



BEA WebLogic Portal™

Guide to Using the BEA E-Business Control Center

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Using the BEA E-Business Control Center

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About This Document

This documentation describes how you can use the BEA E-Business Control Center™ to create personalized Web sites for your valued e-business customers. The features of the E-Business Control Center that are available to you (as well as the corresponding help topics for these features) are determined at run time by the type of license you purchased. For details, please see “About the E-Business Control Center” on page 1-2.

This document includes the following topics:

- Chapter 1, “Introduction to the BEA E-Business Control Center,” introduces you to the capabilities of the E-Business Control Center and highlights some important points about its use. It provides information about the specific e-business roles and responsibilities this tool is intended to support, and indicates the recommended method for traversing the rest of the documentation.
- Chapter 2, “Building Conditions and Queries in the BEA E-Business Control Center,” is a central point of reference for information about building conditions and queries in the E-Business Control Center. The sections in this topic are not meant to be read in sequence, but rather, are pieces of information or instructions that you will use in the context of other tasks.
- Chapter 3, “Creating and Managing Property Sets,” describes how to better personalize content by setting up properties in the E-Business Control Center.
- Chapter 4, “Using Customer Segments to Target High-Value Markets,” contains basic information about customer segments as they are used in the E-Business Control Center, including a conceptual description, an explanation about how you might want to use customer segments, and step-by-step instructions for creating new customer segments.
- Chapter 5, “Retrieving Documents with Content Selectors,” describes how you can use content selectors to specify the conditions under which WebLogic Personalization Server retrieves one or more documents from your content management system.

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- Chapter 6, “Displaying Ads,” explains how you can use ad placeholders to display ads and to manage and evaluate the effectiveness of your advertising strategy.
 - Chapter 7, “Defining Stand-Alone or Campaign Discounts,” contains basic information about discounts as they are used in the E-Business Control Center. This information includes a conceptual description of a discount, an explanation about how you might want to use discounts, and step-by-step instructions for defining a new discount or modifying existing discounts within the E-Business Control Center.
 - Chapter 8, “Discount Examples,” is a supplement to the previous chapter. It contains real-world examples in discounts, ranging from the simple to the complex.
 - Chapter 9, “Roadmap for Creating Promotional Campaigns,” describes the high-level process or roadmap you should follow when creating a new promotional campaign in the E-Business Control Center.
 - Chapter 10, “Creating and Managing Promotional Campaigns,” contains step-by-step information for defining a new campaign or modifying existing campaigns within the E-Business Control Center.
 - Chapter 11, “Webflow Components and Concepts,” provides an overview of Webflow concepts and describes components used in Webflow.
 - Chapter 12, “Using the Webflow and Pipeline Editors,” provides procedures for using the Webflow and Pipeline editors in the E-Business Control Center.
 - Chapter 13, “Using the E-Business Control Center Portal Tool,” describes how to configure your portals and portlets, and determine which users have access to specific portal content.

What You Need to Know

This help is intended for use by business analysts or marketing professionals who use the E-Business Control Center to personalize their e-business Web site, and for business engineers who provide the infrastructure to support the E-Business Control Center. For more information on each of these roles, see “Roles and Responsibilities” on page 1-8.

e-docs Web Site

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>.

Note: The contents of this document as provided on the “e-docs” Web site may be updated periodically with new information or corrections that may not yet be available in the corresponding online help system.

How to Print the Document

You can print a copy of this document from a Web browser, one file at a time, by using the File→Print option on your Web browser.

A PDF version of this document is available on the WebLogic Portal documentation Home page on the e-docs Web site. A PDF version of this document is also available in the documentation kit on the product CD. Or you can download the documentation kit from the WebLogic Portal portion of the BEA Download site. You can open the PDF in Adobe Acrobat Reader and print the entire document (or a portion of it) in book format. To access the PDFs, open the E-Business Control Center documentation Home page, click the PDF files button and select the document you want to print.

If you do not have the Adobe Acrobat Reader, you can get it for free from the Adobe Web site at <http://www.adobe.com>.

Related Information

For more information about the technical tasks involved in maintaining the E-Business Control Center infrastructure, see the *Developing Campaign Infrastructure* documentation at <http://edocs.bea.com/wlp/docs40/campdev/index.htm>.

For information about how the E-Business Control Center works with a Web site to personalize the customer experience, see the following documentation:

- *Strategies for Developing E-Business Web Sites* at <http://edocs.bea.com/wlp/docs40/strategs/index.htm>.
- *Personalization Examples* at <http://edocs.bea.com/wlp/docs40/interm/p13nexam.htm>.
- *JSP Commerce and Campaign Tour* at <http://edocs.bea.com/wlp/docs40/cstour/index.htm>.
- *Guide to Events and Behavior Tracking* at <http://edocs.bea.com/wlp/docs40/events/index.htm>.
- *Guide to Managing Presentation and Business Logic: Using Webflow and Pipeline* at <http://edocs.bea.com/wlp/docs40/wfloppe/index.htm>.
- *Guide to Building Personalized Applications* at <http://edocs.bea.com/wlp/docs40/p13ndev/index.htm>.
- *Guide to Building a Product Catalog* at <http://edocs.bea.com/wlp/docs40/catalog/index.htm>.

Contact Us!

Your feedback on the BEA E-Business Control Center documentation is important to us. Send us e-mail at **docsupport@bea.com** if you have questions or comments. Your comments will be reviewed directly by the BEA professionals who create and update the E-Business Control Center documentation.

In your e-mail message, please indicate that you are using the documentation for the BEA E-Business Control Center 4.0 release.

If you have any questions about this version of BEA E-Business Control Center, or if you have problems installing and running BEA E-Business Control Center, contact BEA Customer Support through BEA WebSUPPORT at **www.bea.com**. You can also contact Customer Support by using the contact information provided on the Customer Support Card, which is included in the product package.

When contacting Customer Support, be prepared to provide the following information:

- Your name, e-mail address, phone number, and fax number
- Your company name and company address
- Your machine type and authorization codes
- The name and version of the product you are using
- A description of the problem and the content of pertinent error messages

Documentation Conventions

The following documentation conventions are used throughout this document.

Convention	Item
boldface text	Indicates terms defined in the glossary.
Ctrl+Tab	Indicates that you must press two or more keys simultaneously.

Convention	Item
<i>italics</i>	Indicates emphasis or book titles.
monospace text	Indicates code samples, commands and their options, data structures and their members, data types, directories, and filenames and their extensions. Monospace text also indicates text that you must enter from the keyboard. <i>Examples:</i> #include <iostream.h> void main () the pointer psz chmod u+w * \tux\data\ap .doc tux.doc BITMAP float
monospace boldface text	Identifies significant words in code. <i>Example:</i> void commit ()
<i>monospace italic text</i>	Identifies variables in code. <i>Example:</i> String <i>expr</i>
UPPERCASE TEXT	Indicates device names, environment variables, and logical operators. <i>Examples:</i> LPT1 SIGNON OR
{ }	Indicates a set of choices in a syntax line. The braces themselves should never be typed.
[]	Indicates optional items in a syntax line. The brackets themselves should never be typed. <i>Example:</i> buildobjclient [-v] [-o name] [-f file-list]... [-l file-list]...

Convention	Item
	Separates mutually exclusive choices in a syntax line. The symbol itself should never be typed.
...	<p>Indicates one of the following in a command line:</p> <ul style="list-style-type: none"> ■ That an argument can be repeated several times in a command line ■ That the statement omits additional optional arguments ■ That you can enter additional parameters, values, or other information <p>The ellipsis itself should never be typed.</p> <p><i>Example:</i></p> <pre>buildobjclient [-v] [-o name] [-f file-list]... [-l file-list]...</pre>
.	Indicates the omission of items from a code example or from a syntax line. The vertical ellipsis itself should never be typed.



1 Introduction to the BEA E-Business Control Center

The BEA E-Business Control Center is a tool designed to simplify the tasks that are necessary to create and maintain a truly personalized Web site. Building upon the functionality of the WebLogic Portal server and the WebLogic Personalization Server products that may already support your e-business, the E-Business Control Center can make business analysts and marketing professionals in your organization more self-sufficient, thereby minimizing the need for collaboration with busy technical resources. And even when collaboration is required for more specialized or advanced tasks, this collaboration may take significantly less time and be more efficient overall.

To meet this objective, the E-Business Control Center guides users through a variety of tasks, ensuring that both business and technical staff members can focus on the aspects of e-business management that are relevant to their role in the organization. The E-Business Control Center's intuitive graphical user interface empowers people in these diverse roles, allowing them to provide exceptional value to their online customers and to effectively nurture customer relationships.

This topic is intended to introduce you to the capabilities of the E-Business Control Center and highlight some important points about its use. It provides information about the specific e-business roles and responsibilities this tool is intended to support. This topic includes the following sections:

- About the E-Business Control Center
 - About the E-Business Control Center Interface
 - What the E-Business Control Center Provides

- Roles and Responsibilities
- Establishing Organizational Policies
- Recommended Reading
- Additional Resources
- Using the E-Business Control Center
 - Starting the E-Business Control Center
 - Working with Application Data
 - Connecting to the Server
 - Modifying Connections
 - Advanced Connection Settings
 - Working with Files
 - Working with E-Business Control Center Windows
 - Synchronizing Application Data
 - Error Logs

The variable `EBCC_HOME` refers to your E-Business Control Center directory. By default on installation, this directory is called `ebcc4.0`.

Note: If you are viewing this guide in the online help system for the E-Business Control Center, only the help topics of the tools for which you are licensed are included. For the full version of this guide, go to the BEA e-docs Web site: <http://e-docs.bea.com/wlp/docs40>.

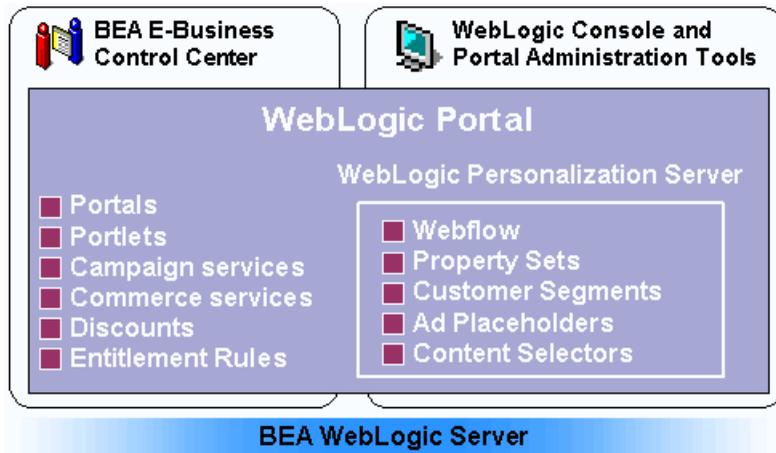
Links in the online help system that are not underlined launch a browser to jump to documents on BEA's e-docs Web site.

About the E-Business Control Center

As shown in Figure 1-1, the E-Business Control Center is an e-business tool built upon the BEA products your organization's technical professionals know and trust to support their e-commerce Web development efforts. Whether your company uses

WebLogic Personalization Server or WebLogic Portal, the E-Business Control Center can make expanding and maintaining your online customer relationships easier and less time consuming.

Figure 1-1 WebLogic Portal Features



In the Personalization-only configuration, the E-Business Control Center exists in a simplified form, while still providing you with the utilities needed to display customized content and control Webflow. The WebLogic Portal product gives you access to even more features in the E-Business Control Center, such as portal and portlet configuration, discounts, and promotional campaigns. The information provided in the following section will help you to understand what features are available in each version of the E-Business Control Center, and how these features can help you achieve your e-business goals.

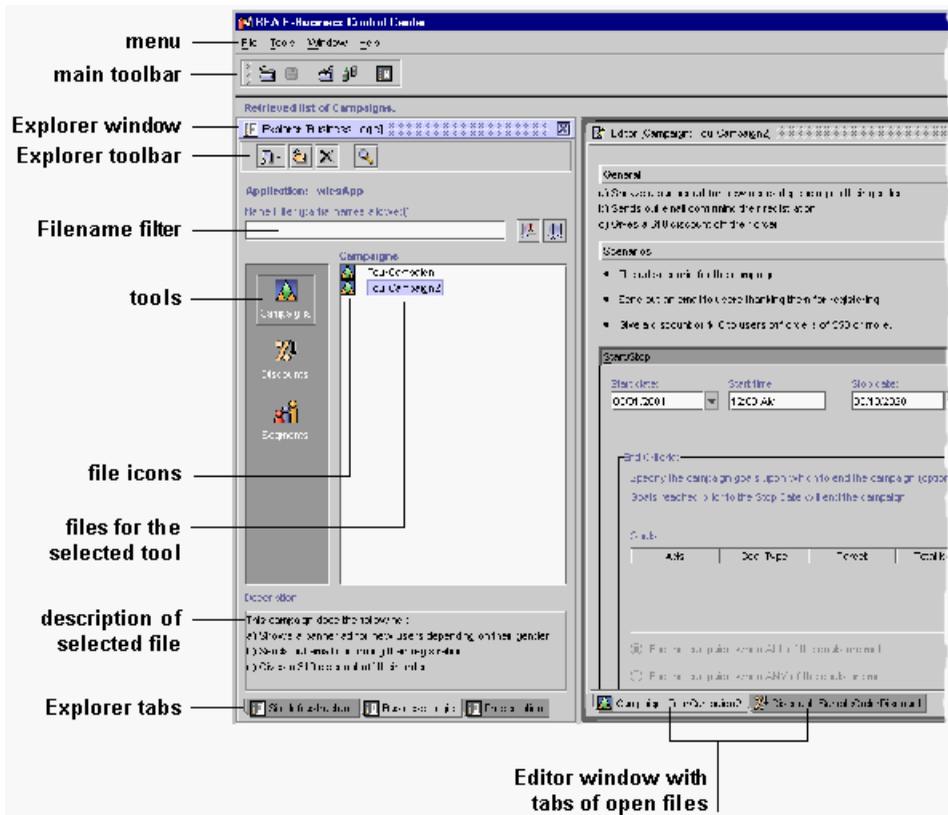
The E-Business Control Center is a tool for just about everyone in the enterprise application development process, from the business analyst creating customer characteristics to the developer working with portals and Webflow. For more details about roles, see “Roles and Responsibilities” on page 1-8.

Note: For more information about WebLogic Personalization Server and WebLogic Portal, see the *Strategies for Developing E-Business Web Sites* at <http://edocs.bea.com/wlp/docs40/stratags/index.htm>.

About the E-Business Control Center Interface

Figure 1-2 shows the different parts of the E-Business Control Center.

Figure 1-2 The E-Business Control Center



The tools available in the E-Business Control Center appear in the Explorer window. Tools are separated by the three tabs at the bottom of the window. The Editor window appears when you open a file.

For more information on applications that are valid for deployment, see “Synchronizing Application Data” on page 1-33.

Icons that Show Status

File icons in the Explorer window can take on different appearances depending on the status of the files. Table 1-1 shows and describes the variations you might see on the standard icons.

Table 1-1 Icons that show status

Icon	Description
	File icons with a crossed-out pencil next to them are set to read-only on your file system.
	File icons with a half-filled square next to them signify files that are missing data.
	Deactivated campaign.
	Discount marked as Finalized. This discount cannot be modified to change the terms of the discount customer have already been given.
	Deactivated discount marked as Finalized.
	Pre-defined event shipped with the E-Business Control Center. These events cannot be modified, because other areas of the E-Business Control Center rely on those pre-defined events.

What the E-Business Control Center Provides

No matter which version of the E-Business Control Center your organization uses, the E-Business Control Center's rich feature set is sure to provide you with the tools you need to effectively personalize your e-business. This section will help you understand which E-Business Control Center features are available in your version of the product, and describes some of the E-Business Control Center features that are available in all versions of the tool to help you get started.

WebLogic Personalization Server 4.0 Customers

WebLogic Personalization Server customers can:

- **Control Webflow.** The Webflow tool lets you specify the order in which pages are displayed to your Web site's visitors, and it calls predefined, specialized components to execute back-end business logic.
- **Track customer behavior (events).** Understanding your customers is the first step to providing them with a truly personalized Web experience. The E-Business Control Center makes use of behind-the-scenes behavior tracking functionality, allowing you to leverage customers' most frequent interactions with your e-business Web site when determining how to personalize site content. Customer behaviors, or events, that are tracked range from viewing content to clicking through hyperlinks. Your technical staff can also help you add your own custom events.
- **Define customer segments.** Although an e-business audience may be diverse, there are often many similarities among customers that you can leverage to more effectively customize your Web site. The E-Business Control Center allows you to organize customers into groups, or customer segments, based on common characteristics. Customer segments may then be used to support your organization's strategic e-business goals.
- **Create placeholders for ad display.** To satisfy your customers' diverse needs, you may want to change single pieces of content on your Web sites, such as ad banners, on a regular basis. In the past, even a simple modification like changing an ad banner required the assistance of a Web developer. Now, with WebLogic Personalization Server or WebLogic Portal, you can add what is called a "placeholder" to a specific region on a Web page. In the E-Business Control Center, you add queries to a placeholder that automatically retrieve, choose, and display a single, targeted piece of content in that region of the Web page. Each time visitors view a page containing a placeholder, they may see a different piece of targeted content in the placeholder, depending on the priorities you have set on the queries and the ads. You don't need any specialized Web development knowledge to create placeholders. Placeholders also provide the important e-commerce capability of letting you capture the number of times ads are displayed by a placeholder (ad impressions) and the number of times visitors click ads displayed by a placeholder (clickthroughs).
- **Target customers with personalized content.** Even after you have collected some information about your customers, analyzed the data, created placeholders

in your Web pages, and organized customers into segments, you may decide that frequent manual updates to your Web site content based on these factors is not enough. Content selectors in the E-Business Control Center let you dynamically match Web content to customers in real time, based on events that occur when someone visits a Web site, customer characteristics that are most often stored in user profiles, or dates and times. Once the content selectors are set up in the E-Business Control Center and your JSP developer writes the code that determines how the content will be displayed in the Web page, your Web site will automatically target customers with personalized content.

WebLogic Portal 4.0 Customers

In addition to the Personalization Server features, WebLogic Portal customers can:

- **Configure Portals, Portlets, and Entitlement Segments.** The portal, portlet, and entitlement segment tools let you configure your portals and determine which users have access to specific portal content. The portal tool lets you determine elements such as layout, skins, pages used in the portal, and the portlets that are part of the portal. The portlet tool lets you specify URLs to content, select Webflow, and configure other aspects of portlets. The entitlement segments tool lets you determine which users or groups see specific portal content.
- **Define stand-alone discounts.** As part of a marketing effort, you might want to temporarily give all your customers a discount on particular items in your product catalog. Using the E-Business Control Center, you can define stand-alone discounts by specifying the percentage or dollar amount off, whether the discount applies on a per-item, set-based, or per-order basis, the products to which the discount applies, and so on. If a customer purchases multiple items and is likely to qualify for more than one discount, the priority you associate with each discount can help resolve any conflicts and ensure that customers receive the discount(s) you intend.
- **Define campaign discounts.** Campaign discounts, which are available only if you use WebLogic Portal, are similar to stand-alone discounts with one exception: They are specifically designed for use within promotional campaigns. In other words, campaign discounts are discounts that are not offered to all your e-business customers, but only those who belong to a particular customer segment, who exhibit particular browsing behaviors, or meet other predefined criteria. With the E-Business Control Center, you can define campaign discounts and apply them in various ways to meet your targeted marketing objectives.

- **Execute and manage promotional campaigns.** Using predefined customer segments, tracked customer behaviors, and previously established campaign discounts, you can create, execute, and maintain powerful promotional campaigns with the E-Business Control Center. Display an ad in a highly visible placeholder on your home page to customers who show interest in new products, or send a promotional e-mail with a special discount to entice browsing visitors to buy. You can execute these actions based on the segment to which a customer belongs, based on the customer's behavior on your Web site, or on a number of other conditions. Alternatively, there may be times when you want to select customers at random to pilot test a new marketing strategy. With the E-Business Control Center, you can combine these campaign-specific features to meet all your promotional needs.
- **Monitor and report campaign results.** While your promotions are in action, use Events and Behavior Tracking to monitor and qualify promotional campaign results. After your campaign has ended, produce reports that allow you to share the success of your e-business strategies with other interested parties in your organization.

Roles and Responsibilities

The E-Business Control Center was designed specifically to help business analysts, marketing professionals, and other non-technical professionals implement customized e-business strategies that will capture and maintain sizable online audiences. Because a business analyst's strength is in conceiving effective models for e-business, the tools you use should allow you to execute these strategies easily, without worrying about technical details or becoming overly dependent on technical resources.

The E-Business Control Center does not require you to have intricate knowledge about how a Web site is implemented. Rather, the E-Business Control Center allows you to remain in control of all your e-business efforts, including the creation and modification of promotional campaigns, through an intuitive graphical interface.

Although a business analyst's reliance on technical resources is greatly reduced when using the E-Business Control Center, some degree of collaboration with your organization's technical staff may still be necessary to fully personalize your customers' experience. The E-Business Control Center provides many out-of-the-box components that you can use to meet your business objectives. However, you may develop a new e-business strategy that leverages the power of BEA technology but does not surface in the E-Business Control Center tool. It is during these times that you

may need to work with a technical resource in your organization to establish a supporting infrastructure. Once this is done, however, you can reuse the new components like you would any other in the E-Business Control Center.

Business Analysts will most likely collaborate with more technical resources who may:

- Manage the operations of major pieces of the Web site, or the entire site itself.
- Coordinate major and minor change processes.
- Be an active participant in overall business effectiveness monitoring and system performance monitoring.
- Be responsible for major, structural updates to an e-business Web site, for management of user profiles, user permissions, and so on.
- Perform many behind-the-scenes programming tasks that keep a Web site functioning.

Therefore, when you require additional support for the E-Business Control Center, you would typically contact a person (or a group of people) who fill the business engineer role described previously.

For more detailed information about how a business engineer accomplishes campaign-related programming tasks, see the *Guide to Developing Campaign Infrastructure*.

Establishing Organizational Policies

Much of the data in the E-Business Control Center is stored in XML files and modified on individual client systems. When synchronized to your server, that data determines the rules and behavior of your enterprise application.

Warning: When multiple developers work concurrently on a single set of source files and business documents, they can overwrite each others' work or create sets of changes that are incompatible and difficult to debug when they synchronize their data to the WebLogic Portal server.

We highly recommend using content management or version control software to control user access to files and provide a file revision history. Also, since such software usually stores data on a single server, your system administrator can back up that data.

There are many issues involved with authoring and deploying your enterprise application to go live. To help save you time, effort, and money, and to help prevent you from making mistakes that negatively affect your Web presence, read about these issues in the *Deployment Guide*.

To facilitate concurrent development, we recommend the following model:

- Use a content management or source-control system to synchronize the separate development environments, control access to files, and maintain a history of changes.
- Organize your development tasks into discrete units. For example, one task is creating a promotional campaign and another is modifying the flow of data through the Web site (Webflow).
- Use a separate installation of the E-Business Control Center for each development task.
- For each installation of the E-Business Control Center, deploy an instance of your enterprise application under a unique name.

It is extremely important that your organization develop some policies about who *owns* objects like customer segments, placeholders, events, campaigns, and so on. Ownership of objects is critical when it comes to modifying information that may be in broad use. For example, if a customer segment is created by one user, it is very possible that other users may begin to use the segment (perhaps unbeknownst to the original author). If the author later changes the segment definition, many people are going to be affected. So, it is also highly recommended that your organizational policies identify which objects others can use, which are more proprietary or “use at your own risk,” and so on.

Recommended Reading

After you have reviewed this introduction, you can take a number of paths through the documentation, depending upon your goals.

WebLogic Portal 4.0 Customers

If you are a WebLogic Portal customer, review the conceptual explanations in all chapters of this guide. If you are going to develop campaigns, pay particular attention to the “Roadmap for Creating Promotional Campaigns” before getting started. This topic should contain all the information you need to know before moving on to the step-by-step instructions that will guide you through campaign implementation.

Note: The importance of planning can never be overstated, so resist skipping the Roadmap discussion! Carefully thinking about and designing a detailed marketing strategy ensures that you have (at the very minimum) the information you will need to begin implementing your campaigns in the E-Business Control Center. In addition, up-front planning can help you identify areas where your strategy may be unclear, possibly preventing you from running into problems down the road that require both time and effort to resolve. Naturally, such problems can delay the release of a promotional campaign, thus affecting your ability to provide the valuable services your online customers expect.

WebLogic Personalization Server 4.0 Customers

If you have the Personalization-only version of the E-Business Control Center, you should review at least the conceptual explanations in the following chapters:

- “Creating and Managing Property Sets”
- “Using Customer Segments to Target High-Value Markets”
- “Retrieving Documents with Content Selectors”
- “Displaying Ads”
- “Webflow Components and Concepts”
- “Using the Webflow and Pipeline Editors”

Additional Resources

In addition to this guide, the following resources will also help you understand and use the E-Business Control Center.

BEA E-Marketing Fieldbook

The goal of the *BEA E-Marketing Fieldbook* is to help you architect a strategy for e-business success. This document weaves together a breadth of fundamental e-business best practices with practical recommendations for how to implement your BEA customer management platform and other technologies to achieve maximum value from your customer relationships.

The Fieldbook contains content ranging from Marketing 101 concepts to leading-edge, technology driven marketing strategies. By covering a range of topics, the Fieldbook addresses the diverse needs of organizations with varied levels of marketing sophistication, while also conveying the importance of building e-business success through a solid foundation of marketing basics.

Fieldbook topics center around traditional functional marketing roles to enable individual contributors within your organization to quickly find the content that applies to their responsibilities. Although written for marketers and business managers, the Fieldbook still covers an array of technical issues, focusing on utilization of technology to drive business objectives.

The *BEA E-Marketing Fieldbook* is available on the BEA e-docs product documentation Web site: <http://e-docs.bea.com/wlp/docs40/interm/pdf.htm>.

Sample Applications and Product Tours

To help you understand the interactions taking place between the E-Business Control Center tool and your Web site or Portal, the documentation also contains two tours that walk you through the features highlighted in the sample applications:

- The *Personalization Examples* demonstrate the personalization services provided by the WebLogic Personalization Server.
- The *JSP Commerce and Campaign Tour* leads you through many of the Web pages provided as part of the sample storefront application, demonstrating how these templates work and illustrating the scope of campaign-related features that are available.

For more information about these product tours, see the BEA e-docs product documentation Web site: <http://edocs.bea.com/wlp/docs40/index.html>.

Online Help

At any time, you can access the E-Business Control Center's built-in online help system to select from a list of available topics or to search for a particular topic. The help system contains both step-by-step directions and specific recommendations about how to get the most out of the E-Business Control Center's capabilities for your e-business efforts.

The contents of this help system are also provided on the BEA e-docs product documentation Web site: <http://e-docs.bea.com/wlp/docs40> (in both HTML and PDF formats), and is updated as new information is added or corrections are made.

Tip: If the online help text runs past the right side of the help window,

Using the E-Business Control Center

This section provides an overview of the E-Business Control Center and shows you how to perform tasks that are common to all tools in the E-Business Control Center.

Note: While the E-Business Control Center may run successfully at lower monitor resolutions, we recommend a monitor resolution setting of 1024 by 768.

Starting the E-Business Control Center

If you feel comfortable with the materials previously described, you are ready to use the E-Business Control Center. To start the E-Business Control Center:

Windows: Selecting Start → Programs → BEA WebLogic E-Business Platform → BEA E-Business Control Center 4.0 → E-Business Control Center.

For a full view of the E-Business Control Center, see Figure 1-2.

If you don't see the Explorer window along the left side of the E-Business Control Center, click the Open Explorer button in the main toolbar, as shown in Figure 1-3.

Figure 1-3 Opening the Explorer Window



Working with Application Data

The E-Business Control Center lets you develop the data that controls the behavior of your enterprise applications. In the E-Business Control Center, data files for an enterprise application are stored in a specific directory structure. This structure, for example, contains directories for storing the Segments, Placeholders, Webflow, and so on, that an enterprise application will use when the data is synchronized to the server.

There are many issues involved in creating and maintaining application data, especially if multiple developers will work on a single application, or the data files will be stored in a content management or version control system (which we recommend). For more information about the issues involved with maintaining application data, see “Establishing Organizational Policies” on page 1-9 and the *Deployment Guide*.

The following sections provide tasks for and information about working with application data in the E-Business Control Center.

Creating an Application Structure for E-Business Control Center Data

The data files in the E-Business Control Center must reside in a specific directory structure. This procedure shows you how to create that structure for an application in the E-Business Control Center.

If you want to view an existing application before creating a new one, you can open the sample application that comes with the E-Business Control Center. See “Opening Application Data.”

To create an application structure for E-Business Control Center data:

1. Choose File → New Application in the menu.

2. In the New Application window, select the folder under which you want to create the application structure.

For example, to make the application a subfolder of the `EBCC_HOME\applications` folder, select the `EBCC_HOME\applications` folder.

You can create the application structure anywhere you like.

3. In the New Directory field at the bottom of the window, enter the name of the application.

Note: Even though the application structure supports a specific enterprise application, you can name the E-Business Control Center application directory whatever you like. This directory name simply serves as a container for the structured subfolders that are automatically created in this procedure. The way the data in this application structure is ultimately sent to its enterprise application is determined by the connection settings to the server. See “Connecting to the Server” on page 1-19.

4. Click Create.

The application structure is built automatically, and you can begin using the E-Business Control Center to configure the enterprise application.

Note: When you create a new application structure, a default `webflow-extensions.wfx` file is placed in the application’s `default\webflow` subfolder. This file contains the default Webflow extensions that will be used for any Web application you add to the application’s structure (see “Creating a Web Application Folder for an Enterprise Application” on page 1-18).

If you customize the `webflow-extensions.wfx` file in the `default\webflow` subfolder, any Web application folder you add afterwards will contain the customized Webflow extensions.

Opening Application Data

To begin using the E-Business Control Center, you must open application data. When you open application data, all of that application’s data is loaded into the E-Business Control Center, where you can modify, add to, remove, or synchronize that data.

Note: The E-Business Control Center is installed with the following sample applications, located in the EBCC_HOME\applications folder: p13nApp, petflowApp, portal, and wlcsApp. Each contains different types of data.

To open an application:

1. If you are using a content management or version control system, check out the files for the application you want to open.
2. In the menu, choose File → Open Application.
3. In the Open Application window, locate and *single-click* the application folder.

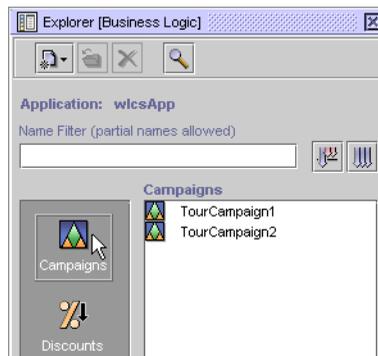
For example, to open the wlcsApp sample application, single-click the EBCC_HOME\applications\wlcsApp folder.

4. Click Open.

Data for the application is loaded into the E-Business Control Center.

When an application is loaded, you can select a tool icon in the Explorer window and see its files, as shown in Figure 1-4.

Figure 1-4 With an application open, click a tool icon to see its files

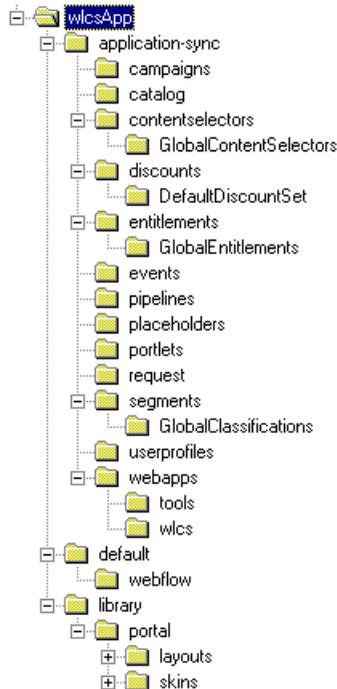


Each time you launch the E-Business Control Center, the last application you had open is loaded automatically.

Directory Structure of an Application

A valid application—one you can open in the E-Business Control Center—has a specific directory structure with specific directory names, as shown in Figure 1-5.

Figure 1-5 Directory structure for a valid application



You can name the application (`wlcsApp` in this example), the webapps (`tools`, and `wlcs` in this example), and the subfolders of `layouts` and `skins` whatever you like (subject to standard naming restrictions). The directory structure and the rest of the directory names must match Figure 1-5 for you to be able to open the application in the E-Business Control Center.

The `default\webflow` folder contains a file called `webflow-extensions.wfx` that you can use to customize your default extensions for Webflow. For more information, see “Creating a Web Application Folder for an Enterprise Application” on page 1-18.

To ensure that you create the correct directory structure for an application, see “Creating an Application Structure for E-Business Control Center Data” on page 1-14.

About the Sample Applications

The sample applications that come with the E-Business Control Center, located in the `EBCC_HOME\applications` folder, contain files for each tool in the E-Business Control Center. You can open these files to get a better idea of how each tool works. See “Opening Files” on page 1-30 for more information.

Detailed information for working with each of the tools in the E-Business Control Center is contained throughout this guide.

Creating a Web Application Folder for an Enterprise Application

The Webflows/Pipelines tool in the E-Business Control Center is associated with specific Web applications within an enterprise application. Use this procedure to add a Web application directory to the structure of the enterprise application in the E-Business Control Center.

1. In the E-Business Control Center, open the application to which you want to add the Web application folder.
2. Choose File → New → Web Application in the menu.
3. In the New Web Application window, enter the exact name of a Web application that will either exist or that already exists on the server.
4. Click OK. The Web application folder is added as a subfolder of the `webapps` folder in the application directory structure (see Figure 1-5).

The `webflow-extensions.wfx` file in the application’s `default\webflow` subfolder is also copied to the new Web application folder.

Creating a Web Application Folder for Portal

For information on creating a Web application folder for Portal, see “Introducing WebLogic Portal” in the *Getting Started with Portals and Portlets*.

Connecting to the Server

Although the majority of E-Business Control Center functionality does not require users to log in to a running WebLogic Portal server, some areas of the E-Business Control Center require you to log in to the server to view or use certain data. You must log in to the server to:

- Search for or preview ads in various windows
- Access property sets in various windows
- Use the Catalog Browser in various windows to select items in a catalog
- Select and preview e-mail content that will be sent out automatically as part of a promotional campaign
- Synchronize your application data to the server

The connection settings determine which enterprise application on the server the E-Business Control Center will be synchronized to. The E-Business Control Center Connection Settings tool makes it easy to set the necessary connections to the WebLogic Portal server. You only need to know a few pieces of information to set up connections: the name of your enterprise application, the name of the server running WebLogic Portal server, the port number, and the username and password. You can get this information from your system administrator.

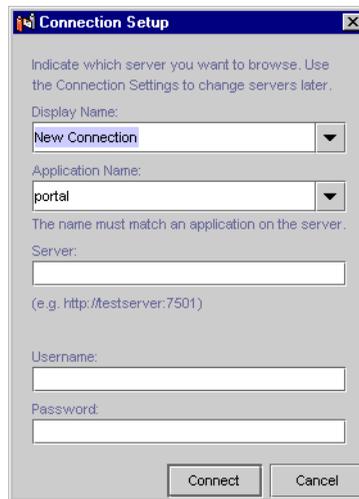
If your organization uses more than one server—for purposes of backup or failover, or to store different types of data on different servers—you can set up a connection for each server.

Connections you set up are available for all applications you open in the E-Business Control Center.

To set up connections to the server:

When you first access a feature in the E-Business Control Center that requires a server connection, the Connection Setup window appears (Figure 1-6). (If you choose Tools → Synchronize, the window is called Synchronization Setup.)

Figure 1-6 The Connection Setup Window



To create a server connection to access the data:

1. In the Display Name field, type a new connection name.
2. In the Application Name field, enter the *exact* name of your enterprise application. The name is case sensitive. This is the enterprise application to which you will synchronize your E-Business Control Center data.

You can get the application name from your system administrator. Your system administrator can also provide your enterprise application name(s) in the Application Name drop-down list, and set a default application name to appear in that field automatically. See “Adding Application Names to the Application Name Drop-Down List” on page 1-26.

You can also select one of the sample application names from the drop-down list if you are working with and synchronizing to one of the sample applications.

3. In the Server field, enter `http://<servername>:<port>`, where `<servername>` is the name of the server that WebLogic Portal is running on, and the `<port>` is the server’s port number, such as 7501.

You can get this information from your system administrator.

4. Enter your username and password.

The default username is `system`, and the default password is the password that was set during WebLogic Server installation. The username and password are set up and maintained in the Administration Tools. Users assigned to the Administrators group can use their own username and password. You only need to enter your username and password once per session.

5. Click Connect.

You are given access to the server-side data you are requesting, and the connection is added to the Connection Settings, described in “Modifying Connections,” where you can edit, delete, or select it for accessing data on the server.

When you create a connection to server-side data for the first time, the connection you establish is used for all data on the server listed at the beginning of this procedure. You will therefore be given automatic access to all other types of server-side data based on that connection.

If you want to use different connections for different types of data—for example, if you store campaign e-mail and ad content on a different server than other data, you can add connections with the Connection Settings tool and individually assign those connections to different types of server-side data. For more information, see “Modifying Connections.”

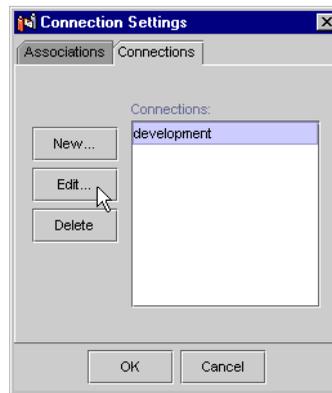
Modifying Connections

After you have established connections in the Connection Setup window when you access server-side data in the E-Business Control Center, you can modify those settings with the Connection Settings tool.

To modify existing connections:

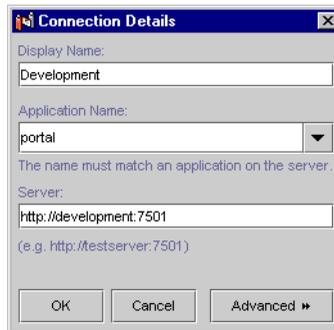
1. In the E-Business Control Center, choose Tools → Connection Settings.
2. In the Connection Settings window, shown in Figure 1-7, click the Connections tab.

Figure 1-7 Setting Connections to the Server



3. Select the connection you want to modify, and click Edit. If you want to create a new connection, click New.
4. In the Connection Details window (Figure 1-8), enter a name for the connection in the Display Name field.

Figure 1-8 Connection Details Window



5. In the Application Name field, enter the *exact* name of your enterprise application. The name is case sensitive. This is the enterprise application to which you will synchronize your E-Business Control Center data.

You can get the application name from your system administrator. Your system administrator can also provide your enterprise application name(s) in the Application Name drop-down list, and set a default application name to appear

in that field automatically. See “Adding Application Names to the Application Name Drop-Down List” on page 1-26.

You can also select one of the sample application names from the drop-down list if you are working with and synchronizing to one of the sample applications.

6. In the Server field, enter `http://<servername>:<port>`, where `<servername>` is the name of the server that WebLogic Portal is running on, and the `<port>` is the server’s port number, such as 7501.

You can get this information from your system administrator.

7. You should not have to click the Advanced button to modify the Uniform Resource Identifier (URI) paths to the server. Your system administrator should notify you if you ever need to modify these settings.

Note: For convenience, the name you enter/select in the Application Name field is automatically put at the beginning of each URI in the Advanced section of the window.

8. Click OK. The Connection Details window closes.
9. Create any remaining connections you need. Each connection can point to a different application, server, and port.
10. When you are finished creating connection, click the Associations tab in the Connection Settings window.
11. The connection selected in the All-Purpose Connection drop-down list is the single connection you will use to access the relevant data on the server from the E-Business Control Center (the types of data listed at the beginning of this procedure).

If you want to use different connections for different types of data, select the “Use independent connections for each task” option, and for each type of data listed in the window, select the appropriate connection.

For example, if your organization stores ad content and e-mail content on a separate server or port from the main development server or main port, you could select that connection in the Content Preview and E-mail Content fields, and select the development connection for the remaining fields.

12. Click OK.

After you set up your connections, you are prompted for your username and password. You only need to enter your username and password once per session.

The default username is `system`, and the default password is the password that was set during WebLogic Server installation. The username and password are set up and maintained in the Administration Tools. Users assigned to the Administrators group can use their own username and password.

If for some reason you are ever presented with the Connection Setup window again, select an existing connection from the Display Name field, enter your username and password if necessary, and click Connect.

Advanced Connection Settings

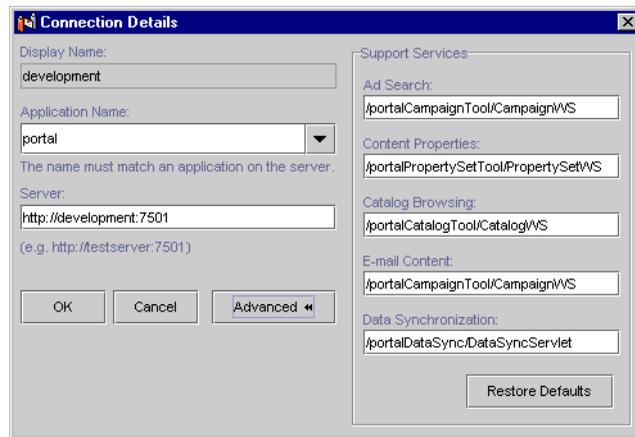
The following sections provide instructions for system administrators to help make the connection-setting process easier and more error-free for E-Business Control Center users.

Changing the Default Connection Setting URIs

When users set up connection settings to access server-side data and to synchronize E-Business Control Center data to the server, they use the Connection Settings and Connection Details windows, shown in Figure 1-7 and Figure 1-8.

In the Connection Details window, there is an Advanced button that displays the URIs to the enterprise application selected in the Application Name field, as shown in Figure 1-9.

Figure 1-9 Connection URIs



If your organization has modified the default locations of the server-side data, your system administrator can modify the URIs that automatically appear in the Connection Details window so that users do not have to modify these settings. To change the default URIs, follow this procedure.

1. Make a backup of the `config.xml` file, located in the `EBCC_HOME\bin` directory, in case you need to revert to the original after you modify it.
2. Open the `config.xml` file.
3. There are five services you can override. The names of these services appear as attributes in the `<connection>` element.

The services are: `adsearch`, `catalogbrowser`, `datasync`, `emailcontent`, and `propertyset`.

4. To override any of these default settings, add them as attributes to the `<DefaultSupportServiceURIs/>` element.

For example, to override the `adsearch` service so that the E-Business Control Center points to ad data for a summer campaign, modify the `<DefaultSupportServiceURIs/>` element so it looks like this:

```
<DefaultSupportServiceURIs
  adsearch="CampaignTool/SummerCampaignWS" />
```

Note: The new URI you create is always automatically prepended by the name of the application selected in the Application Name field. For example,

using the previous example change

(`adsearch="CampaignTool/SummerCampaignWS"`), if a user has selected `portal` in the Application Name field of the Connection Details window, the following URI will be displayed in Ad Search field in the Advanced section of the Connection details window:

```
/portalCampaignTool/SummerCampaignWS
```

5. Save and close the `config.xml` file.

If you do not close the file, users will not be able to access the updated URIs.

6. Tell your E-Business Control Center users to restart the E-Business Control Center edit each connection by clicking the Restore Defaults button in the Advanced section of the Connection Details window (Figure 1-9).

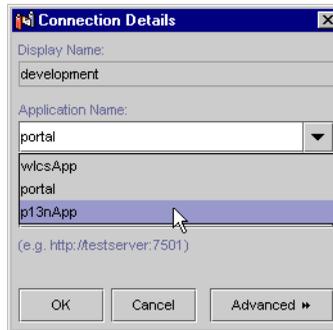
To remove your URI overrides, remove any or all of the attributes you added to the `<DefaultSupportServiceURIs/>` element, and have your users modify their connection settings by clicking the Restore Defaults button in the Advanced section of the Connection Details window.

Adding Application Names to the Application Name Drop-Down List

When E-Business Control Center users set up connections to the WebLogic Portal server, as described in “Connecting to the Server” on page 1-19, there is an Application Name field in which they enter the name of the enterprise application they are working with.

The system administrator can add application names to the Application Name drop-down list so that users can select them rather than typing them. This functionality eliminates two potential problems: it eliminates typing mistakes that result in server connection failures (because the name, which is case-sensitive, must exactly match the name of the enterprise application); and it eliminates support calls that the system administrator must field when typing mistakes cause server connection failures.

Figure 1-10 shows the Application Name drop-down list to which the system administrator can add application names.

Figure 1-10 Application Name Drop-Down List

To add application names to the Application Name drop-down list:

1. Make a backup of the `config.xml` file, located in the `EBCC_HOME\bin` directory, in case you need to revert to the original after you modify it.
2. Open the `config.xml` file.
3. Within the `<EnterpriseApps>` element, add an `<application>` element that contains a name attribute whose value is the application name you want to appear in the drop-down list. You can also make an application name the default name that appears in the drop-down list by adding the attribute and value `default="true"`.

The following example shows how you would add an enterprise application called "gromit" to the drop-down list and make it the default name.

```
<EnterpriseApps>
    <application name="gromit" default="true" />
</EnterpriseApps>
```

4. Save and close the `config.xml` file.

If you do not close the file, users will not be able to see the new application in the drop-down list.

5. Have users restart the E-Business Control Center to see the new application name in the drop-down list.

Working with Files

When you are working with tools in the E-Business Control Center (Portals, Campaigns, Placeholders, Webflows/Pipelines, and so on), all of your work is stored in XML files. When you have created all your E-Business Control Center files, you must synchronize those files to the WebLogic Portal server for those files to affect your enterprise application.

Files are stored in the application structure illustrated in Figure 1-5.

It is important to use a content management or version control system to store and maintain your E-Business Control Center data files, and it is important to have organizational policies for maintaining and synchronizing data. For more information, see “Establishing Organizational Policies” on page 1-9.

The following procedures show you how to create and maintain E-Business Control Center files.

Creating Files (Other than Webflow/Pipeline)

Use this procedure to create E-Business Control Center files of any type other than Webflow/Pipeline files. For instructions on creating Webflow/Pipeline files, see “Creating Webflow/Pipeline Files” on page 1-29.

1. In the Explorer window, select the tab containing the tool for which you want to create a new file.
2. In the Explorer toolbar, click the New button, and select the type of file you want to create.

If you are creating a Portal, select a Web application in the Select Web Application dialog box, and click OK.

The new files opens in an Editor window.

3. Edit the file.

The remainder of this guide contains details for working with each type of file.

4. Click the Save button in the main toolbar.
5. In the Save As window, name the file and click Save.

The length of the filename can be between 1 and 64 characters. The name must start with either a letter or an underscore character (_). The only characters allowed in the rest of the name are letters, numbers, underscores, periods, and hyphens.

If you receive an error trying to save a file, make sure the file name contains valid characters, and make sure your directory structure is correct, as described in “Directory Structure of an Application” on page 1-17.

Creating a File by Duplicating an Existing File

To save editing steps required to create a file, you can create a file by duplicating an existing file. To do this:

1. Open the file you want to duplicate.
2. Choose File → Save As in the menu.
3. In the Save As window, enter the name of the new file, and click Save.

Creating Webflow/Pipeline Files

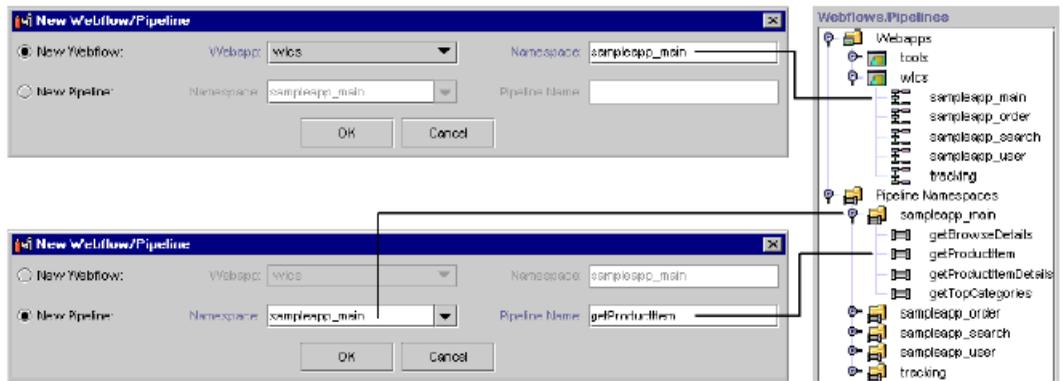
Use this procedure to create Webflow/Pipeline files in the E-Business Control Center. To create all other types of files in the E-Business Control Center, see “Creating Files (Other than Webflow/Pipeline)” on page 1-28.

1. In the Explorer window, select the Site Infrastructure tab, and click the Webflows/Pipelines icon.
2. In the Explorer toolbar, click the New button, and select Webflow/Pipeline.
3. In the dialog box that appears (see Figure 1-11), select the New Webflow option to create a new Webflow namespace or the New Pipeline option to create a new Pipeline.
 - a. If you select the New Webflow option, select the Web application to which you want to add a Webflow namespace, and enter a name for that namespace in the Namespace field.
 - b. If you select the New Pipeline option, select an existing namespace in the Namespace field, or type the name of a new namespace; then enter the name for the new Pipeline in the Pipeline Name field.

The length of the filename can be between 1 and 64 characters. The name must start with either a letter or an underscore character (_). The only characters allowed in the rest of the name are letters, numbers, underscores, periods, and hyphens.

4. Click OK. The new item is added to the tree in the Explorer window, as shown in Figure 1-11, and an Editor window opens with the new file.

Figure 1-11 Where New Webflow Namespace and Pipeline Files Appear in the Explorer Window



Note: You must add a new Web application to the E-Business Control Center for the Web application to appear in the Webflows/Pipelines Explorer window tree. See “Creating a Web Application Folder for an Enterprise Application” on page 1-18.

For more information on Webflows and Pipelines, see “Webflow Components and Concepts” and “Using the Webflow Editor.”

Opening Files

To open a file, select the tool it belongs to in the Explorer window, and double-click the file in the list of files. The file opens in the Editor window.

Saving Files

After you have created or modified a file, with that file active in the Editor window, click the Save button in the main toolbar. If you are saving a newly created file, enter the name of the file in the Save As dialog box, and click OK.

If you close the file or the Editor window before saving changes you have made, you are prompted to save your changes.

Note: If you receive an error trying to save a file, make sure the file name contains valid characters, and make sure your directory structure is correct, as described in “Directory Structure of an Application” on page 1-17.

Deleting Files

To delete a file, select it in the Explorer window and click the Delete button in the Explorer toolbar.

Renaming Files

You can rename a file by opening it, choosing File → Save As in the menu, and saving the file with the new name you want. If you no longer want the old file, delete it.

Filtering Files

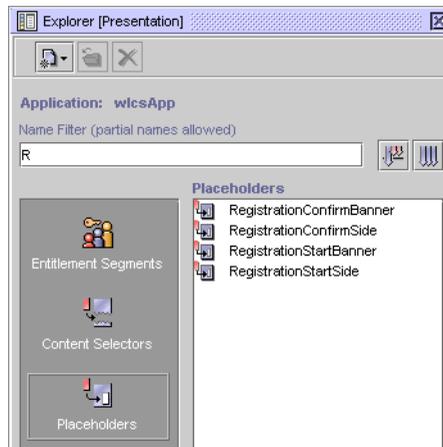
You can filter the list of files in the Explorer window to show files with specific name characteristics.

1. Select a tool icon to list its files.
2. In the Filter field, enter a portion of a name that represents the names you want to view, and click the Filter button, as shown in Figure 1-12.

For example, if you want to list all files starting with the letter “R,” enter `R` in the filter field and press the Filter button. If you want to view campaigns that contain “tour” in the name, enter `tour` in the Filter field.

3. To view the full list again, click the Show All Objects button next to the Filter button.

Figure 1-12 Filtering files



Working with E-Business Control Center Windows

This section provides tips for manipulating the windows in the E-Business Control Center.

Tips for Closing Windows and Tabs

Here are a few tips for closing windows and tabs in the E-Business Control Center:

- In the Editor window, clicking the close button in the upper right corner closes the entire window, not just the file you are currently viewing. You are prompted to save open files that have changed.
- To close an individual file, right-click its tab in the Editor window and choose Close.
- When you choose File → Close in the menu, the active tab of the active window closes. For example, if the Editor window is active, the active file closes.
- If you inadvertently close an Explorer window tab, restore the Explorer window by clicking the Open Explorer icon in the main toolbar.

Organizing Tabs

You can move Explorer or Editor tabs among different windows by using the docking feature. Here is an illustration of one of the more practical uses of this feature: If you had four files (tabs) open in the Editor, and two files were related (a discount and the campaign that uses the discount, for example), you could dock the discount and campaign files into a separate window to better organize your workspace.

To dock a tab to another window:

1. Right-click the tab you want to dock into another window.
2. Choose Dock View Into, then select the type of window you want to dock the tab into.

If a file is the only open file in a window, it will not have a tab, and you cannot dock it into another window. A window must contain more than one file to display tabs.

Note: To restore the Explorer window to its default state of three tabs, click the Open Explorer button on the main toolbar.

Minimizing Windows

When you minimize an Editor window, it becomes an icon at the bottom of the E-Business Control Center window. To restore the Editor to full size, click the icon.

Synchronizing Application Data

Synchronizing application involves using the Tools → Synchronize option to move the application data files from your local system to your enterprise application server.

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. For more information on how to set up your development environment, see "Milestone 4: Set Up a Development Site" in the *Strategies for Developing E-Business Web Sites* documentation.

