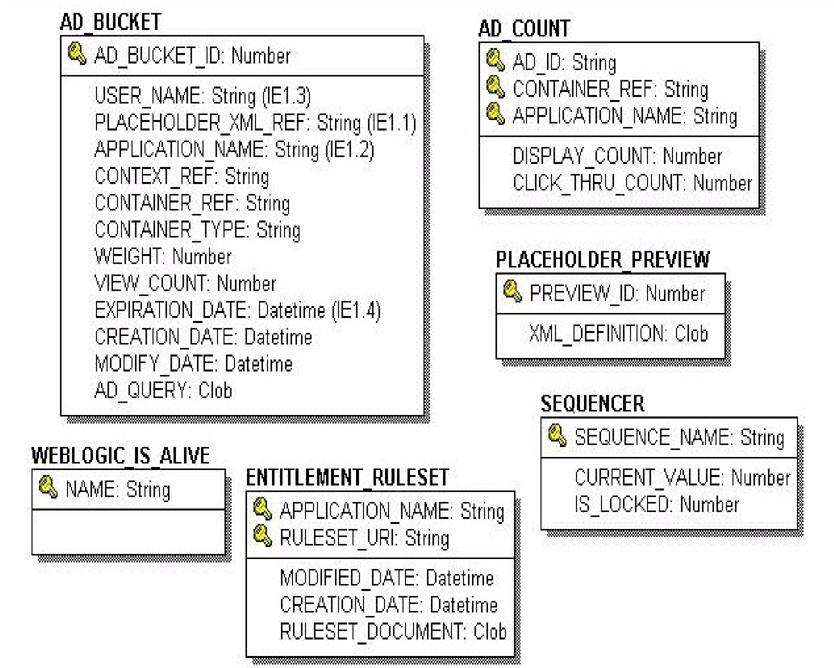


Figure A-6 Entity-Relation Diagram for WebLogic Portal Personalization Continued



List of WebLogic Portal Personalization Tables

WebLogic Portal's personalization features use the following tables. In this list, the tables are sorted by functionality:

Ads and Placeholders tables

The AD_BUCKET Database Table
The AD_COUNT Database Table
The PLACEHOLDER_PREVIEW Database Table

Data Synchronization tables

The DATA_SYNC_APPLICATION Database Table
The DATA_SYNC_ITEM Database Table
The DATA_SYNC_SCHEMA_URI Database Table
The DATA_SYNC_VERSION Database Table

Documentation Management tables

- The DOCUMENT Database Table
- The DOCUMENT_METADATA Database Table

Mail tables

- The MAIL_ADDRESS Database Table
- The MAIL_BATCH Database Table
- The MAIL_BATCH_ENTRY Database Table
- The MAIL_HEADER Database Table
- The MAIL_MESSAGE Database Table

User Management tables

- The GROUP_HIERARCHY Database Table
- The GROUP_SECURITY Database Table
- The USER_GROUP_CACHE Database Table
- The USER_GROUP_HIERARCHY Database Table
- The USER_PROFILE Database Table
- The USER_SECURITY Database Table

Common tables used by WebLogic Portal

- The ENTITLEMENT_RULESET Database Table Database Table
- The ENTITY Database Table
- The PROPERTY_KEY Database Table
- The PROPERTY_VALUE Database Table
- The SAMPLE_UUP_INFO Database Tablee
- The SEQUENCER Database Table
- The WEBLOGIC_IS_ALIVE Database Table

The Personalization Server Data Dictionary

In this section, WebLogic Portal personalization schema tables are arranged alphabetically as a data dictionary.

Note: Even though the following documentation references “foreign keys” to various tables, these constraints do not currently exist in this release of WebLogic Portal. However, they will be (available in future releases) in place in future versions of WebLogic Portal and we want you to be aware of these relationships now.

The AD_BUCKET Database Table

Table 12-1 describes the AD_BUCKET table. This table maintains content queries for ads.

The Primary Key is AD_BUCKET_ID.

Table A-29 AD_BUCKET Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
AD_BUCKET_ID	NUMBER(15)	NOT NULL	PK—a unique, system-generated number used as the record identifier.
USER_NAME	VARCHAR (200)	NOT NULL	The user's name associated with the ad.
PLACEHOLDER_XML_REF	VARCHAR(254)	NOT NULL	The location identifier of the XML-based placeholder definition file.
APPLICATION_NAME	VARCHAR(100)	NOT NULL	The name of the application for which the ad has been scoped.
CONTEXT_REF	VARCHAR(254)	NULL	The scenario unique identifier.
CONTAINER_REF	VARCHAR(254)	NULL	The campaign unique identifier.
CONTAINER_TYPE	VARCHAR(50)	NULL	Identifies the service associated with the CONTAINER_REF.
WEIGHT	NUMBER(15)	NULL	A weighted scheme used in prioritizing one placeholder over another.
VIEW_COUNT	NUMBER(15)	NULL	*Disabled. Reserved for future use.*
EXPIRATION_DATE	DATE	NULL	The date and time the ad expires or becomes invalid.
CREATION_DATE	DATE	NOT NULL	The date and time this record was created.
MODIFIED_DATE	DATE	NOT NULL	The date and time this record was last modified.
AD_QUERY	CLOB	NULL	The actual content query.

The AD_COUNT Database Table

Table 12-2 describes the AD_COUNT table. This table tracks the number of times the ads are displayed and clicked though.

The Primary Key is comprised of `AD_ID`, `CONTAINER_REF`, and `APPLICATION_NAME`.

Table A-30 AD_COUNT Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
`AD_ID`	`VARCHAR(254)`	NOT NULL	A unique, system-generated number used as the record identifier.
CONTAINER_REF	VARCHAR(254)	NOT NULL	The campaign unique identifier.
APPLICATION_NAME	VARCHAR(100)	NOT NULL	The name of the application for which the ad clicks or views were scoped
`DISPLAY_COUNT`	`NUMBER(15)`	NOT NULL	The number of times the ad has been displayed.
`CLICK_THROUGH_COUNT`	`NUMBER(15)`	NOT NULL	The number of times the ad has been clicked on.

The DATA_SYNC_APPLICATION Database Table

Table 12-3 describes the DATA_SYNC_APPLICATION table. This table holds the various applications available for the data synchronization process..

The Primary Key is `APPLICATION_ID`.

Table A-31 DATA_SYNC_APPLICATION Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
`APPLICATION_ID`	`NUMBER(15)`	NOT NULL	PK - A unique, system-generated number used as the record identifier.
`APPLICATION_NAME`	`VARCHAR(100)`	NOT NULL	The deployed J2EE application name. (This should match the name in the WebLogic Server console.)

Table A-31 DATA_SYNC_APPLICATION Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
CREATION_DATE	DATE	NOT NULL	The date and time this record was created.
MODIFIED_DATE	DATE	NOT NULL	The date and time this record was last modified.

The DATA_SYNC_ITEM Database Table

Table 12-4 describes the DATA_SYNC_ITEM table. This table stores all the data items to be synchronized.

The Primary Key is `DATA_SYNC_ITEM_ID`.

Table A-32 DATA_SYNC_ITEM Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
DATA_SYNC_ITEM_ID	NUMBER(15)	NOT NULL	PK - A unique, system-generated number used as the record identifier.
APPLICATION_ID	NUMBER(15)	NOT NULL	FK – to DATA_SYNC_APPLICATON.APPLICATION_ID
SCHEMA_URI_ID	NUMBER(15)	NOT NULL	FK – to DATA_SYNC_SCHEMA_URI.SCHEMA_URI_ID
VERSION_MAJOR	NUMBER(15)	NOT NULL	FK – to DATA_SYNC_VERSION.VERSION_MAJOR
VERSION_MINOR	NUMBER(15)	NOT NULL	FK – to DATA_SYNC_VERSION.VERSION_MINOR
ITEM_CHECKSUM	NUMBER(15)	NOT NULL	A generated number representing the contents of the `XML_DEFINITION` column.
CREATION_DATE	DATE	NOT NULL	The date and time this record was created.
MODIFIED_DATE	DATE	NOT NULL	The date and time this record was last modified.

Table A-32 DATA_SYNC_ITEM Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
XML_MODIFIED_DATE	DATE	NOT NULL	The date and time the XML file was last modified.
XML_CREATION_DATE	DATE	NOT NULL	The date and time the XML file was created.
XML_DEFINITION	CLOB	NOT NULL	The XML representation of the data item to be synchronized.
ITEM_URI	VARCHAR(254)	NOT NULL	The path on the file system of the data item to be synchronized.
ITEM_AUTHOR	VARCHAR(200)	NULL	Metadata info—the o/s login.
ITEM_NAME	VARCHAR(100)	NULL	Metadata info—the full path to the item.
ITEM_DESCRIPTION	VARCHAR(254)	NULL	Metadata info—a general description of the item to be synchronized.

The DATA_SYNC_SCHEMA_URI Database Table

Table 12-5 describes the DATA_SYNC_SCHEMA_URI table. This table holds information pertaining to each of the governing schemas used by various documents.

The Primary Key is `SCHEMA_URI_ID`.

Table A-33 DATA_SYNC_SCHEMA_URI Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
`SCHEMA_URI_ID`	`NUMBER(15)`	NOT NULL	PK - A unique, system-generated number used as the record identifier.
`SCHEMA_URI`	`VARCHAR(254)`	NOT NULL	The governing schema of the document.
`CREATION_DATE`	`DATE`	NOT NULL	The date and time this record was created.
`MODIFIED_DATE`	`DATE`	NOT NULL	The date and time this record was last modified.

The DATA_SYNC_VERSION Database Table

Table 12-6 describes the DATA_SYNC_VERSION table. This table is not being used currently. It is reserved for future use and is expected to accommodate data synchronization versioning. As a result, this table only holds one record.

The Primary Key is comprised of both `VERSION_MAJOR` and `VERSION_MINOR`.

Table A-34 DATA_SYNC_VERSION Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
`VERSION_MAJOR`	`NUMBER(15)`	NOT NULL	The current record has a value of zero.
`VERSION_MINOR`	`NUMBER(15)`	NOT NULL	The current record has a value of zero.
`CREATION_DATE`	`DATE`	NOT NULL	The date and time the record was created.
`MODIFIED_DATE`	`DATE`	NOT NULL	The date and time the record was last modified.
BUILD_NUMBER	`NUMBER(15)`	NULL	The build number associated with the version.
VERSION_DESCRIPTIO N	VARCHAR(30)	NULL	A description of the particular sync version.

The DOCUMENT Database Table

Table 12-7 describes the DOCUMENT table. This table is used to store information pertinent to each document used within WebLogic Portal.

The Primary Key is `ID`.

Table A-35 DOCUMENT Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
`ID`	`VARCHAR(254)`	NOT NULL	The identifier of the document. This specifies the relative path (case sensitive using forward slashes) to the actual file.
`DOCUMENT_SIZE`	`NUMBER(15)`	NOT NULL	The size of the document in bytes.

Table A-35 DOCUMENT Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
VERSION	NUMBER(15)	NULL	The version of the document.
AUTHOR	VARCHAR(50)	NULL	The author's name of this document.
CREATION_DATE	DATE	NULL	The date this document was created in the system.
LOCKED_BY	VARCHAR(50)	NULL	This column identifies who has this document locked for edits or updates.
MODIFIED_DATE	DATE	NULL	The date and time this record was last modified.
MODIFIED_BY	VARCHAR(50)	NULL	This column stores the name of the individual who last modified the document record.
DESCRIPTION	VARCHAR(2000)	NULL	A description of the document.
COMMENTS	VARCHAR(2000)	NULL	An area to store miscellaneous notes about the document.
MIME_TYPE	VARCHAR(100)	NOT NULL	This column identifies which MIME type (or file type) is associated with this document. This is supposed to be MIME 1.0.

