

# Novell exteNd Director

5.2

TUTORIALS

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# About exteNd Director Tutorials

This chapter provides guidelines for using the exteNd Director tutorials. Please read this information before you begin the exercises:

- ◆ [Structure of tutorials](#)
- ◆ [How to use the tutorials](#)
- ◆ [Configuration for running exercises](#)
- ◆ [How to install the Express Portal project and application](#)
- ◆ [How to download accessory files](#)

## Structure of tutorials

The exteNd Director tutorials are organized into parts, each covering a different functional area:

Part	Description
<a href="#">Exploring the Express Portal</a>	Introduces you to Express Portal, a sample portal application and project supplied with exteNd Director.
<a href="#">Working with the Portal</a>	Shows you how to create a container page, and customize page branding and navigation.
<a href="#">Using Accessory Portlets</a>	Introduces accessory portlets, a set of production-quality portlets supplied with exteNd Director. Many of these portlets were converted from Novell Portal System (NPS) gadgets.  You will learn how to create a personal page, add accessory portlets to the page, and customize portal options and portlet preferences.
<a href="#">Working with Pageflows and Forms</a>	Shows you how to create a database pageflow and customize pageflow-generated forms.

Inside each part you will find short tutorials that consist of one or more exercises that walk you through key functions of the product. Each tutorial includes the following sections:

Section	Description
Objective	Describes what you will accomplish after completing all exercises
Concepts	Provides links to documentation that explains concepts related to the tutorial exercises
Exercises	Provides step-by-step instructions for performing tasks to meet the objective stated for the tutorial

Section	Description
What to do next	Suggests what to do or read after completing the tutorial by providing links to other exercises and documentation

## How to use the tutorials

Each part is self-contained. You can run through any combination of parts in any order you wish. In most cases, you can run the tutorials independently within each part; any dependencies between tutorials are clearly stated before you begin the exercises.

## Configuration for running exercises

exteNd Director tutorials require the following system configuration:

- ◆ exteNd Application Server using the **exteNd Server realm**, installed as part of the exteNd product suite
- ◆ MySQL, installed with the exteNd product suite
- ◆ Express Portal project and application  
TIP: See [“How to install the Express Portal project and application” on page 8.](#)
- ◆ Accessory files supplied for the tutorials  
TIP: See [“How to download accessory files” on page 9.](#)

## How to install the Express Portal project and application

There are two ways to install Express Portal:

Type of install	What it does
Express	<ul style="list-style-type: none"> <li>◆ Adds the Express Portal project to your file system</li> <li>◆ Deploys the Express Portal project to your exteNd Application Server</li> <li>◆ Launches the Express Portal application in a new browser window</li> </ul>
Custom	<ul style="list-style-type: none"> <li>◆ Adds the Express Portal project to your file system, but does <b>NOT</b> deploy the project to your server.</li> </ul> <p><b>IMPORTANT:</b> Before you begin the tutorials, you must deploy the Express Portal project to your exteNd Application Server, as described in <a href="#">“How to deploy the Express Portal project” on page 8.</a></p>

## Where the Express Portal project is installed

The Express Portal project is added to your file system in the **Projects\Express** folder of your exteNd install directory. The Express Portal project is a WAR application packaged inside an EAR project called **Express**.

## How to deploy the Express Portal project

See the section on [deploying the Express Portal](#) in the exteNd Director Portal Guide.



## How to download accessory files

Some tutorial exercises require accessory files that you can download from a ZIP archive called **Director52Tutorial.zip**. Follow this procedure:

➤ **To download accessory files for exteNd Director tutorials:**

- 1 Download [Director52Tutorial.zip](#) and store it in a directory of your choice.
- 2 Extract files as required by tutorial exercises.





## Exploring the Express Portal

Choose an exercise for a topic you want to learn about:

- [Invoke and Explore the Express Portal Application](#)
- [Open and Explore the Express Portal Project](#)



# Invoke and Explore the Express Portal Application

## Objective

To learn the basics of using the Express Portal, a prebuilt portal application that's installed, deployed, and ready to run after you install Novell exteNd Director (in typical installations).

**Before you begin** See [About exteNd Director Tutorials](#).

## Concepts

- ◆ [About the Express Portal](#)
- ◆ [About portal applications](#)
- ◆ [About Novell exteNd Director](#)

## Exercises

- ◆ **To invoke and explore the Express Portal application:**
- ◆ **To access the Express Portal as an end user:**
- ◆ **To access the Express Portal as an administrator:**

### ➤ **To invoke and explore the Express Portal application:**

- 1 Make sure that:
  - ◆ The Express Portal has been **installed** on your system and **deployed** to your application server.



If you need help with Express Portal installation and deployment, see the chapter [Preparing to Install exteNd 5](#) in *Installing Novell exteNd* or the chapter [About the Express Portal](#) in the *exteNd Director Portal Guide*.

- ◆ Your application server is **running**.

For example, to run the exteNd Application Server in Windows, you can use the Windows **Start** menu to select:

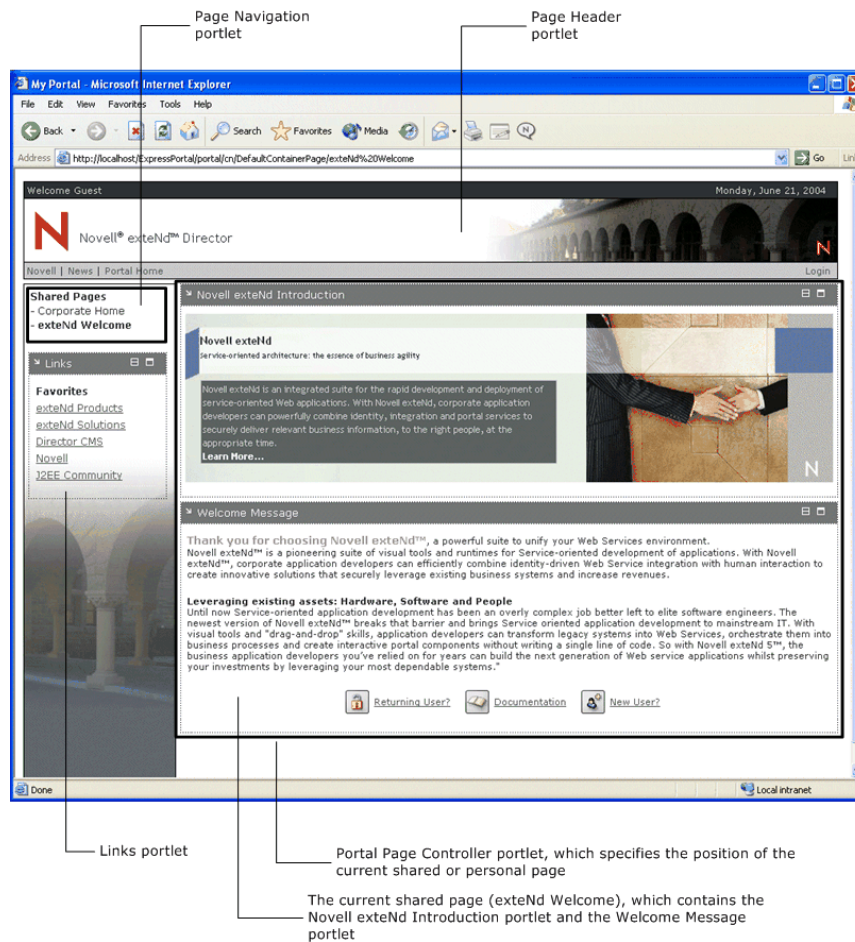
```
Novell exteNd 5.0>AppServer>Application Server
```

To run the exteNd Application Server in Linux, execute the script **SilverServer** in the Novell exteNd **AppServer/bin** directory. (If you're using MySQL for your SilverMaster database, make sure the MySQL server is running first; if necessary, you can start it yourself by executing the script **StartMySQL.sh** in the Novell exteNd **mysql** directory.)

- 2 Start your **Web browser**, then go to this URL (if your server isn't `localhost`, substitute the appropriate name):

```
http://localhost/ExpressPortal
```

The **Express Portal home page** displays. You haven't yet logged in, so for now you are accessing the Express Portal as a **guest**.