To synchronize, you must be connected to the server. See “Connecting to the Server” on page 1-19. Before you synchronize, you can also validate your E-Business Control Center data prior to synchronization to see if any files are incomplete (Tools → Validate Application). For procedures and information on validating and synchronizing data, see “Synchronizing Application Data” in the *Deployment Guide*.

Note: If files are open in the E-Business Control Center Editor window with unsaved changes when you synchronize, those unsaved changes are not synchronized. Changes must be saved to be synchronized.

Error Logs

To find out more—albeit cryptic—details about any errors you may have received using the E-Business Control Center, you can open two different error logs:

- `EBCC_HOME\system\ide.log` – shows information and errors related to the NetBeans integrated development environment (IDE)
- `EBCC_HOME\tools.log` – shows E-Business Control Center error messages

You may also be asked to provide these files for any customer support calls you make.

If you do not see the `tools.log` file in the `EBCC_HOME` directory, that probably means there have been no errors to generate the file.

Warning: The `tools.log` file only stores errors for the current session. If you start the E-Business Control Center, and you have errors in the `tools.log` file from the previous session, the next error you receive in the current session will wipe out those previous errors. If you want to save error messages for a session, copy and rename the `tools.log` file so you can access it later.

2 Building Conditions and Queries in the BEA E-Business Control Center

This topic is a central point of reference for information about building conditions and queries in the BEA E-Business Control Center. The topics in this section are not meant to be read in sequence, but rather, are pieces of information or instructions that you will use in the context of other tasks. These tasks may be used when defining customer segments, running a query for content selectors, or adding scenarios to your promotional campaigns. (*Queries* search your content management system for documents based on a set of criteria that you specify.)

This topic includes the following sections:

- Listing of the Available Conditions
 - Important Note About Dates and Times
- Using the Select Customer Segments Window
- Using the Properties and Visitor Characteristics Windows
- Using the Select Events Window
- Using the Date/Time Entry Dialog Boxes
- Using the Quantity Selector or Currency Selector Dialog Boxes

- Using the Select Operator Dialog Box
- Using the Select Product Categories/Items Windows
 - Using the Catalog Browser
 - Searching a Catalog
- Using the Enter a Range Dialog Box
- Constructing Queries
 - Select a Document Property
 - Describe Documents by Comparing the Property to a Value or Range of Values
 - Describe Documents by Comparing the Property with the Properties of Other Objects
 - Specify How to Handle Multiple Value Phrases and Descriptors
 - Adding Property Sets to Drop-Down Lists
 - Preview the Query Results

Listing of the Available Conditions

The E-Business Control Center provides you with a number of conditions you can use to customize your e-business efforts. Depending on what you are trying to accomplish in the E-Business Control Center, you may encounter some or all of the conditions described in Table 2-1.

Note: The shopping cart conditions are available only if your license includes Commerce services.

Table 2-1 Descriptions of Conditions

Condition	Description
The visitor is a member of a predefined customer segment	If the visitor to your Web site belongs to a predefined customer segment, execute the specified action. For example, if the customer is a Gold Customer (customer segment), give the customer a 15% discount (action).
The visitor has specific characteristics	If a visitor's characteristics are compared to values you specify and those comparisons evaluate to true, execute a specified action. For example, if the customer's salary (characteristic) is greater than or equal to (comparison) \$50,000 (value), send the customer an e-mail (action).
The HTTP session has specific properties	If the HTTP session's properties are compared to values you specify and those comparisons evaluate to true, execute a specified action. An HTTP session is information your organization may want to track about a visitor's browsing session on the Web site. There are no properties for the HTTP session in the E-Business Control Center out-of-the-box.
An HTTP request has specific properties	If the HTTP request's properties are compared to values you specify and those comparisons evaluate to true, execute a specified action. There <i>are</i> properties for the HTTP request in the E-Business Control Center out-of-the-box.
An event has occurred	If a specified event occurs, execute the specified action. For example, if the customer has logged in (event), display an ad that matches their interests (action). Events may be selected from a number of predefined event types.
An event has specific characteristics	If the event's characteristics are compared to values you specify, and those comparisons evaluate to true, execute a specified action. For example, if a customer adds more than 5 items to their shopping cart (event), give the customer a 10% discount (action).
The date is	If the current date is equal to the one you specify, execute a specified action. For example, if the date is equal to July 22, 2001, send customers an e-mail about an upcoming sale (action). The <i>current</i> date refers to the date at the point that the condition is evaluated for a given user visiting the Web site. See "Important Note About Dates and Times" on page 2-5.
It is after a given date	If the current date is after a date you specify, execute a specified action. For example, if the date is after December 18, 2000, offer customers a discount (action). The <i>current</i> date refers to the date at the point that the condition is evaluated for a given user visiting the Web site. See "Important Note About Dates and Times" on page 2-5.

Table 2-1 Descriptions of Conditions (Continued)

Condition	Description
It is after a given date and time	If the current date and time is after a date and time you specify, execute a specified action. For example, if the date and time is after July 22, 2001 at 3 p.m., send customers an e-mail about an upcoming sale (action). The <i>current</i> date and time refers to the date and time at the point that the condition is evaluated for a given user visiting the Web site. See “Important Note About Dates and Times” on page 2-5.
It is between two times	If the current time falls within a range of times you specify, execute a specified action. For example, if the time is between 3 p.m. and 5 p.m., offer customers a discount (action). The <i>current</i> time refers to the time at the point that the condition is evaluated for a given user visiting the Web site. See “Important Note About Dates and Times” on page 2-5.
It is between two dates	If the current date falls within a range of dates you specify, execute the specified action. For example, if the date is between December 18, 2000 and December 18, 2001, show customers a sale ad (action). The <i>current</i> date refers to the date at the point that the condition is evaluated for a given user visiting the Web site. See “Important Note About Dates and Times” on page 2-5.
It is between two dates/times	If the current date and time fall within a range of dates and times you specify, execute the specified action. For example, if the date and time is between July 22, 2000 at 3 p.m. and July 22, 2001 at 3 p.m., show customers a sale ad (action). The range of dates is inclusive. The <i>current</i> date and time refers to the date and time at the point that the condition is evaluated for a given user visiting the Web site. See “Important Note About Dates and Times” on page 2-5.
There is a specific item in the shopping cart	If an item you specify exists in the customer’s shopping cart, execute the specified action. For example, if the customer has an item with a SKU equal to T144 in their shopping cart, give the customer a 10% discount (action).
There is an item from a given category in the shopping cart	If an item from a product category you specify exists in the customer’s shopping cart, execute the specified action. For example, if the customer has an item from Books (product category) in their shopping cart, give the customer a 10% discount (action).

Table 2-1 Descriptions of Conditions (Continued)

Condition	Description
The value of items in the cart is a certain amount	If the value of the items in a customer's shopping cart meets the criteria you specify, execute the specified action. For example, if the customer has \$100 worth (value) of items in their shopping cart, send them a Thank You e-mail (action).
A random number falls within a given range	When someone visits your Web site, the system assigns him a random number from 1 to 100. If the visitor's random number falls within the numeric range you set, execute this action. For example, if you specify a range of 1 to 50, the action will be executed for approximately 50% of the target visitor population.

Important Note About Dates and Times

When you set date and time conditions in the E-Business Control Center, the dates/times you set represent the time in your region. For example, if you are creating a campaign action that will be triggered at 8 p.m., that means 8 p.m. in your region. For a time zone that is two hours behind you, the action will be triggered at 6 p.m. in that time zone.

This also affects dates you set. The date you set becomes effective at midnight in your time zone. In a time zone that is six hours ahead of yours, that date becomes effective for that time zone at 6 p.m. your time the day before.

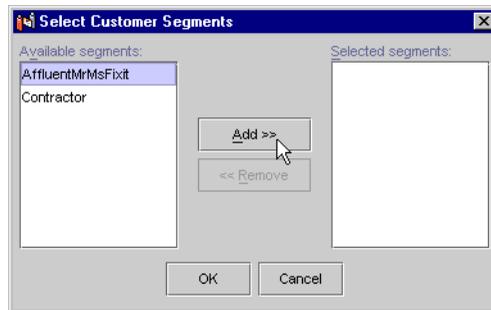
Time changes also affect time-triggered actions. For example, say you create a campaign that begins October 1 at noon and ends October 31 at noon. If a change to standard time (one hour earlier) occurs on October 29, the campaign will actually end on October 31 at 11 a.m. So if you want the campaign to end at noon on the new standard time, set the end time to 1 p.m.

Because of the different dates and times on which actions will be triggered around the country or world, it is important to tell customers that dates and times are effective for your time zone. This type of information allows customers to calculate when in their time zone they can take advantage of your promotions.

Using the Select Customer Segments Window

When you create a campaign scenario action or a content selector, select “The visitor is a member of a predefined customer segment” condition, and click the [customer segment] hyperlink in the Action pane, the Select Customer Segments window opens. Figure 2-1 shows the Select Customer Segments window.

Figure 2-1 Select Customer Segments Window



1. Click a customer segment name shown in the Available Segments list to select it. The customer segment is highlighted.
2. Click Add. The customer segment moves to the Selected Segments list.
3. Repeat steps 1 and 2 for each customer segment you want to add.

Note: If you make a mistake, click a customer segment name shown in the Selected Segments list to select it, then click Remove.

4. Click OK. The Select Customer Segments window closes, and the [customer segment] hyperlink changes to reflect the customer segment(s) you specified.

Using the Properties and Visitor Characteristics Windows

Many items in the E-Business Control Center can be described by their characteristics or **properties**. For example, visitors to the site, content to be shown to visitors, and events that represent visitor behavior can all be described in terms of their properties. Related properties are grouped together for convenience into **property sets**. Objects in the E-Business Control Center may have one or more property sets associated with them. For example, visitors may have one set of properties pertaining to general information, such as their address, and another set of properties pertaining to demographic information, such as their gender.

The windows where you describe E-Business Control Center objects by way of their properties are generically referred to as Properties windows. Using the Properties windows, and their associated Property Values windows, you can build Descriptors that describe an object of interest. The **Descriptor** is comprised of a **property phrase** and a **value phrase**.

For example, you may be interested in targeting an e-mail to customers whose income range is \$75,000-\$99,000. The Descriptor created in an E-Business Control Center Properties window would be:

```
Demographics: Income_Range is equal to "$75,000-$99,000"
```

Demographics is the property set in which you would find the Income_Range property, Is Equal is the comparison, and "\$75,000=\$99,000" is the value. Together, the property set and property form the following Property Phrase:

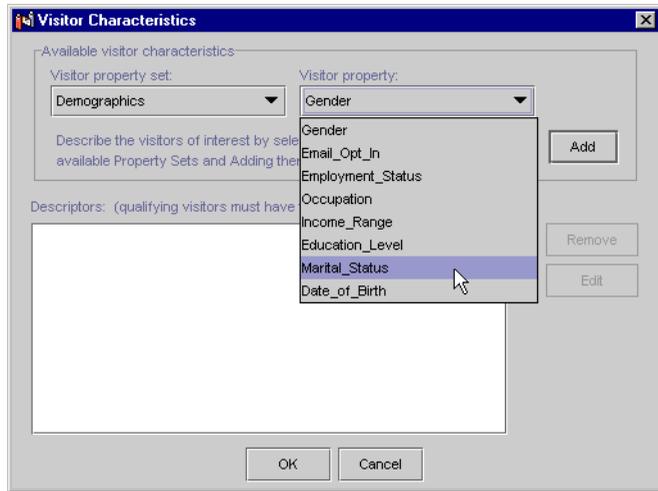
```
Demographics: Income_Range
```

Together, the comparison and the value form the following Value Phrase:

```
is equal to "$75,000-$99,000"
```

When you click the Is Equal To [value] hyperlink, a Properties window opens. Figure 2-2 is an example of a Properties window.

Figure 2-2 Properties Window

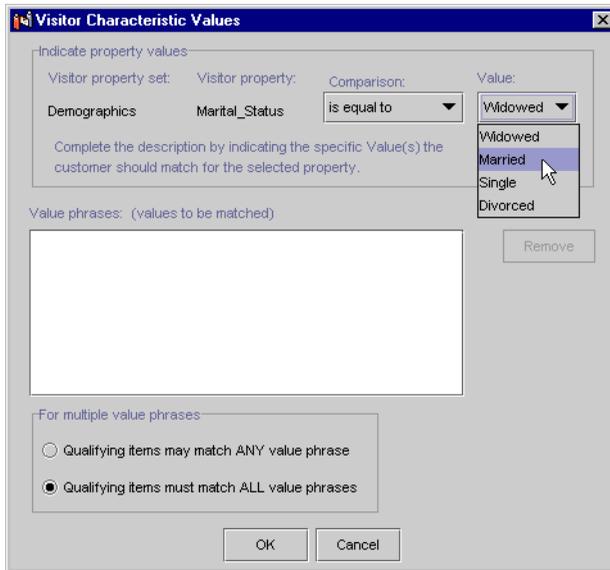


1. Select a property set from the Property Set drop-down list, and a property from the Property drop-down list.

Note: The E-Business Control Center includes some values for the Property Set and Property lists. However, additional Property Sets and Properties may be defined by your organization's business engineer or other technical resource.

2. Click Add. A Property-Values window opens, as shown in Figure 2-3.

Figure 2-3 Property-Values Window



3. Select a comparison from the Comparison drop-down list, and select or type a value in the Value field.

If the property value requires text entry, you can use the `contains` comparison to perform wild card matching. For example, if you want to send an automatic e-mail to customers who work at BEA when they log onto your site, you could select the `Email` property in `CustomerProperties`, select the `contains` comparison, and enter `@bea.com`.

4. Click Add. The value phrase you specified appears in the Value Phrases list box, as shown in Figure 2-4.

Warning: It may be possible to construct value phrases that are not reasonable in real world situations. Be sure to select a comparison and value that makes sense for the property set and property you previously selected.

Figure 2-4 Value Phrases List Box

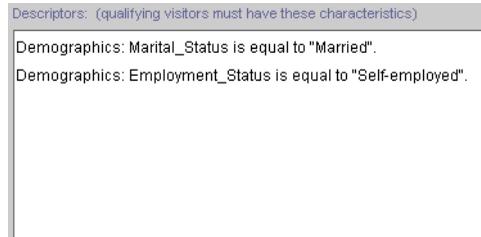


5. If desired, add more value phrases by repeating steps 3 and 4. If you add multiple value phrases, select a Multiple Value Phrases option to specify whether you want to match any or all of the value phrases you specify. If you only specify one value phrase, you can skip the Multiple Value Phrases option.

Note: If you need to remove a value phrases, click on the value phrases in the Value Phrases list box to select it, then click Remove.

6. Click OK. The Property-Value window closes, and the descriptor(s) appear in the Descriptors list box of the Properties window, as shown in Figure 2-5.

Figure 2-5 Descriptors List Box

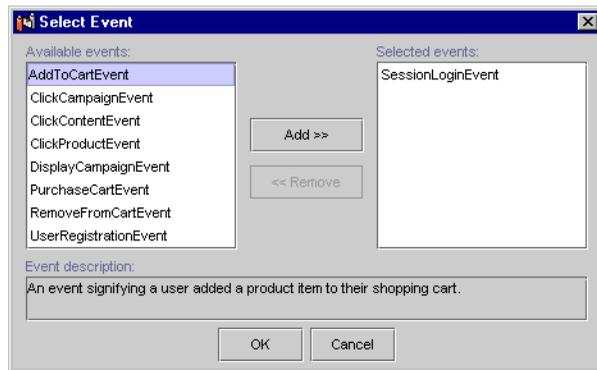


7. If desired, repeat steps 2 through 6 to specify multiple descriptors.
8. Click OK. The Properties window closes, and the [characteristics] and/or [properties] hyperlinks change to reflect the descriptors you specified.

Using the Select Events Window

When you are creating a campaign scenario action, select the “An event has occurred condition,” and click the [event name] hyperlink in the Action pane, the Select Events window opens. Figure 2-6 shows the Select Events window.

Figure 2-6 Select Events Window



1. Click an event name shown in the Available Events list to select it. A description of the event is shown in the Event Description text area.
2. Click Add. The event moves to the Selected Events list.
3. Repeat steps 1 and 2 for each event you want to add.
Note: If you make a mistake, click an event name shown in the Selected Events list to select it, then click Remove.
4. Click OK. The Select Events window closes, and the [event name] hyperlink changes to reflect the event(s) you specified.

Using the Date/Time Entry Dialog Boxes

Before you set date and time conditions in the E-Business Control Center, see “Important Note About Dates and Times” on page 2-5.

When you click one of the generic date or time related hyperlinks, one of the date/time entry dialog boxes opens. Simply type in the date and/or time in the appropriate field, then click OK. When you do so, the date/time entry dialog box closes, and the generic hyperlinks change to reflect the dates and/or times you specified.

Tip: For dates, you can either type in the date, or click the drop-down calendar to select the date, as shown in Figure 2-7. Just click a date to select it.

Figure 2-7 Date Calendar



Using the Quantity Selector or Currency Selector Dialog Boxes

When you click the [n] hyperlink, a Quantity Selector dialog box opens. When you click the [monetary amount] hyperlink, a similar dialog box, called Currency Selector opens. Figure 2-8 shows the Quantity Selector dialog box.

Figure 2-8 Quantity Selector Dialog Box



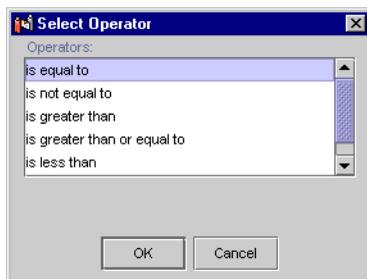
Note: A default value may be shown in the field.

1. If desired, type a new value into the field.
2. Click OK. The Quantity Selector or Currency Selector dialog box closes, and the [n] or [monetary amount] hyperlinks change to reflect the value you specified.

Using the Select Operator Dialog Box

When you click the Equal To hyperlink, a Select Operator dialog box opens. Figure 2-9 shows the Select Operator dialog box.

Figure 2-9 Select Operator Dialog Box



Note: A default value of Is Equal To is highlighted, which is why the hyperlinked Equal To text you clicked on to open the dialog box was not enclosed in brackets.

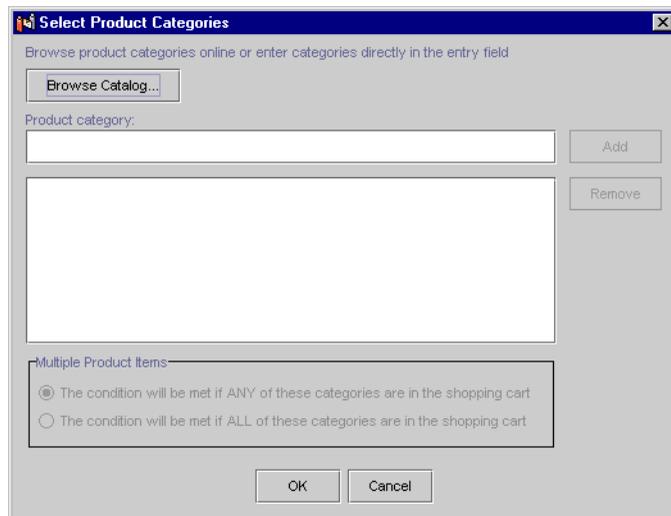
1. If desired, click a new value in the Operators list to select it.

2. Click OK. The Select Operator dialog box closes, and the hyperlink changes to reflect the value you specified.

Using the Select Product Categories/Items Windows

When you click the [product category] or [sku] hyperlinks, the Select Product Categories/Items window opens, as shown in Figure 2-10. When you add a trigger or target to a discount, a Specify Trigger Items or Specify Target Items window appears. The procedure for entering SKU numbers or product categories in these windows is the same.

Figure 2-10 Select Product Categories Window



1. Enter the SKU number or product category in one of two ways:
 - Enter it manually in the Product Category or Product SKU field, or
 - Click the Browse Catalog button to choose a category item directly from your catalog (see "Using the Catalog Browser," next).

2. Click Add.
3. If desired, add multiple SKU numbers or multiple product categories.
4. If you add multiple SKUs or product categories in the Select Product Categories window, select a Multiple Product Items option at the bottom of the window. That is, specify whether the condition is met if Any or All of the SKU numbers (or product categories) exist in the customer's shopping cart.

So, for example, if you specified SKU number T144 and SKU number D128 and you selected the Any option, customers with *either* of these SKU numbers in their shopping cart would meet the conditions. If you selected the All option, customers with *both* of these SKU numbers in their shopping cart would meet the conditions.
5. Click OK. The window closes, and the [product category] or [sku] hyperlinks change to reflect the value(s) you specified.

The following procedure explains how to use the Catalog Browser feature from step 1.

Using the Catalog Browser

The Catalog Browser allows you to easily find and select items for your campaign or discount definition. The following sections provide step-by-step instructions on how to use the Catalog Browser.

Browsing a Catalog

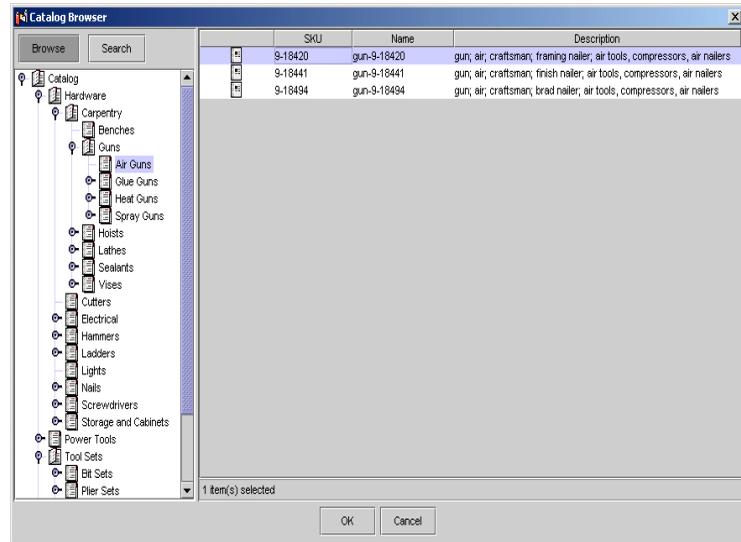
The browsing feature of the Catalog Browser allows you to select either categories or specific items from your catalog. You can select one or more items.

Note: You must first establish a connection to your catalog server. For more information, see "Connecting to the Server" on page 1-19.

1. To open the Catalog Browser, click the Browse Catalog button. The Catalog Browser opens, as shown in Figure 2-11.
2. Click the Browse button in the Catalog Browser window.
3. 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.

4. In the right pane, select one or more categories or items.
5. Click OK. The items or categories are added to your discount or campaign definition.

Figure 2-11 Catalog Browser



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.

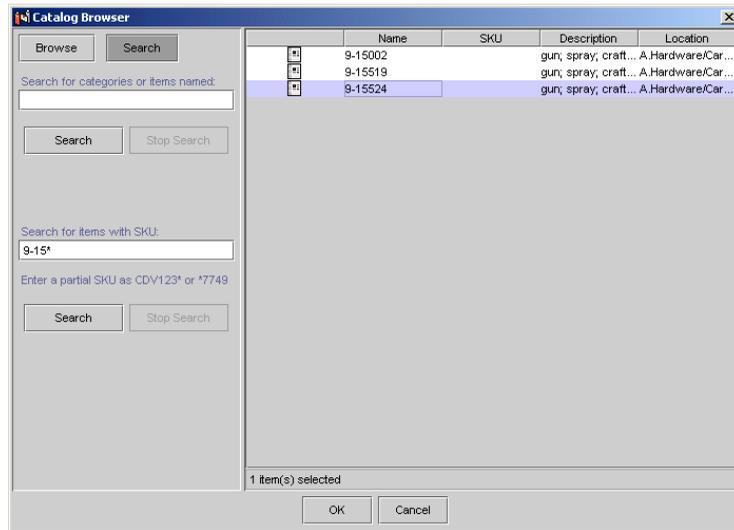
Note: You must first establish a connection to your catalog server. For more information, see "Connecting to the Server" on page 1-19.

1. To open the Catalog Browser, click the Catalog Browser button.
2. Click the Search button. The Search window opens as shown in Figure 2-12.
3. Enter the Category or SKU in the corresponding field, and then click the Search button. Use an asterisk (*) for wildcard searches.

Note: When searching for a category, only the category field is available.

4. After the search list appears in the left pane, select the desired Category or SKU from the left pane.
5. Click OK. The items or categories are added to your discount or campaign definition.

Figure 2-12 Catalog Browser Search



Using the Enter a Range Dialog Box

When you click the [x] hyperlink, the Enter a Range dialog box (shown in Figure 2-13) opens.

Figure 2-13 Enter a Range Dialog Box



1. Enter starting value between 1 and 99.
2. Enter an ending value between 2 and 100.
3. Click OK. The Enter a Range dialog box closes, and the [x] and [y] hyperlinks change to reflect the range you specified.

For more information on ranges, see “About Probability-Based Branching” in the *Roadmap for Creating Promotional Campaigns* chapter.

Constructing Queries

The documents that are stored in your content management system have certain properties associated with them that describe the documents. For example, all documents have system properties such as author, creation date, and modification date. You can also add custom properties to documents that more specifically describe the documents. For example, for your ad graphics, you can add properties for company name and product name. These properties are called metadata.

To create ad placeholders, scenario actions, and content selectors that find and display documents, you must construct queries. Queries search your content management system and retrieve documents that have the metadata you are looking for. The documents are then displayed in your Web pages. You can construct queries in the following ways:

- By comparing a document property to a value or range of values.

For example, you want to display ads for ACME mutual funds in an ad placeholder. Your content management system uses a property named `productName` to indicate the name of the mutual fund that a document

advertises. You construct a query that finds all documents for which the `productName` property contains `ACME`.

- By comparing a document property with a property of some other object. (This type of descriptor is available only for queries that content selectors and scenario actions run.)

For example, you want a content selector to display documents that describe investing in mutual funds. Your content management system uses a document property called `investorRiskLevel` to identify whether a document describes an investment that is aggressive, moderate, or conservative. Your customer profiles also include a property called `investorRiskLevel` to indicate whether a customer prefers aggressive, moderate, or conservative investments. You construct a query that finds all documents for which the `investorRiskLevel` property contains a value that is equal to the value of a customer's `investorRiskLevel` property.

For content selectors and scenario actions, you can also combine the two types of descriptors in a single query. For example, you can create a query for a content selector that finds documents that advertise `ACME` mutual funds and that match a customer's investment-risk profile.

To construct queries, do the following:

1. Select a Document Property.
2. Do one or more of the following:
 - Describe Documents by Comparing the Property to a Value or Range of Values
 - Describe Documents by Comparing the Property with the Properties of Other Objects
3. Specify How to Handle Multiple Value Phrases and Descriptors.
4. Preview the Query Results.

You can search for multiple document properties by repeating steps 1 through 3.

Select a Document Property

You select document properties in the Ad Search window or the Content Search window, depending on whether you are creating an ad placeholder, a scenario action for a campaign, or a content selector. The E-Business Control Center displays the Ad/Content Search window when you do any of the following:

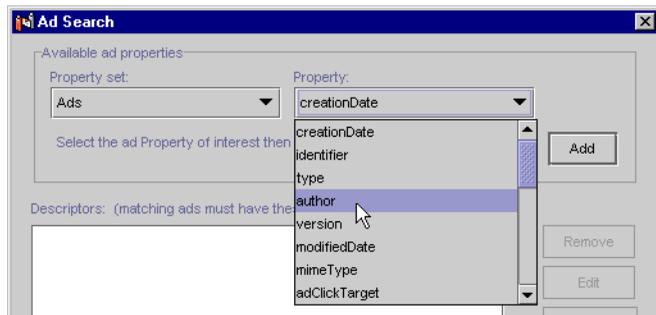
- When you create or edit an ad search for an ad placeholder.
- In an ad scenario for a campaign, click the hypertext link in “Place the content returned by this ad search...” or “...[empty ad search]...” in the Ad Action editor. The Ad Search window appears. This feature is available only with BEA WebLogic Portal.
- When working with content selectors, click the hypertext link in “Show the results of this content search” or “...[empty content search]” under Action in the Content Selector window. The Content Search window appears.

In the Ad/Content Search window, do the following:

1. From the Property Set list, select the property set that contains the properties you use to describe documents.
2. From the Property list, select a document property. (See Figure 2-14.)

For example, you are constructing a query for a campaign ad. Your content management system uses a property named `author` to indicate the name of the person who authored the ad. To search for the ad based on the name of the author, select `author` from the Property list.

Figure 2-14 Select a Property for a Campaign Ad Scenario



3. Click Add. The Ad/Content Search Values window appears.
4. Do one or more of the following:
 - Describe Documents by Comparing the Property to a Value or Range of Values.
 - Describe Documents by Comparing the Property with the Properties of Other Objects. (This type of comparison is available only for queries that content selectors and scenario actions run, not ad placeholders.)

These options are described in the following sections.

To edit the properties of an existing item, select it in the Descriptors list and click Edit.

Describe Documents by Comparing the Property to a Value or Range of Values

To find documents by comparing the document property with a value or range of values, do the following:

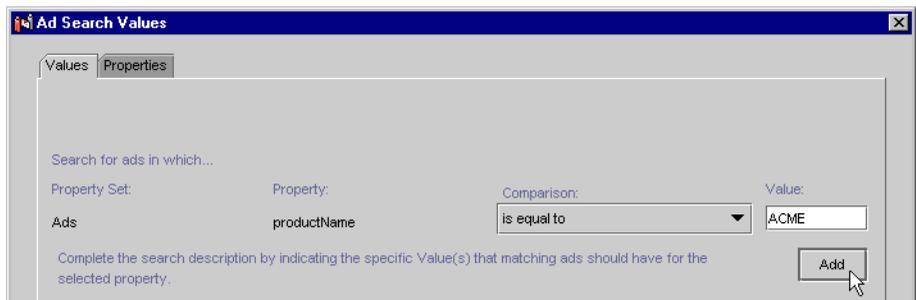
1. From the Ad/Content Search Values window, do one of the following:
 - If you are constructing a query for a content selector or a scenario action, click the Values tab. (See Figure 2-15.)
 - If you are constructing a query for an ad placeholder, the Ad Search Values window does not contain tabs. Skip this step and go to step 2.
2. From the Comparison list, choose a comparator.
3. In the Value box, select or enter a value. (Depending on the property that you are comparing, the Value box might contain a list of values for you to select.)

If the property value requires text entry, you can use the `like` comparison with wild card characters (`*` and `?`). For example, if you have a set of ads with a four-digit number and “ad” as part of the name, you could select the `like` comparison and enter `*10??ad*`.

Note: 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.

4. Click Add.
5. Do one of the following:
 - To compare the document property with additional values, repeat steps 2 through 4.
 - If you are constructing a query for a content selector or a scenario action and you want to compare the document property with the properties of other objects, go to “Describe Documents by Comparing the Property with the Properties of Other Objects” on page 2-22.
 - To select another document property, click OK and go to “Select a Document Property” on page 2-20.
 - To complete the query construction, go to “Specify How to Handle Multiple Value Phrases and Descriptors” on page 2-24.

Figure 2-15 The Values Tab for Ad Search Queries



Describe Documents by Comparing the Property with the Properties of Other Objects

If you are constructing a query for a scenario action or a content selector, you can find documents by comparing the document property with the properties of other objects. To construct such a query, do the following:

1. From the Ad/Content Search Values window, click the Properties tab.
2. From the Comparison list, choose a comparator.

3. From the Property Set Type list, choose the type of object that you want to compare.

If you are constructing a query for a campaign ad action, you can compare the document property with a property in one of the following property sets: User Profile, Session, Request, Event, or Catalog Structure.

If you are constructing a query for a content selector, you can compare the document property with a property in one of the following property sets: User Profile, Session, Request, or Catalog Structure.

For example, you created a property set called `FinancialDocs` that contains a document property called `investorRiskLevel` to identify whether a document describes an investment that is aggressive, moderate, or conservative. (See “Adding Property Sets to Drop-Down Lists” on page 2-25.) Your customer profiles also include a property called `investorRiskLevel` to indicate whether a customer prefers aggressive, moderate, or conservative investments. To create a content selector query that matches documents with a customer’s investment-risk preference, in the Content Search window, you select the `investorRiskLevel` document property. In the Content Search Values window, you click the Properties tab. From the Comparison list, select Is Equal To. Then from the Property Set Type list, select User. (See Figure 2-16.)

4. From the Property Set list, choose the property set that contains the properties of the object that you want to compare.

For example, if you place the `investorRiskLevel` user property in a property set named `InvestmentProfile`, then choose `InvestmentProfile` from the Property Set list.

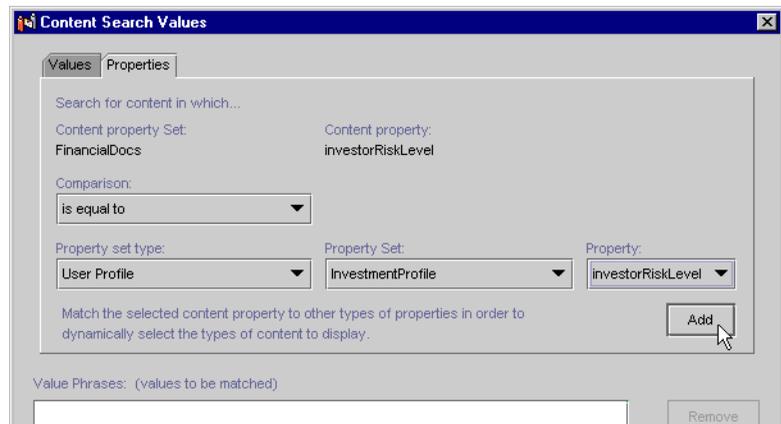
5. From the Property list, choose a property.

6. Click Add.

7. Do one of the following:

- To compare the document property with additional object properties, repeat steps 1 through 6.
- To select another document property, click OK and return to “Select a Document Property” on page 2-20.
- To complete the query construction, go to “Specify How to Handle Multiple Value Phrases and Descriptors” on page 2-24.

Figure 2-16 Find Documents by Comparing the Properties of a User



Specify How to Handle Multiple Value Phrases and Descriptors

1. If you created multiple comparisons, in the Ad/Content Search Values window, under For Multiple Value Phrases, choose one of the following:
 - Qualifying Items May Match ANY Value Phrase if the property value phrase must match at least one of the value phrases.
 - Qualifying Items Must Match ALL Value Phrases if the phrase must match each of the value phrases.
2. In the Ad/Content Search Values window, click OK.
3. To create additional comparisons, click Add and return to “Select a Document Property” on page 2-20.
4. If you created multiple descriptors, from the Ad/Content Search window, under For Multiple Descriptors, choose one of the following:
 - “Qualifying items may match ANY descriptor” if the property value phrase must match at least one of the descriptors.

- “Qualifying items must match ALL descriptors” if the phrase must match each of the descriptors.
5. In the Ad/Content Search window, do either of the following:
 - Preview the Query Results.
 - Click OK to finish constructing the query.

Adding Property Sets to Drop-Down Lists

When you select a property set for an Ad or Content search, you will see two default choices: Ads and LoadedData. These property sets relate to ad and content documents in WebLogic Portal that your query will find.

For most of the ad or content searches you perform (queries you set up) that place documents in placeholders on your JSPs, the Ads and LoadedData property sets should be sufficient. They contain most of the attributes that are appropriate for finding content that can be displayed by a JSP. In particular, these property sets include automatic system attributes you can use in your queries—attributes that all files have, such as name, size, creation date, and modification date. (See “System Attributes for Property Sets” on page 2-28.)

However, you can add more property sets to this list. There are good reasons for doing so:

- **Custom Properties** – When you want to categorize your ad and content documents more precisely. For example, you can create a property set called `FinancialDocs` that contains financial properties, such as `investorRiskLevel`. You can add the `investorRiskLevel` property to the metadata for any mutual fund ads you create. Then, when you assign a certain `investorRiskLevel` (such as “aggressive”) to an ad, you can target customers who have identified themselves as aggressive investors.
- **Organization** – If you have diverse types of ads and content, you may want to create more property sets to make query-building easier. For example, if you have a lot of seasonal clothing ads, you can create a property set called `Clothing` that contains a `season` attribute with four possible values (`summer`, `fall`, `winter`, `spring`). Building queries becomes easier, because you can select the `Clothing` property set in the drop-down list, select the `season`

property, and set its value to `summer`. Your query will then return all ads whose metadata contains the `season` attribute with a value set to `summer`.

If you have only a small number of custom ad attributes you want to use, you can add them to the existing Ads or LoadedData property sets instead of creating new property sets for them.

Adding a property set to the drop-down list involves creating a simple XML file. You can view the XML files for the Ads and LoadedData property sets in the `PORTAL_HOME\dmsBase\doc-schemas` folder. The files are called `ad-schema.xml` (for the Ads property set) and `doc-schema.xml` (for the LoadedData property set).

To add a new property set to the drop-down list:

1. Create a new text file and add the following XML data:

```
<?xml version="1.0" standalone="no"?>
<!DOCTYPE doc-schemas SYSTEM "doc-schemas.dtd">
<doc-schemas>
  <doc-schema name="FinancialDocs">

  </doc-schema>
</doc-schemas>
```

The text you enter in the `<doc-schema>` element is the name of the property set that will appear in the drop-down list.

2. Add properties inside the `<doc-schema>` element, using an element called `<attribute>`.

The following example shows two properties that will be available for selection in the property set: `investorRiskLevel` whose values will be selected from a drop-down list, and `primaryHolding`, a text entry field for the property value. `investorRiskLevel` has a default value set, which will appear automatically when you select that property for a query.

```

<?xml version="1.0" standalone="no"?>
<!DOCTYPE doc-schemas SYSTEM "doc-schemas.dtd">
<doc-schemas>
  <doc-schema name="FinancialDocs">
    <attribute name="investorRiskLevel" default="moderate">
      <value>conservative</value>
      <value>moderate</value>
      <value>aggressive</value>
    </attribute>
    <attribute name="primaryHolding">
      <description>Primary Stock Holding</description>
    </attribute>
  </doc-schema>
</doc-schemas>

```

3. Save the file in the `PORTAL_HOME\dmsBase\doc-schemas` folder, making sure the filename ends with `-schema.xml` like the Ads and LoadedData property set files.
4. To have WebLogic Portal recognize the new property set, do one of two things:
 - Restart WebLogic Portal
 or
 - Restart the document connection pool for your server in the WebLogic Server Administration Console. To do this, make sure your server is the active server in the left navigation pane, then go to Applications → `<application_name>` → Service Configuration → Document Connection Pool, and click the restart button.

You have to perform either of these restart tasks when you simply add a property to an existing property set.

For information on creating ads and loading them into the WebLogic Portal ad database, see “Setting up Ads for Campaigns” in the *Guide to Developing Campaign Infrastructure*.

System Attributes for Property Sets

The following system database attributes are available automatically for your property set and store data about your content. Do *not* add them to your *schema.xml file. Doing so will cause an error when you try to access the property set.

These attributes are: author, comments, creationDate, description, identifier, lockedBy, modifiedBy, modifiedDate, mimeType, name, size, and version.

Preview the Query Results

To run the query and see the documents that it finds, do the following:

1. In the Ad/Content Search window click Preview.

The E-Business Control Center prompts you for a user ID.

2. In the Enter the User ID window, enter the user name of a customer (or a sample customer) who represents a specific set of customer properties, and click OK.

For example, you want to see the documents that the query returns for customers with a conservative investment profile. The customer profile for Pat Gomes specifies a conservative investment profile, so you enter Pat's user name.

Note: You must enter a user ID, regardless of the type of condition that activates a placeholder, scenario action, or content selector.

The E-Business Control Center runs the query and displays the results in your default browser. (See Figure 2-17.)

The top pane displays the query and the left pane displays the names of the ads that the query finds.

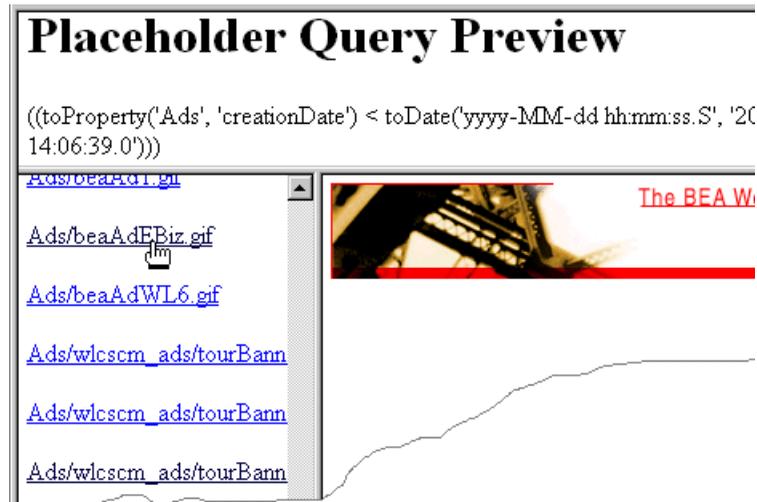
3. To see a document in your browser, click the name of the document in the left pane.

The right pane of your browser displays the document.

Note: WebLogic Portal or WebLogic Personalization Server creates a short-lived cache that stores the results of a query. If you add or modify documents in your content management system and then immediately redo the query

preview, you might not see the results of your modifications. If this occurs, wait several minutes and then retry the query preview.

Figure 2-17 Query Preview in the Browser



4. In the Ad/Content Search window, you can either modify the query or click OK to finish constructing the query.

For information on creating ad content, working with a content management system, and adding mime types, see “Setting up Ads for Campaigns” in the *Guide to Developing Campaign Infrastructure*.

3 Creating and Managing Property Sets

Property sets are the schemas for personalization attributes. Using the E-Business Control Center, you can create property sets and define the properties that make up these property sets.

This topic includes the following sections:

- Overview of Property Sets
 - Property Sets Serve as Namespaces for Properties
 - Where Property Sets Are Used
 - Property Definition Attributes
- Using the E-Business Control Center
 - Starting the Property Set Editors
 - Using the Property Set Editors

Overview of Property Sets

A property set is a convenient way to give a name to a group of properties for a specific purpose. For example, in the sample application you will find a User Profile property set named Customer Properties. This property set defines around thirty properties for an e-commerce customer, such as First Name, Last Name, Home Phone, Email, and Customer Type.

Property sets and property definitions are created in the E-Business Control Center, on the Site Infrastructure tab. A Property Editor allows you to give a new property a name and a description, assign a data type, a selection mode, and a value range, and create a list of possible values for the property.

Although properties are designed in the EBCC, the value assigned to a property is created in the application. Properties are generally represented in an application as fields on a page. To use the Customer Properties property set to collect information about an e-customer, the application will typically present the thirty properties in a list or a table, with text boxes provided to fill in specific values for the customer.

Property Sets Serve as Namespaces for Properties

In the most general sense, a property can be considered a name/value pair. Property sets serve as namespaces for properties so that properties can be conveniently grouped and so that multiple properties with the same name can be defined.

For example, you might create a property set called Demographics to describe user profile properties. The Demographics property set contains properties called Age, Gender, Income, and so forth. Because property sets create unique namespaces for properties, another property set can also have a property called Gender, and the two values will be kept separate.

Figure 3-1 The Demographics Property Set uses the Gender attribute

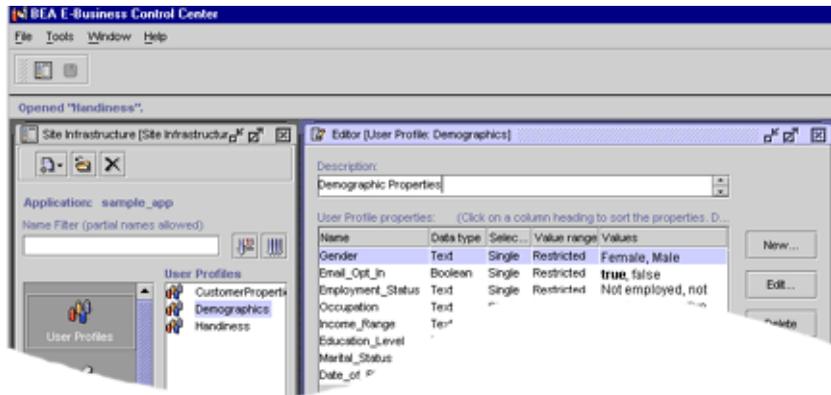
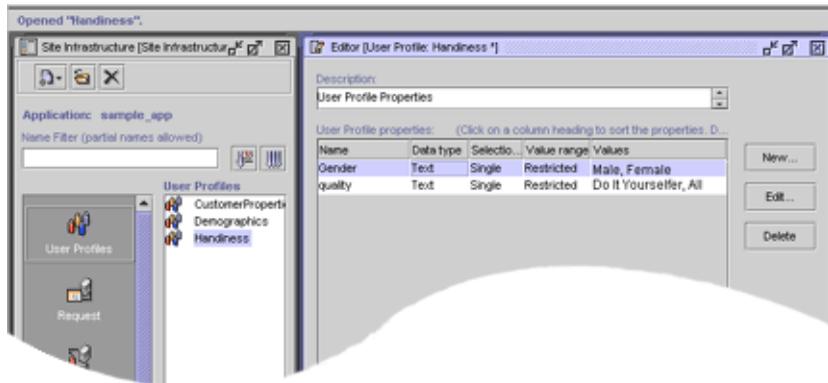


Figure 3-2 The Handiness Property Set also uses the Gender attribute



Where Property Sets Are Used

For Portal and Personalization Server purposes, property sets are applied to six major areas. Of these, five are configured in the E-Business Control Center.

Table 3-1 The Property Set Buttons on the Site Infrastructure Tab

 User Profiles	<p>User Profiles</p> <p>The User Profiles property set type is used for defining the property sets and properties that apply to user and group profiles. For example, a property set of this type might be created called “CustomerProperties.” Subsequent property retrieval for a particular user or group can then be scoped with this property set name to retrieve the user’s email address. For an in-depth discussion of how property retrieval works for users and groups, see “Creating and Managing Users” in the <i>Guide to Building Personalized Applications</i>.</p>
 Request	<p>HTTP Requests</p> <p>An HTTP Request is the information that your browser sends to the server; the server sends back an HTTP response.</p> <p>The Request property set type is used for defining the property sets and properties that apply to HTTP requests. A Request property set type might be called “myApplicationRequest.” Properties available through this property set can then be accessed via the Advisor.</p>
 Session	<p>HTTP Sessions</p> <p>A session contains short-lived, stateful information for the time that a browser is interacting with a server.</p> <p>The Session property set type is used for defining the property sets and properties that apply to HTTP sessions. A “Session” property set type might be called “myApplicationSession.” Properties available through this property set can then be accessed via the Advisor.</p>
 Catalog Structure	<p>Catalog Structure</p> <p>The Catalog Structure property set type is used to define custom attributes for product items and product categories in the Commerce services catalog. These custom attributes can be used in addition to the default attributes provided by Commerce services in the catalog database tables. For more information, see the topic “Catalog Administration Tasks” in the <i>Guide to Building a Product Catalog</i>.</p>

Table 3-1 The Property Set Buttons on the Site Infrastructure Tab

	<p>Events</p> <p>The Events property set type is used to register a custom event. For the purpose of registering an event, you can consider an event property as a name-value pair. During the registration of a custom event, you specify the event's name, description, and one or more properties. Each property has a range, type of permissible value, and default value. The information you need to register an event should be available from your Business Engineer (BE) or Java developer.</p>
<p>Use the tools associated with your document management system.</p>	<p>Content Management</p> <p>The Content Management property set type is used for defining the configuration and run-time use of the content management system. Content Management property sets cannot be created or manipulated with the Personalization Server Administration Tools or the E-Business Control Center. Instead, use the tools associated with your document management system. For more complete information on this subject, see "Creating and Managing Content" in the <i>Guide to Building Personalized Applications</i>.</p>

Property Definition Attributes

All properties includes the following information:

- **Property name**—the name of the property, such as `Gender`. Within a single property set, all properties must have a unique name. However, property names can be re-used in different property sets.
- **Data type**—specifies the data type of the property value. The possible values are Text, Numeric, Floating-Point number (equivalent to `Double` in Java), Boolean, and Date/Time.
- **Selection mode**—specifies whether a property is single-valued (has a single default value) or multi-valued (has a collection of default values).
- **Value range**—specifies whether the defaults are restricted to one specific value, one or more specific values, or any value.

Optionally, property definitions can also include the following:

- **Description**—a textual description of the property, perhaps describing the purpose of the property.

- **Values**—you can assign a list of values from which the user will pick, and you can designate which of the values is the default.

The following table lists the property definition attributes and values.

Table 3-2 Property Definition Attributes and Values

Property Definition Attribute	Attribute Value
Name	Text (100 character length maximum)
Description	Text (255 character length maximum)
Type	<ul style="list-style-type: none">■ Text■ Numeric – (equivalent to Long in Java)■ Float – Floating-Point Number (equivalent to Double in Java)■ Boolean■ Date/Time (equivalent to <code>java.sql.Timestamp</code>)
Selection Mode	Single-valued or multi-valued
Value Range	Restricted or unrestricted
Default Value	Up to the user — can be null
Restricted Values	Allowable values if the property is restricted

Possible Combinations of Properties

As the previous list suggests, a combination of property values are possible. The possible combinations of properties are listed here:

- **Boolean:** The values for this type of property are either True or False. You can choose the default. The default value is displayed only in the Enter Property Values Window, not in the Edit Event Property window. When this data type is selected, the Selection mode and Value range are unavailable.
- **Single, Unrestricted:** This type of property has only one value, which is also the default value.

- **Single, Restricted:** This type of property has multiple available values and a single default value. You can select which value is the default.

An instance of this property can have only one value assigned. For example, the property `Favorite_Day_of_the_Week` would have seven available values, but an instance of the property can have only one value (Saturday).

- **Multiple, Restricted:** This type of property has multiple available values. You can select one or more values as default values.

An instance of this property can have multiple values assigned. For example, the property `Favorite_Days_of_the_Week` would have seven available values, and an instance of the property can have any number of values (Friday, Saturday, Sunday).

- **Multiple, Unrestricted:** This type of property has multiple values. You cannot select any defaults; all values are defaults.

Synchronizing Property Sets

Property sets are meant to be used as application code. Just as you would not normally deploy new code onto a production server without first testing and staging it, we recommend that you do not synchronize updates to the property sets onto a live server once the application itself is deployed into production.

Why would synchronizing to a live server be a problem? If you create a property set containing a property of a specific type, synchronize it and assign values to that property for users, then change the type and re-synchronize it, there will be inconsistent property value data in the database.

Let's look at an example. Suppose the "Date_of_Birth" property in the Demographics property set was originally a String. Users might have put in values in many different formats, such as "8/9/1974", "August 9th, 1974", "Aug 9 1974", and so forth. Then you decide these are too hard to parse and validate, so you make the "Date_of_Birth" property a Date/Time type. You redeploy the property set, but now there are values of the wrong type in the database.

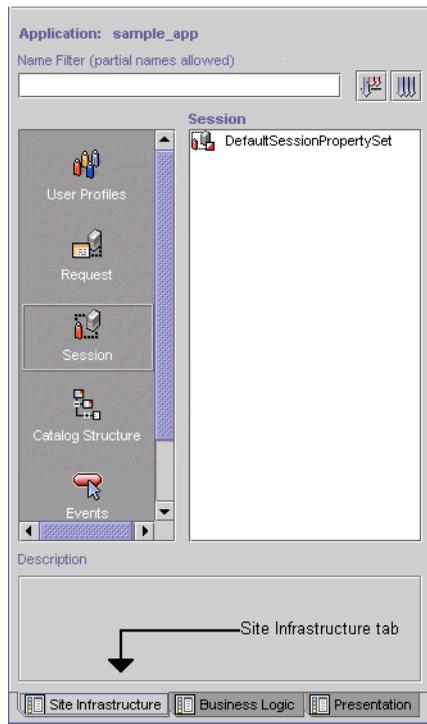
It's up to you, the developer, to do the data conversion to make these properties into the correct type. Or, if your data is just test or sample data, you can delete the data altogether and start over.

Using the E-Business Control Center

The E-Business Control Center tools allow you to create and manage sets of typed properties. Using the Site Infrastructure tab, property sets can be defined to describe properties for User Profiles, Requests, Sessions, Catalog Structures, and Events.

Note: The Site Infrastructure tab also contains the Webflows/Pipelines tool icon, which is used to create and edit new pipelines and webflows. Since webflows and pipelines do not use property sets, these topics will not be covered here. See the topic “Using the Webflow and Pipeline Editors” in the *Guide to Using the E-Business Control Center* documentation.

Figure 3-3 The Site Infrastructure Tab on the E-Business Control Center



Creating a property set is a simple task via the E-Business Control Center. A name for the set must be provided as well as description, and the type of property set (“User/Group”, “Session”, or “Request”) must be chosen.

Once a User/Group property set is created and deployed, property values can be edited for a particular user or group via the User Management user and group tools. For “Session” and “Request” properties, the only editable values are the default values set in the property definitions —run-time values are determined by values in the HTTP session or HTTP request, respectively.

Starting the Property Set Editors

To begin using the Editors, follow these steps:

1. Start the E-Business Control Center (EBCC). For detailed instructions on starting the EBCC, see the topic “Starting the E-Business Control Center” in the *Guide to Using the E-Business Control Center* documentation.
2. Create a new Web application or open an existing Web application for which you will be creating or editing a property set.

For detailed instructions on performing these tasks, see “Creating an Application Structure for E-Business Control Center Data” or “Opening Application Data” in the *Guide to Using the E-Business Control Center* documentation.

3. Select the Site Infrastructure tab in the EBCC’s Explorer window, then click any of the tool icons in the Explorer window (except the Webflows/Pipelines icon.)