The DOCUMENT_METADATA Database Table

Table 12-8 describes the DOCUMENT_METADATA table. This table is used to store user-defined properties associated with each document.

The Primary Key is comprised of both ID and NAME.

Table A-36 DOCUMENT_METADATA Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
ID	VARCHAR(254)	NOT NULL	The document identifier. This is a foreign key to the ID column of the DOCUMENT table.

Table A-36 DOCUMENT_METADATA Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
NAME	VARCHAR(240)	NOT NULL	The metadata name for the document.
STATE	VARCHAR(50)	NULL	The current state of this metadata property. This is used by Interwoven and can be set to null.
VALUE	VARCHAR(2000)	NULL	The value to be associated with the metadata name (NAME).

The ENTITLEMENT_RULESET Database Table

Table 12-9 describes the ENTITLEMENT_RULESET table. This table stores the access decision rules used by the Entitlements Engine.

The Primary Key is comprised of both APPLICATION_NAME and RULESET_URI.

Table A-37 ENTITLEMENT_RULESET Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
APPLICATION_NAME	VARCHAR(100)	NOT NULL	PK – A unique application name within a J2EE server.
RULESET_URI	VARCHAR(254)	NOT NULL	The URI used to identify an entitlement access decision rule.
CREATION_DATE	DATE	NOT NULL	The date and time this record was created.
MODIFIED_DATE	DATE	NOT NULL	The date and time this record was last modified.
RULESET_DOCUMENT	CLOB	NULL	The XML document describing an access decision rule.

The ENTITY Database Table

Table 12-10 describes the ENTITY table. Any ConfigurableEntity within the system will have an entry in this table.

The Primary Key is ENTITY_ID.

Table A-38 ENTITY Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
ENTITY_ID	NUMBER(15)	NOT NULL	PK - A unique, sequence-generated number used as the record identifier.
ENTITY_NAME	VARCHAR(200)	NOT NULL	The name of the ConfigurableEntity.
ENTITY_TYPE	VARCHAR(100)	NOT NULL	Defines what type of ConfigurableEntity this is.
CREATION_DATE	DATE	NOT NULL	The date and time this record was created.
MODIFIED_DATE	DATE	NOT NULL	The date and time this record was last modified.

The GROUP_HIERARCHY Database Table

Table 12-11 describes the PARENT_CHILD_GROUP table. This table stores relationship information between groups.

The Primary Key is comprised of both `PARENT_GROUP_ID` and `CHILD_GROUP_ID`.

Table A-39 GROUP_HIERARCHY Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
PARENT_GROUP_ID	NUMBER(15)	NOT NULL	The parent group identifier. This column is a foreign key to the `ENTITY_ID` column in the `ENTITY` table.
CHILD_GROUP_ID	NUMBER(15)	NOT NULL	The child group identifier. This column is a foreign key to the `ENTITY_ID` column in the `ENTITY` table.
CREATION_DATE	DATE	NOT NULL	The date and time this record was created.
MODIFIED_DATE	DATE	NOT NULL	The date and time this record was last modified.

The GROUP_SECURITY Database Table

Table 12-12 describes the GROUP_SECURITY table. This table holds all groups that a user could be given membership to for security authentication of the rdbms realm.

Table A-40 GROUP_SECURITY Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
GROUP_ID	NUMBER(15)	NOT NULL	PK – a unique, system-generated number used as the record identifier.
GROUP_NAME	VARCHAR(200)	NOT NULL	The name of the group.
CREATION_DATE	DATE	NOT NULL	The date and time this record was created.
MODIFIED_DATE	DATE	NOT NULL	The date and time this record was last modified.

The MAIL_ADDRESS Database Table

Table 12-13 describes the metadata for the E-Business Control Center MAIL_ADDRESS table. This table stores all of the address info for e-mail purposes.

The Primary Key is `MAIL_ADDRESS_ID`.

Table A-41 MAIL_ADDRESS Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
MAIL_ADDRESS_ID	NUMBER(15)	NOT NULL	PK—a unique, system-generated number to be used as the record ID.
MESSAGE_ID	NUMBER(15)	NOT NULL	FK—foreign key to the MAIL_MESSAGE table.
ADDRESS	VARCHAR(254)	NOT NULL	Stores the various e-mail addresses on the distribution list.
SEND_TYPE	VARCHAR(4)	NOT NULL	Determines how the ADDRESS should be included on the distribution. Possible values are TO, CC, or BCC.

The MAIL_BATCH Database Table

Table 12-14 describes the metadata for the E-Business Control Center MAIL_BATCH table. This table establishes a batch for each mailing.

The Primary Key is `BATCH_ID`.

Table A-42 MAIL_BATCH Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
`BATCH_ID`	`NUMBER(15)`	`NOT NULL`	PK—a unique, system-generated number to be used as the record `ID`.
`BATCH_NAME`	`VARCHAR(254)`	`NOT NULL`	The name of the mail message batch.

The MAIL_BATCH_ENTRY Database Table

Table 12-15 describes the metadata for the E-Business Control Center MAIL_BATCH_ENTRY table. This table is used to correlate the mail batch with the specific mail message.

The Primary Keys are `BATCH_ID` and `MESSAGE_ID`.

Table A-43 MAIL_BATCH_ENTRY Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
`BATCH_ID`	`NUMBER(15)`	`NOT NULL`	PK and FK—a unique, system-generated number to be used as the record `ID`.
`MESSAGE_ID`	`NUMBER(15)`	`NOT NULL`	PK and FK—foreign key to the `MAIL_MESSAGE` table.

The MAIL_HEADER Database Table

Table 12-16 describes the metadata for the E-Business Control Center MAIL_HEADER table. This table contains all of the header information specific to the e-mail message.

The Primary Key is `HEADER_ID`.

Table A-44 MAIL_HEADER Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
HEADER_ID	NUMBER(15)	NOT NULL	PK—a unique, system-generated number to be used as the record ID.
MESSAGE_ID	NUMBER(15)	NOT NULL	FK—foreign key to the MAIL_MESSAGE table.
HEADER_NAME	VARCHAR(50)	NULL	The name of the mail message header.
HEADER_VALUE	VARCHAR(254)	NULL	The value of the mail message header.

The MAIL_MESSAGE Database Table

Table 12-17 describes the metadata for the E-Business Control Center MAIL_MESSAGE table. This table contains the specifics of the mail message (e.g., the subject line, text, etc.).

The Primary Key is MESSAGE_ID.

Table A-45 MAIL_MESSAGE Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
MESSAGE_ID	NUMBER(15)	NOT NULL	PK—a unique, system-generated number to be used as the record ID.
FROM_ADDRESS	VARCHAR(254)	NULL	Identifies who is sending the message.
SUBJECT	VARCHAR(128)	NULL	Stores the mail message subject.
MESSAGE_TEXT	CLOB	NULL	Holds the content of the mail message.

The PLACEHOLDER_PREVIEW Database Table

Table 12-18 describes the PLACEHOLDER_PREVIEW table. This table is used as a mechanism to hold the placeholder for previewing purposes only.

The Primary Key is PREVIEW_ID.

Table A-46 PLACEHOLDER_PREVIEW Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
PREVIEW_ID	NUMBER	NOT NULL	PK—a unique, system generated number used as the record identifier.
XML_DEFINITION	CLOB	NULL	The representation of the expression to be previewed.

The PROPERTY_KEY Database Table

Table 12-19 describes the PROPERTY_KEY table. Any property assigned to a ConfigurableEntity has a unique PROPERTY_ID. This identifier and associated information is stored here.

The Primary Key is `PROPERTY_KEY_ID`.

Table A-47 PROPERTY_KEY Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
PROPERTY_KEY_ID	NUMBER(15)	NOT NULL	PK—a unique, system-generated number used as the record identifier.
PROPERTY_NAME	VARCHAR(100)	NOT NULL	The name of the property.
CREATION_DATE	DATE	NOT NULL	The date and time this record was created.
MODIFIED_DATE	DATE	NOT NULL	The date and time this record was last modified.
PROPERTY_SET_NAME	VARCHAR(100)	NULL	The name of the property set.
PROPERTY_SET_TYPE	VARCHAR(100)	NULL	The type the property set.

The PROPERTY_VALUE Database Table

Table 12-20 describes the PROPERTY_VALUE table. This table stores property values for boolean, datetime, float, integer, text, and user-defined properties.

The Primary Key is `PROPERTY_VALUE_ID`.

Table A-48 PROPERTY_VALUE Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
PROPERTY_VALUE_ID	NUMBER(15)	NOT NULL	PK – a unique, system-generated number used as the record identifier.
PROPERTY_KEY_ID	NUMBER(15)	NOT NULL	FK - to PROPERTY_KEY.PROPERTY_KEY_ID
ENTITY_ID	NUMBER(15)	NOT NULL	FK – to ENTITY.ENTITY_ID
PROPERTY_TYPE	NUMBER(1)	NOT NULL	Valid entries are: 0=Boolean, 1=Integer, 2=Float, 3=Text, 4=Date and Time, 5=User-Defined (BLOB)
CREATION_DATE	DATE	NOT NULL	The date and time this record was created.
MODIFIED_DATE	DATE	NOT NULL	The date and time this record was last modified.
BOOLEAN_VALUE	NUMBER(1)	NULL	The value for each boolean property identifier.
DATETIME_VALUE	DATE	NULL	The value for each date and time property identifier.
DOUBLE_VALUE	NUMBER	NULL	The value associated with each float property identifier.
LONG_VALUE	NUMBER(20)	NULL	The value associated with the integer property.
TEXT_VALUE	VARCHAR(254)	NULL	The value associated with the text property.
BLOB_VALUE	BLOB	NULL	The value associated with the user-defined property.

The SAMPLE_UUP_INFO Database Table

Table 12-21 describes the SAMPLE_UUP_INFO table. This is an example of how to use the Unified Profile Types.

The Primary Key is USER_NAME.

Table A-49 SAMPLE_UUP_INFO Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
USER_NAME	VARCHAR(100)	NOT NULL	A username.
USER_INFO	CLOB	NOT NULL	User data stored in XML representation.

The SEQUENCER Database Table

Table 12-22 describes the SEQUENCER table. The SEQUENCER table is used to maintain all of the sequence identifiers (for example, property_meta_data_id_sequence, and so on) used in the application.

The Primary Key is SEQUENCE_NAME.

Table A-50 SEQUENCER Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
SEQUENCE_NAME	VARCHAR(50)	NOT NULL	PK – A unique name used to identify the sequence.
CURRENT_VALUE	NUMBER(15)	NOT NULL	The current value of the sequence.
IS_LOCKED	NUMBER(1)	NOT NULL	This flag identifies whether or not the particular SEQUENCE_ID has been locked for update. This column is being used as a generic locking mechanism that can be used for multiple database environments.

The USER_GROUP_CACHE Database Table

Table 12-23 describes the USER_GROUP_CACHE table. In the event of a deep group hierarchy, this table will flatten the group hierarchy and enables quick group membership searches.

Note: The startup process GroupCache is disabled by default. This table will only be used if enabled.

The Primary Key is comprised of both USER_NAME and GROUP_NAME.

Table A-51 USER_GROUP_CACHE Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
USER_NAME	VARCHAR(200)	NOT NULL	A user's name.
GROUP_NAME	VARCHAR(200)	NOT NULL	A group name.

The USER_GROUP_HIERARCHY Database Table

Table 12-24 describes the USER_GROUP_HIERARCHY table. This table allows you to store associated users and groups.

The Primary Key is comprised of both GROUP_ID and USER_ID.