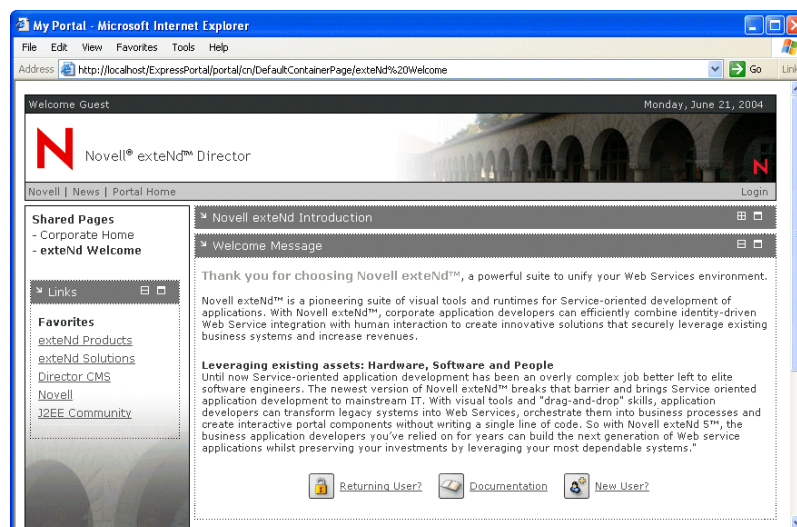


The first thing to note about this typical portal page is that it presents a variety of different portlets, each with its own purpose and features. Let's see how some of these portlets work.

- 3 In the **Novell exteNd Introduction** portlet, click the minimize option on the title bar:



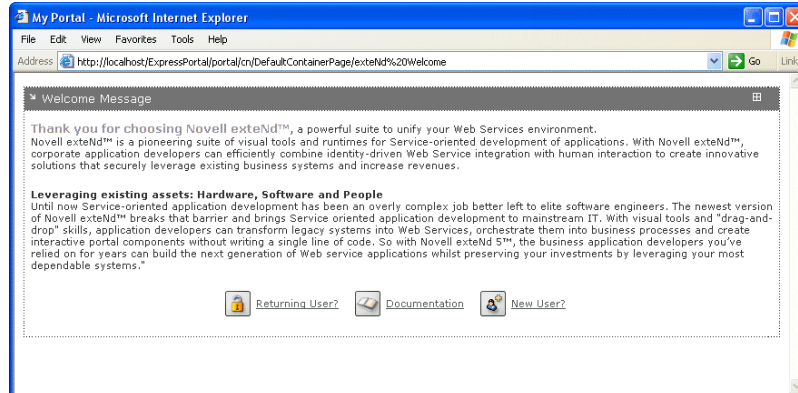
This minimizes that portlet on the page:



- 4 In the **Welcome Message portlet**, click the **maximize** option on the title bar:



This maximizes that portlet on the page:



- 5 Click the **restore** option on the **Welcome Message portlet's** title bar:

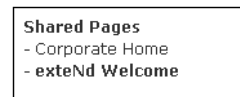


This restores that portlet to its previous state on the page.

- 6 In the **Links portlet**, click one of the links listed under **Favorites**.

This launches a new browser window to display the corresponding Web site; when you're done looking at that window, close it.

- 7 Look at the list of **shared pages** in the **Page Navigation portlet**:

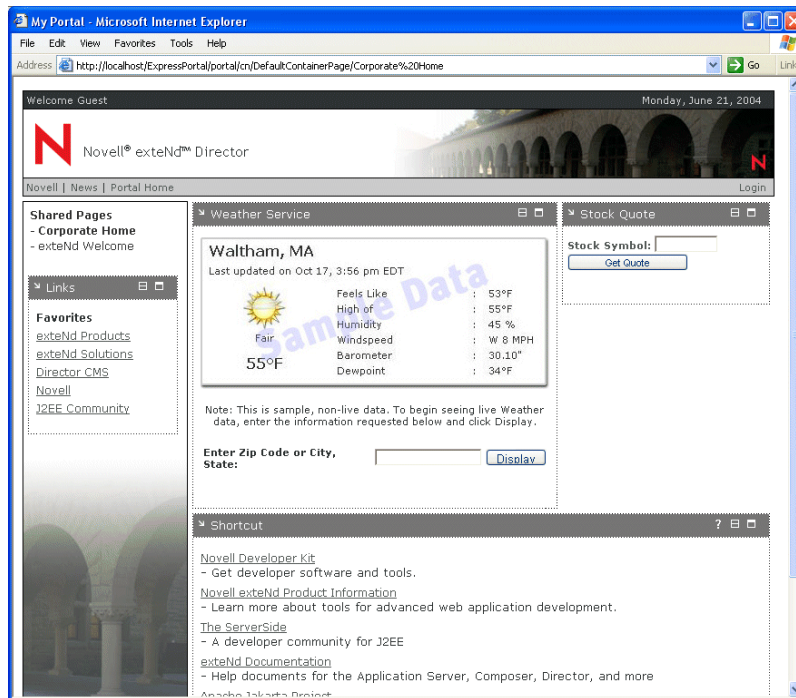


A shared page provides content that can be shared among users and groups. So far, you've been using a shared page named **exteNd Welcome**. Let's go to the other one that's available.

- 8 Select **Corporate Home**.

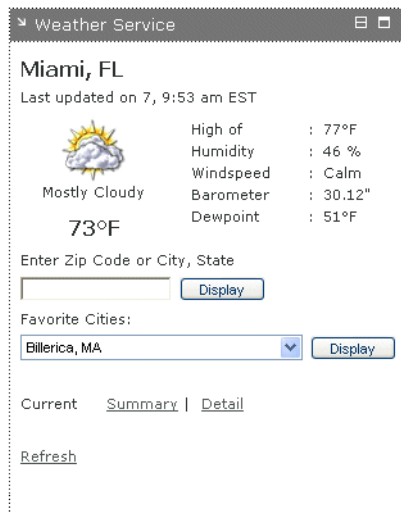
This shared page includes the following three portlets:

- ◆ Weather Service
- ◆ Stock Quote
- ◆ Shortcut



In the next steps, you'll try some of the features of these portlets.

- 9 In the **Weather Service** portlet, type **Miami, FL** and click **Display** to get the weather report for that location:



- 10 In the **Stock Quote** portlet, type a stock symbol and click **Get Quote** to see the current market price information for that stock:

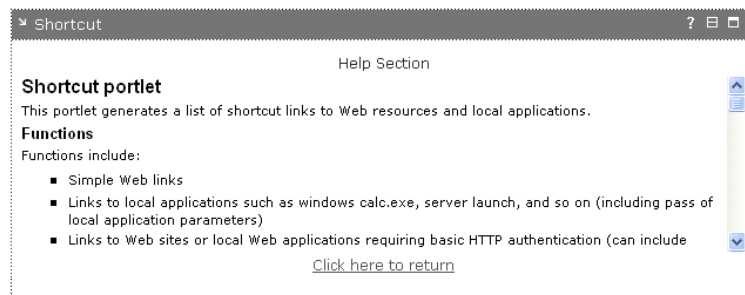




11 In the **Shortcut** portlet, click the **help** option on the title bar:



This displays that portlet in **Help mode**:



Use the **Click here to return** link to switch the portlet back to **View mode**.

12 Use the Page Navigation portlet to go back to the **exteNd Welcome** shared page.

The security features of the Express Portal limit what you can see and do while a guest. If you **log in**, you'll have access to additional capabilities (depending on who you log in as). This affects which pages and portlets you can access, what you can do with them, and what you can personalize.

In the next exercises, you'll try:

- ◆ Logging in as a **new end user**
- ◆ Logging in as a **portal administrator** (if you are authorized to do so)

➤ **To access the Express Portal as an end user:**

1 On the **exteNd Welcome** shared page, click **New User** at the bottom of the Welcome Message portlet.

You will create a new end-user account and log in as that user.

2 Fill in the New User form as follows and click **Register**:

Property	What to type
User ID	jdoe
Password	jdoe
First Name	Joe

Property	What to type
Last Name	Doe
Email	jdoe@somewhere.com

Novell®  
exteNd™

User ID:

Password:

Confirm Password:

First Name:

Last Name:

Email:

**N** [... Register](#)

When the user is created, a message displays and you are prompted to log in.