Using the Property Set Editors

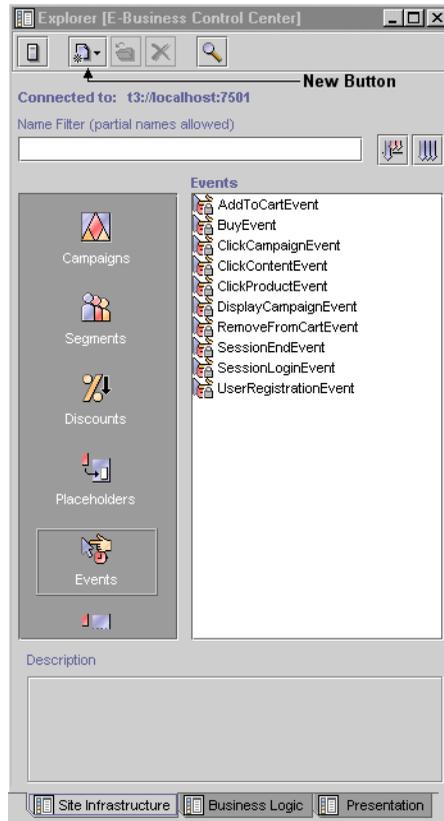
The property set editors works the same way for all property sets. For these examples, we will be using the E-Business Control Center to create and modify Event properties. The examples used here can be used to register a custom event. You can follow the same procedures to create and modify property sets for Users and Groups, HTTP Requests, HTTP Sessions, and the Catalog Structure.

To register a custom event, complete the following steps

1. Start the E-Business Control Center and connect it to a server. The Explorer window opens as shown in Figure 3-4.

Note: For more information on connecting the E-Business Control Center to a server, see the topic “Connecting to the Server” in the *Guide to Using the E-Business Control Center*.

Figure 3-4 E-Business Control Center Window

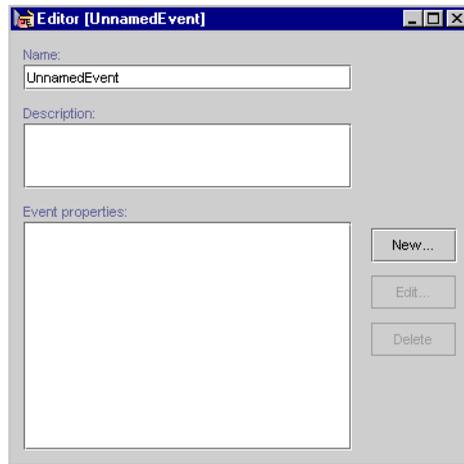


2. Open the Event Editor as follows:

Note: You cannot edit the standard events.

- a. In the Explorer window, select the Event icon. A list of events appears in the Events field.
- b. Click the New Button, and then select Event. The Event Editor window appears as shown in Figure 3-5.

Figure 3-5 Event Editor Window



3. In the Edit Event Editor window, complete these steps:
 - a. In the Name field, enter a unique name for the event no longer than 100 characters (required).
 - b. In the Description field, enter a description for the event no longer than 254 characters (required).
 - c. Click the Save button in the E-Business Control Center system toolbar.
 - d. To create properties for the event, click the New button. The Edit Event Property window opens, as shown in Figure 3-6.

Figure 3-6 Edit Event Property Window



4. In the Edit Event Property window, complete these steps:
 - a. In the Name field, enter a unique name for the property no longer than 100 characters (required).
 - b. In the Description field, enter a description of the property no longer than 254 characters (required).
 - c. In the Data type list, select the data type. If you select Boolean as the data type, the Selection mode and Value range are no longer available. The default for Boolean is Single, Restricted.
 - d. In the Selection mode list, select either Single or Multiple.
 - e. In the Value range list, select whether the value is Restricted or Unrestricted.
 - f. Click the Add/Edit Values button.

The type of window that appears depends on the values selected.

Property Values and Setting the Default Value

Depending on the data type, different steps are required for entering values and setting default values. The following property categories are available:

- Properties with Boolean or a Single Value and Single Default.

- Properties with Multiple Values and Single, Multiple, or All Defaults
- Properties with Date and Time Values

Properties with Boolean or a Single Value and Single Default

To enter the default value for Boolean property or a property with a single value and a single default (unrestricted), complete the following steps:

1. In the applicable Enter Property Value window (Figure 3-7 or Figure 3-8), perform one of the following:
 - For a Boolean property, select either True or False.
 - For a Single Value, Single Default property, enter a value.

Figure 3-7 Enter Property Values Window—Boolean



Figure 3-8 Enter Property Values Window—Single Value, Single Default



2. Click the OK button.
3. In the Edit Event Property window, click the OK button.

Properties with Multiple Values and Single, Multiple, or All Defaults

To enter multiple property values and set one or more defaults (unrestricted), complete the following steps:

1. In the applicable Enter Property Values window (Figure 3-9 or Figure 3-10), enter a value, and then click the Add button.

Figure 3-9 Enter Property Values—Multiple Values, Single Default

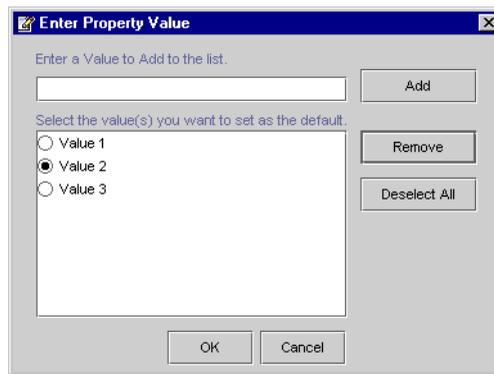


Figure 3-10 Enter Property Values—Multiple Values, Multiple Restricted Defaults

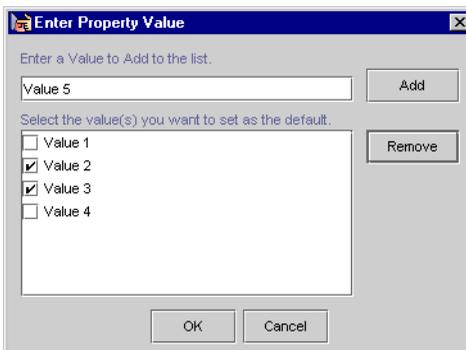
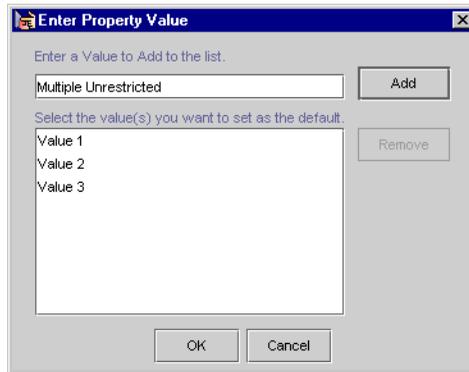


Figure 3-11 Enter Property Values—Multiple Values, Multiple Unrestricted Defaults



2. Repeat the previous step until you have entered all values.
3. To select one or more default values, complete one of the following:
 - If you do not want to select a default, go to next numbered step.
 - For multiple values with a single default, select the value (radio button) that you want to set as the default, and then click the OK button.

Note: To remove the default value for a property with multiple values and a single default, click the Deselect All button.
 - For multiple values with multiple restricted defaults, select the value (check boxes) that you want to set as defaults, and then click the OK button.

Note: For multiple values without restrictions (that is, the Value range is Unrestricted), you do not need to select any defaults.
4. In the Edit Event Property window, click the OK button.

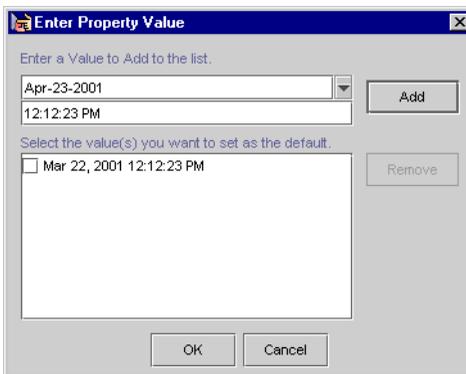
Properties with Date and Time Values

Properties with date and time values can use all Selection mode and Value range settings. For more information about these settings, see “Properties with Boolean or a Single Value and Single Default” and “Properties with Multiple Values and Single, Multiple, or All Defaults” on page 3-15.

To enter date and time values and set one or more defaults, complete the following steps:

1. In the Enter Property Values window shown in Figure 3-12, click the drop-down arrow in the Date list. A calendar appears.

Figure 3-12 Enter Date/Time Values



2. Select a date from the calendar.
3. In the Time field, enter a time.
4. Click the Add button.
5. To add more dates and times, repeat the first four steps until you have entered all the values.
6. To select one or more default values, complete one of the following:
 - If the event has a single date and time with a single default (restricted), click the OK button.
 - If the event has multiple dates and times with a single default (restricted), select the value (radio button) that you want to set as the default, and then click the OK button.

- If the event has multiple dates and times with multiple defaults (unrestricted), select the values (check boxes) that you want to set as the default, and then click the OK button.

7. In the Edit Event Property window, click the OK button.

Updating a Registered Custom Event

Whenever you make changes to a custom event's code, you should update that event's registration. Updating the registration lets the E-Business Control Center know about the changes in the custom event and aids campaign developers using the E-Business Control Center to modify any scenario actions that refer to the event.

To update a custom event, complete the following steps.

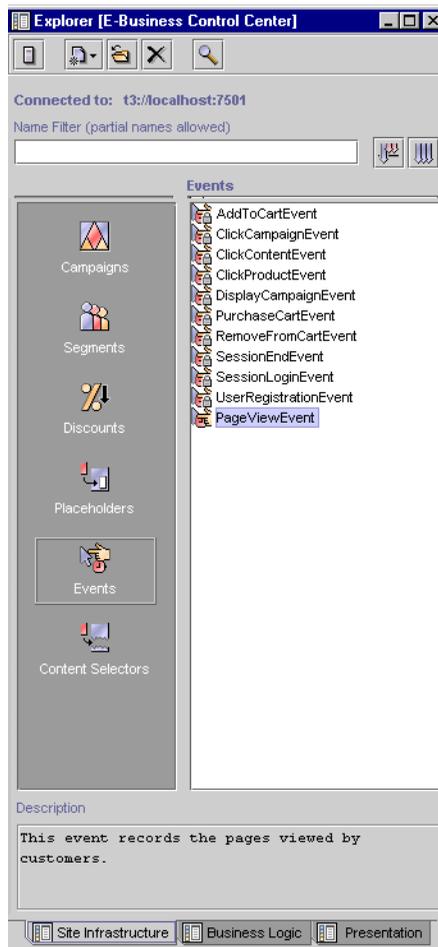
1. Start the E-Business Control Center and connect it to a Web server. The Explorer window opens.

Note: For more information on connecting the E-Business Control Center to a server, see "Connecting to the Server" in the *Guide to Using the E-Business Control Center* documentation.

2. In the Explorer window, select the Event icon. A list of events appears in the Events field as shown in Figure 3-13.

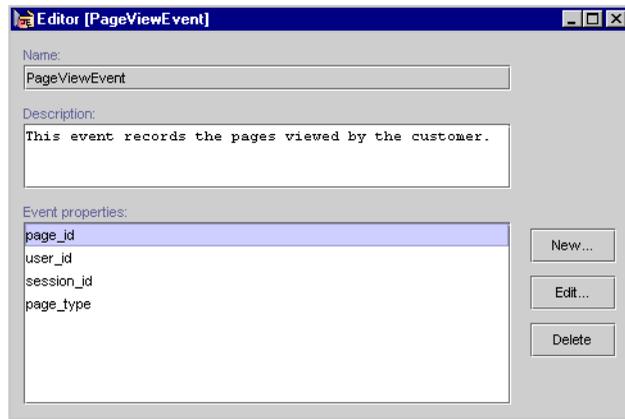
Note: You cannot edit standard events.

Figure 3-13 Explorer Window



3. Double-click the custom event that you wish to edit. The Event Editor window opens as shown in Figure 3-14. The Event properties field displays a list of existing properties.

Figure 3-14 Event Editor Window



4. In the Event properties field, select the property that you want to edit.

Note: For more information about setting custom event properties, see “Property Values and Setting the Default Value” on page 3-13.

5. Click the Edit button. The Edit Event Editor window opens as shown in Figure 3-15.

Figure 3-15 Edit Event Property Window

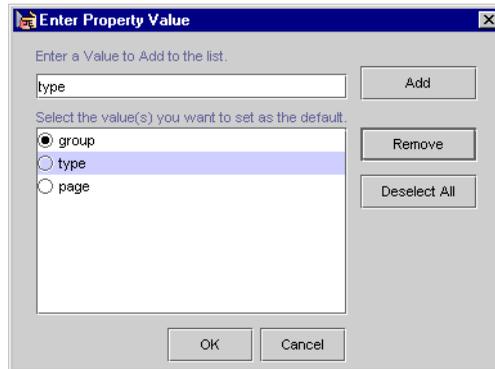


- To change the Data type, Selection mode, or Value range, select a setting from the appropriate list box.

Note: If you change the property setting Data type, Selection mode, or Value range, the associated values will be erased.

- To add or change values, click the Add/Edit values button. The Enter Property Value window opens as shown in Figure 3-16.

Figure 3-16 Enter Property Value Window



- To remove a value, select the value, and then click the Remove button.
 - To add a value, enter the value, and then click the Add button.
 - To change a value, select the value, remove it, and then add the new value.
 - If required, select the default value or values.
 - To remove the default value for a property with multiple values and a single default, click the Deselect All button.
 - Click the OK button. The Enter Property Value window closes.
- After you have finished updating the properties or values for the event, click the OK button in the Edit Event Property window.

3 *Creating and Managing Property Sets*

4 Using Customer Segments to Target High-Value Markets

This topic contains basic information about customer segments as they are used in the BEA E-Business Control Center. This information includes a conceptual description of a customer segment, an explanation about how you might want to use customer segments, and step-by-step instructions for creating a new customer segment or modifying existing customer segments within the E-Business Control Center.

This topic includes the following sections:

- About Customer Segments
 - About Customer Profiles
 - Creating Customer Segments from Information Stored in Customer Profiles
- Uses of Customer Segments
 - Targeting Content to Online Customers
 - Displaying Personalized Content Within Promotional Campaigns
 - When and When Not to Use Segments
- Creating a Customer Segment
- Modifying a Customer Segment
- Deleting a Customer Segment

About Customer Segments

To understand what a customer segment is, you must first learn about customer profiles. Therefore, this section contains the following subsections:

- About Customer Profiles
- Creating Customer Segments from Information Stored in Customer Profiles

About Customer Profiles

A *customer profile* is a collection of information that is gathered, saved, and updated as customers visit your Web site, or from other offline sources. Customer profiles are unique to each customer and can contain a variety of information, from product preferences to the demographic data customers provide on form pages. The information stored in customer profiles is increasingly seen as the true lifeblood of e-business. Effectively managing, analyzing, and using customer intelligence gives you a significant advantage over your competitors, because you can target your highest-value markets with your highest-value services, and do it cost-effectively.

Because the E-Business Control Center works with the BEA WebLogic Portal and WebLogic Personalization Server, the E-Business Control Center already supports some customer profile information out of the box. However, the system is extremely flexible about the customer data it can store, and thus can easily be extended. If you believe that extending the E-Business Control Center would be helpful to your organization, you will initially need to collaborate with a Business Engineer (BE) or other technical resource who can make modifications to the tool. If possible, you should initiate this process before starting to use the E-Business Control Center.

Note: For technical information about how a Web site gathers customer profile information, see “Creating and Managing Users and Groups” in the *Building Personalized Applications* documentation at <http://edocs.bea.com/wlp/docs40/p13ndev/users.htm>.

Creating Customer Segments from Information Stored in Customer Profiles

The customer profile information you collect can be used to create customer segments within the E-Business Control Center. A customer segment is a grouping of customers based on common characteristics from their profile, such as product preferences or age. Each piece of information stored in a customer's profile (or any combination of that information) can be used to create a customer segment.

Using the sample customer profile information shown in Figure 4-1, there are a few customer segments you might create.

Figure 4-1 Example Customer Profile Information

Login	Date of Birth	Favorite Category	...
janedoe	7/22/1975	office supplies	
jblack	12/18/1970	garden tools	
asmith	5/2/1985	office supplies	
.			
:			

Based on the Favorite Category profile information, you might create a customer segment named Office Supply Junkie, which would include the customers janedoe and asmith. Similarly, a customer segment named Over21 would include the customers janedoe and jblack, based on their Date of Birth profile information.

For step-by-step instructions on creating new customer segments in the E-Business Control Center, see “Creating a Customer Segment” on page 4-6.

Uses of Customer Segments

This gives you an overview of how you can use customer segments once you create them. Since there are two ways to use customer segments, this section contains the following subsections:

- Targeting Content to Online Customers
- Displaying Personalized Content Within Promotional Campaigns

- When and When Not to Use Segments

Note: Depending upon the version of the E-Business Control Center you have, you may be able to use customer segments in one or both of the ways described in this section. For more information about the different versions of the E-Business Control Center that are packaged with the BEA WebLogic Portal and WebLogic Personalization Server, see “What the E-Business Control Center Provides” in the “Introduction to the BEA E-Business Control Center” or the *Strategies for Developing E-Business Web Sites* at <http://edocs.bea.com/wlp/docs40/strategs/index.htm>.

Targeting Content to Online Customers

In all versions of the E-Business Control Center, customer segments can be used in conjunction with content selectors to personalize a customer’s experience on your Web site.

A *content selector* is a mechanism used to retrieve documents from a content management system. A *document* is a graphic, a segment of HTML or plain text, or a file that must be viewed with a Web browser plug-in. Using content selectors, you can specify the conditions under which one or more documents are retrieved.

If you use a customer’s membership in a segment as one of these conditions, you can specify that a particular piece of content be selected from the content management system and displayed to that customer. So, for example, customers who belong to an Office Supply Junkie segment may be shown an article titled: “Reducing Desk Clutter With Stackable Organizers.”

Note: To use customer segments with content selectors, you should collaborate with your organization’s business engineer or other technical resource. For more technical information about content selectors, see “Retrieving Documents with Content Selectors.”

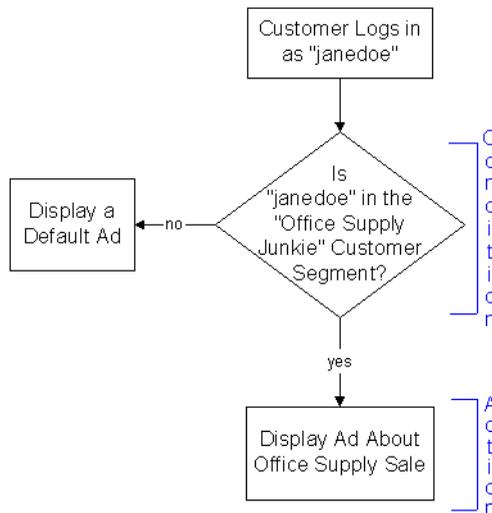
Displaying Personalized Content Within Promotional Campaigns

If you have a BEA WebLogic Portal license, you can also use customer segments within your promotional campaigns.

As part of a promotional campaign, a customer's membership in a particular segment may be used as a condition to trigger a specific action, such as sending an e-mail, offering a discount, or displaying an ad. For example, if janedoe is a member of the Office Supply Junkie customer segment, you might want to display an ad about an upcoming sale on office supplies to Jane when she logs in. Because such actions are only triggered under certain conditions, you can use customer segments to target only the appropriate audience(s) with your campaign content.

The flowchart shown in Figure 4-2 illustrates how customer segments can be used as conditions to trigger specific campaign-related actions.

Figure 4-2 Condition Based on Membership in a Customer Segment



Note: For instructions about how to use customer segments within promotional campaigns, see “Customer Segments in Scenario Actions” in the “Roadmap for Creating Promotional Campaigns” and “Adding Actions to Your Scenarios to the Campaign” in “Creating and Managing Promotional Campaigns.”

When and When Not to Use Segments

You do not always have to use customer segments to target specific groups of people with campaign scenario actions or content selectors. When creating a scenario action or content selector, instead of triggering the action on a customer segment, you can trigger the action if the visitor has certain characteristics—the same set of characteristics you can use to create a customer segment. So since you can trigger a scenario action or content selector on visitor characteristics with or without a customer segment, you should put some thought into whether or not you create customer segments.

In the following guidelines to determine whether or not you should create a customer segment for use in scenario actions, reuse is the key:

- **When to use customer segments** – Create customer segments to trigger scenario actions or content selectors when the customer segment can be reused for other actions, in other campaigns, or for content selectors.
- **When not to use customer segments** – Do not create customer segments to trigger scenario actions or content selectors if the customer segment would be created to support just that action or content selector—or a potentially small number of them.

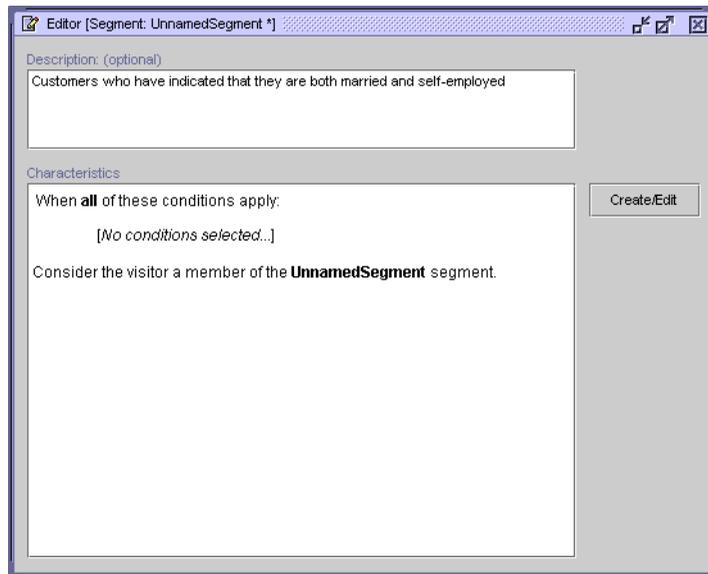
Creating a Customer Segment

Initially, you will probably want to spend some time creating new customer segments for use in the E-Business Control Center. This section provides step-by-step instructions you can follow to accomplish this task. If you have already created customer segments and need to edit them, see “Modifying a Customer Segment” on page 4-10.

To create a new customer segment:

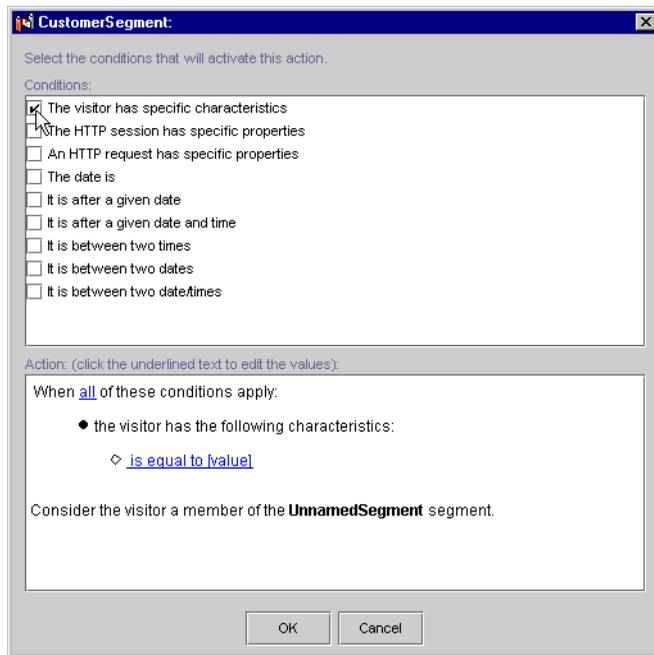
1. In the E-Business Control Center, open the application you want to work with.
2. In the E-Business Control Center, choose File → New → Business Logic → Segment. A new customer segment file opens in the Editor window, as shown in Figure 4-3.

Figure 4-3 Customer Segment Editor Window



3. Enter a description of the segment in the Description area.
The description is displayed at the bottom of the Explorer window when you select the file. It also appears when you move the mouse pointer over the name of the file in the Explorer window.
4. Click Create/Edit. The Customer Segment conditions window appears, as shown in Figure 4-4.

Figure 4-4 Customer Segment Details Window



The conditions window is divided into two panes: Conditions and Actions. After you select a condition, you define the characteristics of that condition in the Action pane. For example, if you select the condition, The Visitor Has Specific Characteristics, you will select those characteristics from the Action pane. (Those visitor characteristics are defined in the User Profiles tool in the E-Business Control Center.)

5. In the Conditions pane, select the condition(s) that will define the customer segment.

When you select a condition, a corresponding line of text with hyperlinks appears in the Action pane.

For a description of the conditions, see “Listing of the Available Conditions” in “Building Conditions and Queries in the BEA E-Business Control Center.”

Tip: You can create conditions that are always true. For example, you can select the It Is After A Given Date condition and then specify the date as January 1, 1970.

- For each condition you selected, click the hyperlinks in the Action pane to specify values.

For example, if you selected The Visitor Has Specific Characteristics condition as shown in Figure 4-4, click the Is Equal to [value] hyperlink under the bulleted phrase, “the visitor has the following characteristics.”

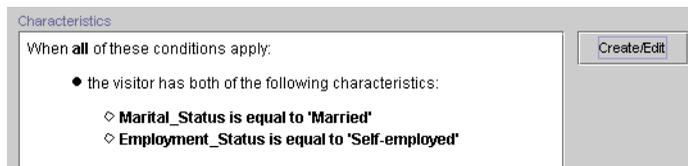
Depending on the condition and the hyperlink, a window or a dialog box opens. Table 4-1 provides a consolidated listing of the conditions and indicates where to look if you need detailed instructions for any of the corresponding windows/dialog boxes.

Table 4-1 Instructions for Building Conditions

Condition(s)	Relevant Instructions in the “Building Conditions and Queries in the BEA E-Business Control Center” chapter
A visitor, HTTP session, HTTP request, or an event has specific characteristic/properties	“Using the Properties and Visitor Characteristics Windows”
Dates and times	“Important Note About Dates and Times” (The dates and times you set are based on universal time [UTC].) “Using the Date/Time Entry Dialog Boxes”

- If you selected more than one condition, decide whether *all* of the conditions must be met for a visitor to belong to the customer segment, or whether a visitor can be considered part of the segment when *any* of the conditions apply. To toggle between All and Any, click the All (or Any) hyperlink in the phrase, When All of These Conditions Apply.
- Click OK. The Customer Segment details window closes. The conditions and corresponding actions you specified appear in the Customer Segment Editor window’s Characteristics list, as shown in Figure 4-5.

Figure 4-5 Customer Segment Editor Window: Characteristics List



9. Save and name the customer segment. The new file is displayed in the list of segments.

Modifying a Customer Segment

To modify an existing segment, double-click its name in the Explorer window to open it in the Editor. You can modify the description, conditions used, and actions. For more information, see “Creating a Customer Segment” on page 4-6.

Warning: If the customer segment you modify is in use by content selectors, promotional campaigns, or other objects, modifications to the segment will affect every object that refers to that segment. 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 E-Business Control Center.

Deleting a Customer Segment

Before you delete a segment (by selecting it in the Explorer window and clicking the Delete button in the Explorer toolbar), read the following warning.

Warning: As with any deletion you make, be absolutely certain that you select the correct customer segment and that you are sure you want to delete it. Deleted segments cannot be retrieved. If you delete a customer segment, anything that refers to it (content selectors, promotional campaigns, or

other objects) will effectively be broken until the segment is dereferenced or a segment with the same name is created.

5 Retrieving Documents with Content Selectors

You can enrich a visitor's experience on your Web site by providing information that matches the visitor's interests or expectations. Using Content Selectors, you can specify conditions under which WebLogic Portal or WebLogic Personalization Server retrieves one or more documents from your content management system. For example, you can use a Content Selector to encapsulate the following conditions: between May 1 and May 10, if a customer in the `SailingEnthusiast` customer segment views this page, find and retrieve any documents that describe sailing along the Maine coast.

A *document* is a graphic, a segment of HTML, or a file that must be viewed with a browser plug-in. We recommend that you store most of your Web site's dynamic documents in a content management system because it offers an effective way to store and manage information.

A business analyst uses the BEA E-Business Control Center to define the conditions that activate a Content Selector and to define the query the Content Selector uses to find and retrieve documents. Then, a business engineer uses Content Selector JSP tags and a set of other JSP tags that retrieve and display the content targeted by the Content Selector.

This topic includes the following sections:

- About Content Selectors
- Describing Documents in Your Content Management System
- Defining Content Selectors
- Previewing Documents

About Content Selectors

Content selectors consist of the following elements:

- A set of conditions that determine when the Content Selector queries the content management system. The conditions can use such things as the profile of the customer who is currently viewing a JSP page, an event that occurs on the page or has occurred previously on some other page, or the current time. For a complete list of conditions, refer to “Listing of the Available Conditions” in “Building Conditions and Queries in the BEA E-Business Control Center.”

Business analysts create and modify the set of conditions in the E-Business Control Center.

- A query that searches the content management system for one or more documents.

Business analysts create and modify the query in the E-Business Control Center.

- A JSP tag that triggers the Content Selector to evaluate its conditions.

To display the documents that the query finds, a business engineer must use an additional set of tags. For information about using content-selector tags and other tags that display the query results, refer to “Working with Content Selectors” in *Guide to Building Personalized Applications*.

Describing Documents in Your Content Management System

The queries that you define for Content Selectors search through the descriptions (attributes) that you attach to the documents in your content management system. WebLogic Portal and WebLogic Personalization Server let you add any attributes to your documents, except the following system attributes, which are generated automatically: `author`, `comments`, `creationDate`, `description`, `identifier`, `lockedBy`, `modifiedBy`, `modifiedDate`, `mimeType`, `name`, `size`, and `version`.

You can, for example, create attributes that describe a document's subject, purpose, and category. When you define a query, the E-Business Control Center presents all of the attributes that your content management system contains.

We recommend that you analyze your overall personalization strategy and create attributes that you can use across customer segments. The more your attributes apply to multiple customer segments, the less often you need to create new attributes.

For information on creating attributes, refer to the documentation for your content management system. To learn more about using a content management system with WebLogic Personalization Server, refer to "Creating and Managing Content" in the *Guide to Building Personalized Applications*.

Defining Content Selectors

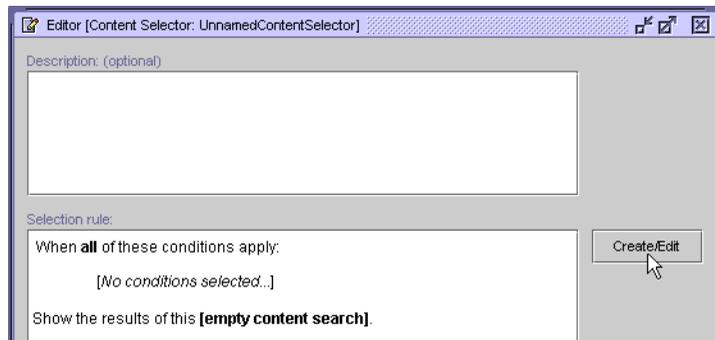
To define a Content Selector, you need the following information:

- A unique name for the Content Selector. A Business Engineer uses JSP tags that refer to this name. The Explorer window in the E-Business Control Center lists the names of all Content Selectors in your data repository.
- The conditions that activate the Content Selector to search for documents. For a description of the conditions that you can use, refer to "Listing of the Available Conditions" in "Building Conditions and Queries in the BEA E-Business Control Center."
- The attributes that you use to describe the documents in your content management system.

To define a Content Selector:

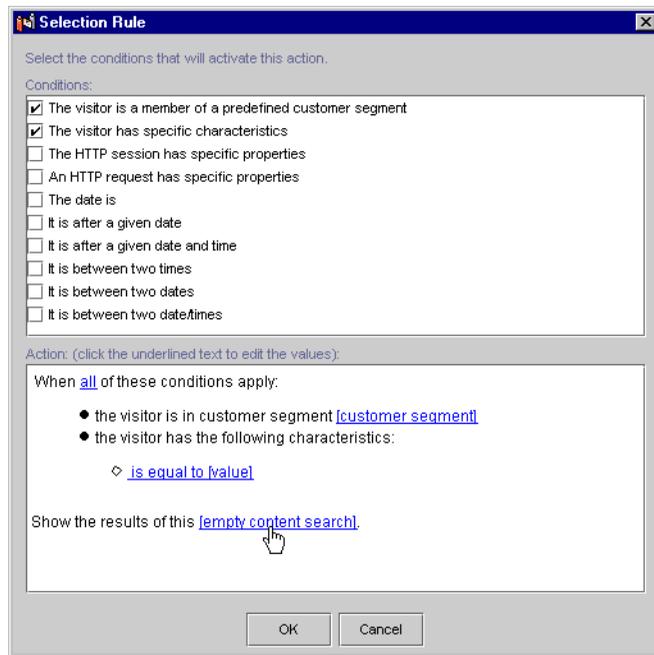
1. In the E-Business Control Center, open the application you want to work with.
2. In the E-Business Control Center, choose File → New → Presentation → Content Selector. A new Content Selector file opens in the Editor window, as shown in Figure 5-1.

Figure 5-1 The Content Selector Editor



3. In the Description box, enter the intended use of this Content Selector.
The description is displayed at the bottom of the Explorer window when you select the file. It also appears when you move the mouse pointer over the name of the file in the Explorer window.
4. Click Create/Edit. The Selector Rule window appears, as shown in Figure 5-2.

Figure 5-2 Create a Query to Display Content



The conditions window is divided into two panes: Conditions and Action. After you select a condition, you define the characteristics of that condition in the Action pane. For example, if you select the condition, The Visitor Has Specific Characteristics, you will define those characteristics from the Action pane.

5. In the Conditions pane, select the condition(s) that will determine when the Content Selector is used.

When you select a condition, a corresponding line of text with hyperlinks appears in the Action pane.

For a description of the conditions, see “Listing of the Available Conditions” in “Building Conditions and Queries in the BEA E-Business Control Center.”

6. For each condition you selected, click the hyperlinks in the Action pane to specify values.

For example, if you selected The Visitor Has Specific Characteristics condition as shown in Figure 5-2, click the Is Equal to [value] hyperlink under the bulleted phrase, “the visitor has the following characteristics.”

Depending on the condition and the hyperlink, a window or a dialog box opens. Table 5-1 provides a consolidated listing of the conditions and indicates where to look if you need detailed instructions for any of the corresponding windows/dialog boxes.

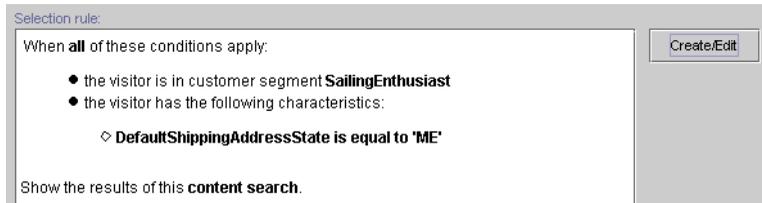
Table 5-1 Instructions for Building Conditions

Condition(s)	Relevant Instructions in the “Building Conditions and Queries in the BEA E-Business Control Center” chapter
The visitor is a member of a predefined customer segment	“Using the Select Customer Segments Window”
A visitor, HTTP session, HTTP request, or an event has specific characteristic/properties	“Using the Properties and Visitor Characteristics Windows”
Dates and times	“Important Note About Dates and Times” (The dates and times you set are based on universal time [UTC].) “Using the Date/Time Entry Dialog Boxes”

7. If you selected more than one condition, decide whether *all* of the conditions must be met for a visitor to belong to the customer segment, or whether a visitor can be considered part of the segment when *any* of the conditions apply. To toggle between All and Any, click the All (or Any) hyperlink in the phrase, When All of These Conditions Apply.
8. Click the [empty content search] hyperlink under Action pane. (See Figure 5-2.)
Since the content you are trying to access is stored on the server, you are prompted for a user name and password. You only need to log in once per session. If you are also prompted to enter connection settings, see “Connecting to a “Server Outside of the Connection Settings Window” in the “Introduction to the BEA E-Business Control Center” chapter.
9. In the Content Search window, create the query that will determine the content displayed by the Content Selector. For more information, see “Constructing Queries” in the “Building Conditions and Queries in the BEA E-Business Control Center” chapter.

- Click OK. The Customer Segment conditions window closes. The conditions and corresponding actions you specified appear in the Customer Segment Editor window's Characteristics list, as shown in Figure 5-3.

Figure 5-3 Content Selector Editor Window: Selection Rule List



- Save and name the Content Selector. The new file is displayed in the list of Content Selectors.

The Content Selector JSP tags that Business Engineers use refer to this name.

Previewing Documents

You can preview the document(s) you have configured your Content Selectors to display. To preview documents:

- Open the Content Selector that is set up to display the document(s) you want to preview.
- In the Content Selector Editor window, click Create/Edit.
- In the Content Selector conditions window, click the Content Search hyperlink in the Action pane.

If you have not yet logged in to access this feature, you will be prompted to enter your user name and password.

- In the Content Search window, click Preview.

A Web browser will open and display a page of links to the document(s) matching the query. Click the relevant links to view the documents you want to see.

6 Displaying Ads

An integral part of most e-commerce Web sites is displaying advertisements and tracking your customers' responses. With WebLogic Portal and WebLogic Personalization Server, you can use ad placeholders to display ads and manage and evaluate the effectiveness of your advertising strategy.

Placeholders are predefined areas on a Web page that you can put different advertisements and messages in.

Ad placeholders decrease the cost of displaying ads on your site by providing a single infrastructure that supports multiple advertising projects that change over time. Once a business analyst and a business engineer create a placeholder in a Java Server Page (JSP)—giving it a name and establishing its size and location, a business analyst can use the E-Business Control Center to add or change the content that goes into the placeholder. Because a placeholder is just that—a placeholder—a business engineer does not need to modify your Web site's JSPs to modify your advertising strategy.

If you use WebLogic Portal, you can use ad placeholders to dynamically target ads to specific customers as a part of a campaign.

This topic includes the following sections:

- About Ad Placeholders
 - Types of Queries That Ad Placeholders Run
 - Determining Which Ads Are Displayed
 - Types of Documents That Ad Placeholders Display
- Describing Ads in Your Content Management System
- Specifying Display and Clickthrough Behavior
- Creating Ad Placeholder Files
- Previewing Documents

- Alternatives to Ad Placeholders
- Removing Queries from Placeholders
 - Removing Default Queries
 - Removing Campaign Queries

About Ad Placeholders

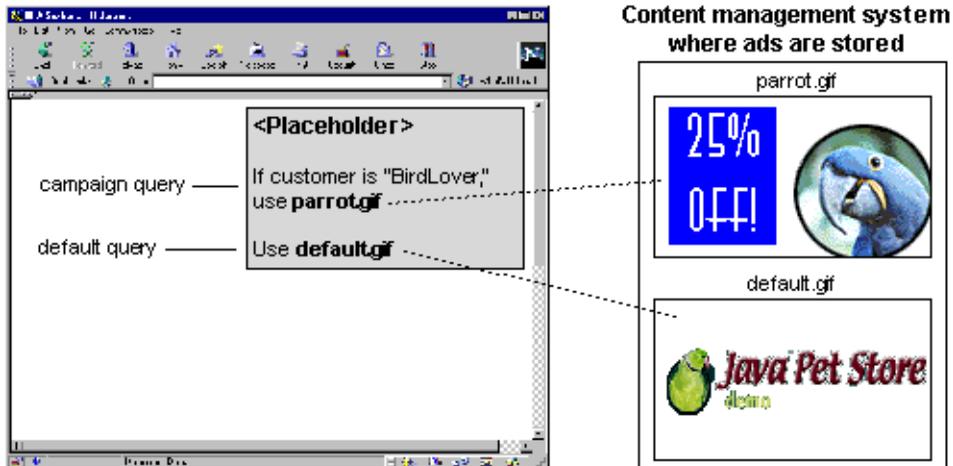
Placeholders are defined in JSPs by the business engineer. In the E-Business Control Center, the business analyst creates placeholder files that match the names of the placeholders established in the JSPs. The business analyst then adds queries to those placeholder files in the E-Business Control Center. For example, the business analyst can define a query that searches the content management system for ads that advertise pets for the Java Pet Store.

When the application is synchronized from the E-Business Control Center to the server, the placeholder files put their queries in their respective placeholders in the JSPs. The queries are then run from the JSPs, and the ad content is displayed in the Web pages.

You can change the queries that a placeholder runs at any time. For example, as part of a special promotion during April, you create a placeholder to display ads in the upper right corner of your site or in a navigation bar. In May, you remove the queries from the placeholder. In July, you decide to use the same placeholder to display ads for a different advertising project.

Figure 6-1 illustrates how placeholders use different types of queries to retrieve ads from a content management database and display them in a Web page.

Figure 6-1 Ad Placeholders



In some cases, a single query can apply to multiple advertisements in the database. For example, you can put a query in a placeholder that looks in the ad database for all files whose names contain “bird.” In that case, a placeholder with a single query can display multiple ads. The following sections explain more about how placeholders handle multiple queries or ads.

If you use WebLogic Portal, you can set up campaigns to dynamically put ads in placeholders. That feature involves a lot of flexibility, which means it is important to think through your ad placeholder strategies. For more information see “Removing Queries from Placeholders” on page 6-12 and “Ad Actions” in “Creating and Managing Promotional Campaigns.”

For information about adding placeholders to JSPs, see “Working with Ad Placeholders” in *Guide to Building Personalized Applications*.

Types of Queries That Ad Placeholders Run

Ad placeholders can run two types of queries: default queries and campaign queries. (Campaign queries are only available with WebLogic Portal.)

- **Default Placeholder** – When you create a placeholder file in the E-Business Control Center to match a placeholder established in a JSP, you can also add a query to that placeholder file that stays with the placeholder until you change or

remove the query in the E-Business Control Center. Creating a default query for a placeholder is a best practice, because it ensures that no matter what, an ad will always appear in the placeholder. In fact, a placeholder file is considered incomplete in the E-Business Control Center if no default queries are defined for it.

A placeholder can run a default query each time a customer loads a page that includes the placeholder. For example, you define a default query for a top banner placeholder and the placeholder runs the query each time a customer loads a page with the top banner. You can also set default queries to not run when a query placed by a campaign is present in the placeholder.

- **Campaign Placeholder** – When you create a campaign, one of the things you may most often want to do is trigger campaign-specific ads to appear in placeholders. You do this by creating ad queries for the campaign and assigning them to existing placeholders. Campaign ad queries are dynamically placed by a campaign when a certain action occurs, such as a user logging in who belongs to a certain segment of the population (see Figure 6-1).

Here is another example. When a customer adds a handsaw to the shopping cart, the campaign places an ad query for miter boxes in the ad placeholder on the shopping cart page, and the ad is displayed on the shopping cart page.

Determining Which Ads Are Displayed

To display an ad in a placeholder, the server needs to figure out two things: first, which query to run (if multiple queries exist in a placeholder), and second, if the query returns multiple ads, which ad to display.

The server uses two factors to determine which query to run:

- Suppressing default queries when campaign queries exist (only if you are using WebLogic Portal)
- Using “Priority” to Determine Which Query Is Run

The server uses one factor to determine which ad to use if a query returns multiple ads:

- Using “Ad Weight” to Choose An Ad when a Query Returns Multiple Ads

For more technical information, see “How Placeholders Select and Display Ads” in the *Guide to Building Personalized Applications*.

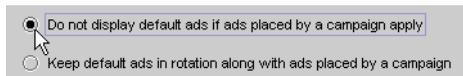
Determining Which Query Is Run

Because of the interplay between default placeholders and campaign placeholders, you can give campaign scenarios precedence by setting up default placeholders to be suppressed if any campaign queries are put in the placeholders. To determine which query will be run in a placeholder, the server first looks to see if you have set default placeholder queries to be suppressed when campaign queries are present in a placeholder (WebLogic Portal only); then, the server compares the priorities set on the queries.

Suppressing Default Queries when Campaign Queries Exist

When creating a placeholder file in the E-Business Control Center, the Placeholder editor window has an option you can set called, “Do not display default ads if ads placed by a campaign apply,” as shown in Figure 6-2.

Figure 6-2 Setting Default Query Options in the Placeholder Editor



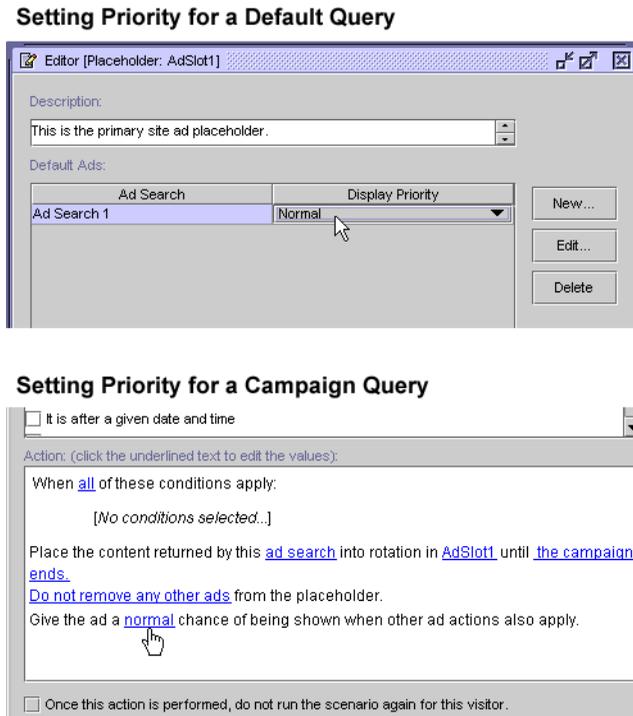
Using “Priority” to Determine Which Query Is Run

Only one ad can be displayed in an ad placeholder at any given time. Yet an ad placeholder can contain many queries, especially if you use WebLogic Portal with multiple campaigns active concurrently. The priority gives a query greater or lesser chance that a placeholder runs a query.

To establish your preferences for queries that should run more frequently than other queries, you attach a priority to a query when you create it. Before it runs a query, an ad placeholder evaluates all of the relative priorities of the queries that it contains. Then it gives the queries with higher priorities a greater chance of being selected. On average, an ad query with a higher priority will run more frequently than a query with a lower priority. However, in any single instance, it is possible that a placeholder runs a query with a lower priority than other queries.

You set priority for a default ad query in the Placeholder editor, and you set the priority for a campaign query when you create an ad action in the campaign editor, as shown in Figure 6-3.

Figure 6-3 Setting Query Priority



Determining Which Ad Is Chosen

After the server determines which query to run in a placeholder, that query could return more than one ad. If this happens, the server needs to determine which ad to display in the page.

Using "Ad Weight" to Choose An Ad when a Query Returns Multiple Ads

You can establish your preferences for ads that should be displayed more frequently than other ads by creating a document attribute called `adWeight` in your content management system. You assign a higher number to the ads that you want to be displayed more frequently.

For more information about the `adWeight` attribute, refer to “Ad Attributes in the Content Management System” under “Working with Ad Placeholders” in *Guide to Building Personalized Applications*.

Types of Documents That Ad Placeholders Display

By default, ad placeholders can display only the following types of documents:

- XHTML (a fragment or an entire document)
- Images
- Shockwave files

A business engineer can set up WebLogic Portal or WebLogic Personalization Server to support additional types of documents. For more information, refer to “Supporting Additional MIME Types” under “Working with Ad Placeholders” in the *Guide to Building Personalized Applications*.

Describing Ads in Your Content Management System

The queries that you define for ad placeholders search through the descriptions (attributes) that you attach to the documents in your content management system. WebLogic Portal and WebLogic Personalization Server place no restrictions on the set of attributes that you use to describe your ads. For example, you can create attributes that describe the name of the product that the document advertises, the name of the ad sponsor, and a product category that matches the categories in your e-commerce product catalog. When you define a query, the E-Business Control Center lets you choose from all of the attributes that your content management currently contains.

We recommend that you analyze your overall advertising strategy and create attributes that you can use across several advertising projects. The more your attributes apply to multiple advertising projects, the less often you need to create new attributes. In addition, review the way in which you define customer segments, and consider

creating attributes that complement customer segments. For example, if you define customer segments for conservative or aggressive investment portfolios, create an ads attribute called “portfolio-type,” and use it to describe investment products that you advertise.

If you use WebLogic Portal, your site might run multiple campaigns concurrently, and each campaign might define several ad queries for a placeholder. The attributes for your ads need to be specific enough that each scenario can define reasonably precise queries for the placeholders that they use.

For information on creating attributes, refer to the documentation for your content management system. To learn more about using a content management system with WebLogic Personalization Server, refer to “Creating and Managing Content” in *Guide to Building Personalized Applications*.

Specifying Display and Clickthrough Behavior

In addition to the attributes that placeholder queries use to find documents, ad placeholders use a standard set of attributes to do the following:

- Create a target URL for clickthrough behavior on images.
- Determine whether the target for a clickthrough of an image ad is displayed in a popup window. The ad placeholder generates the necessary JavaScript to display the popup window, and it can generate a link that customers click to close the popup window.
- Set the quality parameter for a Shockwave file.

A business engineer, or someone familiar with creating hyperlinks in HTML and with developing Shockwave movies, can create these attributes. For information about these attributes, refer to “Ad Attributes in the Content Management System” under “Working with Ad Placeholders” in *Guide to Building Personalized Applications*.

Creating Ad Placeholder Files

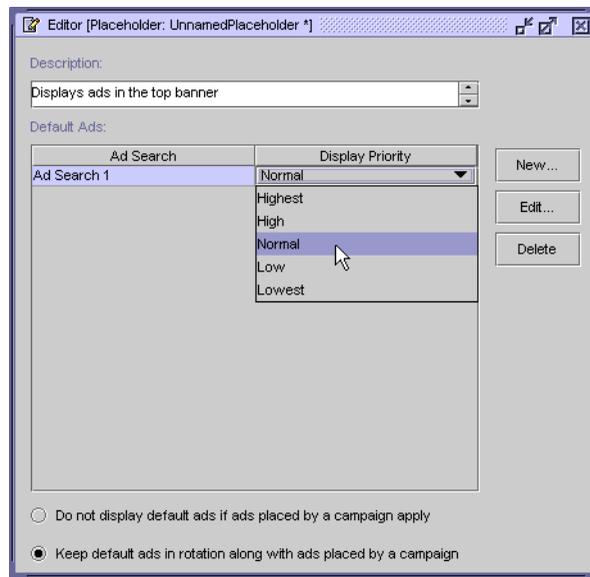
After you define attributes for the documents in your content management system, you use the E-Business Control Center to define ad placeholder files that match the placeholders your business engineer has or will define in your site’s JSPs.

This procedure shows you how to create a placeholder file in the E-Business Control Center and how to set up default—not campaign—queries in that placeholder. “Ad Actions” in “Creating and Managing Promotional Campaigns” shows how to create campaign queries for placeholders.

To create an ad placeholder file:

1. In the E-Business Control Center, open the application you want to work with.
2. Choose File → New → Presentation → Placeholder. A new placeholder file opens in the Editor window, as shown in Figure 6-4.

Figure 6-4 Selecting a Display Priority



3. Enter a description for the placeholder in the Description area.

The description is displayed at the bottom of the Explorer window when you select the file. It also appears when you move the mouse pointer over the name of the file in the Explorer window.

4. Click New to begin defining 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).

Note: Since the content you are trying to access is stored on the server, the Connection Setup window appears. Select an existing connection in the Display Name field, and enter your username and password. If you do not have existing connections you can select in the, see “Connecting to the Server” in the “Introduction to the BEA E-Business Control Center.” You only need to log in once per session when working with placeholders.

For information about setting conditions and actions, see “Constructing Queries” in “Building Conditions and Queries in the BEA E-Business Control Center.”

You can create multiple default queries by repeating this step.

If you do not create ad queries for default ads, the placeholder will display only ads that are generated by campaign queries. If there are no active campaigns, or if an active campaign contains no ad actions within scenarios to trigger an ad for a specific customer, then the placeholder remains empty to customers.

5. To change the priority of a default ad query, click the Display Priority column for the query and select a priority, as shown in Figure 6-4.

The Display Priority determines the likelihood that the query runs relative to the priority of any other queries that are in the placeholder. For more information, refer to “Determining Which Query Is Run” on page 6-5.

6. (The options in this step are available only with WebLogic Portal.) 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.

For more information, refer to “Suppressing Default Queries when Campaign Queries Exist” on page 6-5.

7. Save and name the placeholder. 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.

The new file is displayed in the list of placeholders.

Previewing Documents

You can preview the ads you have configured your placeholders to display. To preview ads:

1. Open the placeholder that is set up to display the ads you want to preview.
2. In the Placeholder Editor window, select the query that references the ads you want to preview, and click Edit.

If you have not yet logged in to access this feature, you will be prompted to enter your user name and password.

If you are asked to supply connection settings, see “Connecting to the Server” or “Connecting to the Server” in the “Introduction to the BEA E-Business Control Center.”

3. In the Ad Search window, select the query in the Descriptors pane that references the document(s) you want to preview.
4. Click Preview.

A Web browser will open and display a page of links to the ads matching the query. Click the relevant links in the browser to view the ads you want to see.

Alternatives to Ad Placeholders

If it is essential that a customer see a specific ad in a specific location, a business engineer can use an `<ad:adTarget>` tag instead of an ad placeholder.

Like an ad placeholder, `<ad:adTarget>` can do the following:

- Display the types of documents that are described in “Types of Documents That Ad Placeholders Display” on page 6-7.
- Use the display and clickthrough attributes that are described in “Specifying Display and Clickthrough Behavior” on page 6-8.
- Use ad weights to choose an ad if a query returns multiple documents, as described in “Determining Which Ad Is Chosen” on page 6-6.