Table A-52 USER_GROUP_HIERARCHY Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
GROUP_ID	NUMBER(15)	NOT NULL	FK – to USER_SECURITY.USER_ID
USER_ID	NUMBER(15)	NOT NULL	FK – to GROUP_SECURITY.GROUP_ID
CREATION_DATE	DATE	NOT NULL	The date and time this record was created.
MODIFIED_DATE	DATE	NOT NULL	The date and time this record was last modified.

The USER_PROFILE Database Table

Table 12-25 describes the USER_PROFILE table. This table associates users with profiles (such as the WLCS_CUSTOMER user profile). User profiles use property sets to organize the properties that they contain.

The Primary Key is USER_NAME.

Table A-53 USER_PROFILE Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
`USER_NAME`	`VARCHAR(200)`	NOT NULL	PK - The name of the user.
`PROFILE_TYPE`	`VARCHAR(100)`	NOT NULL	A type of profile associated with the user (such as `WLCS_Customer`).
CREATION_DATE	DATE	NOT NULL	The date and time this record was created.

The USER_SECURITY Database Table

Table 12-26 describes the USER_SECURITY table. This table holds all the user records for security authentication of the rdbms realm.

The Primary Key is `USER_ID`.

Table A-54 USER_SECURITY Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
`USER_ID`	`NUMBER(15)`	NOT NULL	PK—a unique, system-generated number used as the record identifier.
`USER_NAME`	`VARCHAR(200)`	NOT NULL	The user’s name.
`PASSWORD`	`VARCHAR(50)`	NULL	The user’s password.
CREATION_DATE	DATE	NOT NULL	The date and time this record was created.
MODIFIED_DATE	DATE	NOT NULL	The date and time this record was last modified.

The WEBLOGIC_IS_ALIVE Database Table

Table 12-27 describes the WEBLOGIC_IS_ALIVE table. This table is used by the JDBC connection pools to insure the connection to the database is still alive.

The Primary Key is `NAME`.

Table A-55 WEBLOGIC_IS_ALIVE Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
`NAME`	`VARCHAR(100)`	NOT NULL	Used by the JDBC connection pools to insure the connection to the database is still alive.

Defined Constraints

Various constraints are defined and used in the WebLogic Portal personalization services database schema. These constraints can be found in the following scripts:

`p13n_create_fkeys.sql`—contains the Foreign Keys

`p13n_create_tables.sql`—contains the Check Constraints

Table A-56 Constraints Defined on WebLogic Portal Personalization Services Database Tables

Table Name	Constraints
`DATA_SYNC_ITEM`	**Column**—APPLICATION_ID **Constraint—**FK1_SYNC_ITEM **Constraint Type—**FOREIGN KEY Ensures that each `DATA_SYNC_ITEM` references an existing `DATA_SYNC_APPLICATION` via the `APPLICATION_ID` column. **Column**—SCHEMA_URI_ID **Constraint—**FK2_SYNC_ITEM **Constraint Type—**FOREIGN KEY Ensures that each `DATA_SYNC_ITEM` references an existing `DATA_SYNC_SCHEMA_`URI via the `SCHEMA_URI_ID` column. **Columns**—VERSION_MAJOR and VERSION_MINOR **Constraint—**FK3_SYNC_ITEM **Constraint Type—**FOREIGN KEY Ensures that each `DATA_SYNC_ITEM` references an existing `DATA_SYNC_VERSION` via the `VERSION_MAJOR`, `VERSION_MINOR` columns.

Table A-56 Constraints Defined on WebLogic Portal Personalization Services Database Tables

Table Name	Constraints
DOCUMENT_METADATA	**Column**—ID **Constraint—** FK1_DOCUMENT_MD **Constraint Type—**FOREIGN KEY Ensures that each DOCUMENT_METADATA references an existing DOCUMENT via the ID column.
GROUP_HIERARCHY	**Column**—PARENT_GROUP_ID **Constraint—**FK1_GROUP_HRCHY **Constraint Type—**FOREIGN KEY Ensures that each PARENT_GROUP_HIERARCHY references an existing GROUP_SECURITY via the GROUP_ID column. **Column**—CHILD_GROUP_ID **Constraint—**FK2_GROUP_HRCHY **Constraint Type—**FOREIGN KEY Ensures that each CHILD_GROUP_HIERARCHY references an existing GROUP_SECURITY via the GROUP_ID column.
MAIL_ADDRESS	**Column**—MESSAGE_ID **Constraint—**FK1_MAIL_ADDRESS **Constraint Type—**FOREIGN KEY Ensures that each MAIL_ADDRESS references an existing MAIL_MESSAGE via the MESSAGE_ID column.
MAIL_BATCH_ENTRY	**Column**—BATCH_ID **Constraint—**FK1_MB_ENTRY **Constraint Type—**FOREIGN KEY Ensures that each MAIL_BATCH_ENTRY references an existing MAIL_BATCH via the BATCH_ID column. **Column**—MESSAGE_ID **Constraint—**FK2_MB_ENTRY **Constraint Type—**FOREIGN KEY Ensures that each MAIL_BATCH_ENTRY references an existing MAIL_MESSAGE via the MESSAGE_ID column.
MAIL_HEADER	**Column**—FK1_MAIL_HEADER **Constraint—**FK1_MAIL_HEADER **Constraint Type—**FOREIGN KEY Ensures that each MAIL_HEADER references an existing MAIL_MESSAGE via the FK1_MAIL_HEADER column.

Table A-56 Constraints Defined on WebLogic Portal Personalization Services Database Tables

Table Name	Constraints
USER_GROUP_HIERARCHY	**Column**—USER_ID **Constraint**—FK1_USER_G_HRCHY **Constraint Type**—FOREIGN KEY Ensures that each USER_GROUP_HIERARCHY references an existing USER_SECURITY via the USER_ID column. **Column**—GROUP_ID **Constraint**—FK2_USER_G_HRCHY **Constraint Type**—FOREIGN KEY Ensures that each USER_GROUP_HIERARCHY references an existing GROUP_SECURITY via the GROUP_ID column.
PROPERTY_VALUE	**Column**—ENTITY_ID **Constraint**—FK1_PROP_VALUE **Constraint Type**—FOREIGN KEY Ensures that each PROPERTY_VALUE references an existing ENTITY via the ENTITY_ID column. **Column**—PROPERTY_KEY_ID **Constraint**—FK2_PROP_VALUE **Constraint Type**—FOREIGN KEY Ensures that each PROPERTY_VALUE references an existing PROPERTY_KEY via the PROPERTY_KEY_ID column. **Column**—BOOLEAN_VALUE **Constraint**—CC1_PROP_VALUE **Constraint Type**—CHECK Ensures the value of the BOOLEAN_VALUE column is either 0 (false) or 1 (true).
SEQUENCER	**Column**—IS_LOCKED **Constraint**—CC1_SEQUENCER **Constraint Type**—CHECK Ensures the value of the IS_LOCKED column is either 0 (false) or 1 (true).

Portal Database Schemas

This section documents the database schema for the WebLogic Portal package.

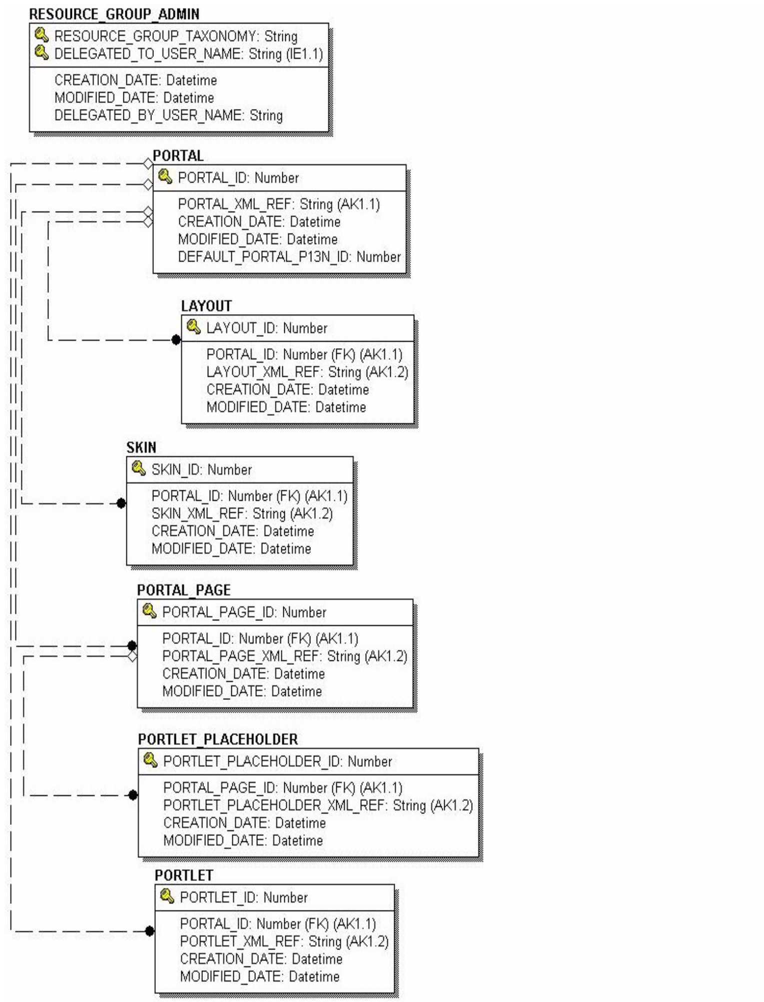
This section includes information on the following subjects:

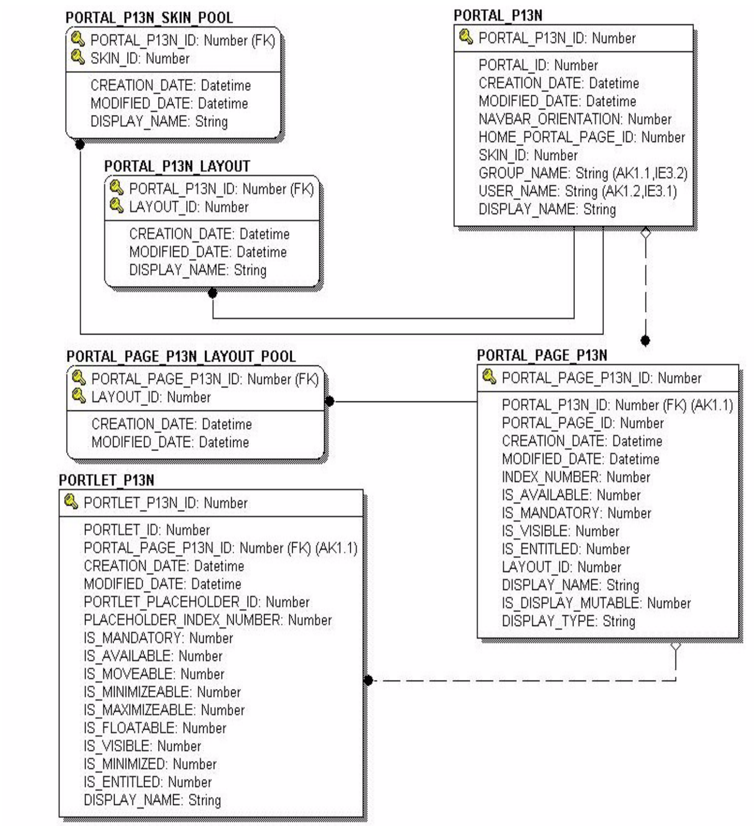
- The Entity-Relation Diagram for the Core Product Catalog Tables
- List of Tables Comprising the Portal Management Package
- The Portal Management Data Dictionary
- Defined Constraints

The Entity-Relation Diagram for the Portal and Portlet Tables

Figure 1-1 shows the logical Entity-Relation diagram for the WebLogic Commerce Server Portal and Portlet tables in the Commerce database. See the subsequent sections in this chapter for information about the data type syntax.