- 3 Fill in the Login form as follows and click **Login**:

Property	What to type
Username	jdoe
Password	jdoe

Novell®  
exteNd™

Username:

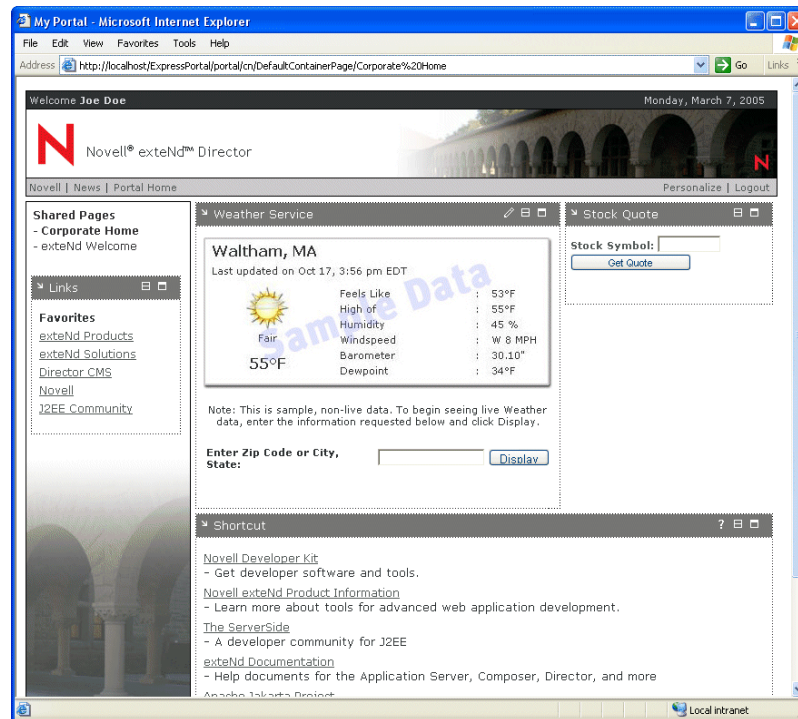
Password:

[→ New User?](#)

**N** [... Login](#)

When the login is successful, the default page for this user displays. It's the **exteNd Welcome** shared page on the **default container page**.

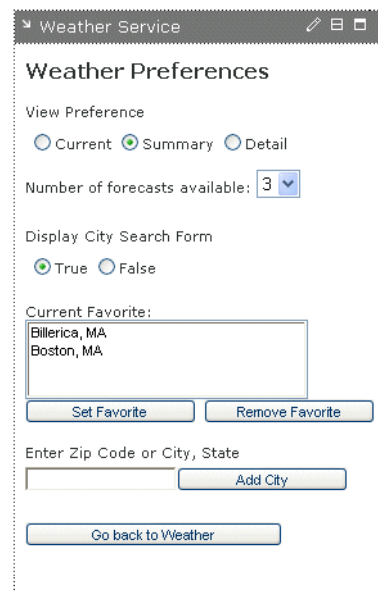
- 4 Use the **Page Navigation** portlet to go to the **Corporate Home** shared page.



5 Now that you're logged in as a user instead of just a guest, notice that additional features are available to you:

- ◆ An **Edit** option in the Weather Service portlet
- ◆ A **Personalize** link in the Page Header portlet

6 In the **Weather Service** portlet, click **Edit** (the pencil icon) on the title bar. This changes the mode of the portlet to let you edit this portlet's preferences:

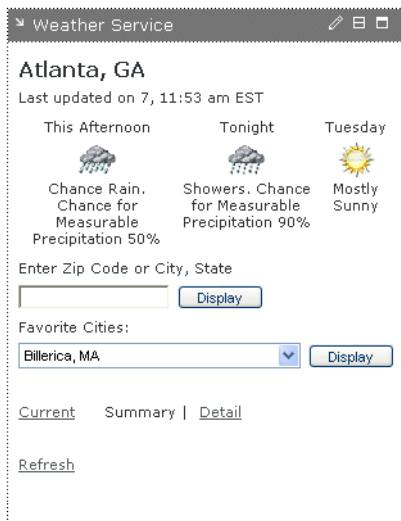


7 Change the **View Preference** to **Summary**.

8 Change the **Number of forecasts available** to 3, then click the **Go back to Weather** button.

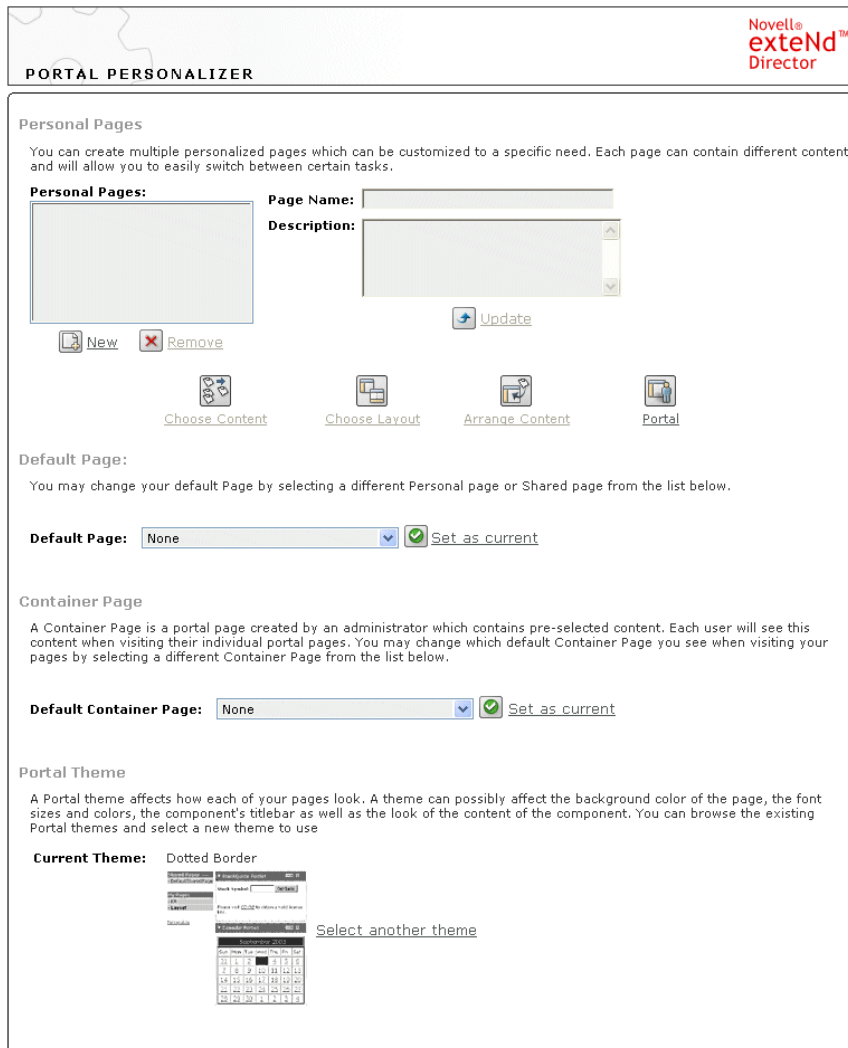
9 Type **Atlanta, GA** and click the **Display** button.

The **Weather Service** portlet displays the 3-forecast summary for that location:



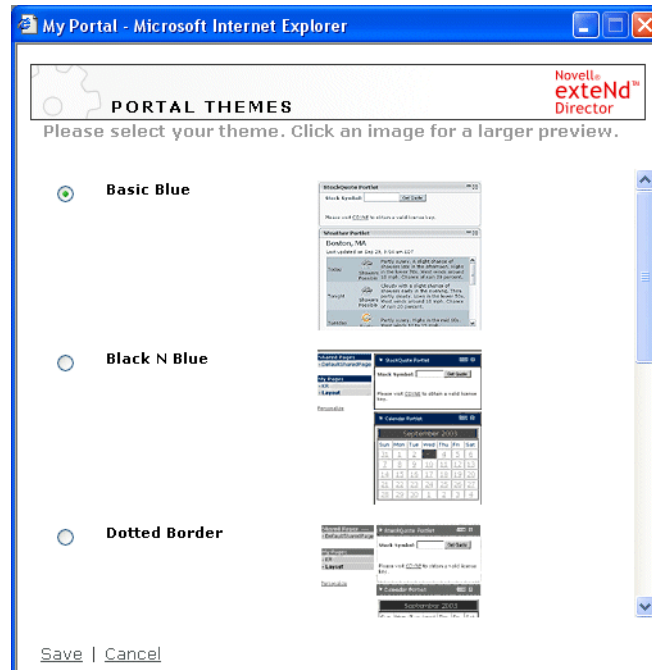
10 In the **Page Header** portlet, click the **Personalize** link.

The **Portal Personalizer** displays. You can use it to customize your portal experience, including creating your own personal pages.