However, the `<ad:adTarget>` is *unlike* ad placeholders in the following ways:

- It contains its own query in the JSP page; it does not refer to the queries that a business analyst creates in the E-Business Control Center. If you want to change the query, you must modify the tag in the JSP.
- A campaign action cannot specify a query to run in an `<ad:adTarget>` tag. Actions can only use ad placeholders to run queries.
- Because it contains only a single query, it does not need to use the ad query priorities, as described in “Determining Which Query Is Run” on page 6-5.

For more information, refer to `<ad:adTarget>` under “JSP Tag Library Reference” in *Guide to Building Personalized Applications*.

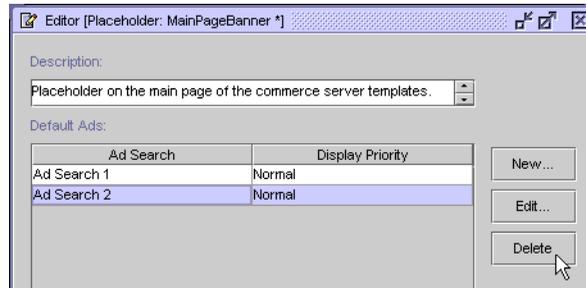
Removing Queries from Placeholders

There are different ways of removing queries from placeholders, depending on whether the queries you want to remove are default or campaign queries.

Removing Default Queries

To remove default queries from a placeholder, open the placeholder in the E-Business Control Center, select the query you want to delete, and click Delete, as shown in Figure 6-5.

Figure 6-5 Deleting a Default Query from a Placeholder



It is always good practice to leave at least one default query in a placeholder to ensure an ad always appears in that placeholder. In fact, the E-Business Control Center considers a placeholder file incomplete if it does not contain at least one query.

Removing Campaign Queries

Removing campaign queries from placeholders is a task that requires planning and an understanding of the dynamic nature of the task. See “Clearing Campaign Queries from Ad Placeholders” in “Creating and Managing Promotional Campaigns.”

7 Defining Stand-Alone or Campaign Discounts

This topic contains essential information about discounts as they are used in the BEA E-Business Control Center. This information includes a conceptual description of a discount, an explanation about how you can use discounts, and step-by-step instructions for defining a new discount or modifying existing discounts within the E-Business Control Center.

This topic includes the following sections:

- What Is a Discount?
- Uses of Discounts
 - Using Discounts as Stand-Alone Discounts
 - Using Discounts in Promotional Campaigns
- About Discount Definitions
 - Discount Duration
 - Discount Types
 - Discount Limits
 - Discount Priorities
- Defining a New Discount With the Discount Terms Wizard
 - Discount Types Available in the Discount Terms Wizard
 - Using the Discount Terms Wizard
- Catalog Browser

- Browsing a Catalog
- Searching a Catalog
- Defining a New Discount With the Discount Editor
 - Specify General Discount Information
 - Specify Discount Terms
 - Establish the Discount Duration and Overall Limit
 - Saving, Finalizing, and Synchronizing a Discount
- Locating an Existing Discount
- Modifying an Existing Discount
 - Deactivating and Reactivating Discounts
- Deleting an Existing Discount

What Is a Discount?

As you might expect, a *discount* is a reduction in the price charged for a product item, an order, or the shipping cost associated with an order. The E-Business Control Center allows you to define discounts that you can offer to your online customers.

Uses of Discounts

This section provides an overview of how you can use discounts after you define them. There are two ways to use discounts (designated *Usage* on the E-Business Control Center windows). These ways are described in the following subsections:

- Using Discounts as Stand-Alone Discounts
- Using Discounts in Promotional Campaigns

Note: Discounts are not available if you have only the BEA WebLogic Personalization Server product license.

Using Discounts as Stand-Alone Discounts

Stand-alone discounts are discounts that are offered to everyone shopping at your Web site. They are not based on a customer's behavior or controlled by campaigns. An example of a discount used as a stand-alone discount is, "give everyone 10% off books."

As you are defining a stand-alone discount, you may want to provide a discount explanation and a discount description. A discount explanation identifies the discount to your customers while they are checking out, or at some other time during their shopping experience. A discount description will help you identify the discount when you are trying to distinguish it from others listed in the E-Business Control Center.

Using Discounts in Promotional Campaigns

As their name implies, campaign discounts are discounts that are intended to be used within campaigns and awarded to specific customers under certain conditions, such as membership in a customer segment or specific customer behavior. An example of a discount used in a promotional campaign is, "if a Gold Customer clicks the Take-Advantage-of-This-Special-Offer ad banner, give the customer a 20% discount off books." Discounts can be incorporated into your promotional campaigns like ads and e-mails (as actions), and used in conjunction with these promotional messages to entice customers to buy your products.

Since one predefined campaign discount can be applied within multiple campaigns, campaign discounts can have multiple discount explanations. A discount explanation identifies the discount to your customers while they are checking out, or at some other time during their shopping experience. Having multiple discount explanations allows you to tailor the text to the specific application of the discount. For campaign discounts, you supply the discount explanation as you are creating the discount scenario action (rather than during the discount definition, as is the case with stand-alone discounts).

As with stand-alone discounts, a discount description helps you identify the discount when you are trying to distinguish it from others listed in the E-Business Control Center.

Note: If you have the WebLogic Portal license and want detailed information about how to use discounts within promotional campaigns, see the “Adding Scenarios to the Campaign” in *Creating and Managing Promotional Campaigns*.

About Discount Definitions

Regardless of how you intend to use discounts, to make them meaningful for your marketing efforts, you need to define discounts using the E-Business Control Center. In addition to the discount usage (stand-alone or campaign), discount definitions also include the following information:

- Discount Duration
- Discount Types
- Discount Limits
- Discount Priorities

Discount Duration

The discount duration is the period the discount is offered. It has a specified start date and time and a specified stop date and time.

Caution: Stop and start dates on discounts and campaigns are completely independent. Using a discount within a campaign does not cause the discount to inherit the campaign’s scheduled dates, or visa versa. If a discount expires before the campaign has ended, the discount may not be awarded at checkout time. BEA recommends that you closely monitor the schedules of these objects when assembling campaigns.

Discount Types

The E-Business Control Center offers three discount types. Before using the E-Business Control Center's discount service, you need to decide which discount type to use. Furthermore, each type of discount requires that you identify the items that cause the discount to be offered, called *trigger items*; the items to which the discount should be applied, called *target items*; and the discount value, which is the percentage or dollar amount of the discount. The three discount types are:

- Per Item Discounts
- Set-Based Discounts
- Order Discounts

Per Item Discounts

Per item discounts are discounts that apply to individual items in your product catalog. Per item discounts can be offered to customers (that is, triggered) based on a customer's purchase of the following:

- Any item (regardless of SKU or product category).
- Specific items in the product catalog (specified by SKU).
- Any items belonging to a particular product category.
- A combination of items specified by SKU and product category.

Per item discounts can apply to (that is, target) the following:

- The same items that triggered the discount offer.
- Any items in the product catalog (regardless of SKU or product category).
- Specific items in the product catalog (specified by SKU).
- Any items belonging to a particular product category.
- A combination of items specified by SKU and product category.

As their name implies, per item discounts will be applied per item. For example, you may specify that for every item purchased from the product category Sports Equipment, customers will receive \$5 off every baseball cap purchased. When

7 Defining Stand-Alone or Campaign Discounts

customers purchase a baseball, a glove, and a bat (all items belonging to the category Sporting Equipment, they will be eligible for a discount on each baseball cap. For instance, if a customer also purchases two baseball caps, the discount will be \$10.

Per item discounts can be specified as a percentage off, an amount off, or a fixed price. Table 7-1 lists some possible per item discounts.

Table 7-1 Per Item Discount Examples

Discount	Examples
Percentage off any item.	Take 10% off the price of any item in the product catalog.
Fixed amount off any item.	Take \$5 off the price of any item in the product catalog.
Fixed price for any item.	All items cost \$10.
Percentage off each specified item.	Take 10% off the price of each item with SKU 12345.
Fixed amount off each specified item.	Take \$5 off each item with SKU 12345.
Fixed price for each specified item.	Each item with SKU 12345 costs \$10.
Percentage off each item belonging to a specified product category.	Take 10% off the price of each item in the Books product category.
Fixed amount off each item belonging to a specified product category.	Take \$5 off the price of each item in the Books product category.
Fixed price for each item belonging to a specified product category.	Each item in the Books product category costs \$10.

If you would like to examine other, more complex examples about how per item discount definitions affect customer orders, see “Discount Examples”.

Caution: When specifying product items by SKU or category, be sure to enter the correct SKU number or category from your product catalog. Failure to enter the correct product identification could result in discounts that are associated with incorrect product items or categories. To help ensure that you enter the correct SKU number or category, use the Catalog Browser. For more information, see “Catalog Browser” on page 7-19.

Set-Based Discounts

Set-based discounts are useful when you want to offer a single discount based on the customer having a specified set of product items in their shopping cart. Set-based discounts can be offered to customers (that is, triggered) based on a customer's purchase of the following:

- Sets of any item (regardless of SKU or product category).
- Sets of specific items in your product catalog (specified by SKU).
- Sets of product items belonging to a particular category.
- Sets created by a combination of product items specified by SKU and product categories.

Set-based discounts can apply to (that is, target) the following:

- The same items that triggered the discount offer.
- Any items in the product catalog (regardless of SKU or product category).
- Specific items in your product catalog (specified by SKU)
- Any items belonging to a particular category
- Specific items specified by SKU or product category.

As their name implies, set-based discounts will be applied per set. For example, you may specify that for every set of three items purchased from the product category Sporting Equipment, customers will receive \$5 off a baseball cap. When customers purchase a baseball, a glove, and a bat (all items belonging to the Sporting Equipment category), they can receive \$5 off one baseball cap, for a total discount of \$5. Unlike the per item discount (described previously) where the customer gets a \$10 discount for also purchasing two caps, the set-based discount would be \$5.

Set-based discounts can be specified as a percentage off, an amount off, or a fixed price.

Note: Under set-based discounts, if you specify a fixed amount off or a fixed price discount, then the discount will be applied to each item in the set, rather than to the set as a whole.

Table 7-2 lists some possible set-based discounts.

Table 7-2 Set-Based Discount Examples

Discount	Examples
Percentage off a specified set of any items.	Take 10% off the price of any set of 3 items.
Fixed amount off a specified set of any items.	Take \$5 off the price of any set of 3 items.
Fixed price for a specified set of any items.	Each set of 3 items costs \$10.
Percentage off a specified set of specified items.	Take 10% off the price of each set of 3 items with SKU 12345.
Fixed amount off each set of specified items.	Take \$5 off each set of 3 items with SKU 12345.
Fixed price for a set of specified items.	Each set of 3 items with SKU 12345 costs \$10.
Percentage off a specified set of items belonging to a specified product category.	Take 10% off the price of each set of 3 items in the Books product category.
Fixed amount off each set of items belonging to a specified product category.	Take \$5 off the price of each set of 3 items in the Books product category.
Fixed price for each set of items belonging to a specified product category.	Each set of 3 items in the Books product category costs \$10.

If you would like to examine other, more complex examples about how set-based discount definitions affect customer orders, see “Discount Examples”.

Caution: When specifying product items by SKU or category, be sure to enter the correct SKU number or category from your product catalog. Failure to enter the correct product identification could result in discounts that are associated with incorrect product items or categories. To help ensure that you enter the correct SKU number or category, use the Catalog Browser. For more information, see “Catalog Browser” on page 7-19.

Order Discounts

Order discounts are discounts that can apply to a customer’s entire order. Order discounts can be offered to customers (that is, triggered) based on the following:

- Any order.

- A specified order subtotal.

Order discounts can apply to (that is, target) the following:

- The order total.
- The shipping cost of the order.

Note: For order discounts, there can be only one target. In other words, you can apply the order discount to *either* the order total *or* the shipping cost.

As their name implies, order discounts are applied per order. For example, you may specify that a \$5 order discount should apply to orders with subtotals greater than \$100. When customers place orders with subtotals that are greater than \$100, customers will receive \$5 off their order, for a total discount of \$5.

Order discounts can be specified as a percentage off, an amount off, or a fixed price. Table 7-3 lists some possible order discounts.

Table 7-3 Order Discount Examples

Discount	Examples
Percentage off any order.	Take 10% off any customer's order total.
Fixed amount off any order.	Take \$5 off any customer's order total.
Fixed price for any order.	All orders cost \$50.
Percentage off orders with subtotals that meet specified criteria.	Take 10% off the order total if the subtotal is greater than \$100.
Fixed amount off orders with subtotals that meet specified criteria.	Take \$5 off the order totals if the subtotal is greater than \$100.
Fixed price for orders with subtotals that meet specified criteria.	Orders with subtotals that are greater than or equal to \$100 cost \$100.

Caution: As these examples show, you should be very careful when specifying fixed price discounts.

Discount Limits

The E-Business Control Center provides you with several ways to limit the application of discounts as you define them. This section describes the following discount limitations:

- Overall Limit
- Order Limit
- Minimum Purchase Requirement

Overall Limit

An overall limit specifies the number of orders to which a discount can be applied for a given customer. The overall limit can be a value equal to or greater than 1.

For example, if your store offers a 10% discount off books with an overall limit of 2. This means that customers can receive the 10% discount for no more than 2 orders containing books. If there were no overall limit, customers could return to the Web site and place separate orders to receive more discounts.

Order Limit

As their name implies, order limits define how many times the discount can be used per order. You can specify order limits either based on the items that triggered the discount, or on the target items to which the discount is applied (which may or may not be the same items). For example, you may want to give away 2 DVD movies with the purchase of every DVD player you sell, with a limit of one giveaway per order. In this case, you would impose the order limit of 1 on the trigger item, the single DVD player. Any additional DVD players in the order would not trigger additional discounts; the customer would receive only 2 DVD movies free.

Limitations on the items that trigger the discount can be specified as follows:

- A value equal to or greater than 1.
- No limit.

Note: Order limits on items that trigger discounts are specified in different windows in the E-Business Control Center, depending on whether you are working with a per item discount or a set-based discount. This is because per item order limits apply to each individual item that triggered the discount, while set-based order limits apply to a set of items that triggered the discount.

Limitations on the target items to which the discount is applied can be specified as:

- Up to N items (or sets).
- Exactly N items (or sets).

where N is a value equal to or greater than 1.

Note: For more information about discount types, see “Discount Types” on page 7-5.

Minimum Purchase Requirement

For per-item discounts, you can use the E-Business Control Center to specify a minimum purchase requirement. The minimum purchase requirement can be a value equal to or greater than 1. Once the minimum requirement has been met in a given order, the discount will be earned for each additional item. For example, if the minimum purchase requirement is 3 items, customers who buy 5 items will receive 5 discounts.

Note: Minimum purchase requirements do not apply to other discount types. For more information about discount types, see “Discount Types” on page 7-5.

Discount Priorities

A discount priority is a setting within the E-Business Control Center that allows you to specify the relative importance of a discount. The discount priority is a value in the range of 1-20, with one being the highest priority. In the event that two or more discounts are applicable to a given item, the priority associated with each discount resolve the conflict by indicating which discount should be applied. Although no more than one discount can be applied to a given item, any remaining discounts may still be eligible for application to other items. This process also applies to discounts on entire orders. Therefore, you should consider the priority with which each discount will be assigned during discount definition time.

Caution: If two or more discounts have the same priority, the order in which the discounts are applied is random. Be sure to follow your organization's established policy for assigning discount priorities if you wish to avoid this situation.

Defining a New Discount With the Discount Terms Wizard

Initially, you will probably want to use the Discount Terms Wizard to help you define new discounts. The Discount Terms Wizard does not duplicate the full function of the E-Business Control Center Discount Editor, but it is a quick and easy way to help you define the most common discounts.

The Discount Terms Wizard specifies simple discount terms. A discount term is the portion of the entire discount definition that indicates which items are discounted, the value of the discount, and the qualifying criteria. For example, buy at least 3 DVDs and get \$2 off each one.

The Discount Terms Wizard does not completely define a discount. Other procedures necessary for defining discounts include the following:

- Specify general discount information. See “Specify General Discount Information” on page 7-23.
- Establish discount duration and overall limit. See “Establish the Discount Duration and Overall Limit” on page 7-34.
- Save and deploy the discount. See “Saving, Finalizing, and Synchronizing a Discount” on page 7-35.

Discount Types Available in the Discount Terms Wizard

The following types of discounts are available in the Discount Terms Wizard. Discount Language means the language used by the Discount service to define a discount. It is the phrasing that appears in the Discount Terms list box.

Simple Discount

A simple discount is a type of per item discount.

Description	Buy a product at a reduced price.
Type	Per Item Discount.
Example	Buy an unlimited number of BEA backpacks at 25% off.
Discount Language	For each item where SKU=B123 (no limit) apply a 25% discount to each trigger item.

Minimum Purchase Discount

Description	Buy a minimum quantity of product and get each at a reduced price.
Type	Per Item Discount.
Example	Buy at least 3 CDs and get \$1 off each CD.
Discount Language	For each item where Product Category=CD (minimum purchase=3, no limit), apply a \$1 off discount to each trigger item.
Note	The limit cannot be less than the minimum purchase requirement.

Buy N, Get 1 Free Discount

Description	Buy a certain quantity of a product and get one free.
Type	Set-based Discount.
Example	Buy 5 ties, get 1 free.

7 Defining Stand-Alone or Campaign Discounts

Discount Language	For the set of the following items, a set of 5 items where Product Category=Tie, apply a 100% discount to each of up to 1 item(s) where Product Category=Tie.
--------------------------	---

Paired Discount

Description	Buy one product and get a price reduction on another product.
Type	Per Item Discount.
Example	Buy a bicycle and get a helmet at 50% off.
Discount Language	For each item where Product Category=Bicycle (limit=1), apply a 50% discount to each of up to 1 item(s) where Product Category=Helmet.

Paired Set Discount

Description	Buy a specified quantity of product and get a price reduction on another product.
Type	Set-based Discount.
Example	Buy 6 bottles of wine and get a wine rack at \$10 off.
Discount Language	For the set of the following items: a set of 6 items where Product Category=Wine, apply a \$10 off discount to each of up to 1 item(s) where Product Category=Wine Rack.

Bundle Discount

Description	Buy a bundle of products at a reduced price.
Type	Set-based Discount.
Example	Buy home, Auto, and life insurance and get 20% off.

Discount Language	For the set of the following items: a set of 1 items where Product Category=Home and a set of 1 items where Product Category=Auto and a set of 1 items where Product Category=Life, apply a 20% discount to each trigger item.
--------------------------	--

Paired Bundle Discount

Description	Buy a bundle of products, get a price reduction on another product
Type	Set-based Discount.
Example	Buy home and auto insurance and get life insurance at 15% off
Discount Language	For the set of the following items: a set of 1 items where Product Category=Home and a set of 1 items where Product Category=Auto, apply a 15% discount to each of up to 1 item(s) where Product Category=Life.

Order Discount

Description	Buy a certain total amount, get a price reduction on the order total (or shipping cost).
Type	Order Discount.
Example	Buy at least \$500 worth of services, get 20% off.
Discount Language	For any order with a subtotal greater than or equal to \$500 apply a 20% discount to the order total (or the shipping cost).

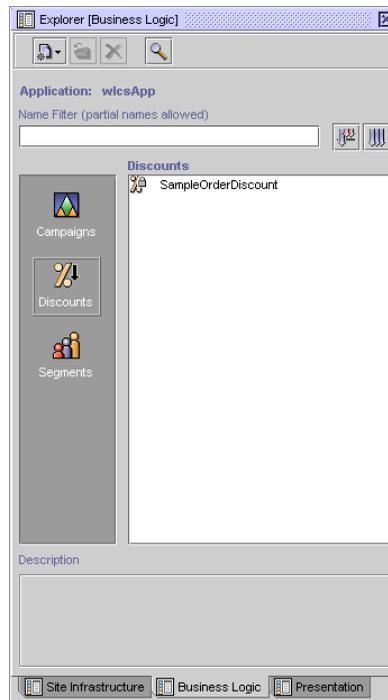
Using the Discount Terms Wizard

Note: Before you can use the E-Business Control Center, you must start the E-Business Control Center and open an application. For more information on starting the E-Business Control Center, see “Starting the E-Business Control Center” in the Introduction to the BEA E-Business Control Center.

To specify terms for a simple discount, complete the following steps:

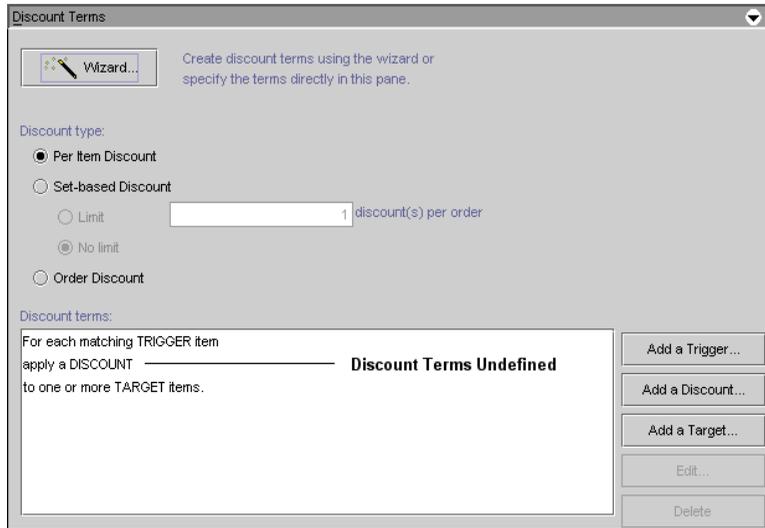
1. In the Explorer window, click the Business Logic tab, as shown in Figure 7-1.

Figure 7-1 Explorer Window: Discounts View



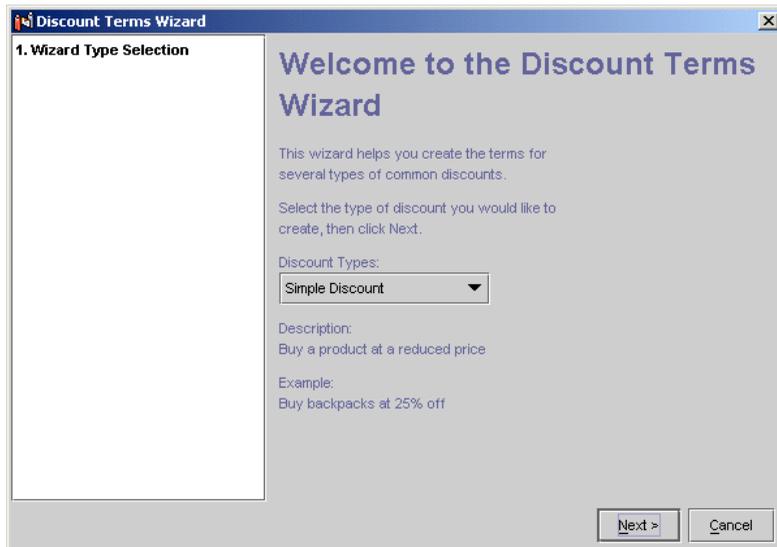
2. To see a list of existing discounts, click the Discounts icon.
3. Click the New button, and then select Discount. The Discount Editor window opens.
4. Click the Discount Terms bar. The Discount pane opens, as shown in Figure 7-2.

Figure 7-2 Discount Pane—Start



5. Click the Wizard button. The Discount Terms Wizard window appears, as shown in Figure 7-3.

Figure 7-3 Discount Terms Wizard Start Window



6. Select the type of discount you want from the Discount Type drop-down list, and then click the Next button. The window that appears depends on the type of discount you selected.
 7. Follow the on-screen instructions to define the discount terms.
- Note:** When selecting items or categories for your discount, be sure to use the Catalog Browser. Using this feature helps ensure that you have specified the correct SKU number or category. For more information, see “Catalog Browser” on page 7-19.
8. After the discount term is defined, the discount terms are displayed in the Discount Terms window, as shown in Figure 7-4.

Figure 7-4 Discount Terms—Finish

Discount Terms

Wizard... Use the wizard to create the discount terms or specify the details direc...

Discount type:

Per Item Discount

Set-based Discount

Limit discount(s) per order

No limit

Order Discount

Discount terms:

For the set of the following items: a set of 3 items where Product Category=DVD apply a 100% discount to each of up to 1 item(s) where Product Category=DVD

Discount Terms Defined

Add a Trigger...

Add a Discount...

Add a Target...

Edit...

Delete

After you have specified the terms of a discount, you need to define other discount specifications using the E-Business Control Center Discount Editor.

As previously mentioned, the Discount Terms Wizard does not completely define a discount. Other procedures necessary for defining discounts include the following:

- Specify general discount information. See “Specify General Discount Information” on page 7-23.

- Establish discount duration and overall limit. See “Establish the Discount Duration and Overall Limit” on page 7-34.
- Save and deploy the discount. See “Saving, Finalizing, and Synchronizing a Discount” on page 7-35.

Catalog Browser

The Catalog Browser allows you to easily find and select items for your campaign or discount definition. The following sections provide step-by-step instructions on how to use the Catalog Browser.

Browsing a Catalog

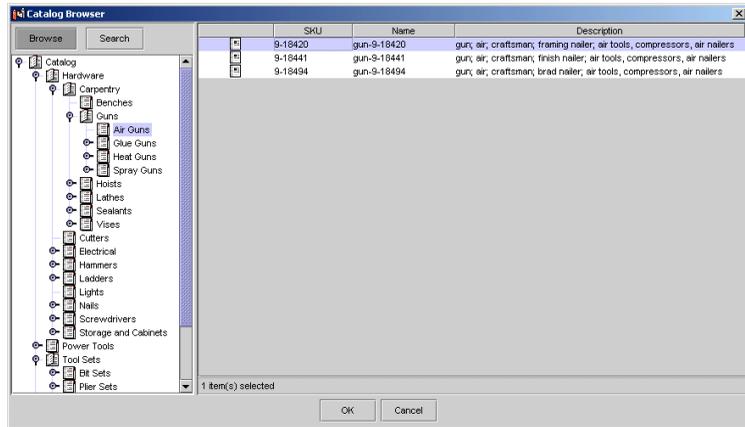
The browsing feature of the Catalog Browser allows you to select either categories or specific items from your catalog. Depending on where the Catalog Browser is opened and the type of discount, you can select one or more items or categories.

Notes: You must first establish a connection to your catalog server. For more information, see “Connecting to the Server” in the Introduction to the BEA E-Business Control Center.

If you switch connections, the data in your catalog browser will be completely refreshed.

1. To open the Catalog Browser, click the Catalog Browser button.
2. In the Logon dialog window, enter your Username and Password, and then click the Connect button. The Catalog Browser opens as shown in Figure 7-5.
3. 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.
4. In the right pane, select one or more categories or items.
5. Click the OK button. The items or categories are added to your discount or campaign definition.

Figure 7-5 Catalog Browser



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.

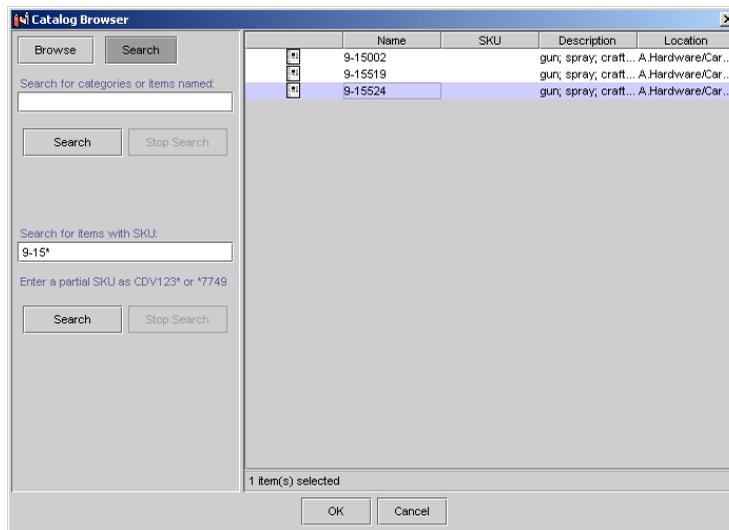
Note: You must first establish a connection to your catalog server. For more information, see “Connecting to the Server” in the Introduction to the BEA E-Business Control Center.

1. To open the Catalog Browser, click the Catalog Browser button.
2. Click the Search button. The Search window opens as shown in Figure 7-6.
3. Enter the Category or SKU in the corresponding field, and then click the Search button. Use an asterisk (*) for wildcard searches.

Note: When searching for a category, only the category field is available.

4. After the search list appears in the left pane, select the desired Category or SKU from the left pane.
5. Click OK. The items or categories are added to your discount or campaign definition.

Figure 7-6 Catalog Browser Search



Defining a New Discount With the Discount Editor

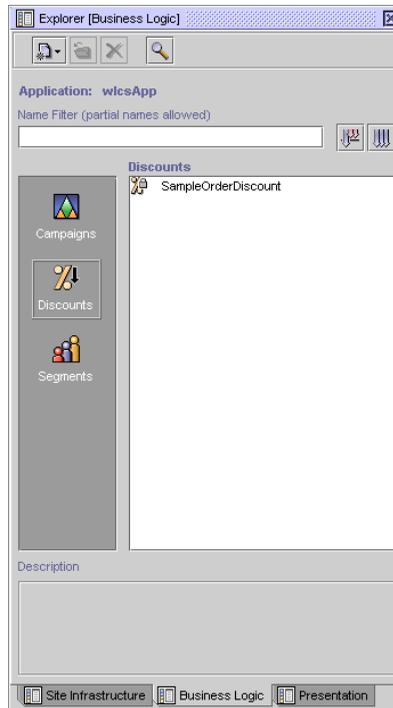
This section provides step-by-step instructions for defining discounts. Using the discount editor you can define more complex discounts than you can with the Discount Terms Wizard. If you have already defined discounts and need to edit them, see “Modifying an Existing Discount” on page 7-39.

Note: Before you can use the E-Business Control Center, you must start the E-Business Control Center and open an application. For more information on starting the E-Business Control Center, see “Starting the E-Business Control Center” in the Introduction to the BEA E-Business Control Center.

To define a new discount, follow these steps:

1. In the Explorer window, click the Business Logic tab, as shown in Figure 7-7.

Figure 7-7 Explorer Window: Discounts View



2. To see a list of existing discounts, click the Discounts icon.
3. Click the New button, and then select Discount. The Discount Editor window opens.
4. In the Discount Editor window, follow the steps provided in the following sections to:
 - Specify General Discount Information
 - Establish the Discount Duration and Overall Limit
 - Specify Discount Terms
 - Saving, Finalizing, and Synchronizing a Discount

Specify General Discount Information

1. Click the General bar. The General pane opens, as shown in Figure 7-8.

Figure 7-8 General Pane

The screenshot shows a window titled "General" with a dropdown arrow in the top right corner. The window is divided into several sections. On the left, under the heading "Usage", there are two radio buttons: "Stand-alone (applied independent of campaigns)" which is selected, and "Campaign (applied via campaigns)". Below these is a text input field for "Discount explanation: (optional)" with a note "(Available for display during shopping and checkout.)". On the right, there is a "Priority: (1-20 where 1 is the highest priority)" field with a text input containing "10". Below the priority field is a note: "If more than one discount is available for a given item, the one with the highest priority will apply." At the bottom, there is a "Description: (Optional)" text area.

2. Select a Usage option by clicking either the Stand-Alone or Campaign radio button.
3. 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 (Java Server Pages) shows the information in this field, it will be displayed to customers receiving the discount.
4. Specify the priority for the discount by entering a number in the Priority field.
Note: A priority of 1 is the highest priority you can assign to a discount. For more information about how discount priorities are used, see “Discount Priorities” on page 7-11.
5. You may want to provide a description of the discount in the Description text area. This description can be useful for future identification of the discount in the E-Business Control Center.
6. To close the pane, click the General bar.

Specify Discount Terms

1. Click the Discount Terms bar. The Discount Terms pane opens, as shown in Figure 7-9.

Figure 7-9 Discount Terms Pane

The screenshot shows a window titled "Discount Terms". At the top left is a "Wizard..." button. To its right is the text: "Create discount terms using the wizard or specify the terms directly in this pane." Below this is the "Discount type:" section with three radio buttons: "Per Item Discount" (selected), "Set-based Discount", and "Order Discount". Under "Set-based Discount" are two sub-options: "Limit" (with a text input field containing "1" and the text "discount(s) per order") and "No limit". Below the "Discount type:" section is the "Discount terms:" section. It contains a text area with the text: "For each matching TRIGGER item apply a DISCOUNT _____ Discount Terms Undefined to one or more TARGET items." To the right of the text area are five buttons: "Add a Trigger...", "Add a Discount...", "Add a Target...", "Edit...", and "Delete".

2. Select the corresponding radio button for Per Item, Set-based, or Order discount types.

Warning: After you select a discount type, you cannot switch to a different type without losing your discount terms. Be sure to select the correct discount type. For more information about the available discount types, see “Discount Types” on page 7-5.

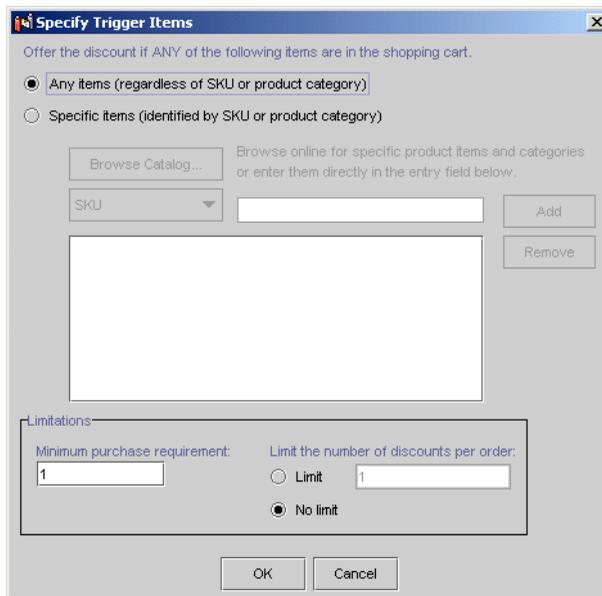
3. Depending on the discount type you selected in the previous step, follow the steps described in:
 - Per Item Discounts
 - Set-Based Discounts
 - Order Discounts

Per Item Discounts

To define the discount terms, complete the following steps:

1. Click the Add a Trigger button. The Specify Trigger Items window appears, as shown in Figure 7-10.

Figure 7-10 Specify Trigger Items Window



2. Select a discount trigger option by clicking either the Any Items or Specific Items radio button.

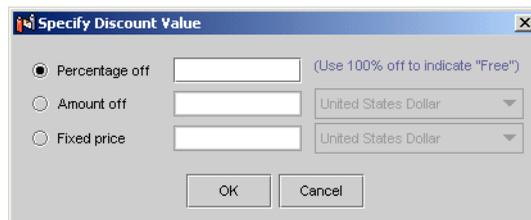
For example, if you select the Any Items option, customers having *any* product items in their shopping cart (regardless of what these items are) would qualify for the discount. If you select the Specific Items option, customers having only the items you specify (by SKU number or product category) in 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.

Note: When selecting items or categories for your discount, be sure to use the Catalog Browser. Using this feature helps ensure that you have specified the correct SKU number or category. For more information, see “Catalog Browser” on page 7-19.

- 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 will qualify 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.
Note: 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.
Note: 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.
Note: To specify additional triggers, repeat steps 1 through 6.
8. Click the Add a Discount button. The Specify Discount Value window opens, as shown in Figure 7-11.

Figure 7-11 Specify Discount Value Window

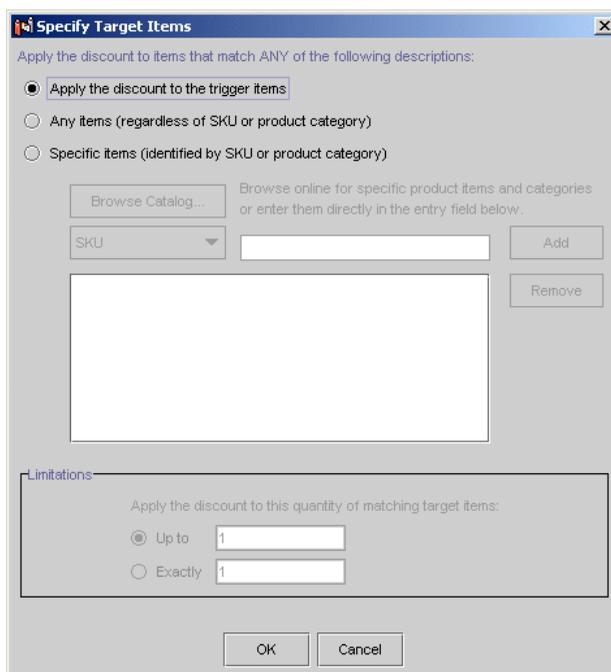


9. Select a discount value, and then enter the percent, amount, or price of the item in the corresponding field. You can choose a Percentage off, an Amount off, or a Fixed Price discount.

Note: You do not need to type the % or currency symbols into the fields.

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, as shown in Figure 7-12.

Figure 7-12 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.

- Note:** When selecting items or categories for your discount, be sure to use the Catalog Browser. Using this feature helps ensure that you have specified the correct SKU number or category. For more information, see “Catalog Browser” on page 7-19.
- 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.
- Note:** If you specify more than one target item (either by SKU or category), *any* of the items present in a customer’s shopping cart will be discounted. In other words, multiple target items—those shown on the same line in the Discount Terms list—are treated as alternates.
- Tip:** If you make a mistake, click the target item shown in the text area to highlight it, and then click the Remove button.
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.
- Note:** To specify additional targets, repeat steps 13 through 15.
17. To close the Discount Terms pane, click the Discount Terms bar.

Set-Based Discounts

To define a set-based discount, complete the following steps:

1. Specify the order limit for the discount by selecting either the Limit or No Limit radio button.

Note: The order limit specifies how many times per order a set of trigger items can be used to qualify for the discount.
2. If you chose an order limit, enter a limit value in the corresponding field.
3. Click the Add a Trigger button. The Specify Trigger Sets window appears, as shown in Figure 7-13.

Figure 7-13 Specify Trigger Sets Window

4. Enter the number of items that will constitute a set into the field. This is the number of items that must be purchased to qualify for the discount.
5. 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.
6. 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.

Note: When selecting items or categories for your discount, be sure to use the Catalog Browser. Using this feature helps ensure that you have specified the correct SKU number or category. For more information, see “Catalog Browser” on page 7-19.

- 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.

Note: If you specify more than one trigger item in the Specify Trigger Items window (either by SKU or category), *any* of those items present in a customer’s shopping cart will qualify 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.

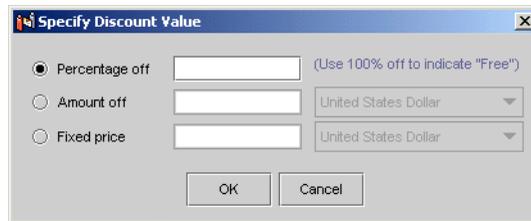
Note: If you make a mistake, select the trigger item shown in the text area to highlight it, and then click the Remove button.

7. 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.

Note: To specify additional triggers, repeat steps 2 through 6.

8. Click the Add a Discount button. The Specify Discount Value window opens, as shown in Figure 7-14.

Figure 7-14 Specify Discount Value Window

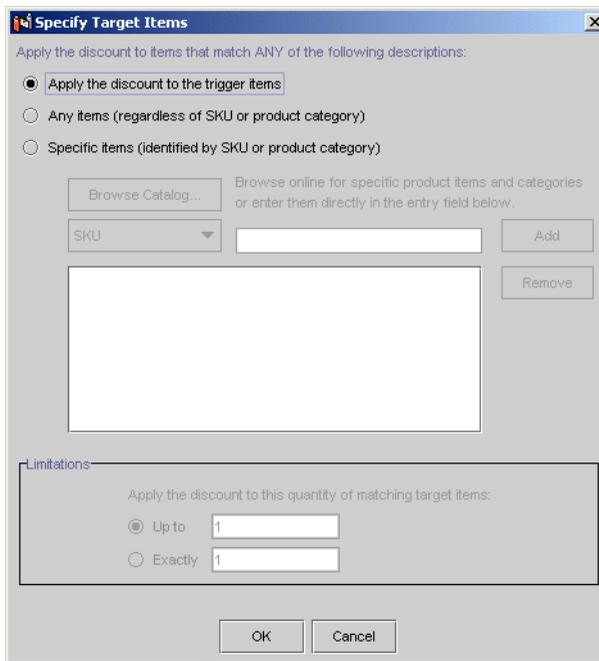


9. Select a discount value. You can choose a Percentage Off, an Amount Off, or a Fixed Price discount. Enter the percent, amount, or price of the item in the corresponding field.

Note: You do not need to type the % or currency symbols into the fields.

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, as shown in Figure 7-15.

Figure 7-15 Specify Target Items Window



13. 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.

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 in the corresponding field.

Note: When selecting items or categories for your discount, be sure to use the Catalog Browser. Using this feature helps ensure that you have specified the correct SKU number or category. For more information, see “Catalog Browser” on page 7-19.

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.

- Note:** If you specify more than one target item (either by SKU or category), *any* of the items present in a customer's shopping cart will be the discounted. In other words, multiple target items—those shown on the same line in the Discount Terms list—are treated as alternates.
- Tip:** If you make a mistake, click the target item shown in the text area to highlight it, and then click Remove.
15. If you selected Any Items or Specific Items in step 11, 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.
 16. Click OK. The Specify Target Items window closes, and the third phrase shown in the Discount Terms list changes to reflect your choices.

Note: To specify additional targets, repeat steps 11 through 15.
 17. To close the Discount Terms pane, click the Discount Terms bar.

Order Discounts

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, as shown in Figure 7-16.

Figure 7-16 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, as shown in Figure 7-17.

Figure 7-17 Specify Discount Value Window



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.

Note: You do not need to type the % or currency symbols into the fields.

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, as shown in Figure 7-18.

Figure 7-18 Specify Order Discount Target Window

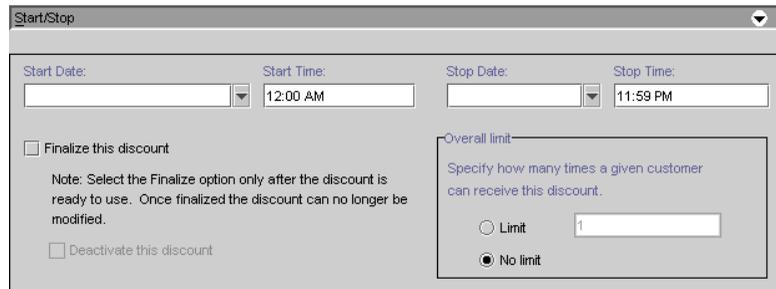


9. Select a radio button to apply the discount to either the order total or to the shipping cost.
10. Click the OK button. The Specify Order Discount Target window closes, and the third phrase shown in the Discount Terms list changes to reflect your choices.
11. To close the Discount Terms pane, click the Discount Terms bar.

Establish the Discount Duration and Overall Limit

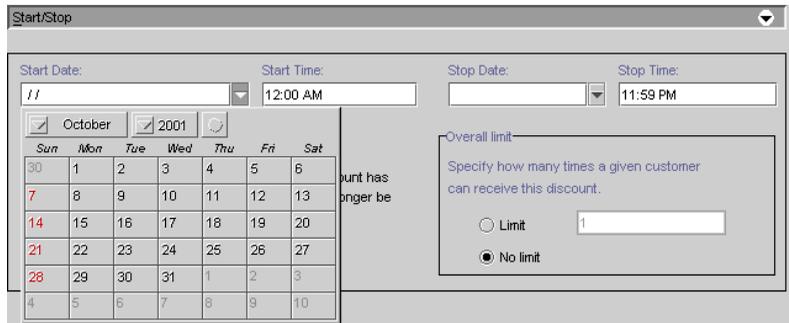
1. Click the Start/Stop bar. The Start/Stop pane opens, as shown in Figure 7-19.

Figure 7-19 Start/Stop Pane



2. Enter a start date, start time, stop date, and stop time for your discount in the fields provided.
Tip: For the start and stop date, you can either type in the date, or click the drop-down list to select the date from a calendar, as shown in Figure 7-20. Click a date to select it.

Figure 7-20 Start/Stop Date Calendar



3. Specify the overall limit for the discount by selecting either the Limit or No Limit radio button.

Note: Recall that the overall limit is a limit on the number of orders to which the discount can be applied.

4. If you chose an overall limit, enter a limit value in the corresponding field.

Caution: Before selecting the Finalize This Discount check box, read “Saving, Finalizing, and Synchronizing a Discount” on page 7-35. For now, skip over this option.

5. To close the pane, click the Start/Stop bar.

Saving, Finalizing, and Synchronizing a Discount

This section discusses the differences between saving, finalizing, and synchronizing a discount. It also provides guidance and instructions to accomplishing these tasks. These features are defined in the following list:

- 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:

1. Click the Save icon on the E-Business Control Center toolbar.
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, as shown in Figure 7-21.

Note: If you do not see the discount, click the Discounts icon in the Explorer window on the Business Logic tab.

Figure 7-21 Explorer Window: Discounts View



Tip: Single-clicking the discount name will cause its description to appear at the bottom of the Explorer window.

Tip: Holding the mouse over the discount name will also show you the discount description.

Finalizing a Discount

To finalize a discount, complete the following steps:

1. Open the Start/Stop pane.
2. 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 7-39. Remember, you can always return to the Start/Stop pane and finalize the discount at another time.

3. Save the discount.

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. Synchronizing is an important step that requires well-thought-out planning and processes. The following sources provide the necessary information:

- For complete information about deployment, see the *Deployment Guide*.
- For information about setting up your development environment, see “Milestone 4: Set Up a Development Site” in the *Strategies for Developing E-Business Web Sites* documentation.
- For information about connecting to the server, see “Connecting to the Server” in the Introduction to the BEA E-Business Control Center.
- For the procedures on synchronizing, see “Deploying Application Data” in the *Deployment Guide*.

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. For more information on how to set up your development environment, see “Milestone 4: Set Up a Development Site” in the *Strategies for Developing E-Business Web Sites* documentation.

Locating an Existing Discount

If you have defined numerous discounts, it can be time consuming to locate a particular discount by simply looking in the Discounts list. Therefore, the E-Business Control Center provides you with a mechanism to filter existing discounts by name.

To locate an existing discount using the name filter, complete these steps:

1. 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.
2. In the Name Filter field (shown in Figure 7-22), type the name of the discount you want to locate.

Figure 7-22 Name Filter Field



Note: You can type full or partial names into the Name Filter field. Discount names are case sensitive. Therefore, filtering based on the text “Sale” will not locate discounts with names that start with “sale.”

3. Click the Filter icon. The discounts that have names beginning with the text you entered appear in the Discounts list.

Note: To return to the full list of discounts, click the Show All Objects icon.

Modifying an Existing Discount

The E-Business Control Center also allows you to 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

Note: For more information about activation state, see “Deactivating and Reactivating Discounts” on page 7-41.

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. If necessary, switch to the Discounts view by clicking the Discount icon in the Explorer window on the Business Logic tab. A list of discounts appears in the Discounts list.
2. Click the name of the discount you want to modify. The discount is highlighted.
Tip: If there is a long list of discount names, use the name filter to locate the discount that you want to modify. For more information about the name filter, see “Locating an Existing Discount” on page 7-39.
3. Click the Open icon on the Explorer toolbar. The Discount Editor opens.
Tip: You can also open the discount by double-clicking on the discount name.
4. If the discount you opened has not yet been finalized, you can modify any part of the discount definition, except for the discount name. Follow the same instructions for defining a new discount, starting from “Specify General Discount Information” on page 7-23.
5. If the discount you opened has already been finalized, follow these steps:
 - 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.
Tip: For the stop date, you can either type in the date, or click the drop-down list to select the date from a calendar. Click a date to select it.
Note: For more information about deactivating discounts, see “Deactivating and Reactivating Discounts” on page 7-41.

6. 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 E-Business Control Center.

Deactivating and Reactivating Discounts

Once discounts are synchronized, they are considered active. In other words, synchronized discounts are working on your enterprise application.

To stop offering a discount, complete these steps:

1. In the Start/Stop pane, check the Deactivate This Discount check box.
2. Save the discount.
3. Synchronize the discount. 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.

If at any time you want to reactivate a discount, complete these steps:

1. In the Start/Stop pane, click the Deactivate This Discount check box to remove the check mark.
2. Save the discount.
3. Synchronize the discount. 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 E-Business Control Center.

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. If necessary, switch to the Discounts view by clicking the Discount icon in the Explorer window) on the Business Logic tab. A list of discounts appears in the Discounts list.
Tip: If there is a long list of discount names, use the name filter to locate the discount that you want to delete. For more information about the name filter, see “Locating an Existing Discount” on page 7-39.
2. Click the name of the discount you want to delete. The discount is highlighted.
3. To delete the discount, click the Delete icon on the Explorer toolbar.

Note: If the discount you are trying to delete is currently associated with a pending offer or a customer order, a message is displayed and you will not be able to delete the discount. This feature prevents errors in the system if the discount is still in use.

8 Discount Examples

This topic contains example discounts that are intended to illustrate how different discounts function under different circumstances. The examples cover a range of per item and set-based discounts of varying complexity and forms. They are not meant to be exhaustive in terms of covering all the possible discount combinations, but they cover a few basics and show cases where the semantics may not be immediately obvious. The further down the example is listed in this document, the more complex the example will be.

This topic contains the following sections:

- Per Item Discount Examples
 - A Simple Per Item Discount
 - A Simple Per Item Discount with a Limit
 - A Per Item Discount with a Minimum Purchase Requirement and Limit
 - Using Different Triggers and Targets
 - Discounting More Than One Target Item
 - Discounting an Exact Quantity of Target Items
 - Using Alternate Trigger Items
 - Requiring More Than One Trigger Item
 - Requiring More Than One Trigger (Each with Alternatives), and Having Alternate Targets
 - Using Multiple Required Targets
- Set-Based Discount Examples
 - Buy Two Get One Free
 - Percentage Off Discounting of a Set of Items

- Amount Off Discounting of a Set of Items
- Fixed Price Discounting of a Set of Items
- Using Multiple Trigger Sets
- Using Multiple Trigger Sets, with Quantities of Target Items Greater Than One
- Using Multiple Trigger Sets, with an Exact Quantity of Target Items

Per Item Discount Examples

This subsection contains several examples that help illustrate how per item discounts work. In each example, the discount terms (as they would appear in the Discount Terms pane of the Discount Editor window) are shown, and then one or more situations in which a customer may receive the discount as a result of the discount definition are provided.

A Simple Per Item Discount

For each item where SKU=T123 (no limit)
apply a 15% discount to
each trigger item.

- If a customer has 5 items of SKU equal to T123 in their shopping cart, the customer will receive 15% off each item.

A Simple Per Item Discount with a Limit

For each item where SKU=T123 (limit 3)
apply a 15% discount to
each trigger item.

- If a customer has 5 items of SKU equal to T123 in their shopping cart, the customer will receive 15% off 3 of the items.

A Per Item Discount with a Minimum Purchase Requirement and Limit

For each item where Product Category=DVD (minimum purchase 3, limit 6)
apply a 15% discount to
each trigger item.

- If a customer has 2 items of Product Category equal to DVD in their shopping cart, none of the items will be discounted.
- If a customer has 5 items of Product Category equal to DVD in their shopping cart, the customer will receive 15% off each of the items.
- If a customer has 8 items of Product Category equal to DVD in their shopping cart, the customer will receive 15% off 6 of the items.

Tip: You could use this format as a range to specify tiered discounts. If a customer purchases between 1 and 10 items, you may want to offer the customer a 5% discount. If the customer purchases between 11 and 20 items, you may want to offer the customer a 10% discount, and so on.

Using Different Triggers and Targets

For each item where SKU=T123 (no limit)
apply a 15% discount to
each of up to 1 item(s) where SKU=T444.

- If a customer has 5 items of SKU equal to T123 and 7 items of SKU equal to T444 in their shopping cart, the customer will receive a 15% discount on 5 of the T444 items.

Discounting More Than One Target Item

For each item where SKU=T123 (limit 3)
take \$5 off
each of up to 2 item(s) where SKU=T444.

- If a customer has 5 items of SKU equal to T123 and 9 items of SKU equal to T444 in their shopping cart, the customer will receive \$5 off 6 of the T444 items.

Note: Since there is a limit of 3 on the trigger items, only 3 discounts are earned; each discount earned can apply to 2 of the target items. This comes out to 6 items having their price adjusted.

Discounting an Exact Quantity of Target Items

For each item where SKU=T123 (limit 3)
apply a 5% discount to
each of exactly 2 item(s) where SKU=T444.

- If a customer has 5 items of SKU equal to T123 and 5 items of SKU equal to T444 in their shopping cart, the customer will receive 5% off 4 of the T444 items.

Note: Since there is a limit of 3 on the trigger items, only 3 discounts are earned. Each discount earned must be applied to exactly 2 of the target items. After the first two pairs of T444 are discounted, there is only one item left over, rather than a complete pair; hence the remaining item is not discounted.

Using Alternate Trigger Items

For each item where SKU=T123 or SKU=T456 (no limit)
set a price of \$10 on
each trigger item.

- If a customer has 4 items of SKU equal to T123 in their shopping cart, the customer will receive each of the items for \$10.
- If a customer has 3 items of SKU equal to T456 in their shopping cart, the customer will receive each of the items for \$10.
- If a customer has 2 items of SKU equal to T123 and 5 items of SKU equal to T456 in their shopping cart, the customer will receive each of the items for \$10.

Tip: You might do this when you have items that you want to treat as interchangeable, as far as the discount is concerned.