Figure 1-1 Entity-Relation Diagram for the Portal and Portlet Tables





List of Tables Comprising the Portal Management Package

Portal Management tables:

The LAYOUT Database Table
The PORTAL Database Table
The PORTAL_P13N Database Table
The PORTAL_P13N_LAYOUT Database Table
The PORTAL_P13N_SKIN_POOL Database Table
The PORTAL_PAGE Database Table
The PORTAL_PAGE_P13N Database Table

The PORTAL_PAGE_P13N_LAYOUT_POOL Database Table
The PORTLET Database Table
The PORTLET_P13N Database Table
The PORTLET_PLACEHOLDER Database Table
The RESOURCE_GROUP_ADMIN Database Table
The SKIN Database Table

The Portal Management Data Dictionary

In this section, the Portal, Portlet, and Sample Portal schema tables are arranged alphabetically as a data dictionary.

The LAYOUT Database Table

Table 1-1 describes the LAYOUT table. This table stores all of the defined layouts.

The Primary Key is `LAYOUT_ID`.

Table 1-1 LAYOUT Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
LAYOUT_ID	NUMBER(15)	NOT NULL	PK— a unique, system-generated number used as the record identifier.
PORTAL_ID	NUMBER(15)	NOT NULL	The record identifier for the portal associated with the layout. FK to the PORTAL table.
LAYOUT_XML_REF	VARCHAR(254)	NOT NULL	The identifier for this layout as specified in the portal definition XML file.
CREATION_DATE	DATE	NOT NULL	The date and time the record was created.
MODIFIED_DATE	DATE	NOT NULL	The last date and time the record was modified.

The PORTAL Database Table

Table 1-2 describes the PORTAL table. This table stores all of the defined portals.

The Primary Key is `PORTAL_ID`.

Table 1-2 PORTAL Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
PORTAL_ID	NUMBER(15)	NOT NULL	PK—a unique, system-generated number used as the record identifier.
PORTAL_XML_REF	VARCHAR(254)	NOT NULL	The identifier for this portal as specified in the portal definition XML file.
CREATION_DATE	DATE	NOT NULL	The date and time the record was created.
MODIFIED_DATE	DATE	NOT NULL	The last date and time the record was modified.
DEFAULT_PORTAL_P13N_ID	NUMBER(15)	NULL	The record identifier for the personalized portal associated with the particular portal.

The PORTAL_P13N Database Table

Table 1-3 describes the PORTAL_P13N table. This table stores all of the personalized portal records.

The Primary Key is `PORTAL_P13N_ID`.

Table 1-3 PORTAL_P13N Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
PORTAL_P13N_ID	NUMBER(15)	NOT NULL	PK—a unique, system-generated number used as the record identifier.
PORTAL_ID	NUMBER(15)	NOT NULL	The record identifier for the portal associated with the personalized portal. FK to the `PORTAL` table.
CREATION_DATE	DATE	NOT NULL	The date and time the record was created.

Table 1-3 PORTAL_P13N Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
MODIFIED_DATE	DATE	NOT NULL	The last date and time the record was modified.
NAVBAR_ORIENTATION	NUMBER(1)	NOT NULL	This flag determines the orientation of the navigation bar. 0 equates to horizontal and 1 equates to vertical.
HOME_PORTAL_PAGE_ID	NUMBER(15)	NOT NULL	The record identifier for the home portal page associated with the personalized portal. FK to the PORTAL_PAGE table.
SKIN_ID	NUMBER(15)	NOT NULL	The record identifier for the skin associated with the personalized portal. FK to the SKIN table.
GROUP_NAME	VARCHAR(200)	NOT NULL	The group name associated with the personalized portal.
USER_NAME	VARCHAR(200)	NOT NULL	The user name associated with the personalized portal.
DISPLAY_NAME	VARCHAR(254)	NOT NULL	The personalized portal display name.

The PORTAL_P13N_LAYOUT Database Table

Table 1-4 describes the PORTAL_P13N_LAYOUT table. This table stores all available layouts for each of the personalized portals.

The Primary Key is comprised of both LAYOUT_ID and PORTAL_P13N_ID.

Table 1-4 PORTAL_P13N_LAYOUT Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
LAYOUT_ID	NUMBER(15)	NOT NULL	PK—combined with PORTAL_P13N_ID to form a unique record identifier. FK to the LAYOUT table.
PORTAL_P13N_ID	NUMBER(15)	NOT NULL	PK—combined with PORTAL_P13N_ID to form a unique record identifier. FK to the PORTAL_P13N table.

Table 1-4 PORTAL_P13N_LAYOUT Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
CREATION_DATE	DATE	NOT NULL	The date and time the record was created.
MODIFIED_DATE	DATE	NOT NULL	The last date and time the record was modified.
DISPLAY_NAME	VARCHAR(254)	NULL	The display name for the layout associated with the personalized portal.

The PORTAL_P13N_SKIN_POOL Database Table

Table 1-5 describes the PORTAL_P13N_SKIN_POOL table. This table stores all available skins for a personalized portal.

The Primary Key is comprised of both `PORTAL_P13N_ID` and `SKIN_ID`.

Table 1-5 PORTAL_P13N_SKIN_POOL Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
PORTAL_P13N_ID	NUMBER(15)	NOT NULL	PK—combined with `SKIN_ID` to form a unique record identifier. FK to the `PORTAL_P13N` table.
SKIN_ID	NUMBER(15)	NOT NULL	PK—combined with `PORTAL_P13N_ID` to form a unique record identifier. FK to the `SKIN` table.
CREATION_DATE	DATE	NOT NULL	The date and time the record was created.
MODIFIED_DATE	DATE	NOT NULL	The last date and time the record was modified.
DISPLAY_NAME	VARCHAR(254)	NULL	The display name for the skin associated with the personalized portal.

The PORTAL_PAGE Database Table

Table 1-6 describes the PORTAL_PAGE table. This table stores all of the defined pages for each portal.

The Primary Key is PORTAL_PAGE_ID.

Table 1-6 PORTAL_PAGE Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
PORTAL_PAGE_ID	NUMBER(15)	NOT NULL	PK—a unique, system-generated number used as the record identifier.
PORTAL_ID	NUMBER(15)	NOT NULL	The record identifier for the portal associated with the portal page. FK to the PORTAL table.
PORTAL_PAGE_XML_REF	VARCHAR(254)	NOT NULL	The identifier for this portal page as specified in the portal definition XML file.
CREATION_DATE	DATE	NOT NULL	The date and time the record was created.
MODIFIED_DATE	DATE	NOT NULL	The last date and time the record was modified.

The PORTAL_PAGE_P13N Database Table

Table 1-7 describes the PORTAL_PAGE_P13N table. This table stores information for each personalized portal page.

The Primary Key is PORTAL_PAGE_P13N_ID.

Table 1-7 PORTAL_PAGE_P13N Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
PORTAL_PAGE_P13N_ID	NUMBER(15)	NOT NULL	PK—a unique, system-generated number used as the record identifier.
PORTAL_P13N_ID	NUMBER(15)	NOT NULL	The record identifier for the personalized portal associated with this personalized portal page. FK to the PORTAL_P13N table.

Table 1-7 PORTAL_PAGE_P13N Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
PORTAL_PAGE_ID	NUMBER(15)	NOT NULL	The record identifier for the portal page associated with this personalized portal page. FK to the PORTAL_PAGE table.
CREATION_DATE	DATE	NOT NULL	The date and time the record was created.
MODIFIED_DATE	DATE	NOT NULL	The last date and time the record was modified.
INDEX_NUMBER	NUMBER(4)	NOT NULL	The index number associated with this piece of the personalized portal page.
IS_AVAILABLE	NUMBER(1)	NOT NULL	This flag determines whether or not the portal page is available. 0 equates to false, 1 equates to true, and -1 equates to unspecified.
IS_ENTITLED	NUMBER(1)	NOT NULL	This flag determines whether or not entitlement rulesets have been defined for the portal page. 0 equates to false, 1 equates to true, and -1 equates to unspecified.
IS_MANDATORY	NUMBER(1)	NOT NULL	This flag determines whether or not the portal page is mandatory. 0 equates to false, 1 equates to true, and -1 equates to unspecified.
IS_VISIBLE	NUMBER(1)	NOT NULL	This flag determines whether or not the portal page is visible. 0 equates to false, 1 equates to true, and -1 equates to unspecified.
LAYOUT_ID	NUMBER(15)	NOT NULL	The record identifier for the layout associated with this personalized portal page. FK to the LAYOUT table.
DISPLAY_NAME	VARCHAR(254)	NOT NULL	The display name associated with the personalized portal page.

The PORTAL_PAGE_P13N_LAYOUT_POOL Database Table

Table 1-8 describes the PORTAL_PAGE_P13N_LAYOUT_POOL table. This table stores all available layouts for each of the personalized portal pages.

The Primary Key is comprised of both PORTAL_PAGE_P13N_ID and LAYOUT_ID.

Table 1-8 PORTAL_PAGE_P13N_LAYOUT_POOL Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
PORTAL_PAGE_P13N_ID	NUMBER(15)	NOT NULL	PK—combined with LAYOUT_ID this is a unique record identifier. FK to the PORTAL_PAGE_P13N table.
LAYOUT_ID	NUMBER(15)	NOT NULL	PK—combined with PORTAL_PAGE_P13N_ID this is a unique record identifier. FK to the LAYOUT table.
CREATION_DATE	DATE	NOT NULL	The date and time the record was created.
MODIFIED_DATE	DATE	NOT NULL	The last date and time the record was modified.

The PORTLET Database Table

Table 1-9 describes the PORTLET table. This table stores all of the defined portlets.

The Primary Key is PORTLET_ID.

Table 1-9 PORTLET Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
PORTLET_ID	NUMBER(15)	NOT NULL	PK—a unique, system-generated number used as the record identifier.
PORTAL_ID	NUMBER(15)	NOT NULL	The record identifier for the portal associated with this particular portlet. FK to the PORTAL table.
PORTLET_XML_REF	VARCHAR(254)	NOT NULL	The identifier for this portlet as specified in the portal definition XML file.

Table 1-9 PORTLET Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
`CREATION_DATE`	`DATE`	`NOT NULL`	The date and time the record was created.
`MODIFIED_DATE`	`DATE`	`NOT NULL`	The last date and time the record was modified.

The PORTLET_P13N Database Table

Table 1-10 describes the PORTLET_P13N table. This table holds all personalized portlet records.

The Primary Key is `PORTLET_P13N_ID`.

Table 1-10 PORTLET_P13N Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
`PORTLET_P13N_ID`	`NUMBER(15)`	`NOT NULL`	PK—a unique, system-generated number used as the record identifier.
`PORTLET_ID`	`NUMBER(15)`	`NOT NULL`	The record identifier for the portal associated with this particular personalized portlet. FK to the `PORTLET` table.
`PORTAL_PAGE_P13N_ID`	`NUMBER(15)`	`NOT NULL`	The record identifier for the portal associated with this particular personalized portlet. FK to the `PORTAL_PAGE_P13N` table.
`CREATION_DATE`	`DATE`	`NOT NULL`	The date and time the record was created.
`MODIFIED_DATE`	`DATE`	`NOT NULL`	The last date and time the record was modified.
`PORTLET_PLACEHOLDER_ID`	`NUMBER(15)`	`NOT NULL`	The record identifier for the placeholder selected for this particular personalized portlet. FK to the `PORTLET_PLACEHOLDER` table.