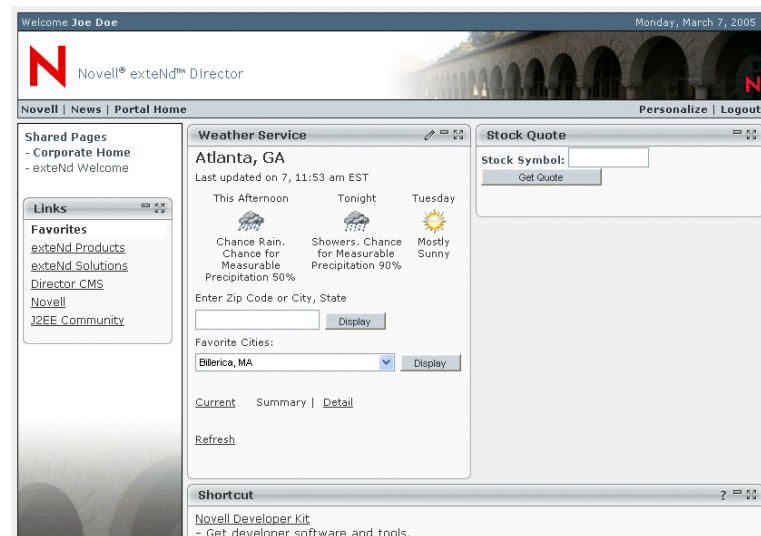
11 Under **Portal Theme**, click **Select another theme**.

## 12 Select Basic Blue:



Then click **Save** to return to the Portal Personalizer page.

- 13 Click **Portal** (in the top section of the Portal Personalizer page) to return to your current page and see how the Express Portal looks with the new theme applied:



### ➤ To access the Express Portal as an administrator:

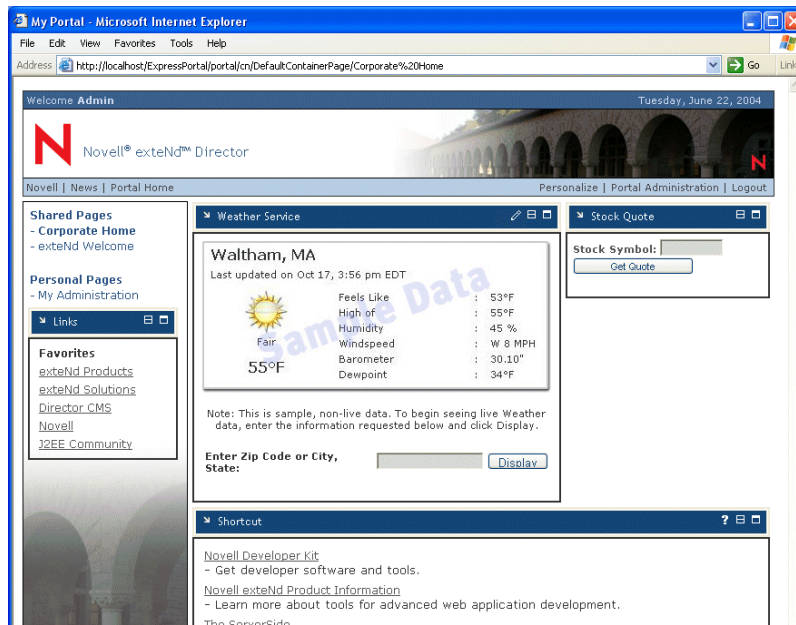
- 1 In the **Page Header** portlet, click the **Logout** link.

**NOTE:** This exercise requires you to log in as a **portal administrator** or **locksmith user** (such as the user you specified during the exteNd install). If you don't have access to such a username and password, skip this exercise.

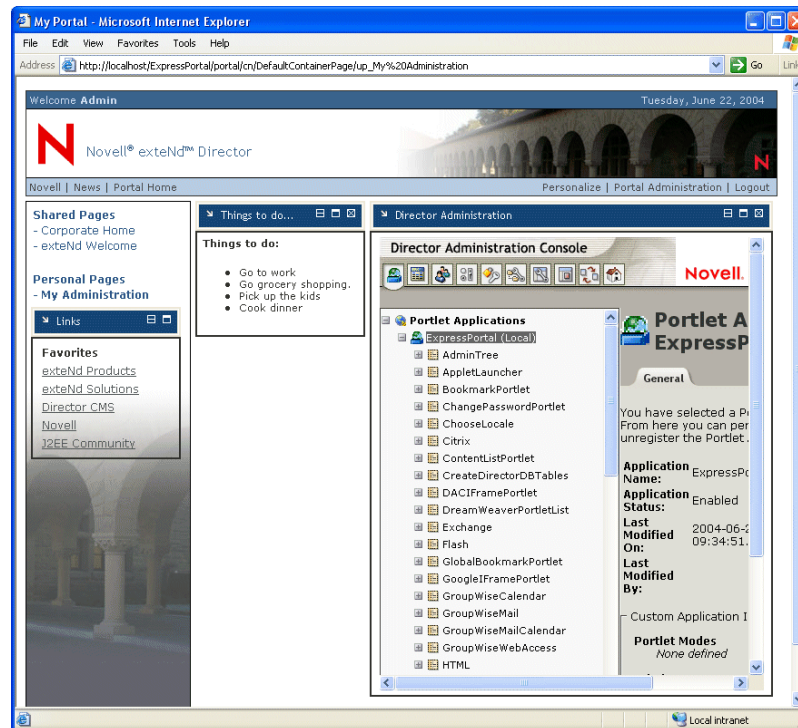
- 2 When the Login form displays, **log in** as a portal administrator or locksmith user.

When the login is successful, the default page for this user displays. It's the **exteNd Welcome** shared page on the **default container page**.

- 3 Use the **Page Navigation** portlet to go to the **Corporate Home** shared page.



- 4 Now that you're logged in as an administrator instead of an end user, notice that additional features are available to you:
  - ◆ A **personal page** named **My Administration** (if you're logged in as the user you specified during the exteNd install)
  - ◆ A **Portal Administration** link in the Page Header portlet
- 5 In the **Page Navigation** portlet, click the **My Administration** link to display that personal page. The **My Administration** personal page displays two portlets:
  - ◆ The **Things to do** portlet displays a todo list; you can personalize it with your own content
  - ◆ The **Director Administration** portlet displays the **Director Administration Console (DAC)**; the DAC is a predefined exteNd Director Web tier application that you can use to administer the exteNd Director applications you are running

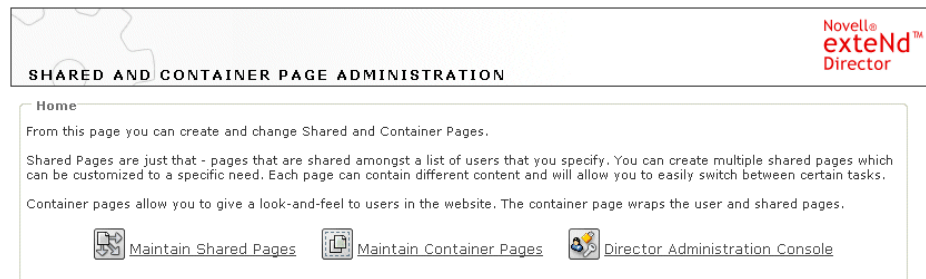


- 6 In the **Page Header** portlet, click the **Portal Administration** link.  
The **Portal Administrator** displays (under the title **Shared and Container Page Administration**). You can use it to do any of the following:

- ◆ Create shared pages and assign them to users and groups
- ◆ Create container pages and assign them to users and groups

A **container page** wraps the contents (including shared and personal pages) that the portal displays with a particular look and feel. You've been using the default container page. Using a different container page can change your experience in the portal.

- ◆ Display the Director Administration Console (DAC)



- 7 Close the Portal Administrator.
- 8 When you're done exploring the Express Portal application, **log out** and close your Web browser.

## What to do next

- ◆ [Open and explore the Express Portal project](#)





# Open and Explore the Express Portal Project

## Objective

To start getting familiar with the exteNd Director project for the Express Portal, which you can later use to:

- ◆ Learn how the Express Portal, a typical exteNd Director portal application, is built and how it works
- ◆ Modify the Express Portal
- ◆ Develop your own portal application based on the Express Portal

**Before you begin** See [About exteNd Director Tutorials](#).

## Concepts

- ◆ [About the Express Portal](#)
- ◆ [About portal applications](#)
- ◆ [About Novell exteNd Director](#)
- ◆ [About the exteNd Director development environment](#)

## Exercises

### ➤ To open and explore the Express Portal project:

- 1 Make sure that the Express Portal has been **installed** on your system.