Requiring More Than One Trigger Item

For each item where Product Category=DVD Player (no limit)
and where SKU=Theater Sound Receiver (no limit)

apply a 50% discount to

each of up to 2 item(s) where Product Category=DVD

- If a customer has 1 DVD player and 5 DVDs in their shopping cart, then the customer will receive no discounts.

Note: A customer must have both the DVD Player *and* the Theater Sound Receiver to qualify for the discount.

- If the customer has 1 DVD player, 1 Theater Sound Receiver, and 5 DVDs in their shopping cart, they will receive 4 of the DVDs at 50% off.

Note: The customer had both the DVD Player *and* the Theater Sound Receiver in their shopping cart, so the customer qualified for two discounts: one for each item. Since each discount can be applied to up to 2 DVDs, 4 of the 5 DVDs in the customer's cart have their prices adjusted to 50% off.

- If the customer has 2 DVD players, 1 Theater Sound Receiver, and 5 DVDs in their shopping cart, the customer will receive all 5 DVDs at 50% off.

Note: Since there was no limit placed on the DVD players, this trigger condition is met if one or more DVD players is purchased, and a discount is earned for each one purchased (with the stipulation that at least one Theater Sound Receiver is also purchased). Therefore, in this example, up to 6 DVDs could have been purchased at 50% off.

Requiring More Than One Trigger (Each with Alternatives), and Having Alternate Targets

For each item where Product Category=DVD Player or Product Category=VCR (no limit)
and where Product Category=Theater Sound Receiver or Product Category=Stereo Receiver or Product Category=Shelf Stereo System (no limit)

apply a 50% discount to

each of up to 2 item(s) where Product Category=DVD or Product Category=Movie (videocassette)

- If the customer has 1 VCR player, 1 Theater Sound Receiver, and 7 movies (on video) in their shopping cart, the customer will receive 4 of the movies at 50% off.

Note: The customer had both the DVD Player *and* the Theater Sound Receiver in their shopping cart, so the customer qualified for two discounts: one for each item. Since each discount can be applied to up to 2 movies, 4 of the 5 videos in your cart have their prices adjusted to 50% off.

- If the customer has 1 VCR player, 1 DVD Player, and 7 movies (on video) in their shopping cart, the customer will receive no discounts.

Note: The customer must have either a DVD player or a VCR, as well as either a Theater Sound Receiver, Stereo Receiver, or Shelf Stereo System, to qualify for the discount. Since the customer had 2 items from the former group, but none from the latter, the customer will not receive any discounts.

- If the customer has 2 DVD Players, a Theater Sound Receiver, a Shelf Stereo System, and 7 DVDs in their shopping cart, the customer will receive all 7 of the DVDs at 50% off. If the customer had purchased 10 DVDs, 8 of them would have been priced at 50% off.

Using Multiple Required Targets

For each item where Product Category="Bicycle Frame" (limit 1)

apply a 25% discount to

each of exactly 2 item(s) where Product Category="Bicycle Tires"
and each of up to 1 item(s) where Product Category="Bicycle Seat"

- If the customer has 1 Bicycle Frame, 2 Bicycle Tires, and 1 Bicycle Seat in their shopping cart, the customer will receive the tires and seat at 25% off.
- If the customer has 1 Bicycle Frame, 1 Bicycle Tires, and 1 Bicycle Seat in their shopping cart, the customer will receive no discount, since the discount must apply to *exactly* 2 tires as well as 1 seat.
- If the customer has 2 Bicycle Frames, 4 Bicycle Tires, and 2 Bicycle Seats in their shopping cart, the customer will receive 2 tires and 1 seat at 25% off.

Note: Since there is a limit of 1 on the the bicycle frames, the discount on the tires and seats can only be earned once per order.

Set-Based Discount Examples

This subsection contains several examples that help illustrate how set-based discounts work. In each example, the discount terms (as they would appear in the Discount Terms pane of the Discount Editor window) are shown, and then one or more situations in which a customer may receive the discount as a result of the discount definition are provided.

Buy Two Get One Free

Note: In this example, assume that the limit is set to 2.

For the set of the following items: a set of 2 items where SKU=T123 apply a 100% discount to each of up to 1 item(s) where SKU=T123

- If the customer has 3 items of SKU equal to T123 in their shopping cart, then the customer will receive one for free.
Note: The same SKU was repeated in the target phrase rather than indicating that the discount be applied to the trigger items. Had the latter option been selected, the set of two trigger items would have been free.
- If the customer has 5 items of SKU equal to T123 in their shopping cart, then the customer will receive 1 for free.
Note: After getting the third item for free, the fourth and fifth items qualified for another discount but there was no additional item to discount. Had there been a sixth item of SKU equal to T123, it would have been free.
- If the customer has 9 items of SKU equal to T123 in their shopping cart, the customer will receive 2 for free.
Note: Since there is a limit of 2, the discount can only be earned twice per order. For set-based discounts, the limit is not displayed in the Discount Terms pane, but above it, near the Set-Based Discount option.

Percentage Off Discounting of a Set of Items

For the set of the following items: a set of 2 items where SKU=T123 apply a 10% discount to each trigger item.

- If the customer has 2 items of SKU equal to T123 in their shopping cart, the customer will receive each item for 10% off.

Amount Off Discounting of a Set of Items

For the set of the following items: a set of 2 items where SKU=T123 take \$10 off each trigger item.

- If the customer has 2 items of SKU equal to T123 in their shopping cart, the customer will receive each item for \$10 off.

Fixed Price Discounting of a Set of Items

For the set of the following items: a set of 2 items where SKU=T123 set a price of \$10 on each trigger item.

- If the customer has 2 items of SKU equal to T123 in their shopping cart, the customer will receive each item for \$10.

Using Multiple Trigger Sets

For the set of the following item(s): a set of 1 items where Product Category=Bicycle Frame and a set of 2 items where Product Category=Bicycle Tires

take \$10 off

each of up to 1 item(s) where Product Category=Bicycle Seat

- If the customer has a bicycle frame, 2 tires, and two seats in their shopping cart, the customer will receive \$10 off one of the seats.

Note: Since the frame and the 2 tires are treated collectively as one set, only one discount has been earned.

Using Multiple Trigger Sets, with Quantities of Target Items Greater Than One

For the set of the following item(s): a set of 1 items where Product Category=Bicycle Frame and a set of 2 items where Product Category=Bicycle Tires

set a price of \$1.00 on

each of up to 5 item(s) where Product Category=Small Decals

- If the customer has a bicycle frame, 2 tires, and 4 small decals in their shopping cart, the customer will receive all 4 decals for \$1.00 each.
Note: Since the frame and the 2 tires are treated collectively as one set, one discount is earned. The discount can be applied to up to 5 small decals.
- If the customer has a bicycle frame, 2 tires, and 7 small decals in their shopping cart, the customer will receive 5 decals for \$1.00 each (and the remaining decals at full price).

Using Multiple Trigger Sets, with an Exact Quantity of Target Items

For the set of the following item(s): a set of 1 items where Product Category=Bicycle Frame
and a set of 2 items where Product Category=Bicycle Tires
set a price of \$1.00 on
each of exactly 5 item(s) where Product Category=Small Decals

- If the customer has a bicycle frame, 2 tires, and 4 small decals in their shopping cart, the customer will receive no discount.
Note: Even though one discount has been earned, based on the set of trigger items, it must be applied to exactly 5 small decals.

9 Roadmap for Creating Promotional Campaigns

This topic describes the high-level process or roadmap you should follow when creating a new promotional campaign in the BEA E-Business Control Center. Following this process will help ensure the best possible delivery of targeted information to your online customers, and reduce your risk for errors when using the application. Where relevant, this topic contains references to other documentation that provides step-by-step instructions for executing the tasks described, or to documentation that provides more details about a concept.

This topic contains the following sections:

- Introduction
- Examples of Campaign Types
 - Combining Campaigns with Discounts to Sell Products
 - Generating Revenue with Ad Clickthroughs
 - Notifying Employees of New Benefits
- Creating Customer Segments
- Using Scenario Templates
- Designing Campaign Scenario Actions
 - Specifying General Campaign Information

- Customer Segments in Scenario Actions
- About Probability-Based Branching
- Authoring Campaign Messages
 - Authoring Ads
 - Placing Ads in Your Web Site
 - Authoring E-mails
- Defining Discounts
- Campaign Maintenance
- Extending the Services That Support the E-Business Control Center
- Deciding on Campaign and Scenario Scope
 - Approach A
 - Approach B
 - Approach C
 - A Note About These Approaches

Introduction

Most promotional campaigns conceived within your organization will be developed within the context of a strategic business objective. For example, you may want to run campaigns aimed at increasing your average order size by employing cross-sell or up-sell tactics. However, you can also use campaigns on internal Web sites. For example, your Human Resources department can set up an employee portal and use campaigns to encourage employees to sign up for specific benefits.

As you define your overall campaign objective, you will need to answer the following core marketing questions:

- Which group of customers do I want to include in my campaign?
- How can I most effectively communicate with campaign customers?

- What is the offer I need to extend to maximize my response?
- Where on my Web site should this message be conveyed?

The answers to these questions relate directly to how you will set up your promotional campaign using the E-Business Control Center. The remaining sections in this roadmap provide guidance for developing your promotional campaigns.

Examples of Campaign Types

This section provides examples of campaigns that are designed to fulfill different types of business objectives:

- Combining Campaigns with Discounts to Sell Products
- Generating Revenue with Ad Clickthroughs
- Notifying Employees of New Benefits

Combining Campaigns with Discounts to Sell Products

If you use WebLogic Portal and you want to target discounts for specific segments of your customers, you can use a campaign to do the following:

- Display targeted advertisements when a specific type of customer logs in to your site.
- Reduce the price for products that the customer places in the cart. You can also reduce or remove shipping charges, or discount the total price of the order.

For example, you want to entice professional carpenters who buy circular saws from your e-commerce Web site to buy saw blades as well. When a customer logs in, WebLogic Portal determines if the customer is in your `ProfessionalCarpenter` customer segment. If so, and the customer places a circular saw in the shopping cart, then the shopping cart displays an ad for a 50% discount on saw blades. The customer places the saw blades into the shopping cart and receives the discounted price.

Generating Revenue with Ad Clickthroughs

If your business generates revenue by advertising products, you can use a campaign to do the following:

- Run a test campaign to determine which customer type (customer segment) is most likely to click through a set of advertisements.
- Based on the results of the test, target advertisements to maximize clickthroughs.

For example, Jan's Roasted Coffee contracts with you to advertise their french roast blend during the month of August. They pay 5 cents for each ad display (impression) and 1.5 cents for each ad clickthrough up to \$2000.

To try to maximize the number of ad clickthroughs, you run a test campaign to determine which customers are most likely to respond to the Jan's Roasted Coffee ad and at what times of day the ad clickthroughs are most likely to occur. Your campaign analysis shows that adult females respond to advertisements for Jan's Roasted Coffee between the hours of 6 a.m. and 9 a.m. Using this information, you can create a campaign to target ads to an `AdultFemale` customer segment during the specified hours. Since your contract with Jan's Roasted Coffee is during the month of August, you can set up the campaign to begin displaying coffee ads on August 1st and stop displaying them on September 1st.

Notifying Employees of New Benefits

If you use WebLogic Portal for your internal Web site, you can use a campaign to encourage your employees to log in to your human resources portal and sign up for a new benefit.

For example, the ACME insurance company creates a new alliance with a health care provider network in New England. You can use a campaign to send e-mail to all employees who live in New England and use the ACME insurance company. When the employee logs in to your internal Web site, you can also display ads for health care seminars that are available to your New England employees.

Creating Customer Segments

When you have answered the question, “Which group of customers do I want to include in my campaign?”, you will be ready to create one or more customer segments in the E-Business Control Center.

A customer segment is a grouping of customers based on common characteristics from their customer profiles, such as age, occupation, product preferences, and the amount of purchases they have made; or a grouping of customers you want to communicate with or target with your marketing campaigns. A customer segment can also be identified in the E-Business Control Center by visitors who log in on specific dates or times, or by visitors whose HTTP session or request information matches properties you set up in the E-Business Control Center Session and Request tools.

As part of creating your promotional campaigns, one of the first things you will need to do is to create customer segments. Once you create a customer segment, the customer segment can be reused in any number of campaigns, whenever you feel it is relevant to your campaign objective.

For More Information

- To learn more about customer profiles and customer segments, or for step-by-step instructions about how to create new customer segments, see “Using Customer Segments to Target High-Value Markets.”
- For technical information about how a Web site gathers customer profile information, see the *Guide to Developing Campaign Infrastructure*.

Using Scenario Templates

Out of the box, the E-Business Control Center provides you with four scenario templates that you can modify to quickly create scenarios that are meaningful for your promotional campaigns. The goal of these scenario templates is to provide useful, easily applicable, and time-saving templates for reuse, and to illustrate more advanced

applications of the E-Business Control Center. The following paragraphs provide a brief description of each scenario template that comes packaged with the E-Business Control Center.

Registration Confirmation E-mail

Demonstrates how a registration confirmation e-mail can be sent to your Web site visitors.

Discount and Ad Actions

Displays a discount ad in conjunction with an associated discount action. In other words, if a customer sees the discount ad and as a result, purchases the item shown in the ad, the customer will receive a discount. This template is available only with WebLogic Portal.

Online Content Test

Tests ad effectiveness using probability-based branching. This scenario template, by default, targets equal thirds of the visitors in the matching customer segments who visit the site while the campaign is running. (See “About Probability-Based Branching.”) You can use this template to test the effectiveness of a single ad on different types of customers, or test multiple ads on a single type of customer.

E-mail Pilot Test

The Pilot Test template tests which of three e-mail messages is most effective. Each of the three messages is triggered by an event and is sent to a specific customer segment. Each e-mail is sent to a random sample within 5% of the visitors matching the segment. (See “About Probability-Based Branching.”.) It is expected that the e-mail generating the best response would be rolled out to a wider customer population.

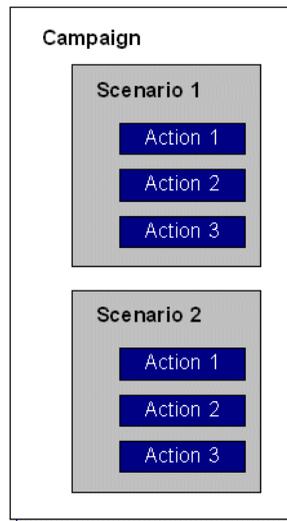
Though the values will be predefined as part of the scenario templates, you can change them to suit your needs. You will also need to provide specific values for any bracketed, undefined, hyperlinked text shown by clicking on them. However, you may also choose to uncheck some of the conditions associated with the bracketed text, if you choose to remove these hyperlinks instead.

Designing Campaign Scenario Actions

When you have answered the question, “How can I most effectively communicate my offer?”, you will be ready to design one or more scenario actions for inclusion in your campaign using the E-Business Control Center. For example, when a visitor logs in who is identified as a power tool buyer, sending an automatic e-mail might be an effective way of advertising a sale on table saws. In combination with an automatic e-mail, you may also decide that power tool buyers are likely to add saw blades to their cart if they saw the 50% off ad that was displayed during check out.

The term campaign, as used in the E-Business Control Center, is a named group of scenarios that work together to achieve strategic business goals. Scenarios, in turn, implement tactics in support of the campaign’s strategic goals. Scenarios are comprised of scenario actions, as shown in Figure 9-1.

Figure 9-1 Campaigns, Scenarios, and Scenario Actions



Using the circular saw buyers example, the over-arching strategic goal would be to increase the number of saw blades purchased by circular saw buyers. A tactic used to achieve this goal might be to display an ad that publicizes the discount to customers in the ProfessionalCarpenter segment during check out. Another tactic might be to

send regular ProfessionalCarpenter customers an e-mail about the 50% off offer. The goal (campaign) remains the same, but there are different tactical means (scenarios) by which the goal can be achieved.

The implementation of different tactics (scenarios) is accomplished through each *scenario's actions*, which control the particular aspects of your e-commerce Web site. The E-Business Control Center comes with three types of pre-configured scenario actions: ad, discount, and e-mail. You can design your scenario action to display an ad or send an e-mail when the right conditions are met. You can also design your scenario action to offer a discount. The E-Business Control Center provides a variety of conditions that you can use to trigger these scenario actions.

You may choose to include multiple scenario action types within a given scenario, and you can create as many scenarios as you like using the E-Business Control Center. However, the way you organize your scenarios—and there are many possible ways—will affect your promotional campaign.

For More Information

- For a brief discussion of other, campaign-related information you will need to specify in the E-Business Control Center, see “Specifying General Campaign Information” on page 9-9.
- If you want to use a discount as a scenario action, you must have previously defined the discount. For more information about defining discounts, see “Designing Campaign Scenario Actions” on page 9-7 of this roadmap document or “Defining Stand-Alone or Campaign Discounts.”
- For more information on ad and e-mail scenarios, see “Authoring Campaign Messages” on page 9-15.
- For guidance on organizing scenario elements and thus your promotional campaigns, see “Deciding on Campaign and Scenario Scope” on page 9-23.
- For more frequently used and more complex scenarios, the E-Business Control Center also provides predesigned scenario templates, so you that do not have to build all your scenarios from scratch. For more information about the scenario templates, see “Using Scenario Templates” on page 9-5.

Specifying General Campaign Information

In addition to scenarios, campaigns also have some general information associated with them. You may have already considered this information during your strategic planning efforts, and perhaps you are ready to use this information when creating a campaign in the E-Business Control Center. Before using the E-Business Control Center to implement a campaign, however, be sure you have considered the following:

- Campaign Attributes
- Campaign Duration and End Criteria

Campaign Attributes

Campaign attributes are simply some descriptive information about the campaign that can prove helpful to you when dealing with the campaign in the future. The E-Business Control Center requires that you specify the name of the campaign sponsor and a description of the campaign. Optionally, you can specify a goal description (value proposition) for the campaign, such as “to entice circular saw buyers to add saw blades to their cart before check out.” All campaign attributes you specify can later be used as campaign search criteria.

Campaign sponsors are entities (that is, organizations) that have commissioned a campaign and on whose behalf the campaign is run. Often, the campaign sponsor will be the same as the organization who owns and operates the e-business Web site, or a department within that organization. However, the Web site owner may want to sell advertising on the site or enter into manufacturer or distributor sponsored campaigns. In such cases, the sponsor is different from the organization that owns the site. In the E-Business Control Center, the sponsor can be used as a criterion for campaign searches as well as for reporting and analysis purposes.

The name you choose when you save your promotional campaigns also has an effect on future campaign reporting. By applying a standardized naming convention across specific campaign fields you can further simplify the process of organizing and aggregating campaign data for inclusion in reports. For example, if you always begin your promotion names with campaign type (upsell, cross-sell, retention, and so on), you will be able to roll up or sort based on this standard.

For More Information

For more information about searching for campaigns, see “Locating Existing Campaigns” on page 10-27.

Campaign Duration and End Criteria

A campaign normally has a fixed duration, or period of time during which it is active. The E-Business Control Center will record your campaign’s starting and ending date and time. For campaigns using scenarios with ad actions, however, the E-Business Control Center also provides you with another option: a campaign goal can be used to stop the campaign, prior to its scheduled end date. For example, the goal might be for a certain number of circular saw buyers to *clickthrough* an ad to another Web page that provides details about a saw blade discount. Or maybe you just want a certain number of people to see your ad (called an *impression* in the E-Business Control Center). In the E-Business Control Center, these goals are called campaign *end criteria*. When your goal is satisfied—that is, when the number of ad clickthroughs or impressions reaches the number you set—the campaign can end.

Customer Segments in Scenario Actions

The E-Business Control Center allows you to target customers for personalized content and messaging by creating dynamic groupings called customer segments. Every visitor may be evaluated during their session in your site or application to determine if they qualify for targeting as a member of one or more defined customer segments. In order to determine if a customer is a member of a given segment, each qualifying condition you specify is evaluated. Thus, a segment is a manageable way of bundling together two or more characteristics that represent a complex customer type.

When and When Not to Use Segments

You do not always have to use customer segments to target specific groups of people with campaign scenario actions. When creating a scenario action, instead of triggering the action on a customer segment, you can trigger the action if the visitor has certain characteristics—the same set of characteristics you can use to create a customer segment. So since you can trigger a scenario action on visitor characteristics with or without a customer segment, you should put some thought into whether or not you create customer segments.

In the following guidelines to determine whether or not you should create a customer segment for use in scenario actions, reuse is the key:

- **When to use customer segments** – Create customer segments to trigger scenario actions when the customer segment can be reused for other actions, in other campaigns, or for content selectors.
- **When not to use customer segments** – Do not create customer segments to trigger scenario actions if the customer segment would be created to support just that action or a potentially small number of actions.

Order and Logic of Evaluation

Both scenarios and scenario actions can be targeted at segments. If segments are used in scenarios and its actions, the segments are evaluated as if they are connected with AND logic; that is, a customer must qualify as a member of both segments in order for the customer to be targeted in that campaign.

Usefulness of Chaining Segments

The logic of AND-ing segments means that you can use them to progressively narrow your targeting without having to script new, even more complex segments.

Retail Example

You could target a scenario only at Active Browsers (in other words, the visitor's last visit is less than 10 days ago, with total purchases less than X), and then target separate actions within that campaign to Stay-at-Home Moms (that is, female visitors with children under 10 and a session time between 10 a.m. and 4 p.m.), and Internet Pros (visitors with a high-speed connection, software/internet employment, and income \$100K+).

B2B Example

You could target a scenario only at Tier 1 Customers, and then target separate actions within that campaign to Managers and Accounting.

Cautionary Notes

Note that it is possible to target nobody by carelessly chaining the targeting of segments in a scenario and its actions.

Absurd Example

You could target a scenario only at Male Category A (using some set of conditions, including male gender), and then target a separate action within that campaign to Female Category A (using some set of conditions, including female gender). This action would actually target no customer, since it would be looking for female customers only within the male users that satisfied the topmost scenario segment.

A more likely case of this phenomenon would be one where very few users satisfied all the conditions of both the scenario segment and its action segments. Therefore, it is important to be familiar with the underlying conditions that make up your established segment definitions.

What if You Only Need to Target One Segment?

Where should you input your segment targeting (if any)—at the scenario level, or at the action level?

Typically it should be at the scenario level for the following reasons:

- A campaign's targeting may be easier to manage at the scenario level, even if it contains a complex series of ad, e-mail, and discount actions.
- The typical business model for personalized campaigns asks first "whom do you want to target?" Putting segment targeting at the top level ensures that other business users inspecting your campaigns in the E-Business Control Center can locate the targeting quickly, without having to delve into individual scenario actions.

However, targeting segments at the action level is useful in some instances; for example, when you anticipate needing to add parallel actions within the same scenario later, but target those actions at different customer segments.

About Probability-Based Branching

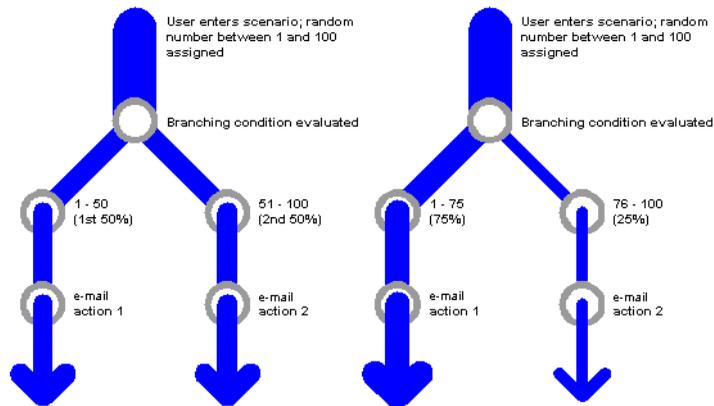
Probability-based branching is a mechanism for dividing campaign scenario actions into proportional but random customer segments (subject to other conditions that may apply). Each time a scenario is evaluated to determine if any of its actions (ad, e-mail, or discount) apply to the customer, a random number between 1 and 100 is automatically generated by the system. If any action in the scenario includes a

probability-based branching condition, then that number is used in its evaluation. If no scenario includes branching, then the number is forgotten, and a new random number is assigned for the next scenario in the campaign.

Branching is designed to provide two distinct capabilities:

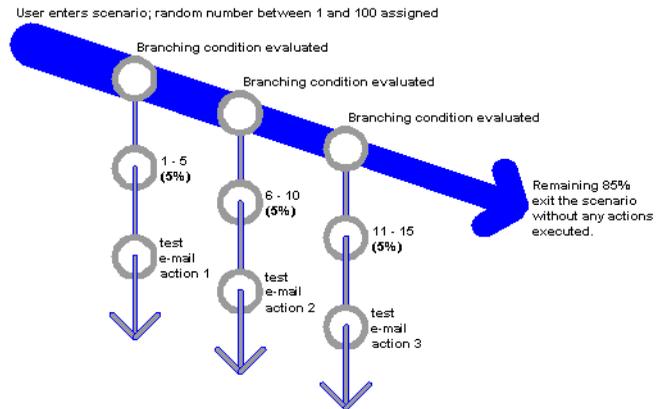
- Dictate that all the actions in a scenario be executed exclusive of each other (branching) and in some specific proportion to each other, as shown in Figure 9-2.

Figure 9-2 Branching the Entire Population by Varying Percentages



- Scale down the number of times a scenario executes to some small percentage of all visitors, as shown in Figure 9-3. This is useful for conducting test marketing against less than all users of the site or application.

Figure 9-3 Branching a Small Percentage of the Population, as a Test Case



Note: It is important to keep in mind what the base of the branching condition is. Consider a branching condition set 50% (from 1 to 50). Will this condition filter its action to execute only for half your customers? Not necessarily.

First of all, remember that the 50% branch condition is only being evaluated for customers that visit the site. Secondly, active visitors may be further filtered by some customer segment targeting at the scenario level, and then again at the action level. So the final 50%, in some cases, may be a percent of a percent of a percent, and so on. (For more information about defining customer segments at the campaign and scenario levels, see “Customer Segments in Scenario Actions” on page 9-10.)

This is particularly important to keep in mind when using smaller branches (approximately 5%) for test marketing. Depending on customer segmentation, a 5% or 3% branch may target so few customers as to be statistically meaningless. Think through the targeting and branching so you reach a useful number of your user base.

Setting a Scenario to Run Just Once for a Visitor

Of particular use when branching actions for test marketing is the Once This Action Is Performed, Do Not Run The Scenario Again For This Visitor check box option, shown in the New Action windows (for ads, discounts, and e-mails). In the ordinary course of campaigns, each time a qualifying visitor comes to the site, that visitor can be targeted with whatever promotional messages (ads and/or e-mails) and discounts are active. However, you usually need mutually exclusive populations for valid market tests. Therefore, the E-Business Control Center provides the ability to have a scenario run once only per visitor. This feature is also pertinent in the case of e-mail campaigns. In many cases, you will want customers to receive only one copy of a given promotion via e-mail.

Authoring Campaign Messages

The E-Business Control Center allows you to use both ads and e-mails in scenario actions to convey promotional messages. If you choose either of these options, you must have previously authored these messages (much like you previously define discounts) and consider a few other factors before using them, as described in the following subsections:

- Authoring Ads
- Authoring E-mails

Authoring Ads

An ad can be a graphic, a segment of HTML or plain text, or a file that is displayed by a Web browser plug-in. Before you can use an ad in your promotional campaign, you will first need to create and store it.

Develop a collection of ads.

You might work with your Web site's graphic artists to do so.

Load the ads into a content management system.

You might work with your Business Engineer or other technical resource to do so. One important attribute to consider as the ads are loaded into the content management system is an *ad weight*. An ad weight indicates the importance of the ad, relative to other ads in the system.

Placing Ads in Your Web Site

After you create and store your ads, you must determine which pages display the ads and where on those pages the ads are displayed.

Determine location(s) on your Web site for ad display.

Ads used within the E-Business Control Center should appear in predefined locations, called *placeholders*, which are embedded in Web pages by your business engineers (or other technical resources). Placeholders answer the question, “Where on my Web site should this message be conveyed?” For circular saw buyers, you may want to display the ad in a prominent location, like at the top of the shopping cart page. Placeholders should have descriptive names that allow you to quickly identify them. For more information on placeholders, see the chapter on “Displaying Ads.”

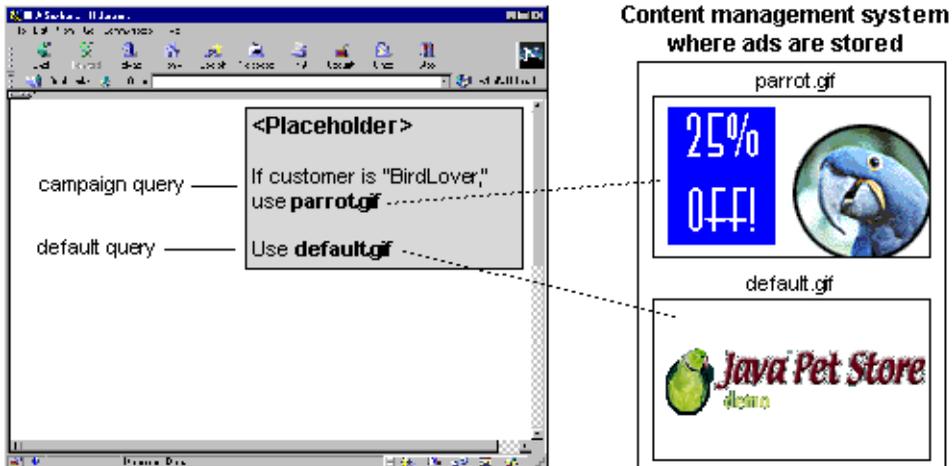
Determine default ad queries (searches).

One or more ads are returned from the content management system for possible display on your Web site as the result of ad queries (searches). Ad queries are run by placeholders, and can be of two types: default or campaign. Default ad queries are queries that retrieve ad content regardless of whether or not the conditions for your campaign are met, ensuring that some ad is always displayed in the placeholder. Campaign ad queries retrieve ad content only when specific circumstances are met. For example, if a customer logs in, and that customer is a member of a customer segment called `BirdLover`, you could display an ad on the page that tells about a sale on parrots.

It is also good practice to combine campaign and default queries inside an ad placeholder. When you do this, you are guaranteed that an ad of some kind will be displayed in the placeholder.

Figure 9-4 illustrates the placeholder concept. If a “BirdLover” is logged in to the site, the campaign query retrieves an ad from the ad database and puts it on the page in the placeholder. A default query is also assigned to the placeholder for all other customers or visitors.

Figure 9-4 Placeholder with a Campaign Query and a Default Query



After a graphic artist or ad developer creates and stores ads, a business analyst or business engineer creates the placeholders (names them and assigns queries to them) in the E-Business Control Center, and a developer puts the placeholders in the appropriate JSPs.

Determine relative importance (priority) for your ad queries.

A *display priority* controls how likely it is that an ad query will run, relative to other ad queries that have the potential to be run in the same placeholder. Default ad queries in the E-Business Control Center automatically have a lower priority than campaign queries, but you can modify this to meet your requirements. (You can also set default ad queries to not run if campaign queries exist in a placeholder.) Because more than one ad may be retrieved as the result of a query, the ad weight attribute assigned to individual ads in your content management system help determine which ad out of the resulting group is actually displayed to your Web site visitors.

If two ad queries in a placeholder have the same priority, both have the same chances of being run in a placeholder. Be sure to follow your organization's established policy for assigning display priorities if you wish to avoid this situation.

For More Information

- For more information on creating ad placeholders and queries in the E-Business Control Center, see “Displaying Ads.”
- For technical information storing ads in a content management system and adding placeholders to JSPs, see “Setting up Ads for Campaigns” and “Setting up JSP Tags and Scriptlets for Campaigns” in the *Guide to Developing Campaign Infrastructure*.

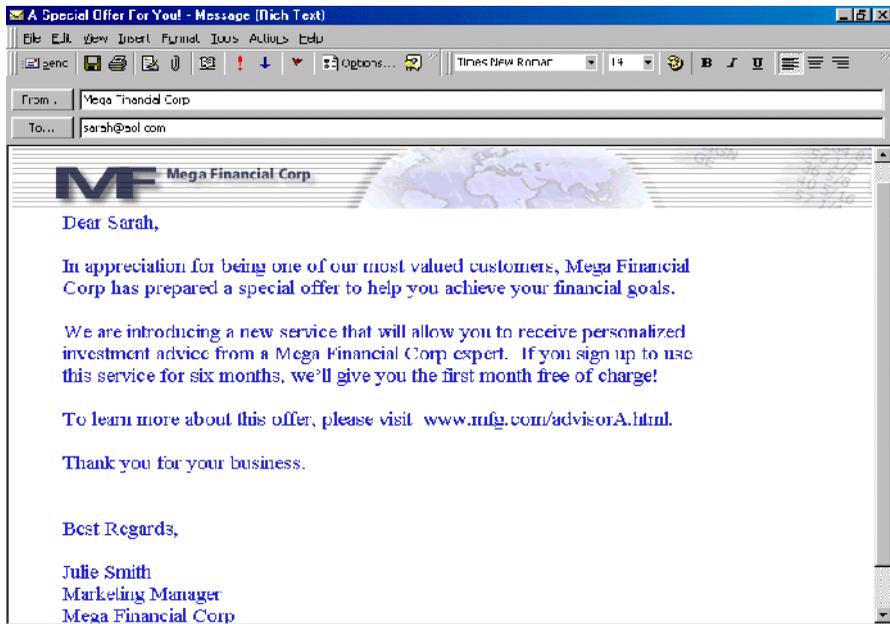
Authoring E-mails

As part of a promotional campaign, you may decide to send an e-mail to specific customers. Before you can send e-mails, however, you will first need to:

Create your e-mail messages.

Like ads, e-mail messages may contain different content depending upon the purpose of your promotional campaign. You may want to include some customer profile information (such as the customer’s name in a salutation) to further personalize your message, as shown in Figure 9-5.

Figure 9-5 Sample Promotional E-mail



Note: To ensure that the appropriate customer profile information is substituted into the message, you may need to collaborate with your business engineer or another member of your organization's technical staff to personalize your e-mails in this way.

Save your e-mails as files, in a central location.

You might want to create a collection of e-mails for use in scenario actions. E-mails can be in TXT, HTML, JSP, or XML (with style sheets) formats. Your system administrator or business engineer must set up the e-mail storage location so that you can access e-mail when creating campaign e-mail actions. If the e-mail files are stored in a specific directory structure, you will be able to use the E-Business Control Center's e-mail browsing window to locate the e-mail messages you want. This directory structure is:

PORTAL_HOME\applications\\campaigns\emails

where <app_name> is your enterprise application directory.

For information on setting up a connection from the E-Business Control Center to the e-mail messages stored on the server, see “Connecting to the Server” in the “Introduction to the BEA E-Business Control Center.”

For More Information

- For more information about the information used to connect to a server, see “Connecting to the Server” in the “Introduction to the BEA E-Business Control Center.”

Defining Discounts

With WebLogic Portal, you can use discounts to help you realize your strategic business objective. For example, if your goal is to entice circular saw buyers in your hardware store to add saw blades to their cart, you might offer them a 50% discount on the saw blades.

To define discounts that are meaningful for your marketing efforts, you will need to consider the following:

Discount Duration

The length of time for which the discount will be offered (start and stop date and time).

Discount Usage

Stand-alone or campaign. Stand-alone discounts are offered to everyone who buys something from your Web site without regard for customer segments or campaign goals. Stand-alone discounts cannot be used in campaigns.

Campaign discounts can be used in discount scenario actions and awarded to customers who meet specific criteria, whether they belong to a particular customer segment, have certain characteristics, or simply buy something on a certain date. You will usually create specific campaign discounts to be used in specific campaigns, so be aware of how the start and stop dates of your campaign discounts compare to the start and stop dates of your campaigns.

Discount Types

Per item, set-based, or per order. Per item discounts are discounts that apply to individual items in your product catalog, while set-based discounts are discounts that apply to sets of items in your product catalog. Order discounts are discounts that can apply to a customer's entire order.

You will also need to identify the items that cause the discount to be offered (called *trigger items*) and the items to which the discount should be applied (called *target items*). For example, if a customer puts a miter saw in the shopping cart (trigger), the customer receives a 50% discount on saw blades (target). You will also need to consider the *discount value* (the percentage or dollar amount of the discount) that you may be required to supply for that discount type. All discount values can be specified as a percentage off, an amount off, or a fixed price.

Discount Limits

Overall, order, and/or minimum purchase requirement. An overall limit is a limit on the number of orders to which the discount can be applied. Order limits restrict how many times the discount can be received per order, and can be placed on items that trigger the discount, or on items to which the discount is applied. For per-item discounts, you can also specify a minimum purchase requirement.

Discount Priority

The relative importance of a discount, specified by a value in the range of 1-20 (with 1 being the highest). In the event that two similar discounts apply to a given item, the priority associated with each discount helps resolve the conflict.

The E-Business Control Center does not detect situations in which multiple discounts are assigned the same priority. If two discounts have the same priority, one of the discounts will be selected at random. Be sure to follow your organization's established policy for assigning discount priorities if you wish to avoid this situation.

For More Information

- To learn more about discounts, or for step-by-step instructions about how to define new discounts, see "Defining Stand-Alone or Campaign Discounts."
- For technical information about how discounts work behind-the-scenes, see the *Guide to Managing Purchases and Processing Orders*.

Warning: Because customer orders may be linked to discounts once they are deployed, you will not be able to modify or delete a discount until its associated time frame (duration) has expired or until it can be determined that no orders are linked to the discount. Therefore, it is extremely important that you define discounts appropriately.

Campaign Maintenance

When saving your campaigns, the E-Business Control Center will ask you to supply a campaign filename. You or others in your organization might find that establishing and following certain naming conventions for campaigns is useful. For example, campaign file naming conventions might help you tie together and therefore quickly locate related campaigns, or assist you when it comes time to run analytic reports. Filename conventions can also identify ownership among different users designing and working with campaigns.

You will also find it beneficial to write good descriptions for your campaigns. You might even use descriptions as a way to coordinate with other users of the E-Business Control Center. For example, you might want to include an author or contact name in the campaign description, so that others who see the campaign know who to contact if and when they have questions about that campaign.

Extending the Services That Support the E-Business Control Center

Out-of-the-box, the E-Business Control Center provides many elements you can use to create your own unique promotional campaigns. However, it is possible that you may want to extend the E-Business Control Center to more closely match your e-business needs. For example, the E-Business Control Center allows you to select from a number of predefined customer behaviors (events) to trigger scenario actions. If you think of

an event that is not already available, you may want it to be created and added to the system. Customer profile information is another example; the system is extremely flexible in the data it can store about visitors to your Web site.

If you believe that extending the E-Business Control Center would be helpful, you will initially need to collaborate with a business engineer or other technical resource in your organization who can make modifications to the tool. If possible, you should initiate this process before proceeding with the E-Business Control Center.

For More Information

To determine what events are initially available for use in the E-Business Control Center, see “Creating and Managing Property Sets”. However, keep in mind that if your organization extends the services that support the E-Business Control Center, you should use the E-Business Control Center itself to view the most up-to-date list.

Deciding on Campaign and Scenario Scope

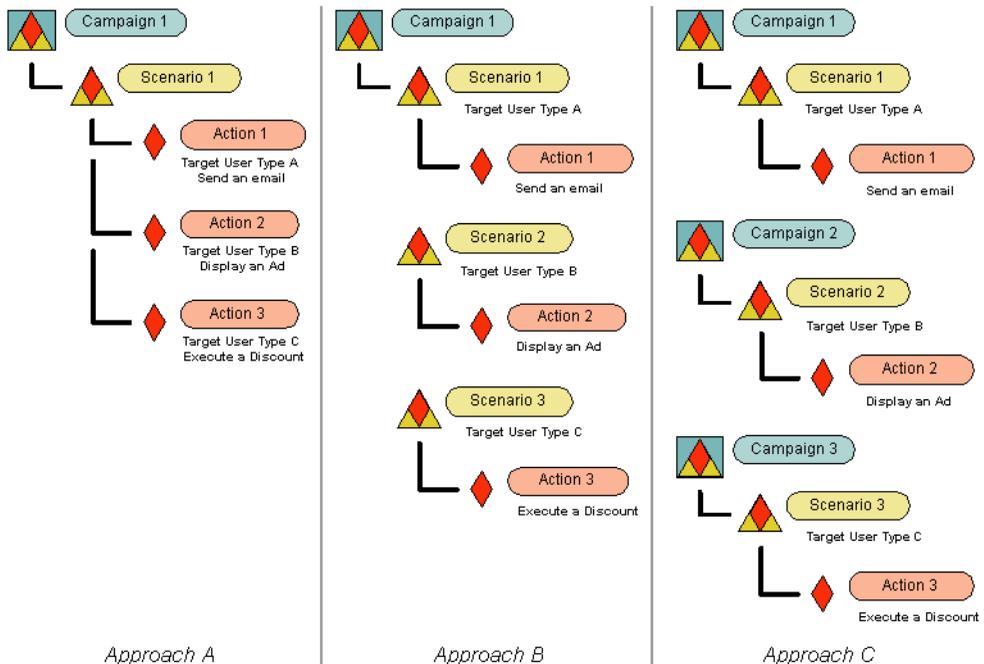
The E-Business Control Center is so flexible that it may seem that there are always multiple ways to accomplish any one goal. And yet, you will learn that there are often preferred ways to use the tool, and to structure your campaigns, depending on factors such as:

- Your internal organization – do campaign sponsors come from different departments or represent a single department?
- Your workflow – will other business analysts be editing and copying your campaigns, or is it a one-person show? Will the sponsor be delegating work to the person using the E-Business Control Center to create campaigns?
- Your development, staging, and production environments – do you use a source-control system and a document or content management system?
- Your own skills inventory – are you technically savvy and able to handle situations where your campaigns overlap with custom implementations? Or are you more comfortable being insulated from technical tasks, such as programming?

- Your working relationship with IT, programming support, in-house consultants, writers, webmasters, graphic artists, and so on – is your desktop environment for the E-Business Control Center managed closely for you, or do you maintain it yourself, including server connections and access to content, ads, and e-mails?
- Your marketing or merchandising calendar – do you run a monthly special every so often, or is your catalog filled with dozens of overlapping specials and discounts?
- Your user base – is your audience segmented only vertically, by their value to the business (for example, purchase history, tier), or are they also segmented horizontally (for example, by class of partnership, business group, role, or submarket)?

Consider the following sets of campaigns (strategic), scenarios (tactical), and actions (operational), shown in Figure 9-6.

Figure 9-6 Campaign and Scenario Nesting Approaches

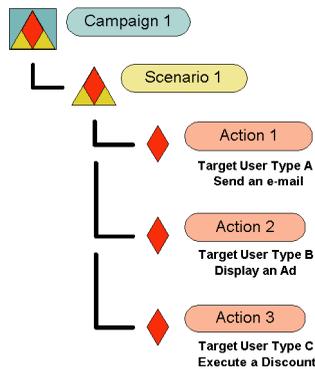


These three campaign approaches are apparently equivalent. Each approach will result in customers being recognized if they are members of one of three target segments, and being sent or displayed the appropriate content (that is, each approach satisfies an identical customer use case).

However, each has pros and cons, even in this simple generic example.

Approach A

Figure 9-7 A Closer Look at Approach A



Approach A (shown again in Figure 9-7), where all actions are lumped into a single scenario in a single campaign, is best when:

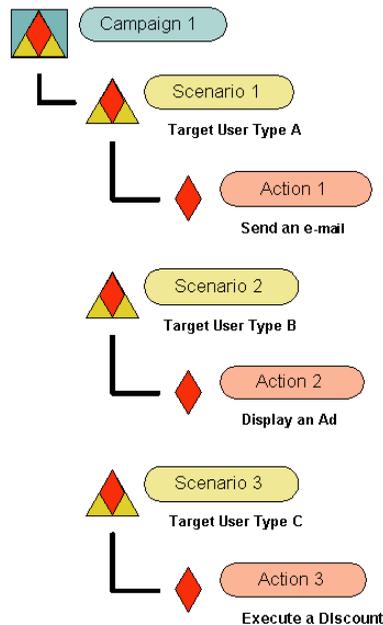
- All the interactions are sponsored by one sponsor and run for the same period of time.
- The campaign is set to end automatically when a certain number of impressions or clickthroughs is reached in Action 2 (the Ad Action), and you want the e-mail and discount actions to shut off at the same time.
- The single scenario, with its three actions, can be thought of as a unified business case, all supporting each other, for example, a succinct offer or incentive, including the presentation of the offer (ad), the discount itself, and a positive feedback (e-mail).

Approach A has drawbacks for the following situations:

- When each action has its own sponsor or administrator.
- Each action has a distinct business purpose, goal, or description. For ease of management, these would be best captured in separate campaigns or scenarios, which fields for description, and so on.
- If the campaign is set to end automatically when a certain number of impressions or clickthroughs is reached in Action 2 (the Ad Action), and you do not want the e-mail and discount actions to cease at the same time.

Approach B

Figure 9-8 A Closer Look at Approach B



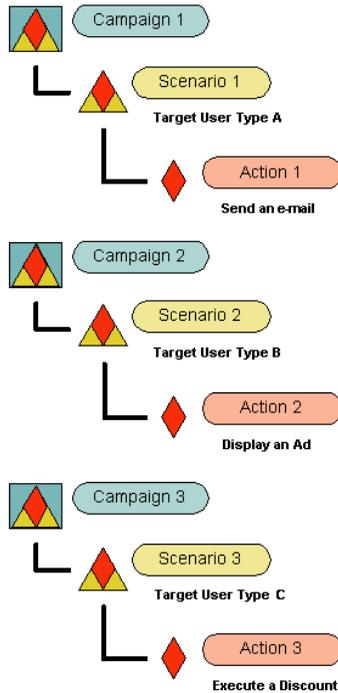
Consider Approach B (shown again in Figure 9-8), which puts each action into separate scenarios—but all within a single campaign—for the following case:

- If you administer campaigns as a larger promotional unit, and within a campaign administer several programs. For example:

- Q2 Loyalty Campaign (channel scenarios):
 - E-mail component (multiple e-mail actions)
 - Ad component (multiple ad actions)
 - And so on.
- ...or:
 - Holiday Specials Campaign (departmental scenarios):
 - Sporting goods scenario (e-mail/ad/discount)
 - Surplus auction scenario (e-mail/ad/discount)
 - And so on.

Approach C

Figure 9-9 A Closer Look at Approach C



Approach C (shown again in Figure 9-9), which breaks every action and scenario out into separate campaigns, is best in the following cases:

- Each interaction is sponsored by a different sponsor, and runs for different periods of time.
- When each action has its own administrator.
- Each action has a distinct business purpose, goal, or description. For ease of management, these would be best captured in separate campaigns, which fields for description, and so on.

- If you have more than a few people administering campaigns with the E-Business Control Center. Approach C pushes every interaction up to the level of a campaign, where its title is visible and searchable in the Explorer window.

A Note About These Approaches

If you look again at Figure 9-6, you will see that Approaches A and B might represent any individual campaign, such as you will first create when you begin to use E-Business Control Center.

However, Approach C might resemble your collection of campaigns and scenarios after some time, when you have built and launched multiple campaigns. Each of the campaigns nested within Approach C can have a structure like that of Approach A or Approach B.

This observation suggests that new users of the E-Business Control Center proceed conservatively, dividing up campaigns according to their internal business processes and marketing programs, and reassess their practices periodically, trying to strike a balance that avoids either of these extremes:

- Cramming too much functionality into a single campaign, limiting access to and management of its constituent actions.
- Breaking every action into its own campaign, sacrificing the power of the scheduling tools and scenario branching, and unnecessarily cluttering the Explorer interface with long lists of campaigns.

9 *Roadmap for Creating Promotional Campaigns*

10 Creating and Managing Promotional Campaigns

This topic contains step-by-step information for defining a new campaign or modifying existing campaigns within the BEA E-Business Control Center. For conceptual descriptions of a campaign or for discussions of the business applications of campaigns, see Chapter 9, “Roadmap for Creating Promotional Campaigns.”

This topic includes the following sections:

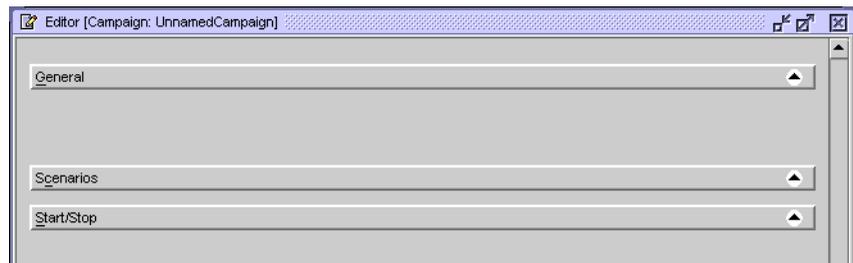
- Creating a New Promotional Campaign
 - Specifying General Campaign Information
 - Adding Scenarios to the Campaign
 - Adding Actions to Your Scenarios
 - Entering the Campaign Duration and End Criteria
- Locating Existing Campaigns
- Modifying Existing Campaigns
 - Deactivating and Reactivating Campaigns
- Deleting Existing Campaigns
- Debugging Campaigns
 - Reactivating Campaigns That Have Ended Because of Goals Being Met

Creating a New Promotional Campaign

To create a new promotional campaign, follow these steps:

1. From the BEA E-Business Control Center, choose File → New → Business Logic → Campaign. The Campaign Editor window opens, as shown in Figure 10-1.

Figure 10-1 Campaign Editor Window

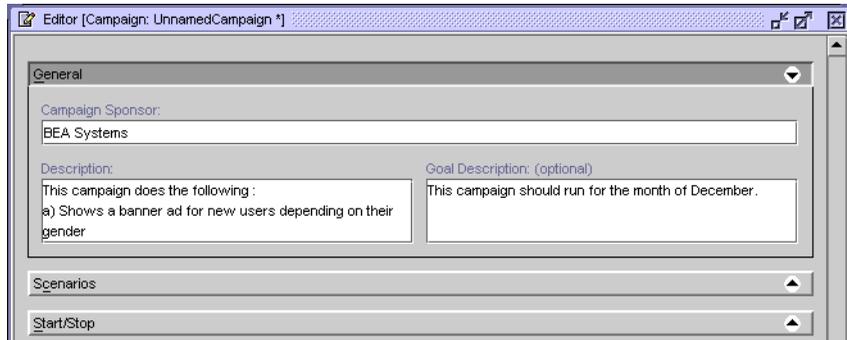


2. You must now follow the steps provided in the following sections to:
 - Specifying General Campaign Information
 - Adding Scenarios to the Campaign
 - Adding Actions to Your Scenarios
 - Entering the Campaign Duration and End Criteria

Specifying General Campaign Information

In the General pane (Figure 10-2), enter a description, campaign sponsor, and optionally, a goal description.

Figure 10-2 General Campaign Information Pane



Adding Scenarios to the Campaign

Because campaigns are groups of scenarios that are associated with a business goal, scenarios are at the very heart of your campaign. In scenarios, you will specify one or more actions to take place on your Web site when certain conditions are met.

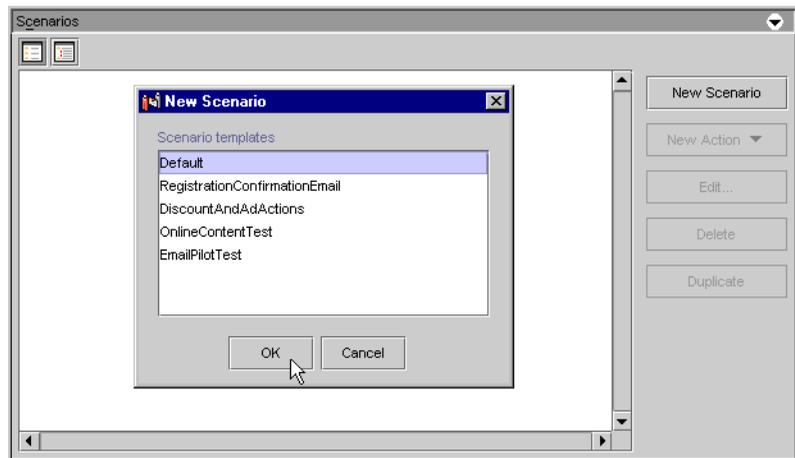
To add scenarios to the campaign:

3. In the Scenarios pane, click New Scenario. The New Scenario window opens, displaying a list of scenario templates, as shown in Figure 10-3.

Note: For a description of each scenario template, see “Using Scenario Templates” on page 9-5.

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.

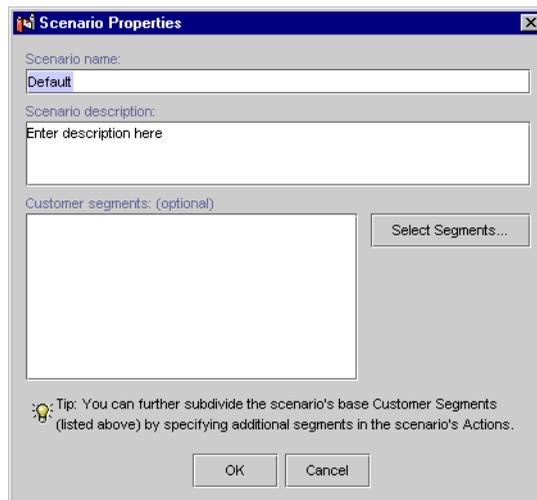
Figure 10-3 Scenarios Pane



4. Select a scenario template and click OK. The Scenario Properties window opens, as shown in Figure 10-4.

To start with a blank scenario, select Default.

Figure 10-4 Scenario Properties Window



5. Enter a unique name for the scenario in the Scenario Name field, and a description of the scenario in the Scenario Description text area.
6. If you want to select customer segments at the scenario level, you may do so now by clicking the Select Segments button.

Note: For an explanation of why you might want to select customer segments at the scenario level and how this is different from selecting segments at the scenario action level, see “Customer Segments in Scenario Actions” on page 9-10. To select customer segments, you must have previously created them. For information on creating customer segments, see “Using Customer Segments to Target High-Value Markets.”