Table 1-10 PORTLET_P13N Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
PLACEHOLDER_INDEX_NUMBER	NUMBER(4)	NOT NULL	An index specifying the order that this particular personalized portlet appears within the specified placeholder.
IS_MANDATORY	NUMBER(1)	NOT NULL	This flag determines whether or not the personalized portlet is mandatory. 0 equates to `false`, 1 equates to `true`, and -1 equates to `unspecified`.
IS_AVAILABLE	NUMBER(1)	NOT NULL	This flag determines whether or not the personalized portlet is available. 0 equates to `false`, 1 equates to `true`, and -1 equates to `unspecified`.
IS_MOVEABLE	NUMBER(1)	NOT NULL	*This column is not being used and is reserved for future use.*
IS_MINIMIZEABLE	NUMBER(1)	NOT NULL	This flag determines whether or not the personalized portlet can be minimized. 0 equates to `false`, 1 equates to `true`, and -1 equates to `unspecified`.
IS_MAXIMIZEABLE	NUMBER(1)	NOT NULL	This flag determines whether or not the personalized portlet can be maximized. 0 equates to `false`, 1 equates to `true`, and -1 equates to `unspecified`.
IS_FLOATABLE	NUMBER(1)	NOT NULL	This flag determines whether or not the personalized portlet can float. 0 equates to `false`, 1 equates to `true`, and -1 equates to `unspecified`.
IS_VISIBLE	NUMBER(1)	NOT NULL	This flag determines whether or not the personalized portlet is visible. 0 equates to `false`, 1 equates to `true`, and -1 equates to `unspecified`.

Table 1-10 PORTLET_P13N Table Metadata (Continued)

Column Name	Data Type	Null Value	Description and Recommendations
`IS_MINIMIZED`	`NUMBER(1)`	`NOT NULL`	This flag determines whether or not the personalized portlet is minimized at startup. 0 equates to `false`, 1 equates to `true`, and -1 equates to `unspecified`.
`IS_ENTITLED`	`NUMBER(1)`	`NOT NULL`	This flag determines whether or not entitlement rulesets have been defined for the portlet. 0 equates to `false`, 1 equates to `true`, and -1 equates to `unspecified`.
`DISPLAY_NAME`	`VARCHAR(254)`	`NOT NULL`	The display name of the personalized portlet.

The PORTLET_PLACEHOLDER Database Table

Table 1-11 describes the PORTLET_PLACEHOLDER table.

The Primary Key is `PORTLET_PLACEHOLDER_ID`.

Table 1-11 PORTLET_PLACEHOLDER_ID Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
`PORTLET_PLACEHOLDER_ID`	`NUMBER(15)`	`NOT NULL`	PK—stores all of the defined placeholder records for each portlet.
`PORTAL_PAGE_ID`	`NUMBER(15)`	`NOT NULL`	The record identifier for the portal page associated with this particular portlet placeholder. FK to the `PORTAL_PAGE` table.
`PORTLET_PLACEHOLDER_XML_REF`	`VARCHAR(254)`	`NOT NULL`	The identifier for this placeholder as specified in the portal definition XML file.

Table 1-11 PORTLET_PLACEHOLDER_ID Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
CREATION_DATE	DATE	NOT NULL	The date and time the record was created.
MODIFIED_DATE	DATE	NOT NULL	The last date and time the record was modified.

The RESOURCE_GROUP_ADMIN Database Table

Table 1-12 describes the RESOURCE_GROUP_ADMIN table. This table is used to store administrative privileges for various users.

The Primary Key is comprised of both `RESOURCE_GROUP_TAXONOMY` and `DELEGATED_TO_USER_NAME`.

Table 1-12 RESOURCE_GROUP_ADMIN Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
RESOURCE_GROUP_TAXONOMY	VARCHAR(254)	NOT NULL	PK—combined with DELEGATED_TO_USER_NAME this is used as a unique record identifier.
DELEGATED_TO_USER_NAME	VARCHAR(200)	NOT NULL	PK—combined with RESOURCE_GROUP_TAXONOMY this is a unique record identifier.
CREATION_DATE	DATE	NOT NULL	The date and time the record was created.
MODIFIED_DATE	DATE	NOT NULL	The last date and time the record was modified.
DELEGATED_BY_USER_NAME	VARCHAR(200)	NULL	The user who administered privileges to the DELEGATED_TO_USER_NAME.

The SKIN Database Table

Table 1-13 describes the SKIN table. This table holds all of the defined skins.

The Primary Key is comprised of `SKIN_ID`.

Table 1-13 SKIN Table Metadata

Column Name	Data Type	Null Value	Description and Recommendations
SKIN_ID	NUMBER(15)	NOT NULL	PK—a unique, system-generated number used as the record identifier.
PORTAL_ID	NUMBER(15)	NOT NULL	The record identifier for the portal associated with this particular skin. FK to the `PORTAL` table.
SKIN_XML_REF	VARCHAR(254)	NOT NULL	The identifier for this skin as specified in the portal definition XML file.
CREATION_DATE	DATE	NOT NULL	The date and time the record was created.
MODIFIED_DATE	DATE	NOT NULL	The last date and time the record was modified.

Defined Constraints

Various constraints are defined and used in the Portal database schema. These constraints can be found in the following scripts:

`portal_create_fkeys.sql`—contains the Foreign Keys

`portal_create_tables.sql`—contains the Check Constraints

Table 1-14 Constraints Defined on Portal Database Tables

Table Name	Constraints
LAYOUT	**Column**—PORTAL_ID **Constraint**—FK1_LAYOUT **Constraint Type**—FOREIGN KEY Ensures that each LAYOUT references an existing PORTAL via the PORTAL_ID column.
PORTAL_P13N_SKIN_POOL	**Column**—PORTAL_P13N_ID **Constraint**—FK1_SKIN_POOL **Constraint Type**—FOREIGN KEY Ensures that each PORTAL_P13N_SKIN_POOL references an existing PORTAL_P13N via the PORTAL_P13N_ID column.
PORTAL_PAGE	**Column**—PORTAL_ID **Constraint**—FK1_PORTAL_PAGE **Constraint Type**—FOREIGN KEY Ensures that each PORTAL_PAGE references an existing PORTAL via the PORTAL_ID column
PORTAL_PAGE_P13N	**Column**— PORTAL_P13N_ID **Constraint**—FK3_PL_PAGE_P13N **Constraint Type**—FOREIGN KEY Ensures that each PORTAL_PAGE_P13N references an existing PORTAL_P13N via the PORTAL_P13N_ID column.
PORTAL_PAGE_P13N_LAYOUT_POOL	**Column**—PORTAL_PAGE_P13N_ID **Constraint**— FK2_LAYOUT_POOL **Constraint Type**—FOREIGN KEY Ensures that each PORTAL_PAGE_P13N_LAYOUT_POOL references an existing PORTAL_PAGE_P13N via the PORTAL_PAGE_P13N_ID column.
PORTLET	**Column**—PORTAL_ID **Constraint**—FK1_PORTLET **Constraint Type**—FOREIGN KEY Ensures that each PORTLET references an existing PORTAL via the PORTAL_ID column.

Table 1-14 Constraints Defined on Portal Database Tables (Continued)

Table Name	Constraints
PORTLET_P13N	**Column**—PORTAL_PAGE_P13N_ID **Constraint—**FK3_PORTLET_P13N **Constraint Type—**FOREIGN KEY Ensures that each PORTAL_P13N references an existing PORTAL_PAGE_P13N via the PORTAL_PAGE_P13N_ID column.
PORTLET_PLACEHOLDER	**Column**— PORTAL_PAGE_ID **Constraint—**FK1_PORTLET_PHD **Constraint Type—**FOREIGN KEY Ensures that each PORTLET_PLACEHOLDER references an existing PORTAL_PAGE via the PORTAL_PAGE_ID column.
SKIN	**Column**—PORTAL_ID **Constraint—** FK1_SKIN **Constraint Type—**FOREIGN KEY Ensures that each SKIN references an existing PORTAL via the PORTAL_ID column.
PORTAL_P13N_LAYOUT	**Column**—PORTAL_P13N_ID **Constraint—**FK1_PL_LAYOUT **Constraint Type—**FOREIGN KEY Ensures that each PORTAL_P13N_LAYOUT references an existing PORTAL_P13N via the PORTAL_P13N_ID column.

Table 1-14 Constraints Defined on Portal Database Tables (Continued)

Table Name	Constraints
`PORTAL_PAGE_P13N`	**Column**—IS_AVAILABLE **Constraint**—CC1_PL_PAGE_P13N **Constraint Type**—CHECK Ensures the value of the `IS_AVAILABLE` column is either -1 (undefined), 0 (false) or 1 (true). **Column**—IS_MANDATORY **Constraint**—CC2_PL_PAGE_P13N **Constraint Type**—CHECK Ensures the value of the `IS_MANDATORY` column is either -1 (undefined), 0 (false) or 1 (true). **Column**—IS_VISIBLE **Constraint**—CC3_PL_PAGE_P13N **Constraint Type**—CHECK Ensures the value of the `IS_VISIBLE` column is either -1 (undefined), 0 (false) or (true). **Column**—IS_ENTITLED **Constraint**—CC4_PL_PAGE_P13N **Constraint Type**—CHECK Ensures the value of the `IS_ENTITLED` column is either -1 (undefined), 0 (false) or 1 (true).

Table 1-14 Constraints Defined on Portal Database Tables (Continued)

Table Name	Constraints
PORTLET_P13N	**Column**—IS_MINIMIZED **Constraint**—CC1_PORTLET_P13N **Constraint Type**—CHECK Ensures the value of the IS_MINIMIZED column is either -1 (undefined), 0 (false) or 1 (true). **Column**—IS_MANDATORY **Constraint**—CC2_PORTLET_P13N **Constraint Type**—CHECK Ensures the value of the IS_MANDATORY column is either -1 (undefined), 0 (false) or 1 (true). **Column**—IS_AVAILABLE **Constraint**—CC3_PORTLET_P13N **Constraint Type**—CHECK Ensures the value of the IS_AVAILABLE column is either -1 (undefined), 0 (false) or 1 (true). **Column**—IS_MOVEABLE **Constraint**—CC4_PORTLET_P13N **Constraint Type**—CHECK Ensures the value of the IS_MOVEABLE column is either -1 (undefined), 0 (false) or 1 (true). **Column**—IS_MINIMIZEABLE **Constraint**—CC5_PORTLET_P13N **Constraint Type**—CHECK Ensures the value of the IS_MINIMIZEABLE column is either -1 (undefined), 0 (false) or 1 (true). **Column**—IS_MAXIMIZEABLE **Constraint**—CC6_PORTLET_P13N **Constraint Type**—CHECK Ensures the value of the IS_MAXIMIZEABLE column is either -1 (undefined), 0 (false) or 1 (true). **Column**—IS_FLOATABLE **Constraint**—CC7_PORTLET_P13N **Constraint Type**—CHECK Ensures the value of the IS_FLOATABLE column is either -1 (undefined), 0 (false) or 1 (true).

Table 1-14 Constraints Defined on Portal Database Tables (Continued)

Table Name	Constraints
PORTLET_P13N (continued)	**Column**—IS_VISIBLE **Constraint**—CC8_PORTLET_P13N **Constraint Type**—CHECK Ensures the value of the IS_VISIBLE column is either -1 (undefined), 0 (false) or 1 (true). **Column**—IS_ENTITLED **Constraint**—CC9_PORTLET_P13N **Constraint Type**—CHECK Ensures the value of the IS_ENTITLED column is either -1 (undefined), 0 (false) or 1 (true).