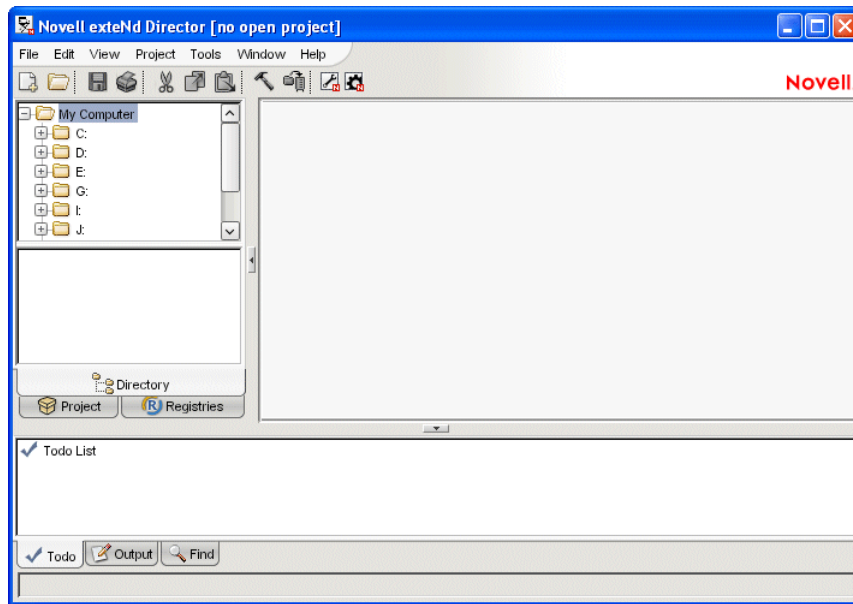


If you need help with Express Portal installation, see the chapter [Preparing to Install exteNd 5](#) in *Installing Novell exteNd* or the chapter [About the Express Portal](#) in the *exteNd Director Portal Guide*.

- 2 Start the **exteNd Director development environment** by doing one of the following:

Platform	What to do
Windows	<ol style="list-style-type: none"><li>1 Go to the list of all programs on the Windows <b>Start</b> menu.</li><li>2 Select <b>Novell exteNd 5.0&gt;Director&gt;Director Designer</b>.</li></ol>
Windows, Linux	<ol style="list-style-type: none"><li>1 Go to the Novell exteNd <b>tools/bin</b> directory.</li><li>2 Run the executable file named <b>xd</b>.</li></ol>

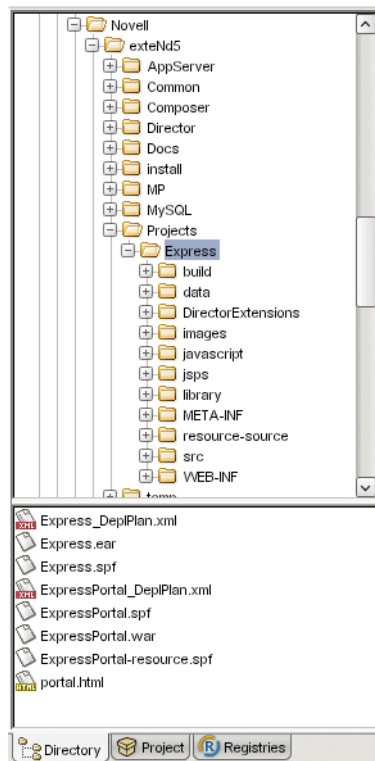
The exteNd Director development environment is an integrated toolset for examining, editing, building, and deploying exteNd Director projects.



- 3 In the **Navigation Pane** (on the left side of the window), click the **Directory** tab. This tab lets you browse your computer's file system. You'll use it now to see where the exteNd install has stored the files for the Express Portal project.
- 4 Expand the directory path where you installed Novell exteNd. This is typically:

C:\Program Files\Novell\exteNd5

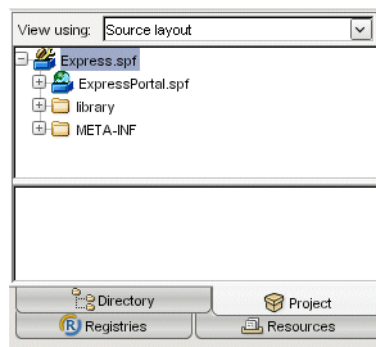
From there, expand and select the subdirectory **Projects\Express**:



- 5 Notice that the Projects\Express subdirectory contains:
  - ◆ The **exteNd Director project (SPF) files** for the Express Portal:
    - Express.spf — EAR (Enterprise archive) project in which the other Express Portal project files are packaged for deployment
    - ExpressPortal.spf — WAR (Web archive) project that defines the Express Portal
    - ExpressPortal-resource.spf — JAR project for the portal's resource set
  - ◆ The resulting **J2EE archive files** for deploying the Express Portal: Express.ear and ExpressPortal.war
  - ◆ The **exteNd Application Server deployment plan files** for deploying the Express Portal: Express\_DeplPlan.xml and ExpressPortal\_DeplPlan.xml
  - ◆ Several **subdirectories containing all of the supporting files** for this exteNd Director portal application

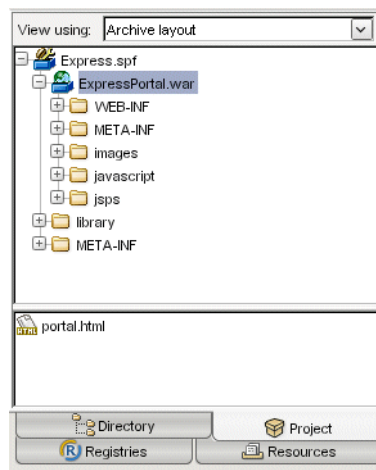
- 6 Double-click the **Express.spf** file.

exteNd Director opens the Express EAR project and displays the **Project** tab of the Navigation Pane:

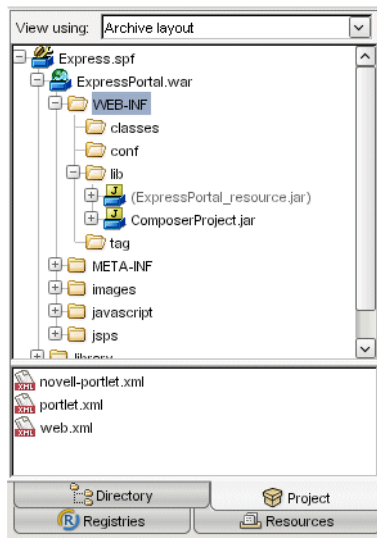


- 7 Use the dropdown control on the Project tab to change the view to **Archive layout**, then expand and select **ExpressPortal.war**.

This gives you a **J2EE-oriented look** at the ExpressPortal project; it shows the ExpressPortal files based on how they will be organized in the **WAR file** generated for this project:

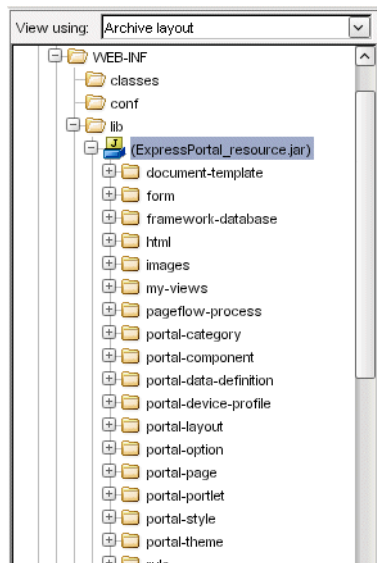


- 8 Briefly explore the project's directories to get an idea of what they contain. In particular, expand and select the **WEB-INF** directory to find the project's:
  - ◆ **Descriptor files** (such as web.xml)
  - ◆ **Configuration files** (in the conf subdirectory)
  - ◆ **Supporting JAR files** (in the lib subdirectory)



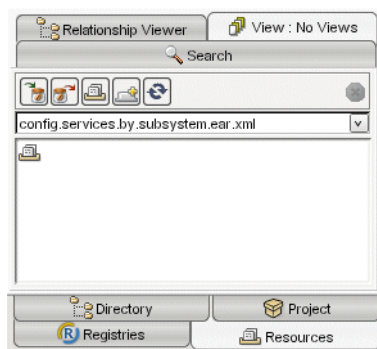
9 Expand **WEB-INF\lib\ExpressPortal\_resource.jar**.

This is a **JAR subproject** that's provided to store any **custom artifacts** you add to the application. Notice that it includes subdirectories for the various types of artifacts (such as forms, images, etc.):



When you create new artifacts, they go into the appropriate subdirectory of **ExpressPortal\_resource.jar**, where they automatically become part of the application's **resource set** (along with many pre-supplied files in other JARs).