7. Click OK.
8. A message appears indicating that the new scenario has been created and that you may now add actions to the scenario. Click OK. The scenario name you specified appears in the Scenarios list.

If you selected customer segments, these appear in addition to the scenario name in the Scenarios list.

9. Add actions to the scenario, as described in “Adding Actions to Your Scenarios.”

Adding Actions to Your Scenarios

Now that you have defined your scenario, you must add actions to it. There are three types of actions you can add to a scenario:

- Ad Actions
- E-mail Actions
- Discount Actions (available only with WebLogic Portal)

Duplicating Actions

Here is a tip to use after you have created other actions. Instead of creating a brand new action, you can save editing time by duplicating an existing action that has similar settings to the action you want to create. To do this, select the action you want to duplicate, and click the Duplicate button. A duplicate action is added to the scenario. You can double-click the new action to edit it.

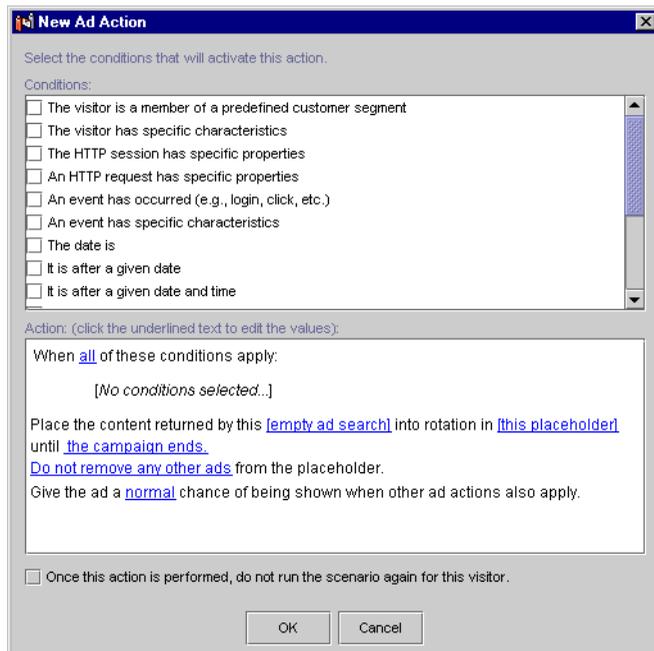
Ad Actions

When you specify an ad action, you are defining criteria that will be used to select an appropriate ad for your online customer from a number of ads that are stored in your organization's content management system. Be sure that you have already developed these ads and that the ads exist within your content management system. For more information, see "Authoring Ads" on page 9-15 or "Describing Ads in Your Content Management System" in "Displaying Ads."

To add ad actions to your scenario, follow these steps:

1. Select the name of the scenario to which you want to add the action.
2. Click the New Action button, and select Ad. The New Ad Action window appears, as shown in Figure 10-5.

Figure 10-5 New Ad Action Window



3. Click the check boxes shown in the Conditions portion of the New Ad Action window to select the condition(s) under which the ad will be displayed. Text describing the conditions you selected appears in the Action portion of the New Ad Action window.

You must add at least one condition, or you will not be able to save the scenario action. For an explanation of the possible conditions, see “Listing of the Available Conditions” in “Building Conditions and Queries in the BEA E-Business Control Center.”

Tip: You can use conditions in ways that always evaluate to true. For example, you can select the It Is after a Given Date condition and then specify the date as January 1, 1970.

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

For example, if you selected the Date Is condition, you must specify a value for the hyperlinked [date] text in “the date is [date]” condition statement, shown in the Action portion of the New Ad Action window.

To specify values for bracketed hyperlinked text, just click the text. Depending upon the condition and the hyperlink, a window or a dialog box opens. Table 10-1 provides a consolidated listing of the conditions and indicates where to look if you need detailed instructions for any of the corresponding windows/dialog boxes.

Note: Table 10-1 shows all the conditions that may be used within the E-Business Control Center. Therefore, not all conditions shown here may apply to the action you are creating.

Table 10-1 Instructions for Building Conditions

Condition(s)	Relevant Instructions in the “Building Conditions and Queries in the BEA E-Business Control Center” chapter
The visitor is a member of a predefined customer segment	“Using the Select Customer Segments Window”
A visitor, HTTP session, HTTP request, or an event has specific characteristics	“Using the Properties and Visitor Characteristics Windows”

Table 10-1 Instructions for Building Conditions (Continued)

Condition(s)	Relevant Instructions in the “Building Conditions and Queries in the BEA E-Business Control Center” chapter
An event (such as login or click) has occurred	“Using the Select Events Window”
Dates and times	“Important Note About Dates and Times” (The dates and times you set are based on universal time [UTC].) “Using the Date/Time Entry Dialog Boxes”
There is a specific item in the shopping cart, there is an item from a given category in the shopping cart, the value of items in the cart is a certain amount	“Using Quantity Selector or Currency Selector Dialog Boxes” “Using the Select Operator Dialog Box” “Using the Select Product Categories/Items Windows”
Note: This condition is available only in WebLogic Portal.	
A random number falls within a given range	“Using the Enter a Range Dialog Box”

- If you selected more than one condition, you may want to click the All hyperlink in the When All Of These Conditions Apply phrase to change All to Any.

The Any/All link acts as a toggle. Clicking on Any will change it to All, and visa versa.

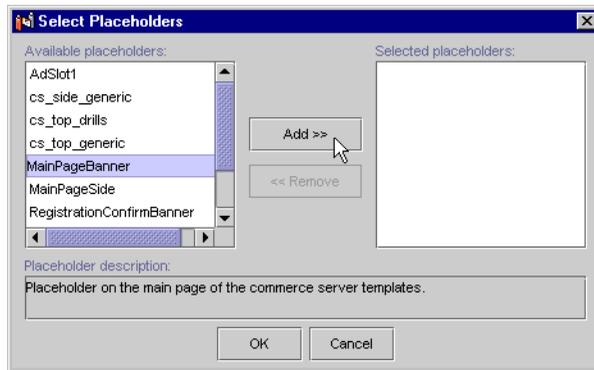
- Click the [empty ad search] hyperlink. The Ad Search window opens. Follow the instructions in “Constructing Queries” in “Building Conditions and Queries in the BEA E-Business Control Center.” to specify criteria for the ad that should be displayed.

If you have not set up connection settings to the server for searching your ad database, or if you have not signed in to this area of the server yet, the Connection Setup window appears. If you have already set up a server connection, select the name of the connection in the Display Name field, and enter your user name and password. If you have not set up a connection to the server yet, see “Connecting to the Server” in the “Introduction to the BEA E-Business Control Center” for information.

7. Click the [this placeholder] hyperlink. The Select Placeholders window opens, as shown in Figure 10-6.

To select placeholders, you must have previously created them. For information on creating placeholders, see “Creating Ad Placeholder Files” in “Displaying Ads.”

Figure 10-6 Select Placeholders Window



8. In the Select Placeholders window, move the placeholder(s) that will display the ads into the Selected Placeholders list.

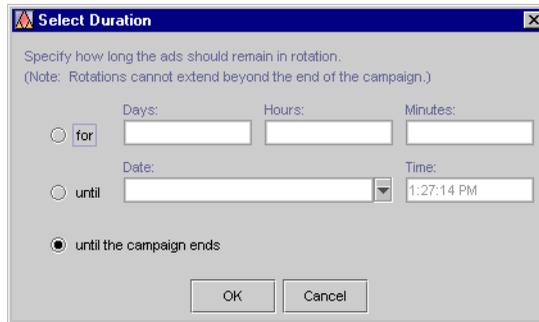
Verify that you are selecting the appropriate placeholder by viewing the text shown in the Placeholder Description text area.

9. Click OK. The Select Placeholders window closes. The name of the placeholder(s) appears in place of the generic [Placeholder] hyperlink in the Action portion of the New Ad Action window.

You can click the new link to edit the placeholder(s) used.

10. Click the [the campaign ends] hyperlink. The Select Duration window appears, as shown in Figure 10-7.

Figure 10-7 Select Duration Dialog Box



11. In the Select Duration dialog box, set a time at which the ad will be cleared from the placeholder, and click OK.

For example, if a promotion within your campaign ends prior to the end of the campaign, this feature helps ensure that promotional ads don't appear after the promotion ends.

The date and time you set is in relation to universal time (UTC). For more information, see "Important Note About Dates and Times" in "Building Conditions and Queries in the BEA E-Business Control Center."

12. For information on the [Do not remove any other ads] hyperlink, see "Clearing Campaign Queries from Ad Placeholders" on page 10-13.

Figure 10-8 Placement Options Dialog Box



13. If you want to change the ad's display priority, click the [Normal] hyperlink, change the priority in the Select Display Priority dialog box, and click OK.

The display priority value appears in place of the Normal hyperlink in the Action portion of the New Ad Action window.

For more information on ad display priorities, see “Authoring Ads” on page 9-15.

14. 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 at the bottom of the New Ad Action window.
15. Click **OK**. The New Ad Action window closes. The conditions and corresponding actions you selected appear beneath the scenario name (and if applicable, customer segments) in the Scenarios list.

You may add different types of scenario actions to your scenario. For example, you may now want to add a discount or e-mail action to the same scenario where you just added the ad action. You may also choose to add another ad action to the same scenario. (Whether you do so or not depends upon whether you want to target the same segments that are specified in this scenario.)

The Flexibility of Campaign Queries in Placeholders

In the E-Business Control Center, a business analyst can create a scenario action that places a query in a specific ad placeholder when an event or some other state triggers the scenario.

WebLogic Portal uses a table to keep track of which scenario-specific queries in a placeholder apply to which customer IDs. For example, if Pat Gomes triggers a scenario to place a query in the top-banner placeholder, WebLogic Portal stores the Pat Gomes/top-banner-placeholder/scenario-query association in a table in its data repository.

Once a scenario places a query in a placeholder for a specific user, WebLogic Portal keeps the query in the placeholder until any of the following occurs:

- The campaign achieves its goal for running the scenario query and displaying the corresponding ad.
- The campaign ends because it has achieved some other goal, the end date/time for the campaign has arrived, or a business analyst ends the campaign in the E-Business Control Center.
- An event or system state triggers another action for the scenario (or re-triggers the same action) that placed the query in the placeholder.

Scenarios can contain multiple actions that place queries in one or more placeholders under different conditions. For example, when Pat Gomes logs in,

scenario1 can place queryA in the top-banner placeholder. When Pat Gomes adds a drill to the shopping cart, scenario1 can place queryB in the top-banner placeholder. However, when a scenario engages a scenario action, it can place only one query in a placeholder for a given customer, and the query remains in the placeholder until the scenario replaces it. For example, when Pat Gomes adds a drill to the shopping cart, scenario1 replaces its queryA with queryB.

- The date/time that you specify in the Select Duration window (by clicking [the campaign ends] hyperlink in the Ad Action window) has expired.
- You click the [Do not remove any other ads] hyperlink in an ad action and select one of the “Remove” options. When the action is triggered, the relevant queries are cleared.
- You use the Tools → Reset Campaigns option in the E-Business Control Center. (See “Debugging Campaigns” on page 10-33.)

Because of the dynamic nature of campaign queries, some actions might leave a query stranded in a placeholder for a specific user, even across multiple sessions on the Web site.

For example:

- After a scenario action places a query in the top-banner placeholder for Pat Gomes, a business analyst deletes the scenario action. Deleting the scenario action does not clear the query from the placeholder. Only another action from the same scenario can replace the query. Instead of deleting the scenario or scenario action, we recommend that you modify the scenario action to place queries for generic ads in the placeholder. Then, when the scenario action is triggered, it replaces the campaign-specific query with a generic, default ad query.
- An action in one scenario puts a query in a placeholder, and an action in another scenario puts another query in the placeholder. If both queries have an equal change of being run, the ads that appear in the placeholder become more unpredictable. There is even a possibility that multiple campaigns can put queries in one placeholder, adding further unpredictability to the ads that are displayed in that placeholder.
- Pat Gomes places a drill in the shopping cart and triggers a scenario action to place a query in a shopping-cart placeholder. If Pat Gomes removes the drill from the shopping cart, the scenario action does not remove its query from the shopping-cart placeholder. Only another action from the same scenario can

replace the query. For example, along with the action that places a query in the shopping-cart placeholder when a user adds a drill to the shopping cart, you can create an action for the same scenario that places queries for generic ads in the shopping-cart placeholder when a user removes a drill from the shopping cart.

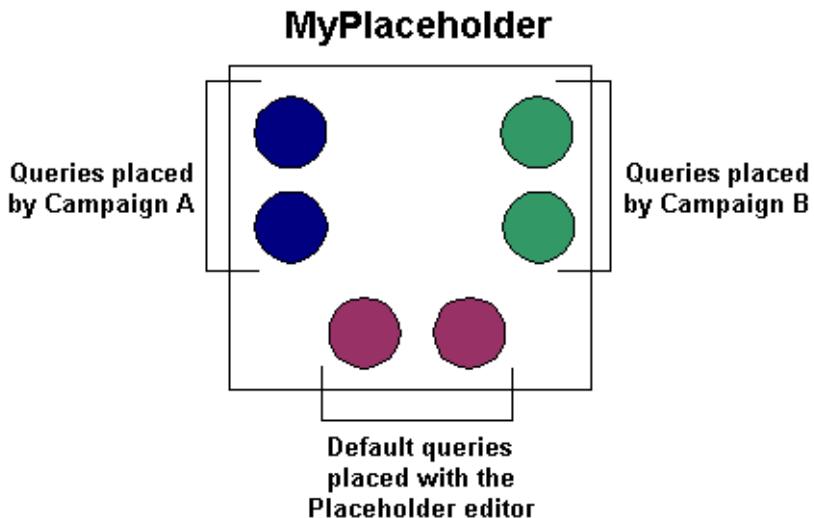
Clearing Campaign Queries from Ad Placeholders

In general, for clearing ad placeholders, we recommend that for each scenario that includes an ad-placeholder action, you include an additional scenario action that displays queries for generic ads in the same ad placeholder when a user logs in.

However, there may be cases where you want to clear out all campaign queries from a placeholder to make sure the query being put in a placeholder has no competition from other campaign queries.

Figure 10-9 shows how an ad placeholder can contain multiple queries that compete with each other.

Figure 10-9 Queries in an Ad Placeholder



Assuming all queries have the same priority (see “Determining Which Query is Run in “Displaying Ads”), all queries in this placeholder have an equal chance of being run, giving you less certainty about which ad will appear.

Note: If the default queries are set to be suppressed if campaign queries are present, they will not be used if a campaign query is put in the placeholder. See “Suppressing Default Queries when Campaign Queries Exist” in “Displaying Ads.”

If your organizational policies allow it, you can set an ad action to remove other campaign queries from a placeholder when the action is run, thereby ensuring that the query placed by the action is run in the placeholder (assuming the default queries are suppressed, as explained in the previous note).

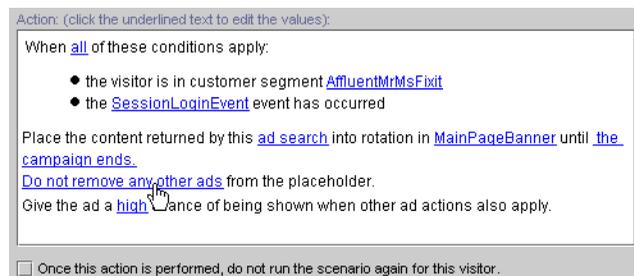
To remove other campaign queries when an action is run:

1. With the campaign open in the E-Business Control Center, open the scenario ad action you want to work with.

If you need to create a scenario or ad action, see “Adding Scenarios to the Campaign” on page 10-3 and “Adding Actions to Your Scenarios” on page 10-5.

2. In the Ad Action window, click the “Do not remove any other ads” link, as shown in Figure 10-10.

Figure 10-10 Removing Other Campaign Queries



The Placement Options dialog box appears, as shown in Figure 10-11.

Figure 10-11 Placement Options Window



3. Select whether you want to remove queries in the placeholder put there by the current campaign, or whether you want to remove queries in the placeholder put there by any campaign.

Default queries always remain in the placeholder unless you delete them in the placeholder editor in the E-Business Control Center. Even though they remain in placeholders, they do not necessarily run. Default queries will not run when a campaign query is present, if you have defined the default queries accordingly.

Note: There is an option in the E-Business Control Center that, among other things, lets you clear all ads (all campaign queries) put in placeholders by campaign actions (Tools → Reset Campaigns). This option is primarily for campaign debugging purposes. See “Debugging Campaigns” on page 10-33.

E-mail Actions

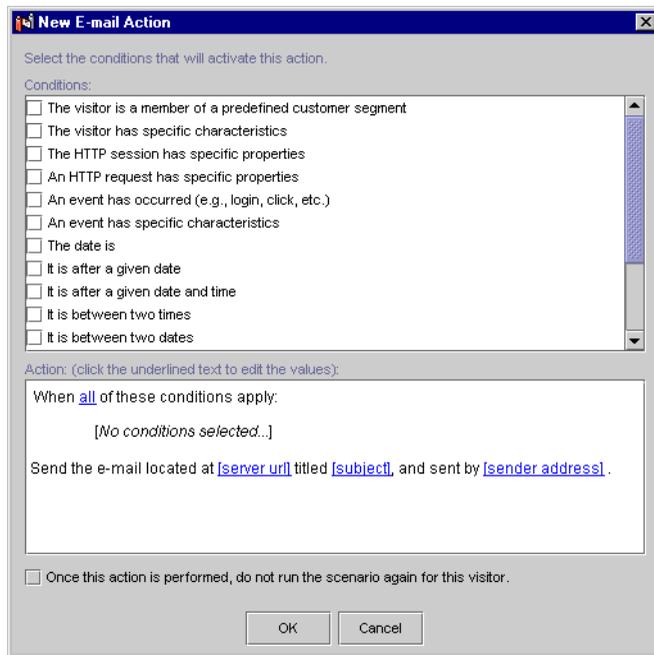
As part of specifying an e-mail action—an action that automatically sends an e-mail to a visitor when the action is triggered—you will need to reference a previously developed e-mail message. Be sure that you have already developed some e-mail messages, as explained in “Authoring E-mails” on page 9-18.

When you specify e-mail actions, remember that e-mails will *only* be sent to those customers who visit your Web site, meet the conditions you specify for the action, and have not chosen to opt out of receiving e-mails.

To add e-mail actions to your scenario, follow these steps:

1. Select the name of the scenario to which you want to add the action.
2. Click the New Action button, and select E-mail. The New E-mail Action window appears, as shown in Figure 10-12.

Figure 10-12 New E-mail Action Window



3. Click the check boxes shown in the Conditions portion of the New E-mail Action window to select the condition(s) under which the e-mail will be sent. Text describing the conditions you selected appear in the Action portion of the New E-mail Action window.

You must add at least one condition, or you will not be able to save the scenario action. For an explanation of the possible conditions, see “Listing of the Available Conditions” in “Building Conditions and Queries in the BEA E-Business Control Center.”

Tip: You can use conditions in ways that always evaluate to true. For example, you can select the It Is after a Given Date condition and then specify the date as January 1, 1970.

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

For example, if you selected The Date Is condition, you must specify a value for the hyperlinked [date] text in “the date is [date]” condition statement, shown in the Action portion of the New E-mail Action window.

To specify values for bracketed hyperlinked text, just click the text. Depending on the condition and the hyperlink, a window or a dialog box opens. Table 10-1 provides a consolidated listing of the conditions and indicates where to look if you need detailed instructions for any of the corresponding windows/dialog boxes.

5. If you selected more than one condition, you may want to click the All hyperlink in the When All Of These Conditions Apply phrase to change All to Any. The Any/All link acts as a toggle. Clicking on Any will change it to All, and visa versa.
6. Click the [Server URL], [Subject], or [Sender Address] hyperlink. The Enter E-mail Information dialog box opens, as shown in Figure 10-13.

Figure 10-13 Enter E-mail Information Dialog Box



7. In the URL for E-mail Content field, specify the e-mail that will be sent. You can type the URL of the e-mail, or you can click the Browse button to select the e-mail you want on the server.

A valid server URL is the location of the file relative to your application directory. For example, if your file is found at `PORTAL_HOME\applications\wlcsApp\wlcs\campaigns\emails\email.jsp` on your sever, where `wlcsApp` is your enterprise application folder, the valid URL would be the path below that application directory to the e-mail JSP file. For example, `/wlcs/campaigns/emails/email.jsp`.

Note: If the e-mail files are stored in a specific directory structure on the server, you will be able to use the Browse button to locate the e-mail messages you want. This directory structure is:

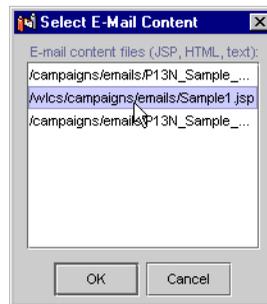
```
PORTAL_HOME\applications\<app_name>\campaigns\emails
```

where *<app_name>* is your enterprise application directory.

8. If you enter the URL manually, skip to step 11.
9. If you click the Browse button to locate an e-mail, the Select E-mail Content window is displayed, as shown in Figure 10-14.

Note: If you have not yet set up connection settings to the server for retrieving or previewing e-mail messages stored on the server, the Connection Setup window appears. If you have already set up a server connection, select the name of the connection in the Display Name field, and enter your user name and password. If you have not set up a connection to the server yet, see “Connecting to the Server” in the “Introduction to the BEA E-Business Control Center” for information.

Figure 10-14 The Select E-mail Content Window



10. Select the e-mail you want, and click OK.

The Select E-Mail Content window closes, and the URL of the e-mail appears in the Enter E-Mail Information window.

11. Enter a subject for the e-mail and an optional sender's e-mail address.

Note: To preview the e-mail, click Preview. (You need a server connection to preview e-mail. See the previous Note.) When prompted to enter a user ID, the name you enter will be used to show a personalized version of the

e-mail, and is inserted where the customer's real user ID would typically appear.) Click OK. A preview of the e-mail will be displayed in your Web browser.

12. Click OK. The Enter E-mail Information dialog box closes, and the e-mail URL, subject, and sender e-mail address (if applicable) appear in place of the generic hyperlinks in the Action portion of the New E-mail Action window.

13. 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 at the bottom of the New E-mail Action window.

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.

14. Click OK. The New E-mail Action window closes. The conditions and corresponding actions you selected appear beneath the scenario name (and if applicable, customer segments) in the Scenarios list.

You may add different types actions to your scenario. For example, you may now want to add an ad or discount action to the same scenario where you just added the e-mail action. You may also choose to add another e-mail action to the same scenario. (Whether you do so or not depends upon whether you want to target the same segments that are specified in this scenario.)

Discount Actions

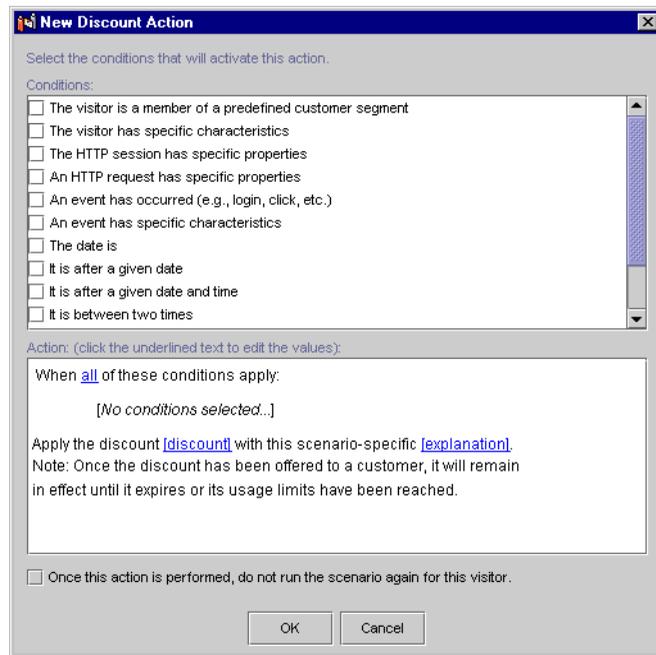
If you use WebLogic Portal, the E-Business Control Center includes an option for specifying discounts as a scenario action.

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 some discounts, as explained in "Defining a New Discount with the Discount Terms Wizard" or "Defining a New Discount with the Discount Editor" in "Defining Stand-Alone or Campaign Discounts."

To add discount actions to your scenario:

1. Select the name of the scenario to which you want to add the action.
2. Click the **New Action** button, and select **Discount**. The **New Discount Action** window appears, as shown in Figure 10-15.

Figure 10-15 New Discount Action Window



3. Click the check boxes shown in the Conditions portion of the New Discount Action window to select the condition(s) under which the discount will be offered. Text describing the conditions you selected appear in the Action portion of the window.

You must add at least one condition, or you will not be able to save the scenario action. For an explanation of the possible conditions, see “Listing of the Available Conditions” in “Building Conditions and Queries in the BEA E-Business Control Center.”

Tip: You can use conditions in ways that always evaluate to true. For example, you can select the It Is after a Given Date condition and then specify the date as January 1, 1970.

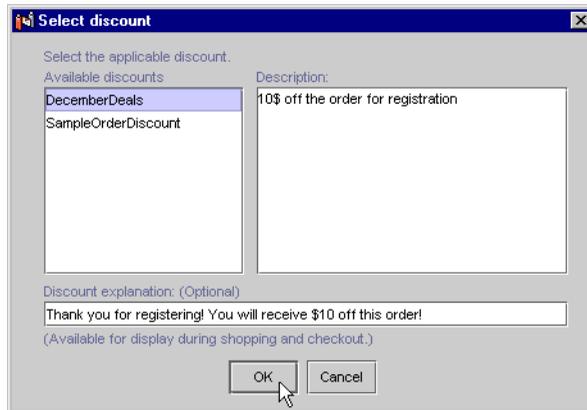
4. For each condition you select, you must specify values for any bracketed hyperlinked text that appears in the Action portion of the window.

For example, if you selected The Date Is condition, you must specify a value for the hyperlinked [date] text in “the date is [date]” condition statement, shown in the Action portion of the New Discount Action window.

To specify values for bracketed hyperlinked text, just click the text. Depending on the condition and the hyperlink, a window or a dialog box opens. Table 10-1 provides a consolidated listing of the conditions and indicates where to look if you need detailed instructions for any of the corresponding windows/dialog boxes.

5. If you selected more than one condition, you may want to click the All hyperlink in the When All Of These Conditions Apply phrase to change All to Any. The Any/All link acts as a toggle. Clicking on Any will change it to All, and visa versa.
6. Click the [Discount] or [Explanation] hyperlinks. The Select Discount window opens, as shown in Figure 10-16.

Figure 10-16 Select Discount Window



7. In the Select Discount window, select the discount you want.
Verify that you are selecting the appropriate discount by viewing the text shown in the Description text area.
8. Enter an optional explanation for the discount in the Discount Explanation field.
The discount explanation may be displayed to customers receiving the discount, if your technical staff chooses to use it. For more information about discount

explanations, see “Uses of Discounts” in “Defining Stand-Alone or Campaign Discounts.”

9. Click OK. The Select Discount window closes. The discount name appears in place of the generic [Discount] hyperlink, and if you specified a discount explanation, the discount explanation appears in place of the generic [Explanation] hyperlink in the Action portion of the New Discount Action window.
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 at the bottom of the New E-mail Action window.

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.

11. Click OK. The New Discount Action window closes. The conditions and corresponding actions you selected appear beneath the scenario name (and if applicable, customer segments) in the Scenarios list.

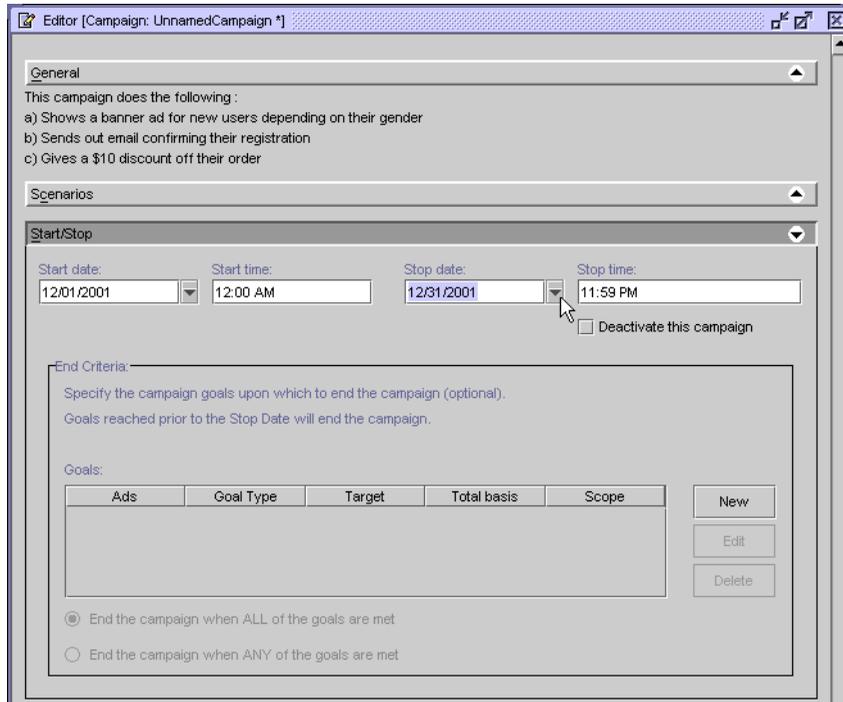
You may add different types of scenario actions to your scenario. For example, since a customer only sees the results of a discount action in the shopping cart, you may also want to create an e-mail or ad action that notifies the customer about the discount in a place other than the shopping cart.

Entering the Campaign Duration and End Criteria

In the Start/Stop pane (Figure 10-17), enter a start date, start time, stop date, and stop time for your promotional campaign in the fields provided.

The dates and times you set are in relation to universal time (UTC). For more information, see “Important Note About Dates and Times” in “Building Conditions and Queries in the BEA E-Business Control Center.”

Figure 10-17 Campaign Duration and End Criteria Pane



If your promotional campaign will contain scenarios with ad actions, you may now want to specify end criteria (goals). For more instructions on how to specify campaign end criteria, see “Specifying Campaign End Criteria.”

For more information about ad actions, see “Designing Campaign Scenario Actions” on page 9-7.

Specifying Campaign End Criteria

If you plan on using ad actions in your scenarios and want to end your campaign when certain ad-related goals are reached, you may want to supply some campaign end criteria. If the campaign end criteria are met, the campaign will be terminated even if the date on which this occurs is prior to the stop date you specified.

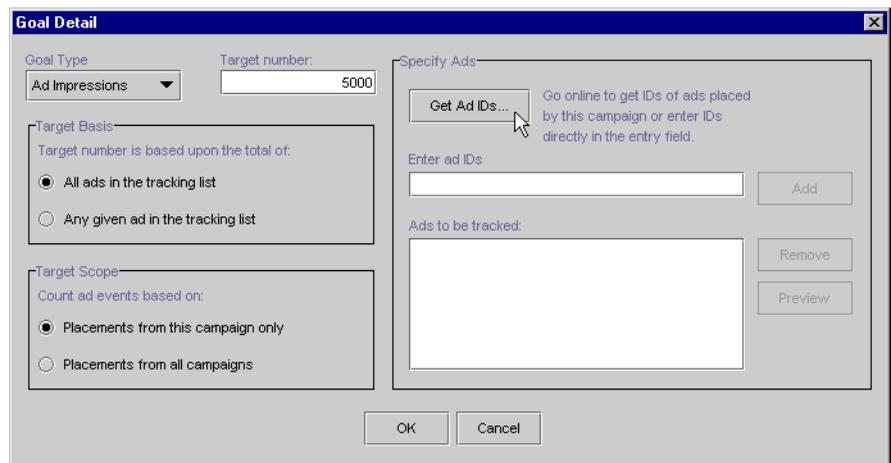
Note: To improve performance, your business engineer may create a cache that limits the number of times a campaign checks with the database to determine whether it has achieved its goal. By default, a campaign updates the cache every 5 minutes. If the cache contains stale data, then it may be possible for a campaign to exceed its goal. For more technical information about this performance-related topic, refer to “Campaign Service Properties” in the *Deployment Guide* documentation.

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

To specify campaign end criteria:

1. In the End Criteria region of the Start/Stop pane, click New. The Goal Detail window opens, as shown in Figure 10-18.

Figure 10-18 Goal Detail Window



The screenshot shows the 'Goal Detail' dialog box. It has a title bar with 'Goal Detail' and a close button. The main area is divided into several sections:

- Goal Type:** A dropdown menu set to 'Ad Impressions'.
- Target number:** A text input field containing '5000'.
- Target Basis:** A section with the text 'Target number is based upon the total of:' and two radio buttons: 'All ads in the tracking list' (selected) and 'Any given ad in the tracking list'.
- Target Scope:** A section with the text 'Count ad events based on:' and two radio buttons: 'Placements from this campaign only' (selected) and 'Placements from all campaigns'.
- Specify Ads:** A section containing:
 - A 'Get Ad IDs...' button with a tooltip: 'Go online to get IDs of ads placed by this campaign or enter IDs directly in the entry field.'
 - An 'Enter ad IDs' text input field with an 'Add' button to its right.
 - An 'Ads to be tracked:' list box with 'Remove' and 'Preview' buttons to its right.

At the bottom of the dialog are 'OK' and 'Cancel' buttons.

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 ad impressions or ad clickthroughs required to meet the goal.

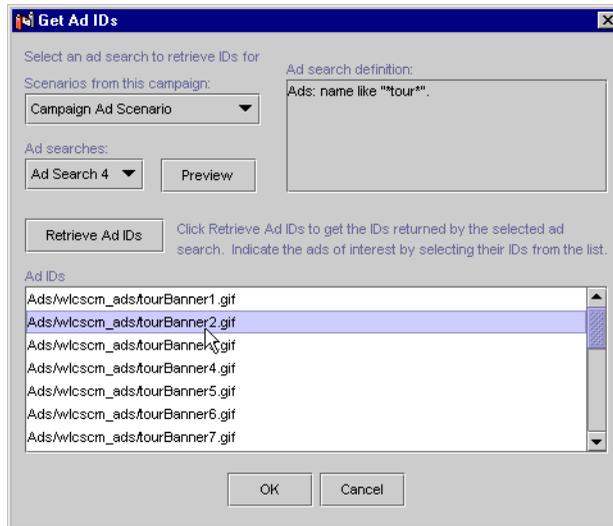
- In the Specify Ads region, specify the ad(s) that will be used to count impressions and clickthroughs. You can enter the path and filename of an ad in the Enter Ad IDs field, or you can click the Get Ad IDs button to search your ad database for the ad(s) you want.

Note: The ad identifier is usually the relative path to an ad file in your ad database. In the Tour Campaign 1 in the wlcsApp sample application, for example, the following ad identifier used is:

Ads/wlcscom_ads/tourBannerFixup.jpg. However, the details of exactly what constitutes an ad identifier may vary from one content management system to another. Be sure to check with your business engineer for details.

- If you manually enter an ad identifier, click Add. The ad identifier is added to the list below. Skip to step 15.
- If you click the Get Ad IDs button to locate an ad, the Get Ad IDs window is displayed, as shown in Figure 10-19.

Figure 10-19 The Get Ad IDs Window



- In the Scenarios from This Campaign field, select the scenario containing the ad query you want.

You can only perform ad searches in this window based on searches that are already defined in the scenario you selected. This ensures that you base your campaign end criteria on ads that are sure to be used by the scenario.

8. In the Ad Searches field, select the number of the query in the selected scenario that will retrieve the ad(s) you want.
9. Click the Retrieve Ad IDs button. The ads from that search appear in the Ad IDs pane. You can click the Preview button to view the selected ads in a browser.

Note: If you have not set up connection settings to the server for searching your ad database, the Connection Setup window appears. If you have already set up a server connection, select the name of the connection in the Display Name field, and enter your user name and password. If you have not set up a connection to the server yet, see “Connecting to the Server” in the “Introduction to the BEA E-Business Control Center” for information.

10. Select the ad you want as part of your campaign end criteria, and click OK. The Get Ad IDs window disappears, and the ad you selected appear in the Ads to Be Tracked pane of the Goal Detail window.
11. If necessary, repeat the previous steps until all the ads you want are listed.

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

12. In the Target Basis region, 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 Given Ad in the Tracking List reaches that number of clickthroughs or impressions.
13. In the Target Scope region, select whether you want to count the ads only within this campaign or across multiple campaigns.

Choosing to count the ads across multiple campaigns means that if a visitor in another campaign views/clicks the ad, the impression/clickthrough would still be counted as an increment in this campaign toward meeting the goal.

14. Click OK. The Goal Detail window closes, and the information you specified appears in the Goals list (as shown in Figure 10-20).

Figure 10-20 Goals List

Start/Stop

Start date: 12/01/2001 Start time: 12:00 AM Stop date: 12/31/2020 Stop time: 11:59 PM

Deactivate this campaign

End Criteria:
Specify the campaign goals upon which to end the campaign (optional).
Goals reached prior to the Stop Date will end the campaign.

Goals:

Ads	Goal Type	Target	Total basis	Scope
Ads/wlcsdm_ad...	Ad Impressions	5000	All ads	This Campaign

End the campaign when ALL of the goals are met
 End the campaign when ANY of the goals are met

New Edit Delete

15. If necessary, repeat the previous steps until you have specified all the end goals you want.

Note: To modify a goal, select it and click Edit. To remove a goal from the Goal list, select it and click Delete.

16. At the bottom of the window, specify whether you want to end the campaign when ANY or All of the goals shown in the Goals list are met. These options are available only if you have multiple goals.

17. Save the campaign. For more information, see “Saving Files” in the “Introduction to the BEA E-Business Control Center.”

Locating Existing Campaigns

If you have defined many campaigns, you may find the need to locate specific campaigns or campaigns containing specific data.

The E-Business Control Center has a campaign search feature that lets you locate campaigns by keyword within campaign, campaign sponsor, activation status (active or deactivated campaigns), start and stop date ranges, and customer segments used.

To use the campaign search tool:

1. Click the Campaign Search icon on the Explorer toolbar. The Campaign Search window opens, as shown in Figure 10-21.

Figure 10-21 Campaign Search Window



Note: The Search function only works to locate campaigns. It does not allow you to search for other objects, such as customer segments or discounts.

2. Enter your search criteria. The more criteria you add to the search, the narrower the search will be.

Use the following guidelines to help you search:

- **Keywords and Campaign Sponsor** – Enter partial or full words. Separate each word with a space. Select the Name, Description, and Goal options to search in those fields. Deselect those options to prevent a search in those fields.
- **Activation Status** – Select the Activation Status option if you want to search for Active or Deactivated campaigns. (See “Deactivating and Reactivating Campaigns” on page 10-31.) If you do not select this option, campaigns will be searched regardless of their status.

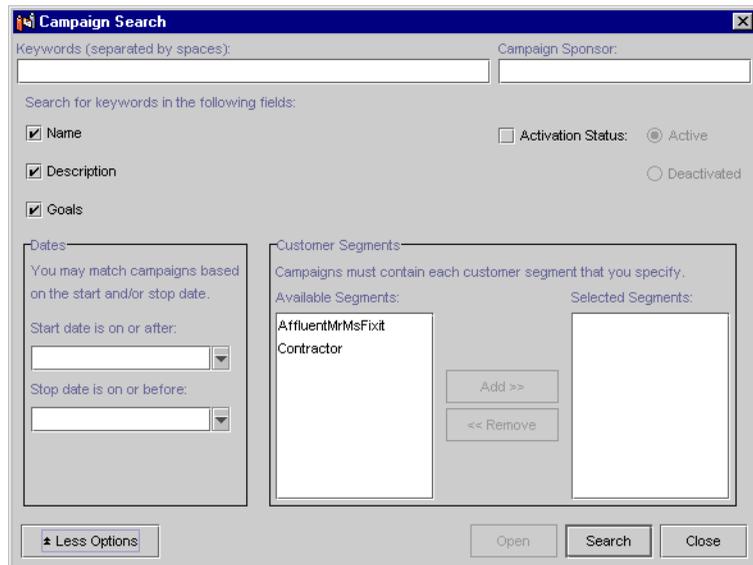
An active campaign does not necessarily mean the campaign is running. Campaigns only run between the start/stop times you specified and when the appropriate conditions are met. Therefore, searching for an active campaign may not necessarily mean you are searching for a campaign that is running.

When you click the More Options button, the following regions appear, as shown in Figure 10-22:

- **Dates** – You can search for campaigns on or after a particular start date, on or before a particular stop date, or both (within a date range).
- **Customer Segments** – To search for campaigns containing one or more specific customer segments, move the segments you want to search for into the Selected Segments list.

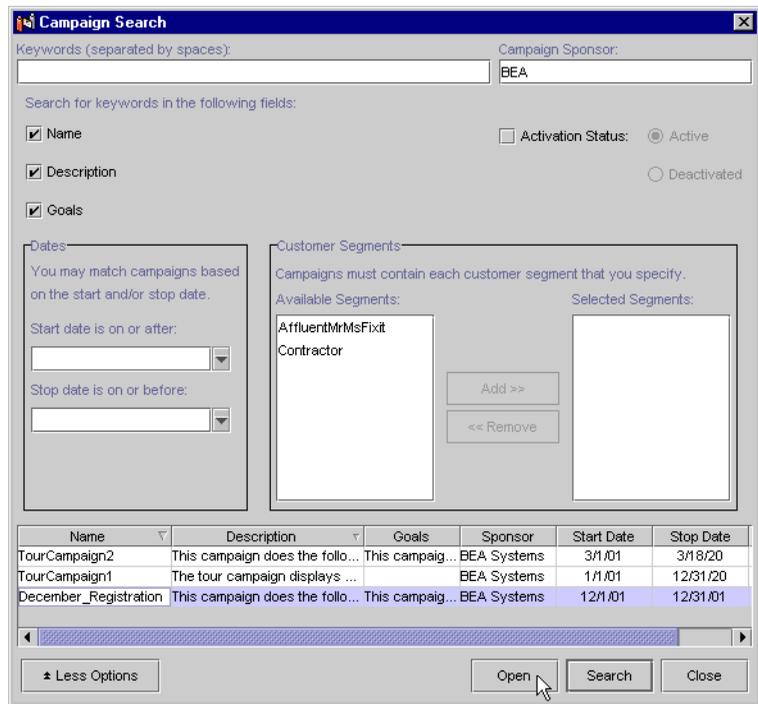
If you specify customer segments as part of the search criteria, the search function will locate only campaigns that have those segments specified at the scenario level. If a campaign has the segments specified at the action level instead, the campaign will not be retrieved as a match. For more information about the differences between specifying customer segments at the scenario and scenario action levels, see “Customer Segments in Scenario Actions” on page 9-10.

Figure 10-22 Expanded Campaign Search Window



3. Click Search. If any campaigns matching your criteria are found, they are displayed in the bottom portion of the Campaign Search window, as shown in Figure 10-23.

Figure 10-23 Campaign Search Results



In the search results area, you can sort the columns by clicking the column names. You can also open a campaign in the search results by selecting it and clicking Open.

Modifying Existing Campaigns

The E-Business Control Center lets you to view and modify existing campaigns. After you modify an active campaign, you also have the opportunity to reset aspects of the campaign, such as removing previously placed ads, clearing counts of ad impressions and clickthroughs, resetting scenarios that are set up to run once per visitor, and clearing pending e-mails.

To modify a campaign:

1. Open an existing campaign in the E-Business Control Center.

For more information, see “Opening Files” in the “Introduction to the BEA E-Business Control Center.”

Tip: If there is a long list of campaign names, you might want to use the name filter or the search function to locate the campaign you want to modify. For more information about these options, see “Locating Existing Campaigns” on page 10-27.

2. To modify the campaign, follow the same instructions for creating a new campaign, starting from “Specifying General Campaign Information” on page 10-2. If you are interested in suspending an active campaign or reactivating a suspended campaign, see “Deactivating and Reactivating Campaigns” on page 10-31.

3. Save your modifications by clicking the Save icon in the main toolbar.

After you modify your campaign, you may want to reset certain aspects of the campaign, such as ads and pending e-mails. For more information, see “Debugging Campaigns” on page 10-33.

Warning: Be certain that the modifications you make are in line with your e-business strategy and that you entered the modifications correctly in the E-Business Control Center.

Deactivating and Reactivating Campaigns

Once campaigns are saved, they are considered active. (In other words, after the entire application is synchronized, 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):

1. Open the campaign.
2. Select the Deactivate This Campaign check box in the Start/Stop pane.
3. In the warning dialog box that appears, click OK.

4. Save the campaign.

In the Explorer window, the icon next to the deactivated campaign becomes a lighter color, indicating that it is deactivated.

Note: The application must be synchronized to the server for the live campaign to become deactivated. For the procedures on synchronizing, see “Synchronizing Application Data” in the *Deployment Guide*.

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

After you synchronize the application to the server, the campaign becomes active. A campaign that is reactivated is once again ready to run between the start/stop times you specified and when the appropriate conditions are met.

Deleting Existing Campaigns

When you delete a campaign in the E-Business Control Center, the campaign is removed from the server when you synchronize your application.

Warning: As with any deletion you make, be absolutely certain that you select the correct campaign and that you are sure you want to delete it. Deleted campaigns cannot be retrieved.

To delete an existing campaign, follow these steps:

1. If necessary, switch to the Campaigns view by clicking the Campaigns icon in the Explorer window. A list of campaigns appears in the Campaigns list.
2. Click the name of the campaign you want to delete. The campaign is highlighted.

Tip: If there is a long list of campaign names, you might want to use the name filter or the search function to locate the campaign you want to delete. For more information about these options, see “Locating Existing Campaigns” on page 10-27.

3. To delete the campaign, click the Delete icon on the Explorer toolbar.

Debugging Campaigns

While testing the campaigns you have created, it is helpful to reset the campaigns so they behave as if they have been deployed for the first time.

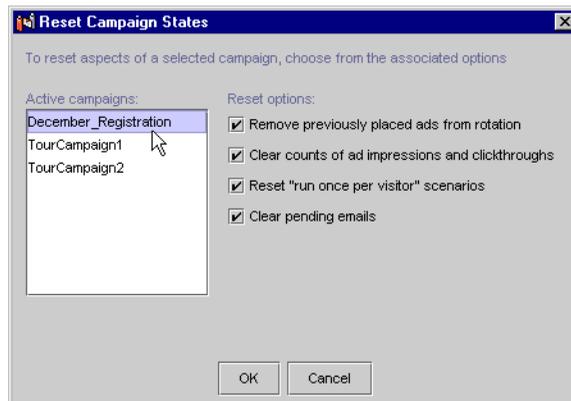
The E-Business Control Center has an option, designed primarily for debugging, that lets you:

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

To reset campaign states:

1. Choose Tools → Reset Campaigns in the menu. The Reset Campaign States window appears, as shown in Figure 10-24.

Figure 10-24 The Reset Campaign States Dialog Box



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 have not set up connection settings to the server, the Synchronization Setup window appears. If you have already set up a server connection, select the name of the connection in the Display Name field, and enter your user name and password. If you have not set up a connection to the server yet, see “Connecting to the Server” in the “Introduction to the BEA E-Business Control Center” for information. Click Connect.

If you have already set up connections, but you have not yet logged in to the server for the current E-Business Control Center session, you must log on in the Logon window that appears.

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 → Synchronization Settings in the menu. In the Synchronization Settings window, 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.

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 (see “Specifying Campaign End Criteria” on page 10-23), you can reactivate that campaign by resetting the ad impressions or clickthroughs that caused it to reach its goals and end.

1. Choose Tools → Reset Campaigns in the menu. The Reset Campaign States window appears, as shown in Figure 10-24.
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. Select any additional reset options you want.
5. Click OK.

For more information, see “Debugging Campaigns” on page 10-33.

6. After the campaign states are reset, you must re-synchronize the application for the campaign to be reinstated.
 - a. Choose Tools → Synchronization Settings in the menu.
 - b. In the Synchronization Settings window, select the “Update all files in the application” option.

If you have made changes to the campaign, you can select the “Update only modified files in the application” option instead.
 - c. Click OK.
 - d. Synchronize the application. See “Synchronizing Application Data” in the “Introduction to the BEA E-Business Control Center.”

11 Webflow Components and Concepts

As described in “Overview of Webflow,” the Webflow mechanism controls the presentation of Web pages as visitors interact with your Web applications. To accomplish this, Webflow makes use of various components, some of which are designed to handle complex tasks like form validation or execution of back-end business processes. This topic first introduces you to all the components that may comprise a Webflow, and includes:

- Introduction to Webflow Components
- Presentation and Processor Nodes
- Input Processors and Pipelines
- The Pipeline Session
- Events
- Namespaces
- Special Webflow Components
 - The Begin Node
 - The Root Component Node
 - The Wildcard Nodes
 - The Configuration Error Page

Next, this topic discusses some additional concepts with respect to using the Webflow mechanism, including:

- Chaining and Branching with Processor Nodes

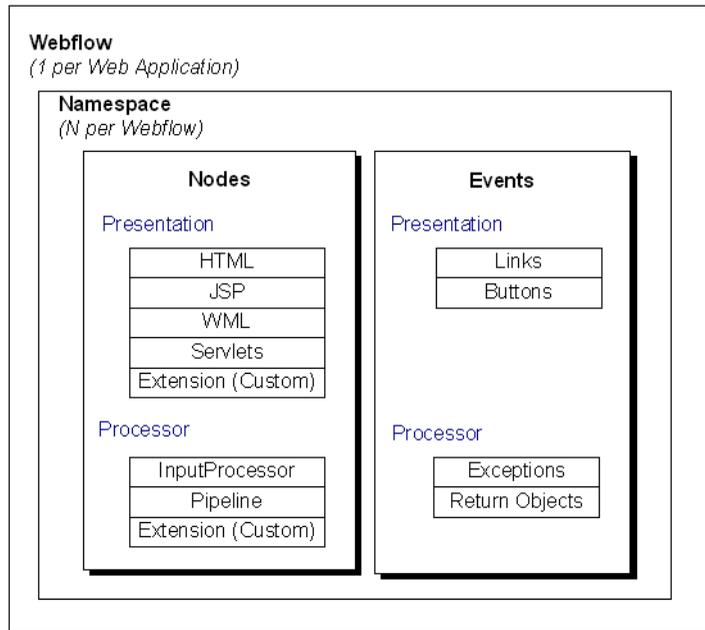
- Using Webflow Components in Your Web Pages
- Using Webflow Components with Portals
- Webflow Execution Order
 - Presentation Nodes
 - Processor Nodes

Notes: For information about using the Webflow and Pipeline Editors to work with the components described in this topic, see “Using the Webflow and Pipeline Editors.” For information about customizing and extending the Webflow mechanism, see “Customizing and Extending Webflow.”

Introduction to Webflow Components

Figure 11-1 illustrates the typical relationships among Webflow components. You can refer back to this illustration as you read more about each component.

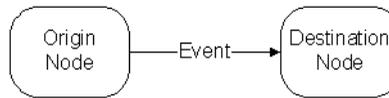
Figure 11-1 Typical Relationship Among Webflow Components



Note: Webflow used in portal applications may respond to more events than are shown in Figure 11-1. For more information about portal applications and use of the Webflow mechanism, see “Customizing Portlets and Portals” in the *Getting Started with Portals and Portlets* documentation.

A Webflow can first be subdivided into nodes and events. A **node** represents a state in the Webflow. Depending on the node type, there are a number of predefined **events** that may occur (such as a visitor clicking a link on a Web page). When a particular event happens, the Webflow decides which subsequent node to invoke to continue the flow. This process is referred to as a **transition**, and is illustrated in Figure 11-2.

Figure 11-2 Generic Webflow Transition



As is also shown in Figure 11-2, nodes may be referred to as origin or destination nodes, depending on their location in a transition.

For more information about node types, see the next section, “Presentation and Processor Nodes.” For more information about the events associated with each node, see “Events” on page 11-7.

Presentation and Processor Nodes

There are two main types of nodes: presentation nodes and processor nodes. Each of the presentation and processor nodes can be used as origin or destination nodes within the Webflow.

As their name implies, **presentation nodes** represent states in which the Webflow presents or displays something to a person interacting with the Web application. A Webflow must always start and end with a presentation node. The form of the presentation can be:

- HTML
- JavaServer Page (JSP)
- Java servlets

You can also create extension (custom) presentation nodes for use in the Webflow. For more information about extension presentation nodes, see “How to Create an Extension Presentation Node.”

In contrast to presentation nodes, **processor nodes** represent states in which the Webflow invokes more specialized components to handle activities like form validation, or back-end business logic that drives the site’s presentation. The processor nodes available for use are:

- Input Processors

- Pipelines

“Input Processors and Pipelines” on page 11-5 discusses these processor nodes in more detail.

You can also create extension (custom) processor nodes for use in the Webflow. For more information about extension processor nodes, see “How to Create an Extension Processor Node.”

Note: For more information about creating a presentation or processor node in the Webflow Editor, see “How to Add Webflow Components.”

Input Processors and Pipelines

Input Processors and Pipelines are the two different types of processor nodes that come packaged with the Webflow implementation.

Input Processors are predefined, specialized Java classes that carry out more complex tasks when invoked by the Webflow mechanism. Input Processors are typically used to validate HTML form data, or to provide conditional branching within a Web page. For example, an Input Processor may contain code that verifies whether a date has been entered in the correct format, as opposed to embedding that code within the same JSP that displays the form fields. Input Processors contain logic that is specific to the Web application, and are therefore loaded by the Web application’s container.

Input Processors are embedded in Web pages using specialized JSP tags, which are discussed in “Webflow JSP Tag Library Reference.” Java/EJB developers report the status of processed form fields back to HTML/JSP developers via the `ValidatedValues` class, which is discussed in “Webflow Validators and Input Processors.”