Index

A

access
- administrative users, creating 6-23
- default passwords 1-7, 6-2
- see also entitlements
- see also group portals
- user groups, adding users to 6-11
- user groups, creating 6-10

actions
- ad (campaign) 9-11
- adding to scenarios 9-10
- discount (campaign) 9-18
- e-mail (campaign) 9-15

actions (campaign)
- modifying and deleting 9-21

actions, duplicating 9-11

activating
- behavior tracking 11-35
- discounts 10-52

ad actions
- creating in campaigns 9-11

ad clickthroughs
- to end campaigns 9-23

ad impressions
- to end campaigns 9-23

Ad Search window 9-13

ad(s)
- clickthroughs 9-23
- impressions 9-23
- selecting placeholders 9-14
- using as campaign end criteria 9-23

AD_BUCKET Database Table A-56

AD_COUNT Database Table A-57

adding
- actions to scenarios 9-10
- scenarios to campaigns 9-8

adding a user, tutorial 2-2

adding categories 10-3

AddToCartEvent 11-29

Admin Server with Clustered Managed Server 11-4

Admin Server with Managed Server 11-4

administering
- catalogs 10-1
- discounts 10-1, 10-29
- order information 10-1
- orders 10-19
- payment information 10-1
- payments 10-25

administering portals
- getting started 1-8
- roadmap 1-4

administration
- database administration 11-11
- system administration tasks 11-1

Administration Console for WebLogic Server 38

administration tasks
- adding categories 10-3
- adding items 10-6

Administration Tools
- starting and logging in 1-6

administration tools
changing password 6-2
starting 10-3
administrative users
creating 6-23
creating, tutorial
see also users
types of 6-23
administrators
administrative users, types of 6-23
changing password for administration tools 6-2
creating 6-23
default passwords 1-7, 6-2
for group portal, setting up 6-23
group portal administrators
changing to portal administrators 6-31
creating 6-29
overview 6-24
removing 6-32
logging in with new ID, tutorial 2-10
making user a portal administrator, tutorial 2-7
making user eligible for portal administrator, tutorial 2-5
overview of portals 1-2
passwords, changing for users 6-5
see also entitlements
WebLogic Portal
creating 6-25, 6-26
overview 6-23
removing 6-26, 6-28
WebLogic Server
creating 6-24
overview 6-23
removing 6-25
advertisements
increasing display-count buffer size 11-22
loading ads with loadads 11-17
personalization 8-6
placeholder choosing between default and campaign ad queries 8-10
Allow Shrinking option 11-21
appearance of portals
see skins, layouts, pages
APPLICATION column 11-28
applications
see also Web applications, enterprise applications, portal Web applications
attributes
editing for items and categories 10-10
page attributes, modifying 7-13
portlets
editing 7-21
authorization
see also entitlements
authorized order status 10-24
authorized payment status 10-27
availability of items
editing 10-13
available layouts 3-5
Available pages 3-15
Available portlet 3-17
available portlets 3-5
Available setting for portlet 7-22
available skins 3-5

B

backups
backups and recovery procedures 11-19
behavior tracking
creating database 11-34
database schema 11-27, A-5
databases 11-25
EVENTS table 11-27
performance tuning with buffer properties 37
scripts 11-34

tablespaces 11-34
browser
catalog, logging in 10-46
catalog, searching for item or category 10-46
catalog, using 10-44
buffers, MaxBufferSize property 37
BuyEvent 11-29

C

Calendar Date Selection Tool 10-20
campaigns 9-1
content 9-2
creating a file in the E-Business Control Center 9-7
creating ad actions 9-11
creating discount actions 9-18
creating e-mail actions 9-15
creating scenarios 9-8
deactivating 9-28
debugging 9-26
defining 9-6
deleting 9-28
ending 9-21
increasing display-count buffer size 11-22
modifying 9-26
modifying and deleting scenarios and actions 9-21
performance factors 11-21
placeholder choosing between default and campaign ad queries 8-10
placeholders in 9-11
prerequisites to creating 9-2
reactivating 9-28
resetting 9-26
setting start date 9-21
sponsor 9-8
triggers 9-2
campaigns, promotional
adding actions to scenarios 9-10
CampaignUserActivityEvent 11-29
Can Edit portlet 7-29
Can Remove page 7-27
Can Remove portlet 7-29
Can See page 7-27
Can See portlet 7-29
cart, shopping 34
catalog
Entity-Relation diagram A-13
catalog browser
logging in 10-46
searching for item or category 10-46
using 10-44
catalog management tools
starting 10-3
CATALOG_ENTITY Database Table A-16
CATALOG_PROPERTY_KEY Database Table A-16
CATALOG_PROPERTY_VALUE Database Table A-17
catalogs
adding categories 10-3
adding items 10-6
adding items to categories 10-8
administering 10-1
administrator tools, starting and logging in 10-3
availability of items, editing 10-13
catalog size 11-21
categories
overview 10-1
categories, adding 10-3
deleting categories 10-17
deleting items from catalog 10-15
deleting items from category 10-14, 10-15
editing attributes
categories 10-10
items 10-10
editing item and category attributes

10-10
moving items to another category 10-18
categories
adding 10-3
adding items to 10-6, 10-8
adding to catalog 10-3
catalog browser, searching for 10-46
catalog browser, using 10-44
catalog, example 10-2
deleting 10-17
deleting, effect 10-1
editing attributes 10-10
moving items to another 10-18
overview 10-1
removing items from catalog 10-15
removing items from category 10-14, 10-15
changing
campaign scenarios and actions 9-21
campaigns 9-26
changing to portal administrators 6-31
characteristic definitions for portals
modifying 7-2, 7-3
modifying availability 7-6
characteristic definitions for portals, modifying availability for portal pages 7-7
characteristic definitions for portlets
modifying 7-18
choosing a scenario template 9-8
ClickCampaignEvent 11-30
ClickContentEvent 11-30
ClickProductEvent 11-30
clickthroughs
to end campaigns 9-23
clickthroughs, ad 9-23
CLOB 11-28, A-7
CLOBs A-66
colors
see also skins
columns
see also layouts
commerce
sample, starting 11-3
commercePool 11-21
commercePool option 11-20
connection pools 38
performance tuning
performance tuning
connection pools 11-37
setting up 11-15, 11-20
connections for synchronizing 11-7
connections, Test Reserve Connections 11-21
constraints 11-34
content
in campaigns 9-2
modifying for portals 7-3
content management
adding content with loaddocs 11-17
content selectors
creating for personalized content in portals 8-2
personalization in portals 8-2
triggering 8-2
copying
scenario actions 9-11
copying existing scenarios 9-9
cost reductions, see discounts
create_db script 11-17
create_event.sql 11-34
creating
campaigns 9-6
customer ID
searching for order by 10-20, 10-26
customer orders
see orders
customer segments
creating 6-38
deleting 6-38
modifying 6-38
selecting for personalized content 8-5

customers
discounts, administering 10-1
payment and order information 10-1
personalized content, see personalization
targeting, see personalization
customized content for customers, see personalization

D

data dictionary A-32
data sources
data source, entering for JNDI 11-38
new JDBC data source factory 11-39
pointing to correct host 11-35
data storage 11-25, A-4
DATA_SYNC_APPLICATION Database Table A-57
DATA_SYNC_ITEM Database Table A-58
DATA_SYNC_SCHEMA_URI Database Table A-59
DATA_SYNC_VERSION Database Table A-60
database administrator 11-25, A-4
Database Directory Paths 11-26, A-4
database schema A-29
database schema tables
Ads and Placeholders tables A-54
common to WLCS and WLPS A-55
Data Synchronization tables A-54
Documentation Management tables A-55
Mail (email) tables A-55
User Management tables A-55
database schemas A-1
database tables
AD_BUCKET A-56
AD_COUNT A-57
CATALOG_ENTITY A-16
CATALOG_PROPERTY_KEY A-16
CATALOG_PROPERTY_VALUE A-17
DATA_SYNC_APPLICATION A-57
DATA_SYNC_ITEM A-58
DATA_SYNC_SCHEMA_URI A-59
DATA_SYNC_VERSION A-60
DISCOUNT A-32
DISCOUNT_ASSOCIATION A-34
DOCUMENT A-60
DOCUMENT_METADATA A-61
ENTITLEMENT_RULESET A-62
ENTITY A-62
EVENT_TYPE 11-33
GROUP_HIERARCHY A-63
GROUP_SECURITY A-64
LAYOUT A-78
MAIL_ADDRESS A-64
MAIL_BATCH A-65
MAIL_BATCH-ENTRY A-65
MAIL_HEADER A-65
MAIL_MESSAGE A-66
ORDER_ADJUSTMENT A-34
ORDER_LINE_ADJUSTMENT A-35
PLACEHOLDER_PREVIEW A-66
PORTAL A-79
PORTAL_P13N A-79
PORTAL_P13N_LAYOUT A-80
PORTAL_P13N_SKIN_POOL A-81
PORTAL_PAGE A-82
PORTAL_PAGE_P13N A-82
PORTAL_PAGE_P13N_LAYOUT_POOL A-84
PORTLET A-84
PORTLET_P13N A-85
PORTLET_PLACEHOLDER A-87
PROPERTY_KEY A-67
PROPERTY_VALUE A-67
RESOURCE_GROUP_ADMIN A-88
SAMPLE_UUP_INFO A-68
SCENARIO_END_STATE A-2
see also databases
SEQUENCER A-69

  SKIN A-89
  USER_GROUP_CACHE A-69
  USER_GROUP_HIERARCHY A-70
  USER_PROFILE A-70
  USER_SECURITY A-71
  WEBLOGIC_IS_ALIVE A-71
  WLCS_CATEGORY A-18
  WLCS_CREDIT_CARD A-36
  WLCS_ORDER A-40
  WLCS_ORDER_LINE A-42
  WLCS_PRODUCT A-22
  WLCS_PRODUCT_CATEGORY A-26
  WLCS_PRODUCT_KEYWORD A-26
  WLCS_SAVED_ITEM_LIST A-43
  WLCS_SECURITY A-44
  WLCS_SHIPPING_ADDRESS A-44
  WLCS_SHIPPING_METHOD A-45
  WLCS_TRANSACTION A-47
  WLCS_TRANSACTION_ENTRY A-49
  WLCS_USTOMER A-38
databases
  administration tasks 11-11
  behavior tracking 11-25, 11-34
  behavior tracking database schema 11-27
  configuring before switching 11-13
  creating for development environment 11-34
  creating for production environment 11-35
  driver 11-16
  PointBase
    console
      console
        PointBase 11-12
    notes on 11-11
  Pointbase
    notes on 11-11
    starting and stopping 11-11
  pointing data source to correct host 11-35
  README.html 11-13
  rebuilding Oracle indexes 11-18
  see also database tables
  setting up connection pools 11-15
  supported databases 11-11
  switching to others 11-13
dates
  calendar date selection tool 10-21
  finding for order 10-21
db_settings.properties 11-12, 11-13
db_settings.properties file 11-15, 11-17
db_version settings 11-14
DB2 7.0 11-14
deactivating
  campaigns 9-28
  discounts 10-51, 10-52
debugging
  campaigns 9-26
Default Minimized
  setting for portlet 7-22
default passwords 1-7, 6-2
defaults
  modifying for portals 7-3
  modifying for portlets 7-18
Defined Constraints A-27
defining
  campaigns 9-6
definitions for portals
  modifying 7-2, 7-3
  modifying availability 7-6
  modifying availability for portal pages 7-7
definitions for portlets
  modifying 7-18
deleting
  campaign scenarios and actions 9-21
  campaigns 9-28
  discounts 10-51, 10-53
  see also the item to delete

users 6-8
deleting items
from catalog 10-15
from category 10-14, 10-15
deploying
discounts 10-41
deployment
hot-deploying new portal 4-8
hot-deploying, username and password for 4-8
developing
campaigns 9-6
Diagram, Entity-Relation A-52
diagram, Entity-Relation A-2
directories
database directory paths
databases
directories 11-26
enterprise application, specifying 11-7
discount actions
creating in campaigns 9-18
DISCOUNT Database Table A-32
discount editor 10-31
DISCOUNT_ASSOCIATION Database Table A-34
discounts
administering 10-1, 10-29
deactivating 10-51, 10-52
deleting 10-51, 10-53
discount duration 10-40
entering general information 10-31
finalizing 10-41, 10-43
modifying after 10-49
finalizing, requirements for 10-42
finding 10-44, 10-47
finishing 10-41
modifying 10-49
after finalizing 10-49
order discounts 10-39
per-item 10-33
reactivating 10-52
saving 10-41, 10-43
saving, requirements for 10-42
set-based 10-37
stand-alone or campaign 10-32
synchronizing 10-41, 10-44
targets, adding 10-35
terms
per item discounts 10-33
Display Name
setting for portlet 7-22
DisplayCampaignEvent 11-30
DisplayContentEvent 11-31
DisplayProductEvent 11-31
DOCUMENT Database Table A-60
DOCUMENT_METADATA Database Table A-61
domains
checking project settings for synchronizing 3-3, 11-7
creating users that are stored in domain 6-3
project settings for synchronizing 3-10
sample
starting and stopping 11-2
starting server in new domain after creating 4-2, 4-10, 5-2
drivers for database 11-16
drop_event.sql 11-34
duplicating
scenario actions 9-11
duration of discount 10-40