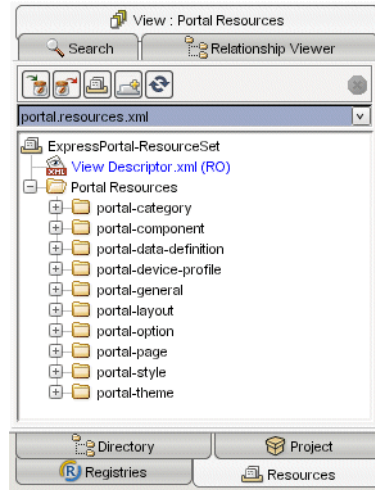
10 Click the **Resources** tab of the Navigation Pane:



The Resources tab enables you to explore the Express Portal files based on how they participate in the application's resource set. It often provides the most convenient entry point when you need to examine or modify a particular aspect of an exteNd Director project.

- 11 At the top of the Resources tab, make sure the child tab named **View: *view-name*** is currently selected.

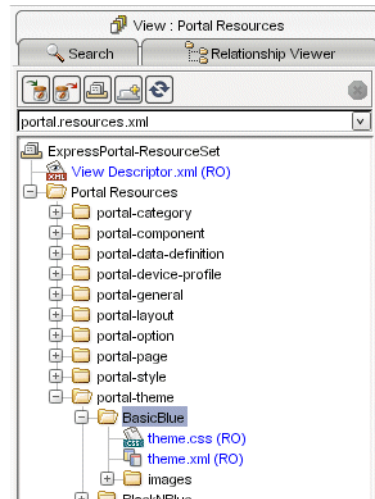
Then use the dropdown control on the tab to change the view to **portal.resources.xml**:



As its name indicates, this view lists files used to implement the application's portal features.

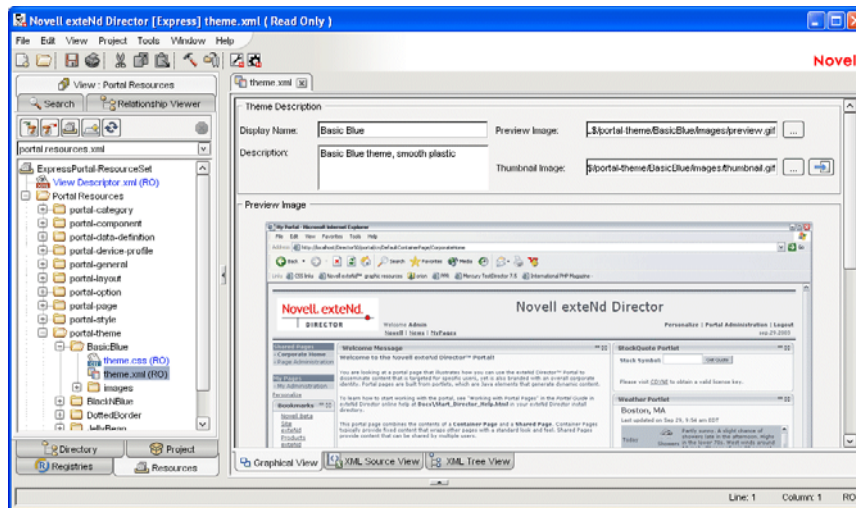
- 12 In this view, expand **Portal Resources**, then **portal-theme**, then **BasicBlue**.

The files that implement the portal's BasicBlue theme are listed:



- 13 Double-click **theme.xml**.

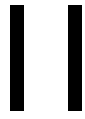
The BasicBlue **theme descriptor** opens in the theme descriptor editor (because this descriptor is a pre-supplied artifact, it is read-only). Now you can see how the BasicBlue theme is defined:



- 14 Close the theme descriptor editor.
- 15 Try exploring other items in this view or in any of the other views.
- 16 When you're done exploring the Express Portal project, select **File>Exit** to close the project and quit the exteNd Director development environment.

## What to do next

- ◆ [Learn about accessory portlets](#)



## Working with the Portal

Choose an exercise for a topic you want to learn about:

- [Creating a Container Page](#)
- [Customizing Page Branding](#)





# Creating a Container Page

## Objective

To create a container page and learn about its default portlets: Portal Page Controller, Page Navigation, and Page Header.

**Before you begin** See “[About exteNd Director Tutorials](#)”.

**Audience** These exercises are designed for portal administrators—users who belong to the PortalAdmin administrator ACL group.

## Concepts

- ◆ [Portal administrator ACL](#)
- ◆ [Portal administrator tasks](#)
- ◆ [About the Portal Administration tool](#)
- ◆ [Working with Container pages](#)
- ◆ [Portal Page Controller portlet](#)
- ◆ [Page Navigation portlet](#)
- ◆ [Page Header portlet](#)
- ◆ [How content is determined for portal pages](#)

## Exercises

This section provides exercises that show you how to perform the following tasks:

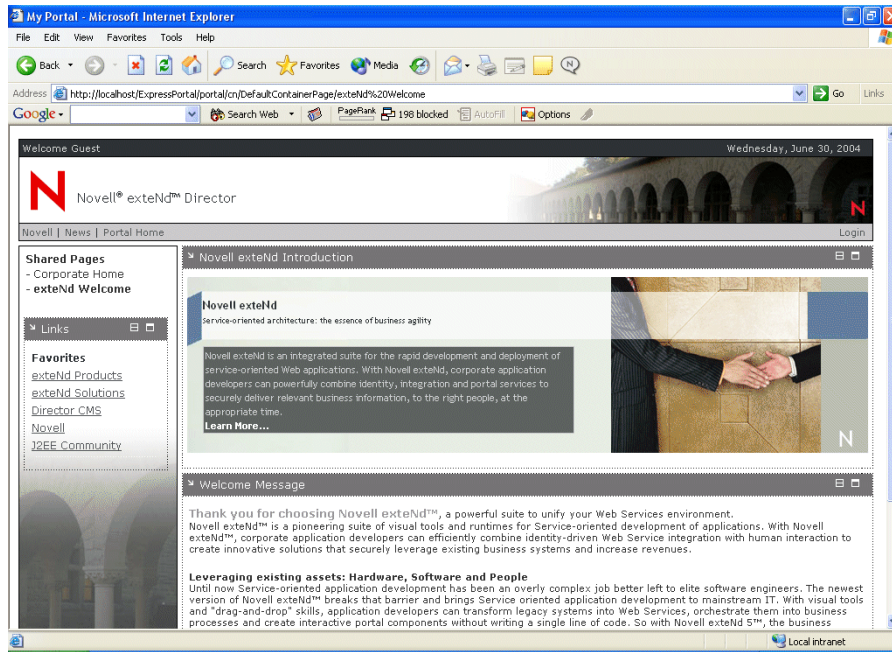
- ◆ [Starting the Portal Administration tool](#)
- ◆ [Creating a container page](#)
- ◆ [Viewing the layout of a container page](#)
- ◆ [Adding content to a container page](#)
- ◆ [Arranging content on a container page](#)
- ◆ [Choosing a default shared page for a container page](#)
- ◆ [Viewing a container page](#)

## Starting the Portal Administration tool

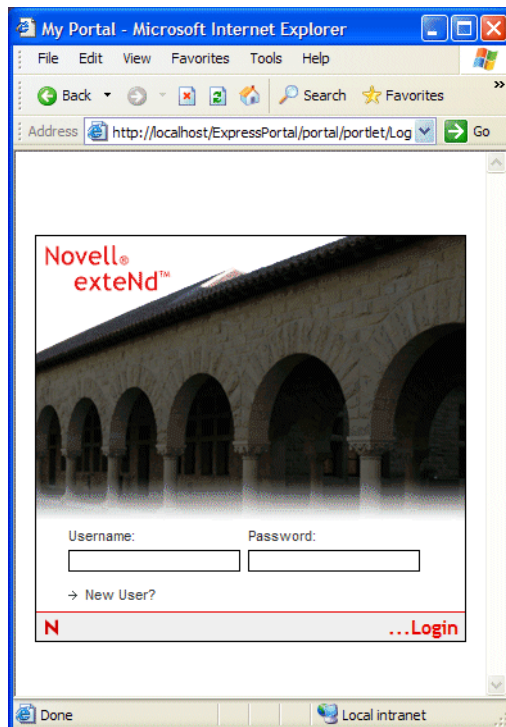
You use the Portal Administration tool to create and maintain container pages. This tool provides a GUI for creating pages, adding and arranging content, selecting layouts, and assigning pages to users and groups.

➤ **To start the Portal Administration tool:**

- 1 Start the exteNd Application Server where the Express Portal application has been deployed.
- 2 Start a browser.
- 3 Start the Express Portal application by entering this URL in your browser:  
**http://host/ExpressPortal**  
The default page for a guest user opens in your browser.
- 4 Click **Login**.