A Pipeline is also a type of processor node that may be invoked by the Webflow. Pipelines initiate the execution of specific tasks related to your business process, and can be transactional or nontransactional. For example, if a visitor attempts to move to another page on your Web site but you want to persist the visitor’s information to a database first, you could use a Pipeline. Pipelines contain business logic that may apply to multiple Web applications within a larger enterprise application, and are therefore loaded by the Enterprise JavaBean (EJB) container.

Note: For more information about transactional versus nontransactional Pipelines, see “Transactional Versus Nontransactional Pipelines.”

All Pipelines are collections of individual Pipeline Components, which can be implemented as Java objects or stateless session Enterprise JavaBeans (EJBs). Pipeline Components are the parts of a Pipeline that actually perform the tasks associated with the underlying business logic. When these tasks are complex, Pipeline Components may also make calls to external services (other business objects).

Notes: For an explanation of the different Pipeline Component implementations, see “Implementation of Pipeline Components as Stateless Session EJBs or Java Objects.”

For more information about creating an Input Processor or Pipeline in the Webflow Editor, see “How to Add Webflow Components.”

The Pipeline Session

It is often necessary to keep track of information gathered from your Web site visitors, or to share the data modified by Pipeline Components and Input Processors as a visitor moves through the site. You may also want to access data that is part of a larger enterprise application, or make a process transactional. To accomplish these tasks, the Webflow mechanism makes use of a Pipeline Session.

A Pipeline Session is an object that is created and stored within the `HttpServletRequest` object. The Pipeline Session provides a single point of communication for all Pipeline Components in a given Pipeline. Input Processors also read data from the `HttpServletRequest` and then use that data to create or update Java objects in the Pipeline Session. The Pipeline Session also provides central access and storage for external classes and also has transactional capabilities. For more information about including the Pipeline Session in transactions, see “Including Pipeline Sessions in Transactions.”

Note: If you have used a prior implementation of Webflow, you may recall that the Pipeline Session used to be stored in the `HTTPSession` rather than in the `HttpServletRequest`. This has been changed to enhance performance and facilitate clustering.

The Pipeline Session is comprised of many name/value pairs called attributes or **properties**. Pipeline Components, Input Processors, and external classes act on particular properties that exist within the Pipeline Session, and may also add new properties as necessary. All objects set in and retrieved from the Pipeline Session should be serializable. For more information about serializing objects in the Pipeline Session, see “Serializing Pipeline Session Properties.”

To get or set a Pipeline Session property within a Web page, you will use the Pipeline Session JSP tags, described in “Webflow JSP Tag Library Reference.” To work with the Pipeline Session from within Input Processor or Pipeline classes, you will use the provided support methods to access the Pipeline Session directly. For more detailed information about accessing the Pipeline Session using the support methods, see “Pipeline Session Internals.”

Events

Each node in a Webflow responds to events, which cause transitions (that is, movement from an origin node to a destination node). However, the types of events a node responds to depends on whether the node is a presentation node or a processor node.

As shown in Figure 11-1, presentation nodes respond to the following events:

- Links
- Buttons

In other words, when a visitor to the Web site clicks a link or a button, the Webflow responds to that event. A response might be to transition to another presentation node (such as a JSP) or to a processor node (such as an Input Processor to validate visitor-provided form data).

In contrast, processor nodes respond to the following events:

- Exceptions
- Return objects

Exceptions occur when an Input Processor or Pipeline does not execute properly, and indicates an error state. (More information about working with exceptions can be found in “Error Handling.”) Otherwise, these processor nodes return an object that the Webflow can use to continue.

Notes: Webflow used in portal applications may respond to more events than those described above. For more information about portal applications and use of the Webflow mechanism, see “Customizing Portlets and Portals” in the *Getting Started with Portals and Portlets* documentation.

For more information about connecting presentation and processor nodes with event and/or exception transitions in the Webflow Editor, see “How to Connect Nodes with Event or Exception Transitions.”

Namespaces

Although you will generally have only one Webflow per Web application, **namespaces** allow you to divide your Webflow into a number of smaller, more manageable modules. This modularity may make your development team more productive by allowing individual developers to simultaneously work with various portions of a Web application, without having to worry about naming collisions. For example, a Pipeline Component defined in one namespace can access a variable defined in another namespace, then redirect to a JSP defined in yet a third namespace.

You can have any number of namespaces within a Webflow, but namespaces can only be one level deep. In other words, you can not nest namespaces.

Tip: Namespaces are best defined along functional lines, such as order management, user management, browsing, and so on. This arrangement enables developers to more easily collaborate, once separate portions of the site require integration. You would not typically define namespaces along horizontal lines (that is, Input Processors, JSPs, Pipeline Components, and so on) because this would make development roles/processes too restrictive.

When a Web application’s Webflow is divided into namespaces, the Pipeline Session is also subdivided accordingly. Therefore, a Pipeline Session property set in one namespace can be obtained from another namespace, and vice versa. For more detailed information about the Pipeline Session, see “Pipeline Session Internals.”

Note: You must specify namespaces in a specific way when using Webflow in portal application. For more information about portal applications and use of the Webflow mechanism, see “Customizing Portlets and Portals” in the *Getting Started with Portals and Portlets* documentation.

Special Webflow Components

In addition to the Webflow components previously described, there are four Webflow components that perform special functions in a Webflow. These components are described in detail in this section.

The Begin Node

Typically, a begin node is a node designated as the initial entry point or state of the Webflow, which automatically transitions to a presentation or processor node. The begin node is generally a presentation node in the form of a JavaServer Page (JSP).

If a URL does not specify an origin, namespace, or event, the Webflow mechanism looks for a begin node in the default namespace. If one is located, the begin node is used as the starting point for the visitor’s interaction with the application. Therefore, although the begin node is optional, we recommend that you have at least one defined in your default namespace.

Note: You specify a default namespace in the `P13N_DEFAULT_NAMESPACE` context parameter of your Web application’s `WEB-INF/web.xml` file. For more information about this context parameter, see “Setting Up Your Web Application’s web.xml File.” For more information about how an application’s Webflow gets invoked from a URL, see “Understanding How Webflow Is Invoked from a URL.”

You can have more than one begin node in a Webflow (one for each namespace). If a namespace specified in the URL has its own begin node, the Webflow will use that begin node before looking for a begin node in the default namespace. You can also use a begin node as a destination node in a Webflow transition.

Note: For more information about designating an existing node as a begin node in the Webflow Editor, see “How to Designate or Remove a Begin (Root) Node.”

The Root Component Node

A root component node is analogous to the begin node for a Webflow, only it is the entry point into or initial state of a Pipeline. You must have one (and only one) root component node per Pipeline.

Note: For more information about designating an existing node as a root component node in the Webflow Editor, see “How to Designate or Remove a Begin (Root) Node.”

The Wildcard Nodes

If the Webflow cannot locate a specific presentation or processor node to complete a transition, the Webflow will search for a wildcard presentation or processor node to use as the origin node. Therefore, wildcard presentation nodes and wildcard processor nodes implement default behavior for your Web application. Put another way, wildcard nodes allow you to abstract common functionality and to locate that functionality in a single place in your Webflow. Wildcard nodes are used only when destination nodes are not explicitly defined in the Webflow. You may have one wildcard presentation node and one wildcard processor node per namespace.

Note: If the Webflow must search for a wildcard node, there may be a slight impact on performance, as more processing is involved.

As an example, perhaps you want a link called Help (that is present on every page) to always direct to a JSP containing help information. To do so, you might use a wildcard presentation origin. Further, you might always want exceptions returned from processor nodes to transition to JSP containing detailed information about the error. This could be handled with a wildcard processor node.

Note: For more information about creating a wildcard node in the Webflow Editor (which is done the same way you create regular presentation and processor nodes), see “How to Add Webflow Components.”

The Configuration Error Page

The configuration error page is essentially a presentation node whose primary purpose is to display debugging information when there is a configuration error in the Webflow. If the Webflow mechanism cannot locate the destination for a transition after exhausting a list of possible choices, the Webflow will instead display the configuration error page you defined. The configuration error page is useful during development, but should never be displayed to visitors of your Web site. That is, testing should ensure that the Webflow configuration is working before your Web application is put into production.

Note: For more information about how the Webflow searches for possible destination nodes, see “Webflow Execution Order” on page 11-13.

You can have more than one configuration error page in a Webflow (one per each namespace), but are not required to have any configuration error pages if you do not want to. If a namespace specified in the URL has its own configuration error page, the Webflow will use that configuration error page before looking for a configuration error page in the default namespace. Therefore, although the configuration error page is optional, we recommend that you have at least one defined in your default namespace.

Notes: You specify a default namespace in the `P13N_DEFAULT_NAMESPACE` context parameter of your Web application’s `WEB-INF/web.xml` file. For more information about this context parameter, see “Setting Up Your Web Application’s web.xml File.”

For more information about specifying a configuration error page name for your Webflow in the Webflow Editor, see “How to Set the Configuration Error Page Name.”

Chaining and Branching with Processor Nodes

Much like you can move from one presentation node (such as a JSP) to another, you can also move from one processor node (such as an Input Processor) to another processor node. In other words, you do not necessarily need to use processor nodes in between presentation nodes. For processor nodes, this movement is called **chaining**. In a chaining arrangement, the result state of one successfully executed processor node is another processor node.

Another useful technique regarding processor nodes is **branching**. You can branch on Input Processor nodes based on the value of the object the Input Processor returns. For example, you can code an Input Processor such that one response from a Web site visitor returns one value, and a different response returns a different value. Based on the value of the object returned from successful execution of the Input Processor, you can cause the Webflow to direct to different destination nodes. Similarly, you can branch on Pipelines based on the exceptions it returns. Based on the type of exception thrown, you can cause the Webflow to direct to different destination nodes. (You cannot branch on return values of objects in Pipelines because the Pipeline Components within them return Pipeline Session properties instead.)

Using Webflow Components in Your Web Pages

When you use the Webflow mechanism in your Web application, each of the URLs within that application should be dynamically generated. This is accomplished by using the Webflow JSP tags, described in “Webflow JSP Tag Library Reference.”

Note: If you used the prior implementation of Webflow, you may recall that dynamic URL generation was formerly accomplished using the `createWebflowURL()` method of the `WebflowJSPHelper` class. This method is still available, but it

is strongly suggested that you use the JSP tags instead. The only reason you may want to use the `WebflowJSPHelper` class instead of a JSP tag is in a servlet or wrapper class.

Using Webflow Components with Portals

With a few exceptions, Webflow works the same way in portal Web applications as it does within the rest of the platform. That is, you can use Webflow to coordinate different parts of your portal Web application, enabling code reuse and maintainability.

The Webflow associated with portals are generally not to be edited because it is fundamental to the application logic that makes up the portal platform. Individual portlets, however, can have individual Webflow files assigned to them, allowing practically all Webflow functionality to be applied to a portlet.

For more information, see “Customizing Portlets and Portals” in the *Getting Started with Portals and Portlets* documentation.

Webflow Execution Order

As described in “Understanding Webflow as a State Machine,” Webflow can be thought of as a state machine and as such, can only be in one state at a time. Webflow transitions from one state to another by interpreting URLs, return values, and exceptions. Therefore, to effectively work with Webflow, you need to understand the order in which Webflow searches for a transition. When searching for a transition, Webflow always attempts to resolve transitions with the exact criteria supplied, but if no matches are found, Webflow broadens its search using wildcards and inheritance hierarchies. The way Webflow searches for a valid transition differs slightly for Presentation Nodes and Processor Nodes.

Note: An important, related concept is that Webflow knows nothing of Pipelines; Pipelines are just Extension (Custom) Processors that BEA has created for you. Consequently, Webflow only governs the flow in and out of Pipelines but

not within the Pipeline itself. (The transitions that take place inside a Pipeline are governed by the Pipeline engine.) Therefore, the explanation provided in this section only applies to transitions to and from Presentation Nodes (JSP, HTML, servlets, Extension (Custom) Nodes) and Processor Nodes (Input Processors, Pipelines, Extension (Custom) Nodes) in a given Webflow.

Presentation Nodes

For Presentation Nodes, Webflow's search for valid transitions is done in the following manner:

1. Webflow searches to find the exact Presentation Node as supplied in the URL.

Given the URL:

```
http://localhost:7501/myapp?namespace=order&origin=shoppingcart.jsp&event=link.help
```

Webflow tries to resolve to the `shoppingcart.jsp` Presentation Node, defined in the underlying `order.wf` Webflow namespace configuration file as:

```
<presentation-origin node-name="shoppingcart" node-type="jsp">
```

2. If the `shoppingcart.jsp` Presentation Node is not present, Webflow searches for the Wildcard Node of the same node type. (As previously shown in the URL, origins are in the form `<node-name>.<node-type>`.) Given the same URL, Webflow tries to resolve to a Wildcard Presentation Node, defined in the underlying `order.wf` Webflow namespace configuration file as:

```
<wildcard-presentation-origin node-type="jsp">
```

Note: For more information about the Wildcard Presentation and Wildcard Processor Nodes, see “The Wildcard Nodes” on page 11-10.

3. If the Webflow fails to locate the exact Presentation Node or a Wildcard Presentation Node, then a configuration error has occurred, and Webflow searches for the configuration error page.

Note: For more information about the configuration error page, see “The Configuration Error Page” on page 11-11.

Alternatively, if the Webflow does locate the exact Presentation Node or a Wildcard Presentation Node, then Webflow searches for the supplied event under the respective node. Therefore, given the same URL, Webflow searches for the

`link.help` event in the event list, defined in the underlying `order.wf` Webflow namespace configuration file as:

```
<event event-name="link.help">
  <destination namespace="main" node-name="help"
node-type="jsp" />
</event>
```

4. If Webflow finds the Presentation Node but not the event, then Webflow searches under the Wildcard Presentation Node for that event. If no event is found, then a configuration error has occurred, and Webflow searches for the configuration error page.

Note: For more information about the configuration error page, see “The Configuration Error Page” on page 11-11.

Using the Webflow and Pipeline Editors to create Webflows can help identify potential problems with your Webflow and greatly reduce the likelihood of errors. This is because of the Webflow and Pipeline Editors’ built-in validation features. For more information, see “About the Webflow and Pipeline Editors’ Validation Features.”

Processor Nodes

Processor Nodes can transition in one of two ways: they can return a Java object or throw a Java exception.

- If the Processor Node returns a Java object, Webflow calls `toString()` on that object and searches for an event with a matching name in the event list. The same search patterns described in “Presentation Nodes” on page 11-14 apply here. Webflow first tries to look for the event under the exact Processor Node that returned the object, but if that Processor Node is not found, Webflow searches for the event under a Wildcard Processor Node.

Note: For more information about the Wildcard Presentation and Wildcard Processor Nodes, see “The Wildcard Nodes” on page 11-10.

- If the Processor Node throws an exception, Webflow searches the exception list associated with the current Processor Node. Webflow first searches for the exact exception thrown. If this exception is not found, Webflow walks up the exception’s inheritance hierarchy in an attempt to find a match. Webflow will walk all the way up the inheritance tree until it encounters the class `Exception`.

If still no match is found, Webflow searches the Wildcard Processor Node and performs the same exception walking activity.

- If all previous attempts fail, the Webflow will simply load the configuration error page defined for the current namespace. If the current namespace does not define a configuration error page, the Webflow will display the configuration error page defined for the default namespace.

Note: For more information about the configuration error page, see “The Configuration Error Page” on page 11-11.

- If for some reason the file for the configuration error page is missing, a standard 500 internal server error, which is outside the scope of the Webflow mechanism, would be displayed.

Using the Webflow and Pipeline Editors to create Webflows can help identify potential problems with your Webflow and greatly reduce the likelihood of errors. This is because of the Webflow and Pipeline Editors’ built-in validation features. For more information, see “About the Webflow and Pipeline Editors’ Validation Features.”

12 Using the Webflow and Pipeline Editors

The E-Business Control Center (EBCC) includes a Webflow Editor and a Pipeline Editor designed to help you create, modify, and validate Webflow and Pipeline XML configuration files. This topic provides an introduction to the Webflow and Pipeline Editors, describes their graphical interfaces, and provides some step-by-step instructions for their use. This topic also includes some best practices for creating, modifying, and migrating Webflow and Pipeline XML configuration files, and describes the Webflow Editor's validation feature. Lastly, this topic provides some information about synchronizing Webflow and Pipeline data for your applications.

This topic includes the following sections:

- Introduction
 - Starting the Webflow and Pipeline Editors
 - Important Notes About Using the Webflow and Pipeline Editors
 - Next Steps
- Learning to Use the Webflow and Pipeline Editors
 - Webflow and Pipeline Editor Essentials
 - Webflow Component Representations
 - Understanding the Webflow and Pipeline Editor Palettes
 - Understanding the Webflow and Pipeline Editor Toolbars
- Organizing Webflow Components in an Editor Canvas
 - How to Select Webflow Components

- How to Add Webflow Components
- How to Edit a Webflow Component's Name (Label)
- How to Designate or Remove a Begin (Root) Node
- How to Move a Webflow Component
- How to Connect Nodes with Event or Exception Transitions
- How to Reposition Connection Ports on a Node
- How to Work with Elbows in Transitions
- Using the Webflow and Pipeline Editor Toolbars
 - How to Print a Webflow Namespace or Pipeline
 - How to Delete Webflow Components
 - How to Use the Zoomed Overview
 - How to Show/Hide the Grid
 - How to Snap Objects to the Grid
 - How to Enable and Disable Link Optimization
 - How to Show and Hide Exception Transitions
 - How to Validate the Selected Node
 - How to Validate All Nodes
 - How to Set the Configuration Error Page Name
 - How to Use the Pipeline Component Editor
 - How to Make the Pipeline Transactional
 - How to Include the Pipeline Session in a Transaction
- Using the Properties Editors
 - Viewing Component Properties
 - Description of Webflow Component Properties
 - Modifying Component Property Values
- Migrating An Existing Webflow
- Creating or Modifying a Webflow: Breadth-First Versus Depth-First

- About the Webflow and Pipeline Editors' Validation Features
 - Validation Error Messages in a Properties Editor
 - What Do the Editors Validate?
 - Saving Invalid Webflows
- Synchronizing Webflow Data for Your Application

Note: This topic assumes that you are already familiar with basic Webflow concepts. If you are not, refer to “Webflow Components and Concepts.”

Introduction

This introductory section provides instructions on how to start the Webflow and Pipeline Editors, and lists some important notes about the Editors that you should take into account before using them to create or modify your Webflow and Pipeline XML configuration files.

Starting the Webflow and Pipeline Editors

To begin using the Editors, follow these steps:

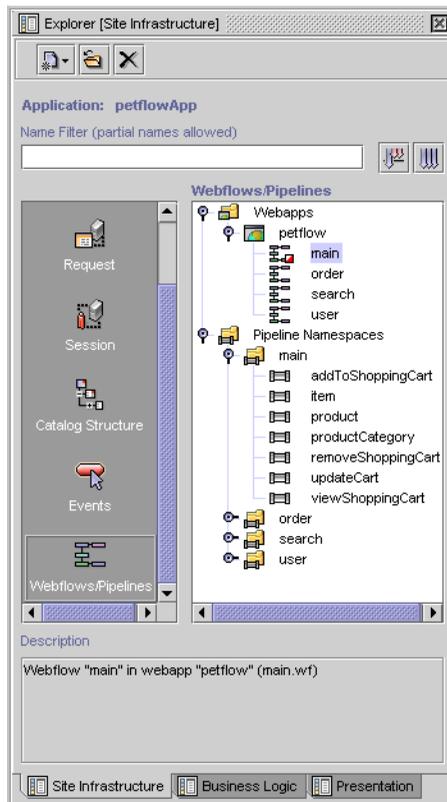
1. Start the E-Business Control Center (EBCC). For detailed instructions on starting the EBCC, see “Starting the E-Business Control Center” in the *Guide to Using the E-Business Control Center* documentation.
2. Create a new Web application or open an existing Web application for which you will be working on a Webflow or Pipeline. For detailed instructions on performing these tasks, see “Creating an Application Structure for E-Business Control Center Data” or “Opening Application Data” in the *Guide to Using the E-Business Control Center* documentation.
3. Select the Site Infrastructure tab in the EBCC's Explorer window, then click the Webflows/Pipelines icon.

Note: You may have to use the scroll bar to locate the Webflows/Pipelines icon.

4. If the Webflows/Pipelines structure shown in the Explorer window is not expanded, click Webapps and then the Web application name to view the Webflow namespaces for that application, or click Pipeline Namespaces and then the namespace to view the Pipelines available within that namespace.

Figure 12-1 shows the Webflow namespaces and Pipelines in expanded form for the sample `petflow` Web application.

Figure 12-1 EBCC Explorer Window With Expanded Webflows/Pipelines List



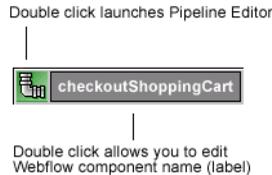
5. If you want to modify an existing Webflow, double click any of the Web application's namespace files shown below the Web application name in the Webflows/Pipelines list. (Figure 12-1 shows the `main` namespace for the `petflow` Web application being selected.) This opens the Webflow Editor.

Note: Listing 12-1 also indicates that the main Webflow namespace is currently invalid, by the red and white square icon located to its left. For more information about Webflow validity, see “About the Webflow and Pipeline Editors’ Validation Features.” For more information about the status icons in the E-Business Control Center (EBCC), see “About the E-Business Control Center Interface” in the *Guide to Using the E-Business Control Center* documentation.

6. If you want to modify an existing Pipeline, double-click any of the Pipeline names (such as `viewShoppingCart` in Figure 12-1) shown in the Webflows/Pipelines list. This opens the Pipeline Editor.

Note: You can also open the Pipeline Editor by double clicking on the icon portion of a Pipeline Node that is currently displayed in the Webflow Editor canvas, as shown in Figure 12-2. For more information about Pipeline Nodes, see “Input Processors and Pipelines.”

Figure 12-2 Results of Double-Clicking Portions of Pipeline Node



7. If you would rather create a new Webflow or Pipeline for the Web application, see “Creating Webflow/Pipeline Files” in the *Guide to Using the E-Business Control Center* documentation.

Note: For general information about managing EBCC files, see “About the E-Business Control Center Interface” in the *Guide to Using the E-Business Control Center* documentation.

Important Notes About Using the Webflow and Pipeline Editors

The following list includes useful information for developers who are about to use the Webflow and Pipeline Editors:

- An application's Webflow is comprised of one or more Webflow namespace (`<namespace>.wf`) files, as well as zero or more Pipeline (`<namespace>.pln`) files that exist within a namespace. Webflow files specify the flow of control between presentation nodes (JSPs, HTML, and so on) and processor nodes (Input Processors and Pipelines) that exist in a Webflow namespace. Pipeline files contain information about the Pipeline Components that comprise a given Pipeline. Therefore, when you use the Webflow Editor, you are creating or editing a Webflow namespace; when you use the Pipeline Editor, you are creating or editing the Pipeline Component nodes for a Pipeline that exists *within* a given namespace. For more information, see "Webflow and Pipeline Editor Essentials" on page 12-9.
- The Webflow and Pipeline Editors are designed to help you create, modify, and validate `<namespace>.wf` and `<namespace>.pln` XML configuration files that are associated with a particular Web or enterprise application, respectively. The Editors do not support the editing of arbitrary files or other files in the WebLogic Portal product suite.
- The recommended editing method for the Webflow and Pipeline XML configuration files is via the Webflow and Pipeline Editors. If while hand-editing the XML configuration files in a text editor you create invalid entries, or if you fail to provide a namespace called `main` when using a `begin` node as the destination of an event in a new Webflow (as in `<destination node-name="begin"/>`), the behavior of the Editors may be unpredictable.
- It is expected that if Webflow and Pipeline XML configuration files for an application are stored in a Content Management System, they will be checked out by developers prior to modification in the Webflow and Pipeline Editors. If the appropriate files are not checked out, the Editors will open the files in read-only mode and the Editor palettes and toolbars that typically allow you to make modifications will not be shown. For more information, see "Webflow and Pipeline Files in Your Content Management System" on page 12-12.

- The Webflow and Pipeline Editors' use of namespace files allows different developers to work on portions of a single application's Webflow at the same time. Keep in mind, however, that references to nodes in other namespaces (called proxy nodes) are simply a snapshot of information that was available in your Content Management System at the time your files were checked out. Other developers with write permission for the application may be simultaneously modifying namespace modules within the application, causing the Webflow to enter an invalid state. It is important that developers on the team work together to ensure that changes are propagated to all affected namespaces and result in a valid Webflow for the entire application. The Webflow and Pipeline Editors do allow you to save a Webflow or Pipeline that is invalid, but you must ensure that an application's Webflow (as a whole) is valid prior to data synchronization. See "Synchronizing Application Data" in the *Deployment Guide* for more information.
- The E-Business Control Center (EBCC) does not support role-based security. Any user with access to the EBCC can also access the Webflow and Pipeline Editors.
- By default, changes made to Webflow and Pipeline XML configuration files do not require you to restart the server or perform any special deployment activities. Instead, the Webflow and Pipeline data for a particular application is synchronized along with other application data. See "Synchronizing Application Data" in the *Deployment Guide* for more information. If errors in a Webflow (or other data) are detected during the data synchronization process, an appropriate error message will be sent to the client. While such errors will not prevent application deployment, they may result in failures during execution.
- If you are using a cluster, the data synchronization service will update your application's Webflow and Pipeline information to all servers in the domain.

Next Steps

If you are new to this release of the Webflow and Pipeline Editors, it is strongly suggested that you proceed to the next section, "Learning to Use the Webflow and Pipeline Editors" on page 12-8. For step-by-step instructions on using the Webflow and Pipeline Editors to create Webflows, proceed to any of the following:

- Organizing Webflow Components in an Editor Canvas

- Using the Webflow and Pipeline Editor Toolbars
- Using the Properties Editors

Once you understand the behaviors and capabilities of the Webflow and Pipeline Editors, you may want to read some of the following sections, depending on your current goals:

- Migrating An Existing Webflow
- Creating or Modifying a Webflow: Breadth-First Versus Depth-First
- About the Webflow and Pipeline Editors' Validation Features

If you have already finished work on your application's Webflow, you may want to read "Synchronizing Webflow Data for Your Application" on page 12-48.

Learning to Use the Webflow and Pipeline Editors

This section provides you with general information about the Webflow and Pipeline Editor user interfaces, and includes a mapping of Webflow components to their graphical representations. This section also includes descriptions of tools in the Webflow and Pipeline Editor palettes and buttons in the Editors' toolbars. As such, this section includes the following:

- Webflow and Pipeline Editor Essentials
- Webflow Component Representations
- Understanding the Webflow and Pipeline Editor Palettes
- Understanding the Webflow and Pipeline Editor Toolbars

Webflow and Pipeline Editor Essentials

This section provides you with some basic information about the Webflow and Pipeline Editors. It includes an explanation of what the Webflow Editor displays and allows you to work with, introduces the Pipeline Editor, and describes some status indicators you should notice as you use the Webflow and Pipeline Editors. It also includes a brief discussion about using a Content Management System with your Webflow and Pipeline XML configuration files.

Webflow Namespaces

Although there is only one Webflow per Web application, BEA recognizes that different developers may be assigned to work in different functional areas of the same application. Therefore, a Webflow for a single Web application is comprised of numerous modules called **namespaces**. (See “Namespaces” for more information.)

The Webflow Editor displays and requires that you work with Webflow components within individual namespaces. In addition to allowing different developers to work in different areas of the same Webflow, displaying a Webflow by namespace in the Webflow Editor provides a much cleaner visualization, and thus may reduce the likelihood of error.

As such, the activities you perform in the Webflow Editor are really just operations on one or more editable namespace files. You can create, open, save, save as, or delete Webflow namespace files the same way you perform these tasks with other types of EBCC files. For detailed instructions on these general EBCC functions, see “Working with Files” in the *Guide to Using the E-Business Control Center* documentation.

The Webflow Editor does allow you to open more than one namespace file at a time. When you open more than one namespace, the tabs at the bottom of the Editor window will allow you to move between the namespace files that are currently available.

Note: For more information about the behavior of multiple files in an EBCC editor, see “About the E-Business Control Center Interface” in the *Guide to Using the E-Business Control Center* documentation.

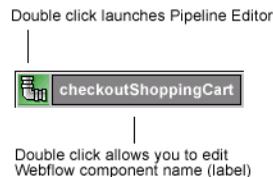
Pipelines Versus Pipeline Namespaces

The Pipeline Editor displays and requires that you work with Webflow components within individual Pipelines, rather than within entire Pipeline namespaces. In other words, since you can define multiple Pipelines within one Pipeline namespace, the editable unit in the Pipeline Editor is a Pipeline. You can create, open, save, save as, or delete Pipelines the same way you perform these tasks with other types of EBCC files. For detailed instructions on these general EBCC functions, see “Working with Files” in the *Guide to Using the E-Business Control Center* documentation.

Because Pipelines are scoped to an enterprise application (instead of a Web application like Webflows), Pipelines do not appear within the Webapp folder in the E-Business Control Center Explorer window’s Webflows/Pipelines list. Rather, Pipelines appear under the Pipeline Namespaces folder. Thus, while a Pipeline is the editable unit within the Pipeline Editor, it is a *Pipeline namespace* (rather than the Pipeline itself) that corresponds to a generated `<namespace>.p1n` file. You will need to check out the appropriate Pipeline namespace file from your Content Management System in order to work with a Pipeline in the Pipeline Editor. This is the only case where an object shown in the E-Business Control Center Explorer window does not have a one-to-one correspondence with a file.

The Pipeline Editor opens when you double click a Pipeline shown in the E-Business Control Center (EBCC) Explorer window, or when you double click on the icon portion of a Pipeline node that is currently displayed in the Webflow Editor canvas, as shown in Figure 12-3. The Pipeline Editor behaves exactly like the Webflow Editor, but operates with a different palette and toolbar, and on different node types (namely, Pipeline Components).

Figure 12-3 Results of Double-Clicking Portions of Pipeline Node



Notes: For more information about the differences between the Webflow and Pipeline Editors, see “Understanding the Webflow and Pipeline Editor Palettes” on page 12-17 and “Understanding the Webflow and Pipeline Editor Toolbars” on page 12-20. For more information about Pipelines and Pipeline Components, see “Input Processors and Pipelines.”

The Pipeline Editor allows you to open more than one Pipeline at a time. When you open more than one Pipeline, the tabs at the bottom of the Editor window will allow you to move between the Pipelines that are currently available. When you open multiple Pipelines, remember that these Pipelines may or may not be part of the same Pipeline namespace.

Note: For more information about the behavior of multiple files in an EBCC editor, see “About the E-Business Control Center Interface” in the *Guide to Using the E-Business Control Center* documentation.

Information Displayed in the Editors’ Title Bars

In the Webflow Editor, the title bar displays the name of the Editor and the namespace for the Webflow you are currently creating or modifying, in brackets []. For example, the Webflow Editor’s title bar may read: `Editor [Webflow: main]`, which means you are currently using the Webflow Editor to work with Webflow components in the namespace called `main`.

In the Pipeline Editor, the title bar displays the name of the Editor and the Pipeline you are currently creating or modifying, in brackets []. For example, the Pipeline Editor’s title bar may read: `Editor [Pipeline: viewShoppingCart]`, which means you are currently using the Pipeline Editor to define Pipeline Components in the Pipeline called `viewShoppingCart`.

In both Editors, the title bar may also show the text “Read Only” in parentheses. If present, this text indicates that the opened file(s) are in read-only mode and must be checked out of your Content Management System prior to editing or saving. See “Webflow and Pipeline Files in Your Content Management System” on page 12-12 for more information.

Webflow and Pipeline Files in Your Content Management System

When you want to edit or save Webflow components within a Webflow namespace or a Pipeline using the Webflow and Pipeline Editors, you should verify that you have checked out all the necessary files from your Content Management System. Depending on the Webflow components you want to edit, you may or may not need all of the following files:

- `<namespace>.wf`

The Webflow configuration files contain XML elements that represent the Webflow components used in the Webflow namespace, as well as the relationships among them. The `<namespace>.wf` files are scoped to the Web application.

- `<namespace>.pln`

The Pipeline configuration files contain XML elements that represent the Pipeline Components within a Pipeline being used in the namespace, as well as the relationships among them. The `<namespace>.pln` files are scoped to the enterprise application.

- `<namespace>.wf.ui` and `<namespace>.pln.<pipeline_name>.ui`

These XML files contain information that is used by the Webflow and Pipeline Editors to display the Webflow components in the way you last organized them. They are generated when you save a Webflow or Pipeline, and are located in the appropriate directories under the `BEA_HOME\EBCC_HOME\applications\
<enterprise_app>\project-info\webapps\
<web_app>` directory.

- `webflow-extensions.wfx`

This XML file describes the Webflow components currently available for use in the Webflow Editor. Any extension (custom) presentation or processor nodes your development team creates must be registered in this file if you want them to appear in the Webflow Editor. The `webflow-extensions.wfx` file is scoped to a Web application, and should remain in read-only mode unless extensions need to be added. More information about the `webflow-extensions.wfx` file is located in “Making Your Extension Presentation and Processor Nodes Available in the Webflow Editor.”

Note: If you just want to view a Webflow namespace or Pipeline using the Editors, you do not need to check out files. The Webflow and Pipeline Editors will display the Webflow components in read-only mode. In read-only mode, the Webflow and Pipeline Editors’ palettes and toolbars are not displayed. For

more information about the Webflow and Pipeline Editors’ palettes and toolbars, see “Understanding the Webflow and Pipeline Editor Palettes” on page 12-17 and “Understanding the Webflow and Pipeline Editor Toolbars” on page 12-20, respectively.

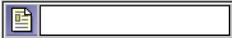
Webflow Component Representations

Since the Webflow and Pipeline Editors are graphical tools for creating and modifying Webflows and Pipelines, each Webflow component has a graphical representation for display in an Editor. This section provides you with information that will help you associate each Webflow component with its graphical representation.

Note: In addition to associating Webflow components with their graphical representations, Table 12-1 and Table 12-2 also provide brief descriptions of each component. If you do not remember the details of a particular Webflow component, refer to “Webflow Components and Concepts” for more information.

Table 12-1 provides information about Webflow component representations in the Webflow Editor.

Table 12-1 Webflow Components in the Webflow Editor

Representation	Webflow Component	Description
	Presentation Node	A page displayed to visitors interacting with your Web application. The type of these pages can be HTML, JSP, Java servlet, or an Extension (Custom) Presentation Node.
 <i>(This representation also shows an automatically created connection port.)</i>	Wildcard Presentation Node	A single, global event contained on one or more Presentation Nodes, typically used to implement general functions. There may be several Wildcard Presentation Nodes within a Webflow namespace. The type property reflects the context in which the event occurs.

12 Using the Webflow and Pipeline Editors

Table 12-1 Webflow Components in the Webflow Editor (Continued)

Representation	Webflow Component	Description
<i>(Same as a Presentation Node.)</i>	Extension (Custom) Presentation Node	A node created by an experienced Java/EJB developer for use in a Webflow. To appear in the Webflow Editor, this node must have an equivalent server-side Java class representation and be registered in the <code>webflow-extensions.wfx</code> file.
	Input Processor Node	A processor Webflow component that handles data input, whether from Web site visitors or other processor nodes. Validation of data input is the typical use of an Input Processor.
 <i>(This representation also shows an automatically created connection port.)</i>	Pipeline Node	A processor Webflow component that encapsulates business logic for a Web application. Pipelines Nodes contain a series of Pipeline Component Nodes, the latter of which are editable in the Pipeline Editor.
 <i>(This representation also shows an automatically created connection port.)</i>	Wildcard Processor Node	A single, global event contained on one or more Processor Nodes, typically used to implement general functions. There may be several Wildcard Processor Nodes within a Webflow namespace. The type property reflects the context in which the event occurs.
	Extension (Custom) Processor Node	A node created by an experienced Java/EJB developer for use in a Webflow. To appear in the Webflow Editor, this node must have an equivalent server-side Java class representation and be registered in the <code>webflow-extensions.wfx</code> file.
 <i>(This image represents a Presentation Begin Node.)</i>	Begin Node	A node designated as the initial state of or entry point into the Webflow. There can be one Begin Node for each namespace in a Webflow. The Begin Node can also be used as a destination.

Table 12-1 Webflow Components in the Webflow Editor (Continued)

Representation	Webflow Component	Description
 <i>(This image represents a Pipeline Proxy Node.)</i>	Proxy Node	A special node that represents a node whose definition resides in a different namespace file. Nodes in the namespace being edited can refer to the Proxy Node as a destination, but the Proxy Node itself cannot be edited. Proxy Nodes can be Presentation Nodes, Processor Nodes, or Extension (Custom) Nodes.
  <i>(The second representation is of a self-referring event.)</i>	Event <i>(may be a link, button, or return object)</i>	An occurrence triggered by the interaction of a Web site visitor that results in some change in the state of the Webflow. In other words, events cause Webflow transitions (movement from an origin node to a destination node). There are different events for different node types: link and button are events for Presentation Nodes; return object is an event for a Processor Node that has executed successfully.
  <i>(The second representation is of a self-referring exception.)</i>	Exception	Representation of an exception, which occurs when Processor Nodes do not execute successfully.

Table 12-2 provides information about Webflow component representations in the Pipeline Editor.

Table 12-2 Webflow Components in the Pipeline Editor

Representation	Webflow Component	Description
 <i>(This representation also shows an automatically created connection port.)</i>	Pipeline Component Node	A specialized Webflow component that performs tasks related to the application's underlying business logic. Pipeline Components exist within Pipelines, and may be implemented as Java objects or stateless session EJBs.

12 Using the Webflow and Pipeline Editors

Table 12-2 Webflow Components in the Pipeline Editor (Continued)

Representation	Webflow Component	Description
	Root Node	A Pipeline Component that represents the initial entry point into the Pipeline. There can be one Root Node for each Pipeline. The Root Node can also be used as a destination.
	Abort Exception Node	A special node that represents the place where a Pipeline's exceptions connect to, because their destinations actually exist outside the Pipeline Editor (in the Webflow Editor). Note: For more information, see "Configuring Pipeline Component Exception Fatality."
 <i>(Self-referring event transitions are not allowed in the Pipeline Editor.)</i>	Event <i>(return object)</i>	An occurrence triggered by the successful execution of a Pipeline Component that results in some change in the state of the Webflow. In other words, events cause Webflow transitions (movement from an origin node to a destination node). There are different events for different node types: return object is an event for a Pipeline Component Node that has executed successfully.
 <i>(The second representation is of a self-referring exception.)</i>	Exception	Special event type triggered by a Pipeline Component Node when it does not execute successfully.

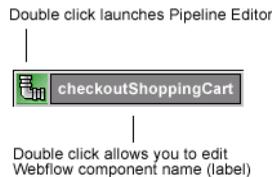
Understanding the Webflow and Pipeline Editor Palettes

When you first open a Webflow namespace in the Webflow Editor or a Pipeline in the Pipeline Editor, you will notice a palette on the left-hand side of the Editor window. This section describes each of the tools provided in the Webflow and Pipeline Editor palettes.

Notes: If you do not see a palette on the left-hand side of either the Webflow or Pipeline Editors when you open a Webflow namespace or a Pipeline, this means that the files you are opening are in read-only mode. To view the palettes, you will need to make sure the appropriate `.wf` and `.pln` files are writable. For more information about these files, see “Webflow and Pipeline Files in Your Content Management System” on page 12-12.

The Pipeline Editor opens when you double click a Pipeline shown in the E-Business Control Center (EBCC) Explorer window, or when you double click on the icon portion of a Pipeline node that is currently displayed in the Webflow Editor canvas, as shown in Figure 12-4. For more information about Pipelines, see “Input Processors and Pipelines.”

Figure 12-4 Results of Double-Clicking Portions of Pipeline Node



Tools in the Webflow Editor Palette

Table 12-3 describes each of the tools in the Webflow Editor palette.

Table 12-3 Description of the Webflow Editor Palette Tools

Tool	Function	Description
	Selection Tool	Allows you to select and move nodes, event transitions, and exception transitions. Also allows you to add elbows to transitions. This is the default tool for the Webflow Editor.
	Event Tool	Allows you to add an event transition between two nodes, or a self-referring event transition.
	Exception Tool	Allows you to add an exception transition between two nodes, or a self-referring exception transition.
	Begin Node	Allows you to designate one of the Presentation or Processor Nodes already on the Editor canvas as the Begin Node for the current Webflow namespace.
	Presentation Node	Allows you to add a new Presentation Node to the Editor canvas.
	Wildcard Presentation Node	Allows you to add a new Wildcard Presentation Node to the Editor canvas.
	Input Processor Node	Allows you to add a new Input Processor Node to the Editor canvas.
	Pipeline Node	Allows you to add a new Pipeline Node to the Editor canvas.
	Wildcard Processor Node	Allows you to add a new Wildcard Processor Node to the Editor canvas.

Table 12-3 Description of the Webflow Editor Palette Tools (Continued)

Tool	Function	Description
	Extension (Custom) Processor Node	Allows you to add a new Extension (Custom) Processor Node to the Editor canvas. Note: The Extension (Custom) Processor Node tool is disabled until the Webflow Editor detects a new node in the <code>webflow-extensions.wfx</code> file.
	Proxy Node	Allows you to add a Proxy Node to the Editor canvas. You should create a Proxy Node any time you want to refer to a node that is defined in another namespace.

Tools in the Pipeline Editor Palette

Table 12-4 describes each of the tools in the Pipeline Editor palette.

Table 12-4 Description of the Pipeline Editor Palette Tools

Tool	Function	Description
	Selection Tool	Allows you to select and move Pipeline Components, event transitions and exception transitions. This is the default tool for the Pipeline Editor.
	Event Tool	Allows you to add an event transition between two nodes.
	Exception Tool	Allows you to add an exception transition between two nodes, or a self-referring exception transition.
	Root Node	Allows you to designate one of the Pipeline Components already on the Editor canvas as the Root Node for the current Pipeline.
	Pipeline Component	Allows you to add new Pipeline Components to the Editor canvas.

Understanding the Webflow and Pipeline Editor Toolbars

You will find the Webflow and Pipeline Editor toolbars at the top of both the Webflow and the Pipeline Editors, respectively, but the buttons available from each Editor's toolbar may differ. This section describes which buttons are available from which Editor's toolbar, and describes their functions.

Display and Behavior Buttons

The toolbar buttons described in this section modify the display or behavior of Webflow components, and may not be available from both the Webflow and Pipeline Editors. These buttons act as toggles, meaning that you click the button once to select the tool, then again to deselect the tool.

Table 12-5 briefly describes the Display and Behavior buttons, and where appropriate, indicates which Editor they belong to.

Table 12-5 Description of the Display and Behavior Buttons

Tool	Function	Description
	Show/Hide Grid button	Allows you to show or hide a grid background in the Editor canvas.
	Snap to Grid button	Allows you to control whether or not Webflow components are automatically placed to the nearest grid point on the Editor canvas when you release the mouse button.
	Link Optimization button	Allows you to control whether or not the connectors on each node will be automatically moved around the perimeter of the node as the node is moved on the Editor canvas.
	Show/Hide Exceptions button	Allows you to show or hide exception transitions in the Editor canvas.

Table 12-5 Description of the Display and Behavior Buttons (Continued)

Tool	Function	Description
	Make This Pipeline Transactional button	Allows you to specify whether the Pipeline should be transactional. Note: Only available in the Pipeline Editor.
	Include Pipeline Session in Transaction button	Allows you to specify whether the Pipeline Session should be included in the transaction. Enabled only if the Pipeline Transaction button is on. Note: Only available in the Pipeline Editor.

Command Buttons

The toolbar buttons described in this section execute commands related to Webflow components, and may not be available from both the Webflow and Pipeline Editors. Many of these buttons also have keyboard shortcuts you may find helpful.

Table 12-6 briefly describes the Command buttons and where appropriate, indicates which Editor they belong to.

Table 12-6 Description of the Command Buttons

Tool	Function	Description	Keyboard Shortcut
	Print button	Allows you to print the entire Webflow namespace or Pipeline to a printer.	Ctrl+P
	Delete button	Deletes the selected Webflow component. The Delete button is disabled until a Webflow component is selected.	Delete
	Zoomed Overview button	Allows you to view the entire Webflow namespace or Pipeline at a glance.	Ctrl+Z

Table 12-6 Description of the Command Buttons (Continued)

Tool	Function	Description	Keyboard Shortcut
	Validate the Selected Node button	Allows you to run the Webflow validation feature on the selected node. The Validate the Selected Node button is disabled until a Webflow component is selected.	Ctrl + V
	Validate All button	Allows you to run the Webflow Editor's validation feature on the entire Webflow namespace, or the Pipeline Editor's validation feature on the entire Pipeline.	Alt + V
	Set Up Configuration Error Page Name button	Allows you to specify the name and path to the configuration error page. Note: Only available in the Webflow Editor.	--
	Pipeline Component Editor button	Opens the Pipeline Component Editor, which allows you to manage Pipeline Components. Note: Only available in the Pipeline Editor.	--

Organizing Webflow Components in an Editor Canvas

This section provides you with detailed instructions about how to perform common tasks using the Webflow and Pipeline Editors. This section includes information about:

- How to Select Webflow Components
- How to Add Webflow Components
- How to Edit a Webflow Component's Name (Label)
- How to Designate or Remove a Begin (Root) Node
- How to Move a Webflow Component
- How to Connect Nodes with Event or Exception Transitions
- How to Reposition Connection Ports on a Node
- How to Work with Elbows in Transitions

How to Select Webflow Components

To select a Webflow component in either the Webflow or Pipeline Editor, click the Webflow component. For events and exceptions, this means clicking the transition itself or an associated connection port.

Note: When you select a Webflow component, detailed information about the component is displayed in the Properties Editor. For more information about the Properties Editor, see “Using the Properties Editors” on page 12-38.

How to Add Webflow Components

To add a new Webflow component (that is, a new Presentation Node, Wildcard Presentation Node, Input Processor Node, Pipeline Node, Wildcard Processor Node, Extension (Custom) Processor Node, Proxy Node, or Pipeline Component Node) in either the Webflow or Pipeline Editor, follow these steps:

1. Click the appropriate tool from the Editor's palette (see Table 12-3 or Table 12-4).
2. Position the cross-hairs on the Editor canvas.
3. Click the mouse to add the Webflow component to the Editor canvas in that location.

Notes: A default name (label) is provided for the added component. For information about editing component names, see “How to Edit a Webflow Component's Name (Label)” on page 12-24. In addition to the component's name, there are several other properties for a new component that you must provide. For more information, see “Using the Properties Editors” on page 12-38.

If you add a Proxy Node to the canvas, be sure to connect it to another node with an event or exception transition before saving your Webflow namespace. If you do not, the Proxy Node will not appear on the canvas following a reload. This is because the purpose of the Proxy Node is solely as a destination for transitions. If there are no transitions, there is no use for the Proxy Node. For more information about Proxy Nodes, see Table 12-1 and Table 12-3.

How to Edit a Webflow Component's Name (Label)

The Webflow and Pipeline Editors will typically give each component you add to the canvas a name (label). To edit the component's name, follow these steps:

1. Double-click the Webflow component's name to select it.
2. Type a new name for the component, and press Enter.

Note: You can also edit a Webflow component's name (label) using the Properties Editor. For Pipeline Component Nodes displayed in the Pipeline Editor, you can only edit the Pipeline Component's name by selecting a new one from the Properties Editor. For more information, see "Using the Properties Editors" on page 12-38.

How to Designate or Remove a Begin (Root) Node

To designate a Presentation or Processor Node as the Begin Node for the current Webflow namespace in the Webflow Editor, or a Pipeline Component Node as the Root Node for the current Pipeline in the Pipeline Editor, follow these steps:

1. Click the Begin Node or Root Node Tool (see Table 12-3 and Table 12-4).
2. Click a Presentation, Processor, or Pipeline Component Node that is already on the Editor canvas to designate it as the Begin (Root) Node. The node is marked by a green stripe to the right of the node name

Since the Begin and Root Node Tools work as toggles, you can also remove the Begin or Root designation from a node by following the same procedure. When you remove the begin (root) designation from a node, the green stripe is also removed.

Notes: Wildcard, Proxy, and Abort Exception nodes cannot be designated as begin or root nodes. For more information about the Begin Node, see "The Begin Node." For more information about the Root Node, see "The Root Component Node."

How to Move a Webflow Component

To move a Webflow component (that is, a Presentation Node, Wildcard Presentation Node, Input Processor Node, Pipeline Node, Wildcard Processor Node, Extension (Custom) Processor Node, Proxy Node, or Pipeline Component Node) to another location on the Webflow or Pipeline Editors' canvas, follow these steps:

1. Click and hold the mouse button down on the component while dragging it to the desired location.

Note: The node's corresponding event and exception components (that is, the associated transitions) will move with the node.

2. Release the mouse button to place the component in the new position.

Caution: It is possible to drag a node far to the right or bottom of an Editor canvas, so that you cannot see the entire flow of the Webflow namespace or Pipeline at one glance. Verify that you have edited all the nodes you wanted to by using the scroll bars to the right and at the bottom of the Editor’s canvas. The Zoomed Overview tool, described in “How to Use the Zoomed Overview” on page 12-31, may be helpful here.

How to Connect Nodes with Event or Exception Transitions

Transitions from an origin node to a destination node result from events or exceptions thrown by the origin node. Therefore, you connect two different nodes with event and exception transitions, or you can create a self-referring transition (a transition that has the same origin and destination node).

Note: For more information about origin and destination nodes, see “Introduction to Webflow Components.”

To connect nodes with event or exception transitions, follow these steps:

1. Click the Event Tool or the Exception Tool (see Table 12-3 or Table 12-4).
2. Position the transition by moving the mouse to an edge of the origin node. A solid orange square indicates an acceptable connection location, and the cursor changes to indicate a transition addition.

Note: If the origin node already has a connection port (as shown in Figure 12-5), position the transition by moving the mouse over the existing connection port.

Figure 12-5 Pipeline Node with Automatically Created Connection Port



3. If you want to connect two different nodes with the transition, click, hold, and drag the mouse to the destination node. Release the mouse to connect the transition to the destination node.

Note: An outlined red square with an X in it indicates that you cannot place the transition at the current location.

If you want to create a self-referring transition, just single-click the mouse on the node to connect the transition to that same node.

How to Reposition Connection Ports on a Node

A **connection port** is a small graphical device on a node edge that represents where an event or exception is connected to that node. Connection ports accepting transitions are called input connection ports; connection ports where transitions originate are called output connection ports. In some cases, it may be helpful to move the node's connection port. To reposition the connection port on a node, follow these steps:

1. Click and hold the mouse button on the connection port, then drag the connection port to the desired location on the node.

Note: A solid orange square indicates an acceptable connection location; an outlined red square with an X in it indicates that you cannot place the transition at the current location.

2. Release the mouse button to place the connection port in the new location.

Notes: The connection port associated with a self-referring transition can only be moved along the same node edge.

When repositioning connection ports, you may find the Link Optimization feature helpful. For more information see “How to Enable and Disable Link Optimization” on page 12-32.

How to Work with Elbows in Transitions

In addition to the repositioning connection ports, you can also reposition transition lines on an Editor's canvas by moving, creating or deleting elbows. **Elbows** allow you to bend portions of the transition line.

How to Move an Existing Elbow

To move an existing elbow, follow these steps:

1. Single-click a transition to view the existing elbows, which appear as black squares.
2. Click and hold the mouse button on the elbow as you drag it to the desired position. The selected elbow appears as an orange square.
3. Release the mouse button to place the elbow in the new location.

How to Create a New Elbow

To create a new elbow, follow these steps:

1. Single-click a transition to view the existing elbows, which appear as black squares.
2. Click and hold the mouse button anywhere on the transition line (except on an existing elbow) and drag the mouse to add the new elbow. The selected elbow appears as an orange square.
3. Release the mouse button to create the elbow in that location.

How to Delete a Elbow

To delete an existing elbow, follow these steps:

1. Single-click a transition to view the existing elbows, which appear as black squares.
2. Click the elbow you want to delete to select it. The selected elbow appears as an orange square.
3. Click the Delete button on the Editor's toolbar, or press the Delete key.

Using the Webflow and Pipeline Editor Toolbars

This section provides you with detailed instructions about how to perform common tasks using the buttons in the Webflow and Pipeline Editor toolbars. This section includes information about:

- How to Print a Webflow Namespace or Pipeline
- How to Delete Webflow Components
- How to Use the Zoomed Overview
- How to Show/Hide the Grid
- How to Snap Objects to the Grid
- How to Enable and Disable Link Optimization
- How to Show and Hide Exception Transitions
- How to Validate the Selected Node
- How to Validate All Nodes
- How to Set the Configuration Error Page Name
- How to Use the Pipeline Component Editor
- How to Make the Pipeline Transactional
- How to Include the Pipeline Session in a Transaction

How to Print a Webflow Namespace or Pipeline

To print the contents of the Webflow Editor canvas or the Pipeline Editor canvas, click the Print button (see Table 12-6), or press Ctrl+P. A platform-specific Print dialog opens, which allows you to print as you would from any other application.

How to Delete Webflow Components

Caution: No confirmation dialog is presented before a Webflow component is deleted, and no undo feature is provided. If you delete a Webflow component by mistake, the only remedy is to close the Editor without saving. Be sure you want to delete a Webflow component before proceeding.

You may delete a Webflow component because you do not require it for your namespace, but keep in mind that other namespaces within the application's Webflow may still use the component. If this is the case, the other namespaces will become invalid. Be sure to communicate your changes to others on the development team who may be affected by the deletion.

To delete a Webflow component from an Editor's canvas, follow these steps:

1. Click the Webflow component you want to delete to select it.
2. Click the Delete button on the Editor's toolbar (see Table 12-6), or press the Delete key.