E

EBCC
discounts
specifying terms 10-32, 10-33
opening project file in order to use 3-3
project file, opening 3-3
setting up 11-6
starting and logging in 1-6

starting and using 3-3
E-Business Control Center A-2
E-Business Control Center, see EBCC
ecommerce
sample, starting 11-3
Edit Connections settings 3-10
Edit Connections window for synchronization project settings 11-7
editing portals 7-2, 7-3, 7-6, 7-7
editing portlets 7-18
editors
discount editor 10-31
e-mail actions
creating in campaigns 9-15
End Criteria Detail window 9-23
ending
campaigns 9-21
Enter E-mail Information window 9-17
enterprise application directory, specifying 11-7
entitlement segments
creating 6-33
deleting 6-37
modifying 6-37
ENTITLEMENT_RULESET Database Table A-62
entitlements
establishing who can access portlets 7-27
see also entitlement segments
to group portals 7-25
ENTITY Database Table A-62
Entity-Relation Diagram A-52
Entity-Relation diagram A-2
for catalog tables A-13
entity-relation diagram 11-27, A-29
entity-relation diagraom A-5
event
database tables 11-27, A-6
EVENT table 27, 6
event(s)
persisting 3
EVENT_ACTION table 27, 32, 5, 11
EVENT_DATE column 11-28
EVENT_ID column 11-28
EVENT_TYPE column 11-28
EVENT_TYPE table 27, 11-33, 5, 11
events
avoiding firing extraneous 11-21
behavior tracking database schema 11-27
create_all scripts 11-34
indexes and constraints 11-34
properties 11-36
XML_DEFINITION data elements 11-30
examples
portal overview and example 1-5
see also samples

F

filters
locating discounts 10-47
finalizing
discounts 10-41, 10-43
modifying after 10-49
discounts, requirements for 10-42
finding
discounts 10-44
orders 10-19
finding items and categories, see catalog browser
fixing
campaigns 9-26
footers
modifying for portals 7-3

G

getting started

roadmap for administering portals 1-4
see also tutorial
what to do 1-8
graphics
modifying for portals 7-3
group portal administrators 6-31
creating 6-29
removing 6-32
Group Portals
creating
tutorial 4-1, 5-1
group portals
creating group portal 6-18
defined 6-1
group portal administrators
changing to portal administrators 6-31
creating 6-29
overview 6-24
removing 6-32
group, creating for use in 6-18
portal administrators, setting up 6-23
see also groups
see also users
setting access through entitlements 7-25
GROUP_HIERARCHY Database Table A-63
GROUP_SECURITY Database Table A-64
groups
adding to groups 6-16
adding user to 6-11
administering 6-1
and LDAP 6-1
changing properties 6-15
defined 6-1
deleting 6-17
members, viewing 6-14
removing user 6-14
see also group portals
see also users
user groups, adding users to 6-11
user groups, creating 6-10
GUI, E-Business Control Center A-2

H

headers
modifying for portals 7-3
hierarchies
catalog, overview 10-1
hostname value 3-10
hot-deploying
new portal 4-8
password and username 4-8
hotspot 11-23

I

i18n
performance tuning 11-24
icons
modifying for portals 7-3
ID and password for administrator tools
logging into administrator tools 10-3
impressions
to end campaigns 9-23
impressions, ad 9-23
indexes 11-34
indexes, rebuilding for Oracle 11-18
Initial Capacity 11-21
insert_event_type.sql 11-34
installService 11-5
interaction management
procedures 8-1
items
adding to catalog 10-6
adding to categories 10-8
and categories, overview 10-1
catalog browser, logging in 10-46
catalog browser, searching for 10-46
catalog browser, using 10-44
catalog, example 10-2

deleting from catalog 10-15
deleting from category 10-14, 10-15
deleting, effect 10-1
editing attributes 10-10
editing availability 10-13
moving to another category 10-18
viewing detail of order 10-22

J

JDBC
commercePool option 11-20
new data source factory 11-39
JNDI
Data Source 38
JNDI data source 11-38
JRockit 11-23
JVMs 11-22, 11-23

K

Keep Default Ads in Rotation option 8-10

L

launching tools 1-6
LAYOUT database table A-78
layouts
editing for a page 7-15
making available
tutorial 3-3
modifying availability to portal 7-6
modifying availability to portal pages 7-7
see also skins
using new
tutorial 3-12
viewing in modified portal
tutorial 3-12
viewing modified
tutorial 3-18
LDAP
and users and groups 6-1
limit for discount 10-40
listeners
adding behavior tracking 36
asynchronous 36
behavior tracking 35
synchronous 36
loadads script 11-17
loaddocs script 11-17
logging in to tools 1-6
login
changing password for administration tools 6-2
for hot-deploying 4-8
login and password for administrator tools 10-3
Login Delay Seconds 11-21
look and feel, see presentation, skins, layouts, pages

M

MAIL_ADDRESS Database Table A-64
MAIL_BATCH Database Table A-65
MAIL_BATCH_ENTRY Database Table A-65
MAIL_HEADER Database Table A-65
MAIL_MESSAGE Database Table A-66
Managed Server 11-4
Mandatory
setting for portlet 7-22
MarkedForSettle
defined 10-27
MaxBufferSize property 37
Maximizable
setting for portlet 7-22
Maximum Capacity 11-21
members
group members, viewing 6-14
Microsoft SQL Server 2000 11-14

Microsoft SQL Server 7 11-14
Minimizable
setting for portlet 7-22
minimizable
modifying for portlets 7-18
modifying
campaign scenarios and actions 9-21
campaigns 9-26
discounts
after finalizing 10-49
portals 7-2, 7-3, 7-6, 7-7
modifying portlets 7-18

N

name filter
for locating discounts 10-47
names
default name for portlet 7-22
New Ad Action window 9-12, 9-16
New Discount Action window 9-19

O

Oracle
example of connection properties 11-14
rebuilding indexes 11-18
switching to from another database 11-14
ORACLE 8.1.6 11-14
ORACLE 8.1.7 11-14
ORACLE 9i 11-14
order
for pages 7-11
order discounts
entering 10-39
order ID
searching for order by 10-20
Order List
about 10-21
Order Management page
search page 10-20
order processing schema A-32
order status
possible statuses 10-24
Order Status page 10-22
ORDER_ADJUSTMENT Database Table A-34
ORDER_LINE_ADJUSTMENT Database Table A-35
orders
administering 10-1, 10-19
finding 10-19
finding for a date 10-21
searching by customer ID 10-20
searching by order ID 10-20
status, updating 10-23
viewing detail 10-22
overall limit for discount 10-40
overview
getting started, what to do 1-8
of portals 1-2
portal example 1-5

P

pages
adding portlet to
tutorial 3-6
attributes 3-15
attributes, modifying 7-13
layouts, editing 7-15
modifying availability to portal pages 7-6, 7-7
ordering 7-11
portlet appearance on, editing 7-21
portlets
arranging on
selecting for
see also portals, portlets
selecting 7-11
parent categories

overview 10-1
passwords
changing for administration tools 6-2
default 11-4
defaults 1-7, 6-2
for administrator tools 10-3
for hot-deploying 4-8
user, changing 6-5
payment status
values and definitions 10-27
Payment Transaction History
about 10-26
payments
administering 10-1, 10-25
conditions required for obtaining funds
payment status
conditions required for obtaining funds
searching by customer ID 10-26
searching by status 10-26
status 10-27
PendingSettle
defined 10-27
per item discounts 10-33
performance tuning 11-20
behavior tracking and properties 37
campaigns 11-21
Hotspot 11-22
i18n 11-24
per-item discounts 10-33
permissions
see also entitlements
persisting behavior tracking data 11-24
personalization
creating campaigns 9-1
customer segments, selecting 8-5
procedures 8-1
queries 8-2
sample, starting 11-3
schema tables A-54
triggers 8-2
using advertisements 8-6
using portal content 8-2
PLACEHOLDER_PREVIEW Database Table A-66
placeholders
choosing between default and campaign ad queries 8-10
creating to target customers with advertisements 8-6
in campaigns 9-11
increasing display-count buffer size 11-22
personalization with advertisements 8-6
selecting for ads 9-14
PointBase
console 11-12
notes on 11-11
notes regarding starting server 11-5
POINTBASE 4.2 11-14
port value 3-10
Portal
portal administrators
creating 6-26
overview 6-23
removing 6-28
sample domains, starting and stopping 11-2
samples, starting 11-3
system administrators
creating 6-25
overview 6-23
removing 6-26
Portal Administration Tools
starting 10-3
starting and logging in 1-6
portal administrators
creating 6-23
for WebLogic Portal
creating 6-26
overview 6-23
removing 6-28

group portal, setting up 6-23
making able, tutorial 2-7
making eligible, tutorial 2-5
making from group portal administrators 6-31
PORTAL database table A-79
portal pages
see pages
Portal server
starting 4-2, 4-10, 5-2
portal server
starting 10-3
portal Web applications
creating new 4-4
portal wizard
files created by 4-7
using 4-3
PORTAL_P13N database table A-79
PORTAL_P13N_LAYOUT database table A-80
PORTAL_P13N_SKIN_POOL database table A-81
PORTAL_PAGE database table A-82
PORTAL_PAGE_P13N database table A-82
PORTAL_PAGE_P13N_LAYOUT_POOL database table A-84
portals
access
see also entitlements
access to portlets via entitlements 7-27
administering
tutorial 3-1
appearance
see also skins, layouts, pages
attributes for pages, editing 7-13
characteristic definitions
modifying 7-2, 7-3
modifying availability 7-6
characteristic definitions, modifying availability for portal pages 7-7
examples 1-5
getting started administering 1-8
group portals overview 1-3
group, see also group portals 1-3
hot-deploying new portal 4-8
layout and appearance, see skins, layouts
logging in as new portal administrator, tutorial 2-10
making user a portal administrator, tutorial 2-7
making user eligible for portal administrator, tutorial 2-5
new window for creating in EBCC 4-3
order for pages 7-11
overview 1-2
pages, editing attributes 7-13
pages, selecting and ordering 7-11
personalization 8-2
portal administrators, creating 2-2
sample domains, starting and stopping 11-2
sample, starting 11-3
see also group portals
see also pages, portlets
selecting template 4-4
skins, selecting 7-9
synchronizing
tutorial 3-9
synchronizing new data to application 7-23
user groups, adding users to 6-11
user groups, creating 6-10
using, see also tutorial
viewing
tutorial 3-2
viewing modified
tutorial 3-12, 3-18
what you can accomplish 1-2
portals and Group Portals
creating
tutorial 4-1, 5-1
PORTLET database table A-84