The Login dialog opens in your browser:

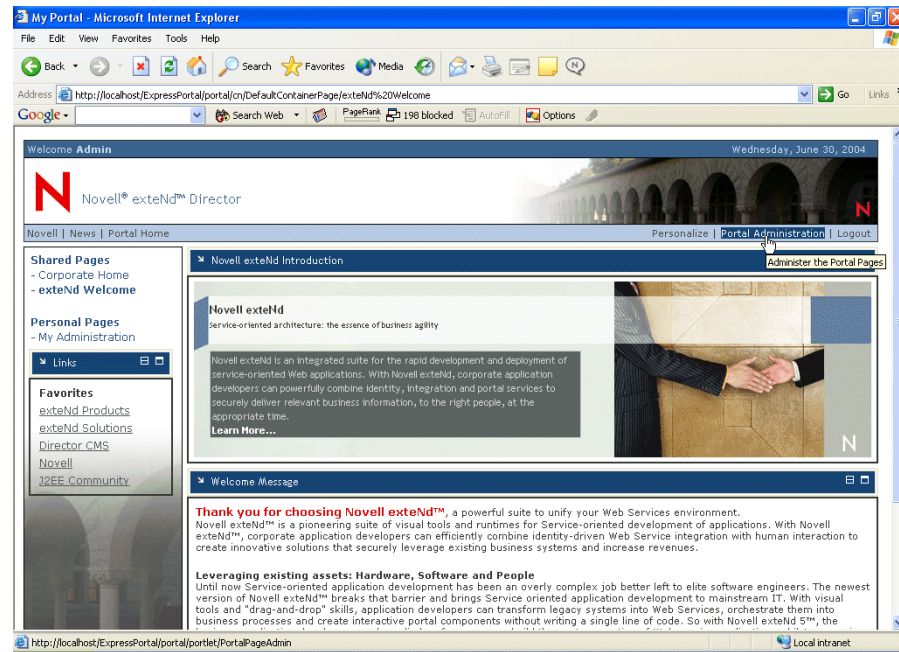


5 Log in as a portal administrator, then click **login** or the **Enter** key.

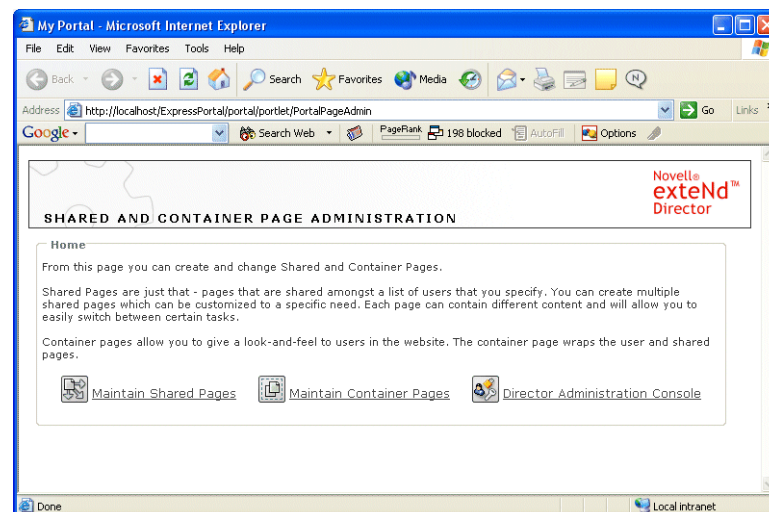
**TIP:** A portal administrator is a user who is a member of the PortalAdmin administrator ACL group. Check with your system administrator for the username and password to use.

The default page for portal administrators opens in your browser.

6 Start the Portal Administration tool by selecting **Portal Administration**.



The Portal Administration tool opens in your browser.



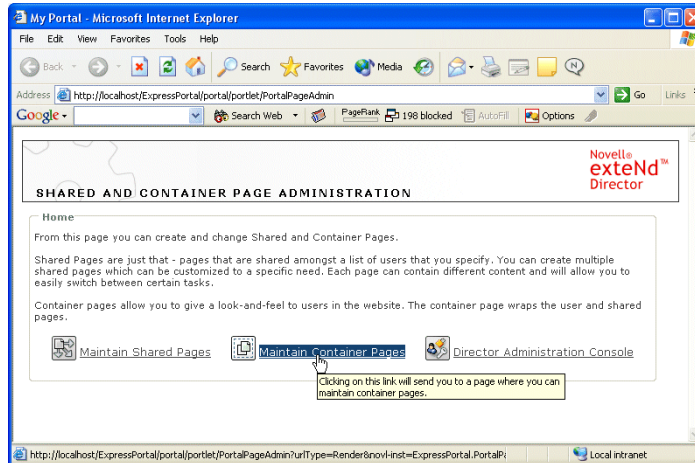
Now you are ready to create a container page. Leave the Portal Administration tool running and move to the next exercise.

## Creating a container page

Portal administrators can create and maintain container pages using the Portal Administration tool. A container page is a page that wraps shared and personal pages with a consistent look and feel.

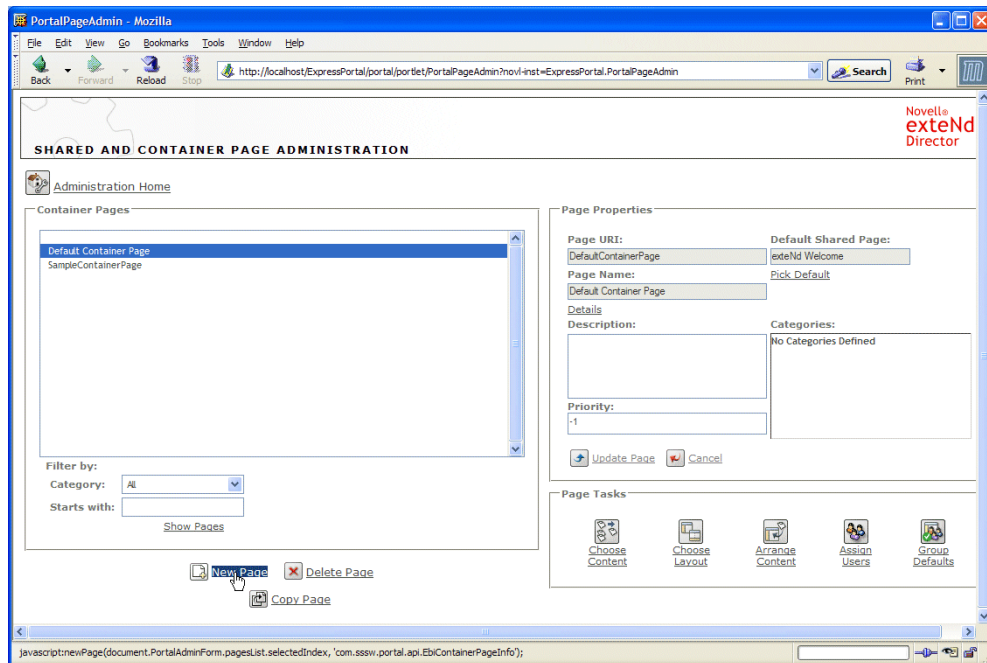
### ➤ To create a container page:

- 1 Select **Maintain Container Pages** in the Portal Administration tool:



The container page administration tool opens in your browser.

- 2 Select **New Page**.



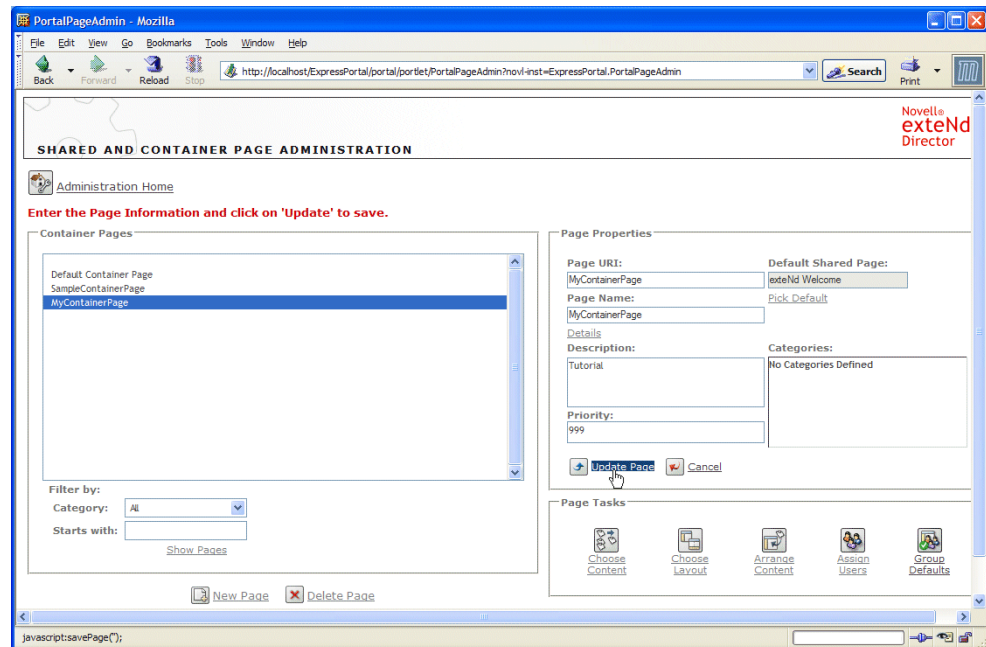
A new, untitled page appears in the Container Pages list.