Notes: Deleting a transition or an input connection port associated with a node deletes the entire transition (that is, the input/output connection ports on the node, as well as the line between them). However, deleting an input connection port deletes only the input connection port and the line (that is, the output connection port is retained).

Deleting a transition line or a connection port on a Wildcard Node and saving the Webflow namespace or Pipeline file causes that Wildcard Node to disappear on reload, and no validation alert is produced. This is because the Wildcard Node has no meaning without an event or exception transition.

How to Use the Zoomed Overview

To use the zoomed overview feature, follow these steps:

1. Click the Zoomed Overview Tool (see Table 12-6) to see all the Webflow components in a Webflow namespace or a Pipeline at one glance.
2. Click and hold the mouse button on the green rectangle that appears at the top, left-hand corner of the Editor canvas.
3. Drag the mouse to the desired location. To return to the normal view, release the mouse button.

How to Show/Hide the Grid

When the Show/Hide Grid toggle button in an Editor's toolbar is selected, a rectangular grid appears in the background, behind your Webflow components. This grid may make manipulating components easier on your eyes and help you align components. When the Show/Hide Grid toggle button is deselected, the background is just a plain canvas. By default, the Editors open with the Show/Hide Grid toggle button in the deselected position (that is, no grid is shown).

How to Snap Objects to the Grid

When selected, the Snap To Grid toggle button in an Editor's toolbar can help you align Webflow components by placing them to the grid point closest to where you release the mouse button. When the Snap To Grid toggle button is deselected, you have complete control over placement of the other Webflow components. The Snap To Grid feature does not require the grid to be visible. By default, the Editors open with the Snap To Grid toggle button in the selected position (that is, Webflow components are snapped to the grid).

How to Enable and Disable Link Optimization

When the Link Optimization toggle button in an Editor's toolbar is selected, link optimization is turned on. In other words, the connectors on each node will be automatically relocated as the node is moved on the Editor canvas, minimizing link length and enabling the best possible display. By default, the Editors open with the Link Optimization toggle button deselected (that is, connectors are not optimized).

How to Show and Hide Exception Transitions

When the Show/Hide Exceptions toggle button in an Editor's toolbar is selected, exception transitions are not shown on the Editor canvas. This provides you with a cleaner picture of the other Webflow components. Alternatively, when the Show/Hide Exceptions toggle button is deselected, the exception transitions are shown in the Editor canvas. By default, the Editors open with the Show/Hide Exceptions toggle button in the deselected position (that is, exceptions are shown).

How to Validate the Selected Node

To validate a single node in the Webflow or Pipeline Editor, follow these steps:

1. Click the node you want to validate to select it.
2. Click the Validate the Selected Node button (see Table 12-6).

Note: The Validate the Selected Node button is disabled until you select a node as described in steps 1 and 2.

3. Click the Alerts tab of the Properties Editor to view any alerts for the selected node. If an alert exists, the severity of that alert is indicated by the traffic light icon.

Note: For more information about the validation feature, see “About the Webflow and Pipeline Editors’ Validation Features” on page 12-45.

How to Validate All Nodes

To validate all the nodes in the namespace using the Webflow Editor or all the nodes in the Pipeline using the Pipeline Editor, follow these steps:

1. Click the Validate All button (see Table 12-6).
2. Click the Alerts tab of the Properties Editor to view any alerts for the namespace or Pipeline. If an alert exists, the severity of that alert is indicated by the traffic light icon.

Note: As described in “About the Webflow and Pipeline Editors’ Validation Features” on page 12-45, the Alerts tab contains a running log of error messages as you work in the namespace or Pipeline. Therefore, using the Validate All button is useful when you have already cleared the Alerts and want a new, complete validation of your work.

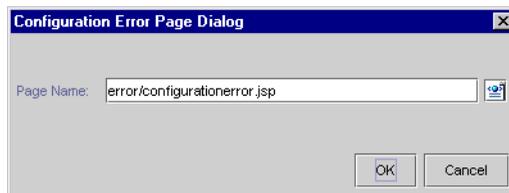
How to Set the Configuration Error Page Name

You can set a configuration error page name using the Webflow Editor. To set the configuration error page name, follow these steps:

1. Click the Set Up Configuration Error Page Name button (see Table 12-6). The Configuration Error Page Dialog, shown in Figure 12-6, appears.

Note: The default configuration error page name that is used in the WebLogic Portal’s sample applications is `error/configurationerror.jsp`.

Figure 12-6 Configuration Error Page Dialog



2. Either type in the path and the file name for the configuration error page in the Page Name input field, or click the Browse button at the left of the input field to locate the Page Name with the Open window.

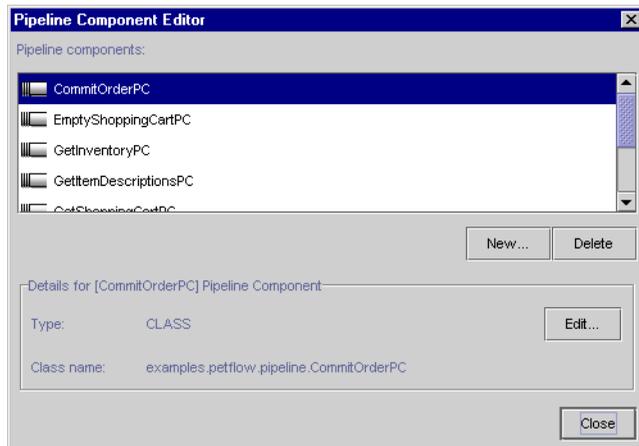
3. Click OK.

Note: For more information about the configuration error page, see “The Configuration Error Page.”

How to Use the Pipeline Component Editor

The Pipeline Component Editor is available from the Pipeline Editor. It allows you to view, add, edit, or delete the Pipeline Components that are available for selection in the Properties Editor (specifically, in the Component attribute). Figure 12-7 is a sample illustration of the Pipeline Component Editor.

Figure 12-7 Pipeline Component Editor



How To View Pipeline Component Details

To view the details of a Pipeline Component that is shown in the list, click the Pipeline Component's name to select it. The details for that Pipeline Component are shown in the Details region of the Pipeline Component Editor.

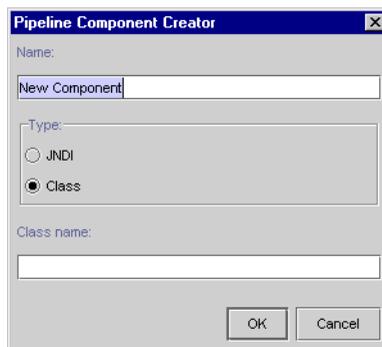
How to Add Pipeline Components

To add a new Pipeline Component to the list, follow these steps:

1. Click New... The Pipeline Component Creator dialog opens, an example of which is shown in Figure 12-8.

Note: When you add a new Pipeline Component, a default name for the Pipeline Component is automatically shown in the Name input field.

Figure 12-8 Pipeline Component Creator Dialog



2. Type the name of the Pipeline Component in the Name input field.
3. Select the Type for the Pipeline Component (JNDI or Class) using the radio buttons. The default value for the Type is Class.
Note: If you change the Type to JNDI, the Class Name label will change to JNDI Name.
4. Type the class name or JNDI name for the Pipeline Component in the Class Name or JNDI Name input field.
5. Click OK. The Pipeline Component Creator Dialog closes, and the Pipeline Component you added appears in the Pipeline Components list.
6. Click Close. The Pipeline Component Editor closes, and the new Pipeline Component will now be available for selection as a Component attribute in the Properties Editor.

How to Edit Pipeline Components

To edit a Pipeline Component that is shown in the list, follow these steps:

1. Click the Pipeline Component's name shown in the list to select it.
2. Click Edit... The Pipeline Component Creator dialog opens, an example of which is shown in Figure 12-8.

Note: The existing values for the Pipeline Component are shown in the Pipeline Component Creator dialog.

3. If desired, type a new name for the Pipeline Component in the Name input field.
4. If desired, modify the Type for the Pipeline Component (JNDI or Class) using the radio buttons. The default value for the Type is Class.

Note: If you change the Type to JNDI, the Class Name label will change to JNDI Name.

5. If desired, type the new class name or JNDI name for the Pipeline Component in the Class Name or JNDI Name input field.
6. Click OK. The Pipeline Component Creator Dialog closes, and the new details for the Pipeline Component you edited appear in the Details region.
7. Click Close. The Pipeline Component Editor closes, and the modified Pipeline Component will now be available for selection as a Component attribute in the Properties Editor.

How to Delete Pipeline Components

Caution: No confirmation dialog is presented before a Pipeline Component is deleted, and no undo feature is provided. If you delete a Pipeline Component by mistake, the only remedy is to close the Editor without saving. Be sure you want to delete a Pipeline Component before proceeding.

To delete a Pipeline Component that is shown in the list, follow these steps:

1. Click the Pipeline Component's name shown in the list to select it.
2. Click Delete. The Pipeline Component is no longer shown in the Pipeline Components list.

3. Click Close. The Pipeline Component Editor closes, and the deleted Pipeline Component will no longer be available for selection as a Component attribute in the Properties Editor.

How to Make the Pipeline Transactional

When the Make This Pipeline Transactional toggle button in the Pipeline Editor's toolbar is selected, the Pipeline will be made transactional. Alternatively, when the Make This Pipeline Transactional toggle button is deselected, the Pipeline will not be transactional. By default, the Pipeline Editor opens with the Make This Pipeline Transactional toggle button in the deselected position (that is, the Pipeline will not be transactional).

Note: For more information about transactional Pipelines, see “Transactional Versus Nontransactional Pipelines.”

How to Include the Pipeline Session in a Transaction

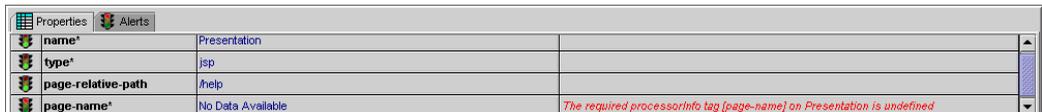
When the Include Pipeline Session in Transaction toggle button in the Pipeline Editor's toolbar is selected, the Pipeline Session will be included in the transaction. Alternatively, when the Include Pipeline Session in Transaction toggle button is deselected, the Pipeline Session will not be included in the transaction. The Include Pipeline Session in Transaction toggle button is not enabled unless the Make Pipeline Transactional toggle button is in the selected position.

Note: For more information about including Pipeline Sessions in transactions, see “Including Pipeline Sessions in Transactions.”

Using the Properties Editors

As shown in Figure 12-9, a Properties Editor is the portion of the Webflow or Pipeline Editor that is located directly below the canvas.

Figure 12-9 Example of a Properties Editor



name*	value	
type*	jsp	
page-relative-path	/help	
page-name*	No Data Available	The required processorInfo tag [page-name] on Presentation is undefined

The Properties tab in a Properties Editor contains information about the Webflow component currently selected. Properties for a component are displayed in two columns: one for the name and one for the value. To create a valid Webflow, you must fill in the required properties for each node in each namespace that comprises the Webflow. (Required properties are marked with an asterisk.) To help you accomplish this, this section includes information on the following:

- Viewing Component Properties
- Description of Webflow Component Properties
- Modifying Component Property Values

The third column in the Properties tab displays messages about the selected Webflow component if it is invalid, which should help you troubleshoot problems as you work. However, this column displays messages for the listed properties only. That is, the node may be invalid not because a property value is defined incorrectly, but because the node is missing a necessary transition. Adding that transition would cause another property to be displayed in the Properties Editor for the node. Therefore, to find a complete list of validation messages for the node, use the Validate the Selected Node button. For more information, see “How to Validate the Selected Node” on page 12-32.

Note: For more information about the Webflow and Pipeline Editors’ validation features, see “About the Webflow and Pipeline Editors’ Validation Features” on page 12-45.

Viewing Component Properties

To view the properties for a particular Webflow component, click the Selection Tool (see Table 12-3 and Table 12-4), then click the component. The properties for the selected Webflow component are displayed in the Properties Editor.

Description of Webflow Component Properties

The properties displayed in the Properties Editor depend on which Webflow component is selected. Table 12-7 lists the properties that should typically be specified for each Webflow component, and provides examples of property values.

Note: Required properties are marked with an asterisk (*).

Table 12-7 Webflow Component Properties

Component	Description of Properties	Example
Presentation Node <i>and</i> Extension (Custom) Presentation Node	<p>Name*: The name (label) of the Presentation Node that is displayed in the Editor canvas. Initially defaults to the Page-name value.</p> <p>Type*: The type of page, which can be HTML, JSP, Java servlet, or an Extension (Custom) Presentation Node.</p> <p>Page-relative-path: The path to the Page-name, relative to the top of the Web application. The Page-relative-path property is only available when the type is JSP or HTML. For a servlet, this property is called Request-uri-path.</p> <p>Page-name*: The filename for the Presentation Node. Page-name is only a required property when the Type is JSP or HTML.</p> <p>Notes: There will be an Event property for each transition originating from the node. Depending on how the Extension (Custom) Presentation Node is defined, there may be different properties.</p>	<p>Name: item</p> <p>Type: jsp</p> <p>Page-relative-path: /browse</p> <p>Page-name: item.jsp</p>

12 Using the Webflow and Pipeline Editors

Table 12-7 Webflow Component Properties (Continued)

Component	Description of Properties	Example
Wildcard Presentation Node	<p>Name*: The name (label) of the Wildcard Presentation Node that is displayed in the Editor canvas. Initially defaults to the Event value.</p> <p>Type*: The type of event, which can be HTML, JSP, a Java servlet, or an Extension (Custom) Presentation Node.</p> <p>Event*: The global event for the Wildcard Presentation Node. Initially defaults to the Name value.</p>	<p>Name: HelpWildcardLink</p> <p>Type: jsp</p> <p>Event: link.help</p>
Input Processor Node	<p>Name*: The name (label) of the Input Processor to be invoked by the Webflow.</p> <p>Class-name*: The package name for the Input Processor class, relative to the Web application's directory.</p> <p>Note: There will be Event or Exception properties from each transition originating from the node.</p>	<p>Name: itemIP</p> <p>Class-name: examples.petflow.ip.ItemIP</p> <p>Exception: com.bea.p13n.appflow.exception.ProcessingException</p> <p>Event: success</p>
Pipeline Node	<p>Name*: The name (label) of the Pipeline to be invoked by the Webflow.</p> <p>Pipeline-name*: The name of the Pipeline within the specified namespace.</p> <p>Pipeline-namespace: The name of the Pipeline namespace in which the Pipeline with Pipeline-name resides.</p> <p>Notes: If dictated by the selected Pipeline-name, the Editor will automatically add connection ports to the node for events and exceptions. You must specify a Pipeline-namespace first, then the Pipeline-name.</p>	<p>Name: updateCart</p> <p>Pipeline-name: updateCart</p> <p>Pipeline-namespace: main</p> <p>Event: success</p> <p>Exception: com.bea.p13n.appflow.exception.PipelineException</p>

Table 12-7 Webflow Component Properties (Continued)

Component	Description of Properties	Example
Wildcard Processor Node	<p>Name*: The name (label) of the Wildcard Processor Node that is displayed in the Editor canvas. Initially defaults to the Exception value.</p> <p>Type*: The type of processor, which can be an Input Processor Node, a Pipeline Node, or an Extension (Custom) Processor Node.</p> <p>Exception*: The global exception for the Wildcard Processor Node. Initially defaults to the Name value.</p>	<p>Name: MyWildException</p> <p>Type: inputprocessor</p> <p>Exception: com.bea.pl3n.appflow.exception.ProcessingException</p>
Extension (Custom) Processor Node	<p>Name*: The name (label) of the Extension (Custom) Processor Node that is displayed in the Editor canvas.</p> <p>Type*: The type associated with the Extension (Custom) Processor Node.</p> <p>Note: There will be additional properties for the Extension (Custom) Processor Node, depending on how it is defined.</p>	<p>Name: customLayout</p> <p>Type: layoutmanager</p>
Proxy Node	<p>Referent-namespace*: The name of the namespace in which the node actually exists.</p> <p>Entity Name*: The name (label) of the node entity to which the Proxy Node refers.</p>	<p>Referent-namespace: order</p> <p>Entity Name: checkout.ShoppingCart</p>
Event	<p>Name*: The name of an event transition on a node. For Presentation Nodes, this can be <code>link</code> or <code>button</code>, and the name of the link or button, separated by dot notation. For Processor Nodes, the name is simply the return object.</p> <p>Note: The number of event properties you must specify depends on how many event transitions you add to a node.</p>	<p>Name: <code>link.logout</code> (Presentation Node); <code>success</code> (Processor Node)</p>
Exception	<p>Name*: The package name to the exception class, relative to the Web application's directory.</p>	<p>Name: com.bea.pl3n.appflow.exception.ProcessingException</p>
Pipeline Component	<p>Component*: The name of the Pipeline Component.</p> <p>Event*: The event transition on the node. For Pipeline Component Nodes, the event is simply the return object</p>	<p>Component: GetProductPC</p> <p>Event: success</p>

Table 12-7 Webflow Component Properties (Continued)

Component	Description of Properties	Example
Abort Exception Node	<p>Exception behavior: The behavior that is to be executed when there is a fatal exception in the Pipeline.</p> <p>Note: The value for this property cannot be modified if the Abort Exception Node is the destination of transitions. If no transitions are specified, the Pipeline's default behavior can be specified by setting this property to Abort or Continue. Pipeline processing will either stop or continue if an exception is thrown by a Pipeline Component.</p>	Exception behavior: abort

Modifying Component Property Values

To modify the value of a Webflow component's property in the Properties Editor, you must first be able to view the properties. To view a component's properties, follow these steps:

1. Click the Selection Tool (see Table 12-3 and Table 12-4).
2. Click the component.
3. Click the Properties tab. The properties for the selected Webflow component will be displayed in the Properties Editor.

The way you modify the value of a Webflow component's property depends on the property itself. A single-click of the mouse button in an property value field may:

- Allow you to type in a new value. If this is the case, type the new value and then press Enter.
- Allow you to select a predefined value from a drop-down list. If this is the case, just click the new value to select it.

Note: Be sure to save the changes to your Webflow or Pipeline using the E-Business Control Center (EBCC). For more information about saving files in the EBCC, see "Saving Files" under "Working with Files" in the *Guide to Using the E-Business Control Center* documentation.

Migrating An Existing Webflow

If you used a previous release of Webflow, you will notice that the format of the Webflow and Pipeline configuration files has changed. That is, the `webflow.properties` and `pipeline.properties` files have been converted to XML files. The new Webflow and Pipeline XML configuration files can be created and modified using the E-Business Control Center (EBCC)'s graphical Webflow and Pipeline Editors.

To use the Webflow and Pipeline Editors, you will first need to migrate your existing Webflow and Pipeline properties files to the new XML format. To do this, use the Data Migrator Tool as described in the *Migration Guide*.

The migration of your `webflow.properties` and `pipeline.properties` files will result in two XML files: `main.wf` and `main.pln`, where `main` is the default namespace name assigned by the Migrator Tool. You will find these files in the root of the destination directory, which is defined by the `data_dst_dir` variable in the `migration_install.properties` file. (See the *Migration Guide* for details.)

Once you copy these files to the appropriate place (as explained in the *Migration Guide*), you can use the Webflow and Pipeline Editors to divide your Webflow or Pipelines into multiple namespaces. (See “Opening Files” in the *Guide to Using the E-Business Control Center* documentation for detailed instructions.)

Note: Because there is no prior graphical layout for the Webflow components, the Webflow and Pipeline Editors automatically display the components in a way that preserves their relationships. You may also want to clean up the layout.

Creating or Modifying a Webflow: Breadth-First Versus Depth-First

There are two different approaches you can take to create or modify a Webflow. These approaches may depend on how you prefer to work, or the amount of information you currently have about your Web application. These approaches are:

- **Breadth-first:** Create and lay out all Presentation and Processor Nodes on the Webflow Editor canvas, using the default names (labels). Once all Presentation and Processor Nodes are on the canvas, go back and fill in the properties for each node (except for Pipeline Nodes), using the Properties Editor. Then connect the nodes with event and/or exception transitions.

Create and lay out Pipeline Component Nodes on the Pipeline Editor canvas, using the default names (labels). Once all Pipeline Components are on the canvas, go back and fill in the properties for each node, using the Properties Editor. (You may want to launch the Pipeline Component Editor to create or modify individual Pipeline Components.) Then connect the nodes with event and/or exception transitions.

Return to the Webflow Editor to specify which Pipeline your Pipeline Nodes reference, using the Properties Editor.

- **Depth-first:** Create a Presentation or Processor Node and fill in all the properties for that node, using the appropriate combination of Editors (that is, Properties Editor, Pipeline Editor, and/or Pipeline Component Editor). Then, do the same for another node. Once you have two complete nodes, connect them with event and/or exception transitions. Continue to create complete nodes (that is, nodes for which all properties are filled in), and connect the completed nodes to the existing Webflow with transitions.

A breadth-first approach will temporarily cause individual Webflow components in your namespace be marked as invalid. Invalid nodes are marked with a red and white square status icon, which serves as a reminder that you must fill in the properties of each node in the namespace or Pipeline for your Webflow to be valid, regardless of when you decide to do it. All nodes placed on an Editor canvas are initially invalid.

Notes: Although your Webflow namespaces and Pipelines may be invalid, you may still save them and continue working on them later. For more information, see “Saving Invalid Webflows” on page 12-47. For more information about troubleshooting invalid Webflows, see “About the Webflow and Pipeline Editors' Validation Features” on page 12-45.

About the Webflow and Pipeline Editors' Validation Features

In addition to making an application's Webflow easier to visualize, the Webflow and Pipeline Editors are also beneficial because of their built-in validation features. When you first start the Webflow and Pipeline Editors, the Webflow namespace or Pipeline is automatically validated and any messages are shown in the Properties Editor. Additionally, the validators continually work behind the scenes as you create or modify Webflow namespaces and Pipelines. This section explains more about the Editors' validation features, and includes:

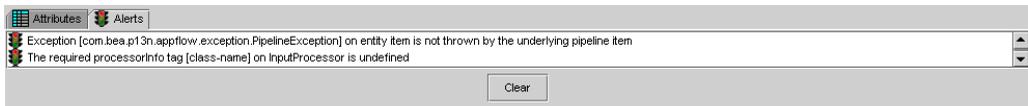
- Validation Error Messages in a Properties Editor
- What Do the Editors Validate?
- Saving Invalid Webflows

Caution: If the underlying XML in your Webflow or Pipeline configuration files has been corrupted (perhaps as the result of hand-editing), the Webflow and Pipeline Editors may not be able to complete the validation process.

Validation Error Messages in a Properties Editor

The Alerts section of a Properties Editor (shown in Figure 12-10) is the primary location of validation error messages for your Webflow namespace or Pipeline. Since validation is automatically run on a Webflow namespace or Pipeline when you open an Editor, you can get a sense of any problems before you start working. If there are validation error messages, the traffic light icon on the Alerts tab will appear red. If there are validation warnings, the traffic light icon will appear yellow. (Warnings typically occur when you redefine an event or exception on a wildcard node.) Click the Alerts tab to see the detailed messages.

Figure 12-10 Alerts in a Properties Editor



As you are working, the validation feature will continue to run, causing the Alerts section to collect a running log of validation error messages. To clear the alerts that have collected, click Clear.

After you clear alerts, you may choose to validate a particular node or the entire Webflow namespace or Pipeline again. For instructions on how to accomplish these tasks, see “How to Validate the Selected Node” on page 12-32 or “How to Validate All Nodes” on page 12-33.

Notes: In addition to the validation error messages shown in the Alerts section, messages for individual Webflow component properties may also appear in the third column of a Properties Editor’s Properties section, as explained in “Using the Properties Editors” on page 12-38.

When there is a validation error, the Webflow namespace or Pipeline will also be marked as invalid in the E-Business Control Center (EBCC) Explorer window. Validation warnings, however, will not be marked as invalid. For more information about the EBCC Explorer’s status icons, see “About the E-Business Control Center Interface” in the *Guide to Using the E-Business Control Center* documentation

What Do the Editors Validate?

The Webflow and Pipeline Editor's validation features check:

- The properties of components within the Webflow. All required properties must be filled in using the Properties Editor and must contain valid values. In other words, the validation feature verifies that the grammar in the Editor-generated XML files is in accordance with the provided XML Schema Definition (XSD).
- That the entities (for example, JSPs or Java classes) represented by the Presentation and Processor Nodes in a Webflow actually exist within the Web or enterprise application and are deployed on the server.
- That all event and exception transitions have valid destination nodes.
- That a Pipeline used in a Web application's Webflow exists in the associated enterprise application (that is, outside of the Web application).

The Webflow and Pipeline Editor's validation features do not verify:

- That the entities (for example, JSPs or Java classes) represented by the Presentation and Processor Nodes can actually handle the particular events or can throw the exceptions specified in the Webflow.
- That all the events or exceptions that can be generated by the entities (for example, JSPs or Java classes) are specified in the Webflow.

Saving Invalid Webflows

You can save the files associated with a Webflow namespace or a Pipeline using the E-Business Control Center (EBCC), even if they are not yet in a valid state. (See "Working with Files" in the *Guide to Using the E-Business Control Center* documentation for more information.) However, in order for your application's Webflow data to be synchronized, the entire Webflow (that is, all the Webflow namespaces and Pipelines that comprise the Webflow) should be valid.

Notes: The EBCC's Explorer window indicates when a Webflow namespace or Pipeline is complete by removing the red and white square icon associated with the object. For more information about the EBCC Explorer's status icons, see "About the E-Business Control Center Interface" in the *Guide to Using the E-Business Control Center* documentation.

For more information about Webflow data and synchronization, see "Synchronizing Webflow Data for Your Application" on page 12-48 or the *Deployment Guide*.

Synchronizing Webflow Data for Your Application

The Webflow and Pipeline XML configuration files you create using the Webflow and Pipeline Editors represent just one piece of application data that must eventually be synchronized. You synchronize all application data at once, using the E-Business Control Center (EBCC). Thus, new or modified Webflow and Pipeline XML configuration files will be synchronized along with other application data. For instructions on how to synchronize application data using the EBCC, see "Synchronizing Application Data" in the *Deployment Guide*.

Warning: If you and other developers concurrently synchronize data to a single enterprise application, it is possible to overwrite each others work or to create sets of changes that are incompatible and difficult to debug. To prevent this possibility, synchronize to separate instances of your application. For more information on how to set up your development environment, see "Milestone 4: Set Up a Development Site" in the "Workflow for Developing an E-Business Web Site" topic of the *Strategies for Developing E-Business Web Sites* documentation.

13 Using the E-Business Control Center Portal Tool

The E-Business Control Center enables you to define the design, functionality and visitor attributes of portals and portlets with limited coding knowledge of Java, JavaServer Pages (JSPs) or HTML. Once you have defined the components of a portal or portlet, the definitions are communicated to a server and the new portal is available to visitors or to an administrator who may define its runtime components using the WebLogic Portal Administration Tools.

Components that can be defined via the E-Business Control Center include:

- Design components
Includes assigning skins and layouts to portals.
 - Functionality
Includes assigning Web applications, Webflow mechanisms, and portlets.
 - Visitor information and Guidelines
Includes defining entitlement definitions and user profiles.
- Note:** To use the portal design functionality in the E-Business Control Center, you must purchase the full WebLogic Portal License.

This topic includes the following sections:

- Using the E-Business Control Center

What you should know in order to make the best use of this application.

- E-Business Control Center Portal Concepts

Basic concepts you should be familiar with when using the E-Business Control Center portal functionality.

- Getting Started

How to get started using the E-Business Control Center.

- Portal Web Applications

How to open a newly created portal Web application in the E-Business Control Center.

- Portals

How to associate available Web components, such as skins, layouts, and the portlets and entitlements you have created in earlier sections, for the creation of a new portal.

- Portlets

Step by step procedure for creating a new portlet.

- Entitlement Segments

How to access the entitlement segment definition tool.

Using the E-Business Control Center

To effectively utilize the portal definition tools in the E-Business Control Center, you should have some knowledge of the fundamentals of building a Web portal, including a high-level understanding of JavaServer Pages (JSPs), page flows, servlets, and portlets. It is also helpful, but not necessary, to be familiar with the Portal framework, Webflow, and the WebLogic Portal Administration Tools.

E-Business Control Center Portal Concepts

The following terms are concepts often used in this document and in the E-Business Control Center.

- Portal Web Applications

A portal Web application is a group of server-side Web resources that make up an interactive online portal application. The Web resources include Java servlets, JSPs, static documents (such as HTML documents), and applets that can be deployed in a client Web browser.

- Portals

A Portal is the framework for the Web portal or application. Using the E-Business Control Center, you define what possible layouts, skins, pages, and portlets that will be available for the portals. Once these definitions are synchronized with the server, the new portal can be accessed by a visitor or can be edited by a designated user of the WebLogic Portal Administration Tools.

- Portlets

A portlet is a Web component, often a small software application, that resides within a portal. It can be something as simple as a JSP `include` statement containing text, or as robust as a Web application, such as e-mail or a stock ticker. A well-designed portlet can be reused in different portals.

- Defaults

When you define portal attributes, you set defaults to determine which of your selections will be seen initially at the front end. These defaults can also be set, or the EBCC defaults can be reset, using the WebLogic Portal Administration Tools portal at runtime.

- Entitlement Segments

An entitlement segment is a visitor group based on common characteristics that allow a member of the group to view certain aspects of a portal. For example, if you create a portal that provides information about upcoming city council elections in Los Angeles, you might want to define an entitlement group for that portlet that consists of visitors who live in Los Angeles county and are of voting age.

Meeting an entitlement segment's criteria may also give the user certain privileges in a portal. In the above example, any visitor that lives in Los Angeles county and is of voting age might be given the ability to edit the presentation or color scheme of their portal.

You use the E-Business Control Center to create entitlement segment definitions. These segments are associated with pages and portals in the WebLogic Portal Administration Tools.

- Synchronization

Once you have defined the portal attributes and defaults, you use the synchronization functionality to post this information to a server. Once you synchronize, the portal is generated or updated and becomes available to visitors and designated users of the WebLogic Portal Administration Tools. While other tools in the E-Business Control Center require a server connection, you can use the Portal tool offline until you are ready to synchronize to the server. See “Synchronizing Application Data” in the *Deployment Guide* for more information.

- Webflow and Pipeline

Webflow allows the user to create a flow of actions and pages for a Web application. You use the E-Business Control Center to assign Webflow mechanisms to portals and portlets. For general information about Webflow and Pipeline, see the *Guide to Managing Presentation and Business Logic: Using Webflow and Pipeline* documentation. For information specific to portal Webflow, see the Webflow topics in “Customizing Portals and Portlets.”

- WebLogic Portal Administration Tools

Once you have determined the desired Web components for the portal, the actual instance of the portal can be configured using the WebLogic Portal Administration Tools. For more information, see the *Getting Started with Portals and Portlets* documentation.

Note: You cannot edit or delete the default Administrator and everyone groups in the WebLogic Portal Administration Tools.

Getting Started

To start the E-Business Control Center:

Windows: Selecting Start → Programs → BEA WebLogic E-Business Platform → BEA E-Business Control Center 4.0 → E-Business Control Center.

UNIX/Linux: Run `$ EBCC_HOME/bin/ebcc.sh`

If you don't see the Explorer window along the left side of the E-Business Control Center, click the Open Explorer button in the main toolbar, as shown in Figure 13-1.

Figure 13-1 Explorer Window



- For information about managing E-Business Control Center files, see “Working With Files” in the *Guide to Using the E-Business Control Center* documentation.

Portal Web Applications

A portal Web application is a group of Web resources or components that are used in a portal application. The Web resources include Java servlets, JSPs, static documents (such as HTML documents), and applets that can be deployed in a client Web browser. Before you create a new portal, make sure resources exist on the WebLogic Portal server.

For information about creating a new Web application, see the *Getting Started with Portals and Portlets* documentation.

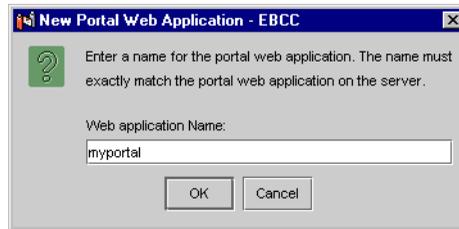
Importing Data for a New Portal Web Application

Use the following procedure to create a new portal Web application that exists on a server.

1. In the E-Business Control Center toolbar, select File → New → Portal Web Application.

The New Portal Web Application window appears (Figure 13-2).

Figure 13-2 New Portal Web Application Window



1. In the Web Application Name field, type the name of the portal Web application. You must type this exactly as it exists on the server.
2. Click OK. The portal Web application is now available for use and editing in the E-Business Control Center.

Portals

When you create a new portal definition, you associate metadata for elements such as skins, portlets, pages, layouts, and Webflow mechanisms. This section covers the following information:

- Designating a New Portal
 - Defining General Portal Elements
 - Creating Portal Pages
 - Setting Portal Defaults
- Editing a Portal
- Deleting a Portal

Designating a New Portal

The first step in creating a new portal is selecting the design elements, including banners, skins, headers, content, layout, as well as user profile information.

Defining General Portal Elements

To define general portal elements, use the following procedure:

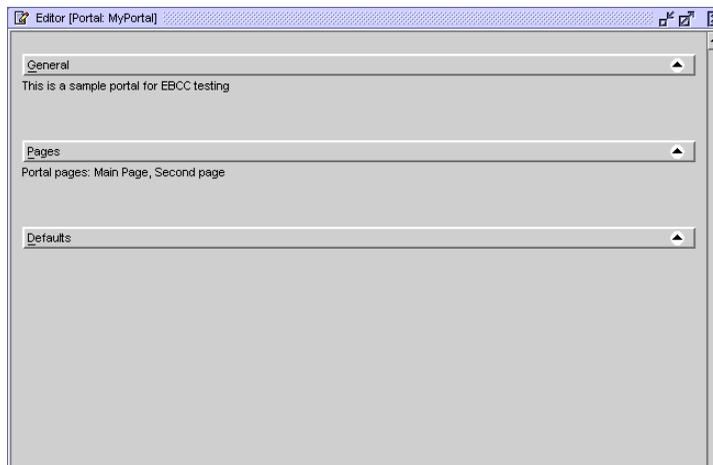
1. In the main toolbar, select File → New → Presentation → Portal.

The Select Web Application window appears.

2. Select the desired Web application from the available list and click OK. For information about adding making new portal Web applications available for use via the E-Business Control Center, see “Portal Web Applications” on page 13-5.

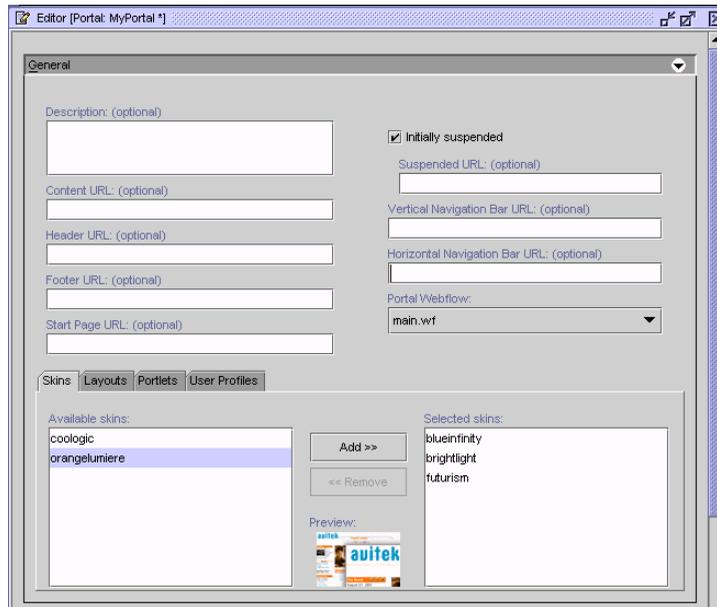
The Portal Editor appears (Figure 13-3).

Figure 13-3 Portal Editor



3. Click on the General bar to display the General portal pane (Figure 13-4).

Figure 13-4 General Portal Pane



4. Provide the following information:
 - a. Description (optional): Provide a description for the portal you are creating.
 - b. Content URL: Provide a URL for the content that will appear in the portal.
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 are determined by your organization.
 - c. Header URL (optional): Provide a URL to the JSP that will be used as the portlet's header content.
 - d. Footer URL (optional): Provide a URL to the JSP that will be used as the portlet's footer content.
 - e. Vertical Navigation Bar URL: Provide a URL if you wish to display a vertical navigation bar for your portal.

- f. Horizontal Navigation Bar URL: Provide a URL if you wish to display a horizontal navigation bar for your portal.
 - g. Portal Webflow: When you create a Portal, you must associate the new Portal with a predefined Webflow; in most cases, the `portal` Webflow. For more information about the Webflow mechanism as it relates to portals and portlets, see “Customizing Portals and Portlets.”
5. Click on the Skins tab at the bottom of the panel to select the possible skins for the portal (Figure 13-5).
- Note:** When you select skins and layouts for your portal, you select from a library of metadata representing selected portal components. The E-Business Control Center ships with an existing library which can be modified or supplemented. For information about editing or adding skins and layouts, see “Developing Portals and Portlets” in the *Getting Started with Portals and Portlets* documentation.

Figure 13-5 Selecting Skins



Use the Add and Remove buttons to select the desired skins. A thumbnail image will appear when you select a skin. You can select one to many skins.

6. Click on the Layouts tab to select the possible layouts for the portal.

Use the Add/Remove buttons to select the desired layout(s); The preview thumbnail allows you to view the selected layout. You can select one to many layouts.
7. Click on the Portlets tab to select the portlets that will be included in the new portal.

Use the Add/Remove buttons to select the desired portlets. If you select multiple portlets for your portal, visitors can select from these layouts when personalizing their portal.

8. Click the User Profiles tab to select the user profile set that will be enabled to view or use the portal.

Use the Add/Remove buttons to select the desired user profiles.

A **user profile** is a collection of information that is gathered, saved, and updated as customers visit your Web site, or is collected from other offline sources. When you select a user profile, you determine which information can be used or collected. These user profiles are defined in the Entitlement section of the E-Business Control Center. For more information, see “Using Customer Segments to Target High Value” in the *Guide to Using the E-Business Control Center*.

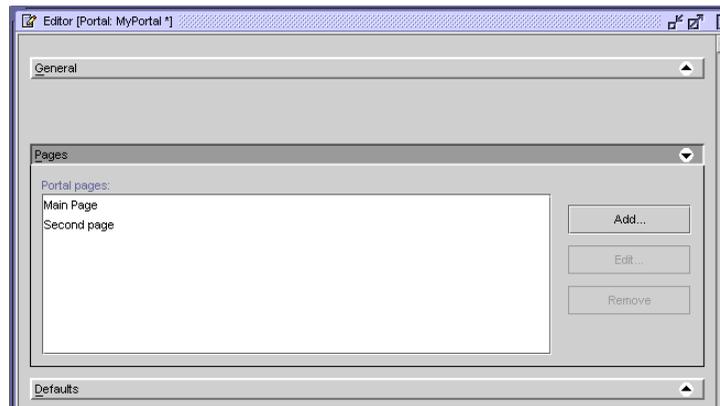
9. Click Save to save your changes. These changes will be available to the visitor or for modification via the WebLogic Portal Administration Tools once you have synchronized your changes to the appropriate server. See “Synchronizing Application Data” in the *Deployment Guide* for more information.

Creating Portal Pages

When you create portal pages, you create or associate each page that can or will be used in the portal flow.

1. Click the Pages bar of the Portal Editor panel to expand the Pages pane (Figure 13-6).

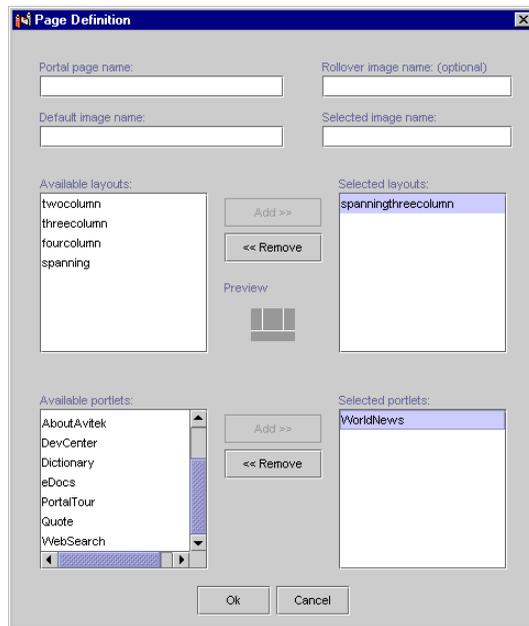
Figure 13-6 Creating Portal Pages



2. Click Add.

The Page Definition editor displays (Figure 13-7).

Figure 13-7 Page Definition Editor



3. Provide a portal page name.
4. Supply the path to the graphics files that will be used as the default and selected images. A path to the rollover image is optional.
5. Select at least one page layout: use the Add/Remove buttons to select the desired layout. The page can have one to many associated layouts.

Pages draw from the portal's layout and portlet lists to get their available lists. This means that the layouts in this window are limited to layouts that have been added to the portal. To make more layouts available for your pages, see "Designating a New Portal" on page 13-6.

6. Select at least one portlet: Use the Add/Remove buttons to select the desired portlet(s). The Portal page can have one to many portlets.
7. When you are finished, click OK.

The new page appears in the Portal Pages window.

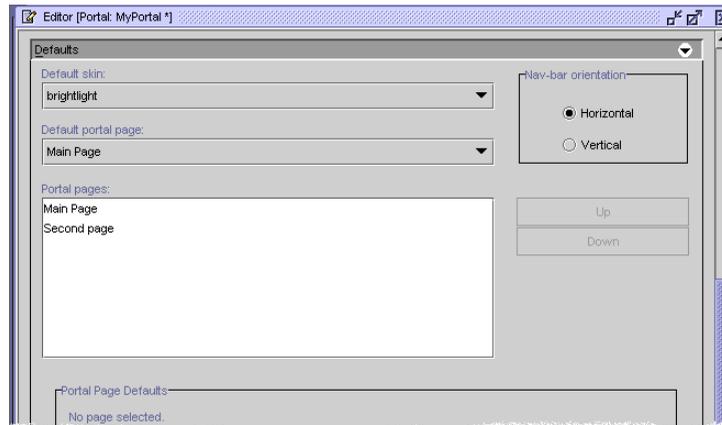
8. Click Save to save your changes. These changes will be available to the visitor or for modification via the WebLogic Portal Administration Tools once you have synchronized your changes to the appropriate server. See “Synchronizing Application Data” in the *Deployment Guide* for more information.

Setting Portal Defaults

Before synchronizing your new portal definition to the server, you must set defaults. Setting defaults for your portal ensures that appropriate pages are displayed until an administrator has enabled the applications.

1. Click the Default Bar in the Portal Editor to expand the Defaults pane (Figure 13-8).

Figure 13-8 Setting Portal Defaults



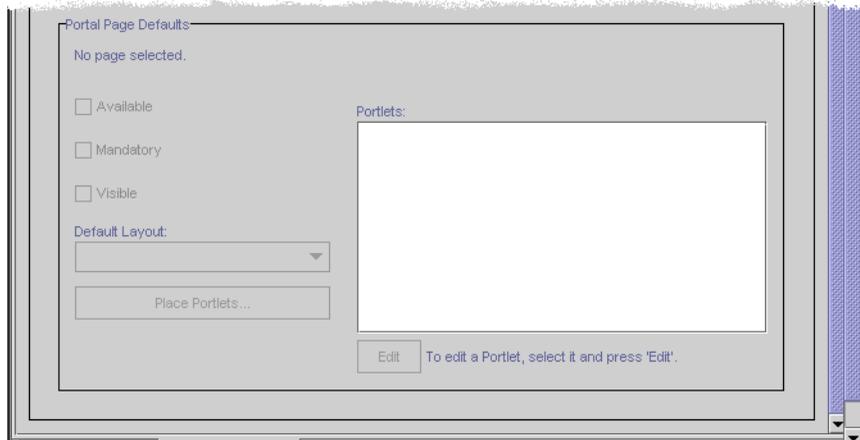
2. Set a default display name for your portal.
3. Set a default skin: Use the pull-down menu to select one default from a list of your previously selected skins.
4. Set default pages: Use the pull-down menu to select the desired pages from a list of your previously selected pages.
5. Use the Up/Down buttons to set the order that the selected page tabs will appear in the portal.

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6. Select either vertical or horizontal orientation for the Navigation bar.

7. Set portal page defaults (Figure 13-9).

Figure 13-9 Setting Portal Page Defaults



- a. Check the appropriate boxes if you wish the page to be Available, Mandatory, and/or Visible.
- b. Select a default layout.
- c. Click the Place Portlets button, the Page Layout window appears.

To add a portlet to the layout template, highlight the desired portlet, click the radio button in the desired section, then click the Add button. The portlet will be added to the desired section of the layout.

To remove a portlet from the layout template, click on the desired portlet in the template, then click the Remove button. The portlet will be removed from the template and added back to the portlet list.

To move a portlet, click on the desired portlet in the template, then click the Up or Down buttons.

When you have finished arranging your portlets in the template, click OK.

- d. You can also edit a portlet's default settings from the Portal Page Defaults section. Select the desired portlet in the Portlets window, then click the "Edit" button to launch a Portlet Defaults editor. For a detailed description of each default setting, see "Editing a Portlet" on page 13-20.

8. Click Save to save your changes. These changes will be available to the visitor or for modification via the WebLogic Portal Administration Tools once you have synchronized your changes to the appropriate server. See “Synchronizing Application Data” in the *Deployment Guide* for more information.

Editing a Portal

1. In the E-Business Control Center Explorer window, click the Presentation tab, then the Portal icon.
A list of existing portals will appear.
2. Click on the portal you wish to edit.
The Portal Editor will display the information for that portlet.
3. You may edit any of the fields in Portal Editor. For more information about portal attributes that can be modified in the editor, see the previous section of this topic.
4. Click Save to save your changes. These changes will be available to the visitor or for modification via the WebLogic Portal Administration Tools once you have synchronized your changes to the appropriate server. See “Synchronizing Application Data” in the *Deployment Guide* for more information.

Deleting a Portal

1. In the E-Business Control Center Explorer window, click the Presentation tab, then the Portal icon.
A list of existing portals appears.
2. Click on the portal you wish to delete and click the Delete button.
The portal is removed from the explorer window.
3. When you synchronize to the server, the portal will be deleted from the server. See “Synchronizing Application Data” in the *Deployment Guide* for more information.

Portlets

Portlets reside within a portal application and can be anything from a robust Web application (such as e-mail) to a simple data view (for example, a link to a weather page). You can define portlets and add them to a portal at any time during or after the portal development process.

When you create a new portlet definition, you associate metadata for elements such as title bars, headers, helpfiles, and Webflow mechanisms. This section covers the following information:

- Defining a New Portlet
- Editing a Portlet
- Deleting a Portlet

Defining a New Portlet

Use the following procedure to create a new portlet definition.

1. In the E-Business Control Center toolbar, select File → New → Presentation → Portlet.

The Portlet Editor appears (Figure 13-10).

Figure 13-10 Portlet Editor

The screenshot shows a web-based form titled "Editor [Portlet: UnnamedPortlet]". The form is organized into several sections:

- Description:** A text input field with the label "Description: (optional)".
- Content URL:** A text input field containing the value "/portlets/".
- Header URL:** A text input field with the label "Header URL: (optional)".
- Alternate Header URL:** A text input field with the label "Alternate Header URL: (optional)".
- Footer URL:** A text input field with the label "Footer URL: (optional)".
- Alternate Footer URL:** A text input field with the label "Alternate Footer URL: (optional)".
- Titlebar URL:** A text input field containing the value "/framework/titlebar.jsp".
- Banner URL:** A text input field with the label "Banner URL: (optional)".
- Icon URL:** A text input field containing the value "/portlets/images/".
- Webflow:** A dropdown menu currently set to "None".
- Options:** A group of checkboxes on the right side:
 - Editable
 - Helpable
 - Login required
 - Mandatory
 - Floatable
 - Minimizable
 - Maximizable
 - Defaults minimized
- Additional Fields:** Several other text input fields are present, each with a label like "Edit URL: (optional)", "Help URL: (optional)", and "Maximize URL: (optional)".

2. In the Portlet Editor, provide the following information:
 - a. **Description (optional):** Provide a description for the portlet you are creating.
 - b. **Content URL:** Provide a URL for the main body of content that will appear in the portlet.

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 are determined by your organization.
 - c. **Header URL/Alternate Header URL (optional):** Provide a URL for the JSP that will serve as an `include` for the portlet header; You can also provide an alternative header in the event that the primary header is missing or corrupt at runtime.
 - d. **Footer URL/Alternate Footer URL (optional):** Provide a URL for the footer. If desired, provide an alternate footer.
 - e. **Titlebar URL:** Provide a URL for the titlebar.

- f. Banner URL (optional): Provide a URL for a banner, if you wish one to appear in your portlet.
 - g. Icon URL (optional): Provide a path to an icon that will represent the portlet.
 - h. Portlet Webflow (optional): Select a defined Webflow if your portlet requires Webflow functionality. Although portlets do not require a Webflow association, it is highly recommended. For more information, see “Customizing Portals and Portlets.”
 - i. Editable checkbox/Edit URL (optional): If your portlet enables editing by visitors, check the Editable box and provide the URL for the JSP page they will use to personalize the portlet.
 - j. Helpable checkbox/Help URL (optional): If the portlet is accompanied by Online Help, check the box and provide a path to the Help files.
 - k. Login Required (optional): Check this box if the visitor must login with a password to access the portlet.
 - l. Maximize URL (optional): If the portlet is maximizable, provide the URL for the maximized JSP page.
3. Determine the portlet defaults. Default selections determine how the portlet will appear in a browser if it has not been configured using the WebLogic Portal Administration Tools.
 - a. Mandatory: Mandates that the visitor will always see this portlet; That is, they cannot delete it from their personalized portal.
 - b. Floatable: If this box is checked, the portlet will appear in a popup window.
 - c. Minimizable: Allows the visitor to minimize the portlet. If this box is not checked, the portlet cannot be minimized within the portal.

Note: Portlet defaults can be set differently via the portal editor and override the original defaults for that instance of the portlet. For more information, see “Setting Portal Defaults” on page 13-13.
 4. Click Save to save your changes. These changes will be available to the visitor or for modification via the WebLogic Portal Administration Tools once you have synchronized your changes to the appropriate server. See “Synchronizing Application Data” in the *Deployment Guide* for more information.

Editing a Portlet

To edit a portlet:

1. In the E-Business Control Center Explorer window, click the Presentation tab, then click the Portlet icon.

A list of existing portlets appears in the E-Business Control Center Explorer window.

2. Click the portlet you wish to edit.

The Portlet Editor displays the information for that portlet.

3. You may edit any of the fields in the Portlet Editor.
4. Click Save to save your changes. These changes will be available for use by the WebLogic Portal Administration Tools when you have synchronized your changes to the appropriate server. See “Synchronizing Application Data” in the *Deployment Guide* for more information.

Deleting a Portlet

1. In the E-Business Control Center Explorer window, click the Presentation tab, then click the Portlet icon.

A list of existing portlets appears.

2. Select the portlet you wish to delete and click the Delete button.

The portal is removed from the Explorer window.

3. When you synchronize to the server, the deletion will be updated in the server. See “Synchronizing Application Data” in the *Deployment Guide* for more information.

Entitlement Segments

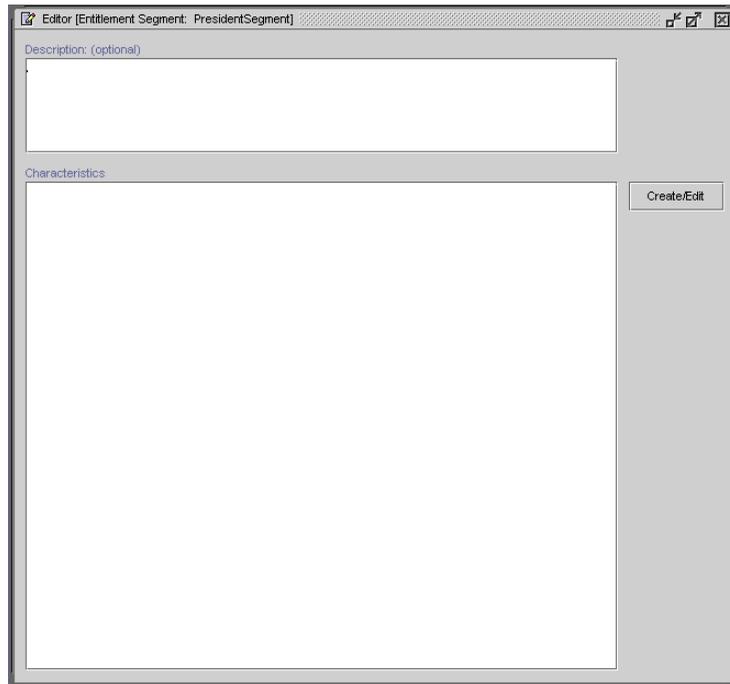
The E-Business Control Center Portal Tools allow you to create multiple entitlement segment definitions with multiple conditions and values. You use the E-Business Control Center to create entitlement segment definitions. These segments are associated with pages and portals in the WebLogic Portal Administration Tools.

Accessing the Entitlement Segment Definition Tool

In the main toolbar, select File → New → Presentation → Entitlement Segment.

The Entitlement Editor appears (Figure 13-11). Defining entitlement rules involves setting up conditions and queries. See “Building Conditions and Queries in the BEA E-Business Control Center” in the *Guide to Using the E-Business Control Center*.

Figure 13-11 Entitlement Editor



13 *Using the E-Business Control Center Portal Tool*

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