PORTLET_P13N database table A-85
PORTLET_PLACEHOLDER database table A-87
portlets
    access to portlets via entitlements 7-27
    adding to portlet page
        tutorial 3-6
    appearance
        see skins, layouts, pages
    arranging on portal page 7-16
    attributes 3-17
    attributes, editing 7-21, 7-22
    characteristic definitions
        modifying 7-18
    modifying behavior 7-18
    page order 7-12
    see also portals, pages
    selecting for portal page 7-16
    setting entitlements for who can access 7-27
    using new
        tutorial 3-12
    viewing in modified portal
        tutorial 3-12
    viewing modified
        tutorial 3-18
presentation
    modifying 7-3
price reductions, see discounts
privileges
    default passwords 1-7, 6-2
    passwords, changing 6-5
    see also administrators
    user groups, adding users to 6-11
    user groups, creating 6-10
    user passwords, changing 6-5
procedures
    see also tutorials
procedures for administering portals 1-4
product catalog
    browser 10-44
product catalog, see catalog
profiles
    modifying availability to portal 7-6
    modifying availability to portal pages 7-7
    user properties, changing 6-6
    UUP and correct user type for 6-4
project file
    opening 3-3
project setting
    checking 3-10
project settings
    checking for synchronizing 3-3, 11-7
Project Settings window
    values to set 11-9
promotional campaigns
    adding actions to scenarios 9-10
PROPERTY_KEY Database Table A-67
PROPERTY_VALUE Database Table A-67
PurchaseCartEvent 11-31

Q

queries
    creating to retrieve personalized content 8-2
    placeholder choosing between default and campaign ad queries 8-10

R

reactivating
    campaigns 9-28
    discounts 10-52
README.html for databases 11-13
Realm field 11-9
realms 11-16
recovery procedures
    troubleshooting
        backup and recovery procedures 11-19

Rejected
defined 10-27
relational databases 11-25, A-4
RemoveFromCartEvent 11-31
removing
user from group 6-14
requirements for obtaining funds from payment
resetting
campaigns 9-26
resource bundle checking, i18n 11-24
RESOURCE_GROUP_ADMIN database table A-88
restarting
campaigns 9-28
Retry
defined 10-27
rights
administrative users, creating 2-2
see also users, UUP
roadmap for administering portals 1-4
RuleEvent 11-32
running scenarios once per visitor 9-15, 9-18, 9-20

S

sample applications
starting and stopping 11-2
sample domains
starting and stopping 11-2
SAMPLE_UUP_INFO Database Table A-68
samples
commerce features 11-3
passwords, default 11-4
personalization features 11-3
portal features 11-3
see also tutorial
saving
discounts 10-41, 10-43
discounts, requirements for 10-42
scenario actions, duplicating 9-11
Scenario Properties window 9-10
scenario(s)
adding actions to 9-10
running once per visitor 9-15, 9-18, 9-20
starting with a copy of 9-9
templates
choosing 9-8
SCENARIO_END_STATE Database Table A-2
scenarios
ad actions 9-11
campaign 9-8
discount actions 9-18
e-mail actions 9-15
scenarios (campaign)
modifying and deleting 9-21
schema tables, personalization A-54
schema, see also databases
schemas
database 25, 4
Scope 11-9
scripts
development environment 11-34
searching
discounts 10-44
security 11-16
administrative users, creating 2-2
changing password for administration tools 6-2
see also access, group portals
segments
customer, see customer segments
entitlement, see also entitlement segments
see also entitlement segments
see also entitlements
segments, see customer segments
Select Discount window 9-20
Select E-mail Content window 9-17
Select Placeholders window 9-14

selection rules
creating for personalized content in portals 8-3
SEQUENCER Database Table A-69
server
default passwords 1-7, 6-2
starting 10-3
servers
sample Portal domains, starting and stopping 11-2
starting 11-4
and PointBase 11-5
starting and stopping 11-2
starting for newly created domain 4-2, 4-10, 5-2
synchronizing and correct project settings 3-10
SessionBeginEvent 11-32
SessionEndEvent 11-32
SessionLoginEvent 11-32
set-based discounts
entering 10-37
Settled
defined 10-27
shipping information
viewing detail of order 10-22
shopping cart 34
Show reset options for active campaigns 11-9
shrinking option 11-21
Single Server 11-4
SKIN database table A-89
skins
making available
tutorial 3-3
modifying availability to portal pages 7-6, 7-7
selecting 7-9
using new
tutorial 3-12
viewing in modified portal
tutorial 3-12
Specify Trigger Items window 10-33
Specify Trigger Sets window 10-37
sponsor
campaigns 9-8
SQL scripts 25, 11-34, 35, 4
starting
campaigns 9-21
starting Portal server 4-2, 4-10, 5-2
starting servers 11-4
starting tools 1-6
startP13N.bat 11-3
startP13N.sh 11-3
startPBConsole.bat 11-12
startPBConsole.sh 11-12
startPBServer.bat 11-12
startPBServer.sh 11-12
startPortal.bat 11-4
startPortal.sh 11-4
startSamplePortal.bat 11-3
startSamplePortal.sh 11-3
startWLCS.bat 11-3
startWLCS.sh 11-3
status
of orders, updating 10-23
of payments
values for 10-27
searching for payment by 10-26
values and definitions 10-27
stopping
campaigns 9-21
subcategories
example 10-2
see also categories
subtotals
viewing detail of order 10-22
support, technical xiii
supported databases 11-11
SweepInterval property 37
SweepMaxTime property 37
SYBASE 12.0 11-15
SYBASE 12.5 11-15

synchronizing
- checking project settings 3-3, 3-10, 11-7
- discounts 10-41, 10-44
- entering correct settings for 3-11
- portal data to application 7-23
- realm and other settings 11-9
- tutorial 3-9

system administration tasks 11-1
system administrators
- creating 6-23
- for WebLogic Portal
  - creating 6-25
  - overview 6-23
  - removing 6-26
- for WebLogic Server
  - creating 6-24
  - overview 6-23
  - removing 6-25
- passwords, default 11-4

T

tablespaces 25, 4
tablespaces and behavior tracking 11-34
target market, see customer segments
targeting customers, see personalization
targets
- add a target to discount 10-35

taxes
- viewing detail of order 10-22

template, scenario
- choosing 9-8

templates
- selecting for portal 4-4

terms, discount 10-32, 10-33
Test Reserve Connections 11-21
Testing tab 11-21
tools
- starting and logging in 1-6

tools (administrator)
- starting 10-3

totals
- viewing detail of order 10-22

transactions
- conditions required for obtaining funds
- see also payments

triggers
- campaign 9-2
- creating to bring up content selectors 8-2

troubleshooting
- default passwords 1-7, 6-2
- EBCC project settings 3-10
- enterprise application directory, specifying 11-7
- rebuilding Oracle indexes 11-18
- starting server with PointBase 11-5
- synchronizing 3-3, 3-10, 11-7
- synchronizing new portal data to application 7-23
- Windows services 11-5
- Windows services, uninstalling 11-5

tuning
- i18n 11-24

tutorial
- adding a user 2-2
- adding portlet to portal page 3-6
- administering a portal 3-1
- administrative users, creating
- creating a portal and Group Portal 4-1, 5-1
- creating portal page 3-6
- creating portlet page 3-6
- making skins and layouts available 3-3
- making user able to manage portals 2-7
- making user eligible to manage portals 2-5
- password and login for administration tools 3-12
- see also samples
- synchronizing modified portal 3-9
- using new portlets, skins and layouts 3-12

viewing existing portal 3-2
viewing modified portal 3-12, 3-18

U

uninstallService 11-6
user accounts 35
user groups
adding user to 6-11
adding users to 6-11
changing properties 6-15
creating 6-10
see also groups
user profiles
modifying availability to portal 7-6
modifying availability to portal pages 7-7
USER_GROUP_CACHE Database Table A-69
USER_GROUP_HIERARCHY Database Table A-70
USER_ID column 11-28
USER_PROFILE Database Table A-70
USER_SECURITY Database Table A-71
username
changing password for administration tools 6-2
username and password for administrator tools 10-3
UserRegistrationEvent 11-32
users
accessing UUP properties for 6-4
adding groups to groups 6-16
adding to group 6-11
adding, tutorial 2-2
administering 6-1
administrative users
creating 6-23
administrative users, types 6-23
and LDAP 6-1
creating 6-3
creating administrative users, tutorial
deleting 6-8
deleting groups 6-17
entitlements, setting for access to pages 7-25
entitlements, setting for access to portlets 7-27
forbidden user names 6-4
group members, viewing
group properties, changing 6-15
groups, adding users to 6-11
groups, creating 6-10
in groups, see also members
logging in as new portal administrator, tutorial 2-10
making a portal administrator, tutorial 2-7
making eligible to manage portal, tutorial 2-5
passwords, changing 6-5
properties of, changing 6-6
removing from group 6-14
see also group portals
using Portal, see tutorial
UUP
system accessing properties in for user 6-4

V

Validation 11-9
Visible pages 3-15
Visible portlet 3-17, 7-22
visible portlets 7-17
Visitor Editable Name for page 3-15

W

Web applications
see also enterprise applications, portal Web applications

WebLogic Personalization Server (WLPS)
  schema A-51
WebLogic Portal
  default passwords 1-7, 6-2
  portal administrators
    creating 6-26
    overview 6-23
    removing 6-28
  sample domains, starting and stopping 11-2
  samples, starting 11-3
  see also tutorial
  system administrators
    creating 6-25
    overview 6-23
    removing 6-26
WebLogic Portal Administration Tools
  starting and logging in 1-6
WebLogic Portal server
  starting 10-3
WebLogic Server
  system administrators
    creating 6-24
    overview 6-23
    removing 6-25
WebLogic Server Administration Console 11-20, 11-22, 11-37, 11-39
WebLogic Server console 11-15
WEBLOGIC_IS_ALIVE Database Table A-71
window
  Ad Search 9-13
  End Criteria Detail 9-23
  Enter E-mail Information 9-17
  New Ad Action 9-12, 9-16
  New Discount Action 9-19
  Scenario Properties 9-10
  Select Discount 9-20
  Select E-mail Content 9-17
  Select Placeholders 9-14
Windows services
  and PointBase 11-5
  and starting server 11-5
  uninstalling 11-5
wizards
  portal wizard 4-3
WLCS_CATEGORY Database Table A-18
WLCS_CREDIT_CARD Database Table A-36
WLCS_CUSTOMER Database Table A-38
WLCS_ORDER Database Table A-40
WLCS_ORDER_LINE Database Table A-42
WLCS_PRODUCT Database Table A-22
WLCS_PRODUCT_CATEGORY Database Table A-26
WLCS_PRODUCT_KEYWORD Database Table A-26
WLCS_SAVED_ITEM_LIST Database Table A-43
WLCS_SECURITY Database Table A-44
WLCS_SHIPPING_ADDRESS Database Table A-44
WLCS_SHIPPING_METHOD Database Table A-45
WLCS_TRANSACTION Database Table A-47
WLCS_TRANSACTION_ENTRY Database Table A-49
WLS_SESSION_ID column 11-28

X

XML
  document A-7
XML document 11-28
XML_DEFINITION column 11-28
XML_DEFINITION data elements 11-29, A-7