- 3 In the fields provided, enter the following information about the new container page:

Field	What to specify
Page URI	Enter <b>MyContainerPage</b> .
Page Name	Enter <b>MyContainerPage</b> .
Default Shared Page	Do not enter a default shared page.

Field	What to specify
Description	Enter a description of the page.
Categories	Do not assign any categories to the container page. <b>NOTE:</b> If you have not created any page categories, you will see the message <b>No Categories Defined</b> .
Priority	Enter <b>999</b> (the highest allowed value). <b>NOTE:</b> The priority setting determines which container page to display if there is no explicit page assignment for the logged in user. The page with the highest priority value is the page displayed.

#### 4 Click Update Page.



The new page and its specifications are recorded in the portal.

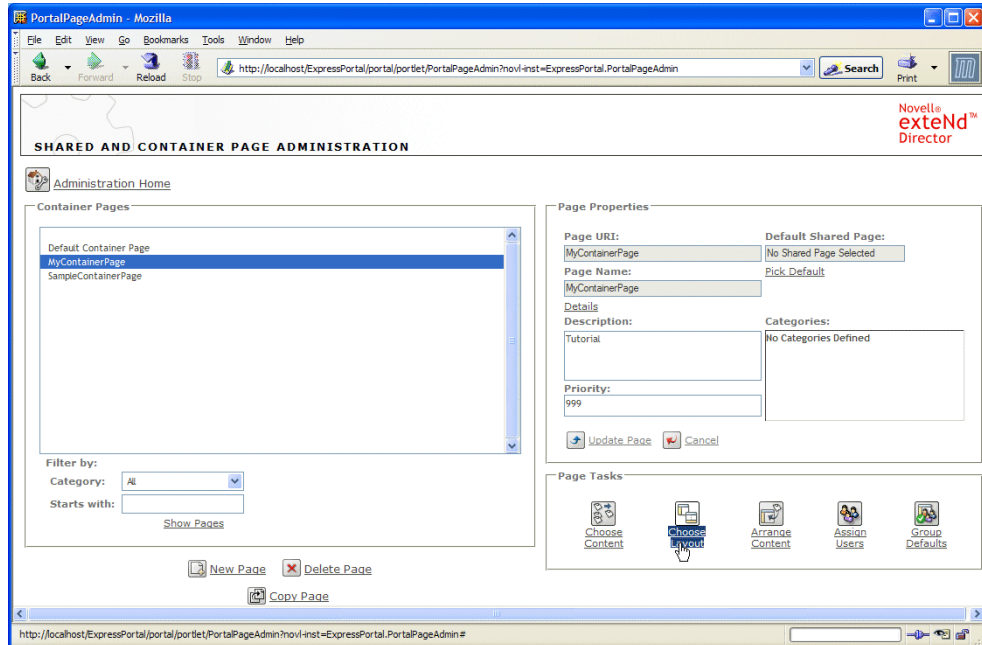
Now you are ready to view the default layout of your container page. Leave your new container page selected in the container page administration tool and move to the next exercise.

## Viewing the layout of a container page

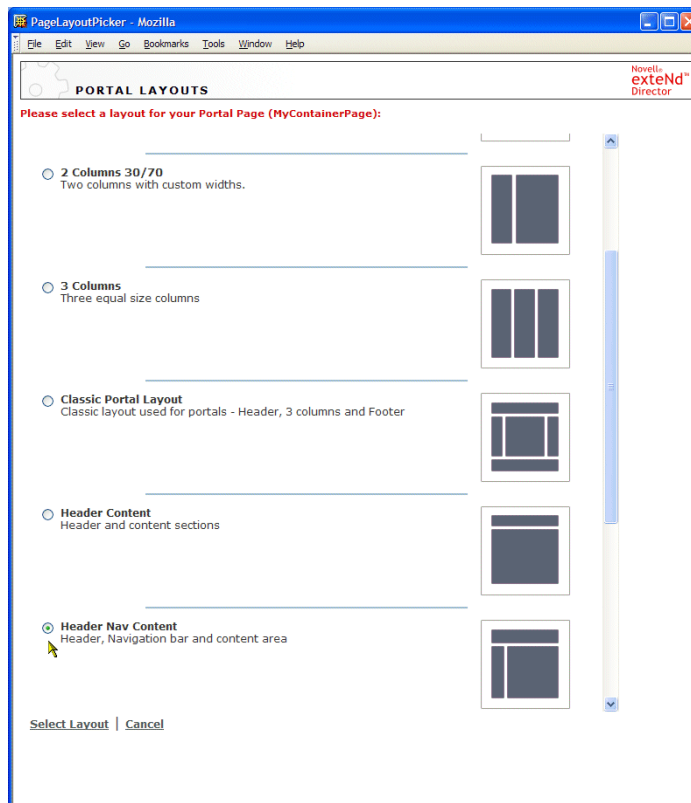
exteNd Director provides a Portal Layouts tool for assigning layouts to portal pages. The default layout for container pages is the **Header Nav Content** layout, as described in the next procedure.

### ➤ To view the layout of a container page:

- 1 With your container page selected in the container page administration tool, select **Choose Layout**.



The Portal Layouts tool opens:



Note that the **Header Nav Content** layout is selected by default. As its name suggests, this layout partitions the page into header, navigation, and content areas. This is the layout you will use for your container page.

- 2 Scroll through the other layouts to see what options are available, but leave the Header Nav Content layout selected.
- 3 Click **Cancel** to close the Portal Layouts tool and return to the container page administration tool.

You are now ready to add content to your new container page. Leave the page selected in the container page administration tool and move to the next exercise.

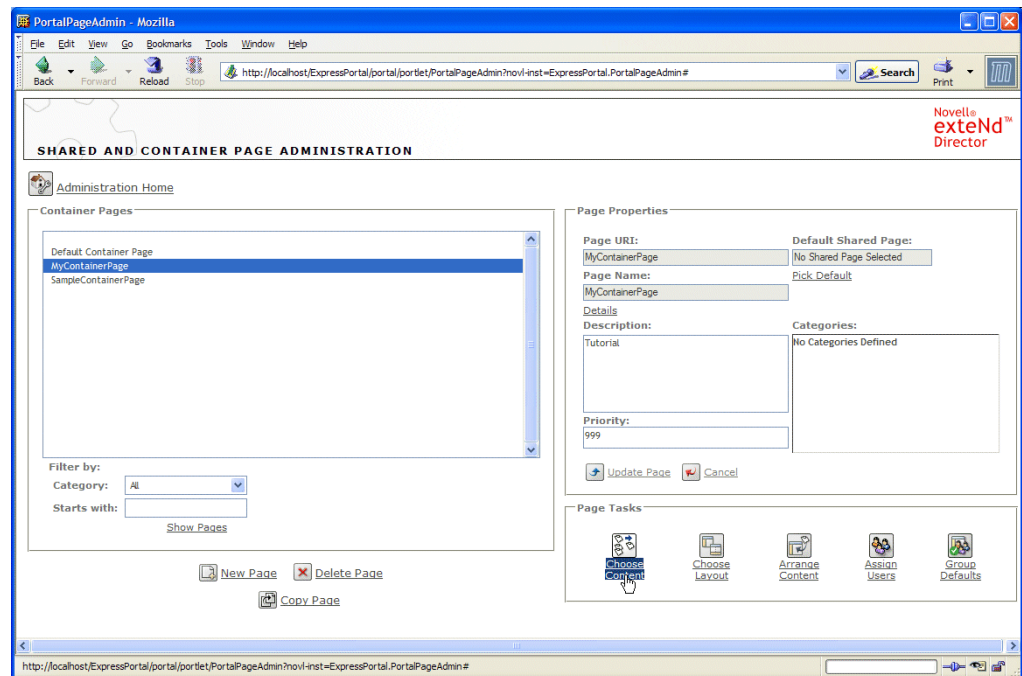
## Adding content to a container page

The content of container pages—and all other types of exteNd Director portal pages—is generated by portlets. You add portlets to portal pages using the Content Selector tool, as described in the next procedure.

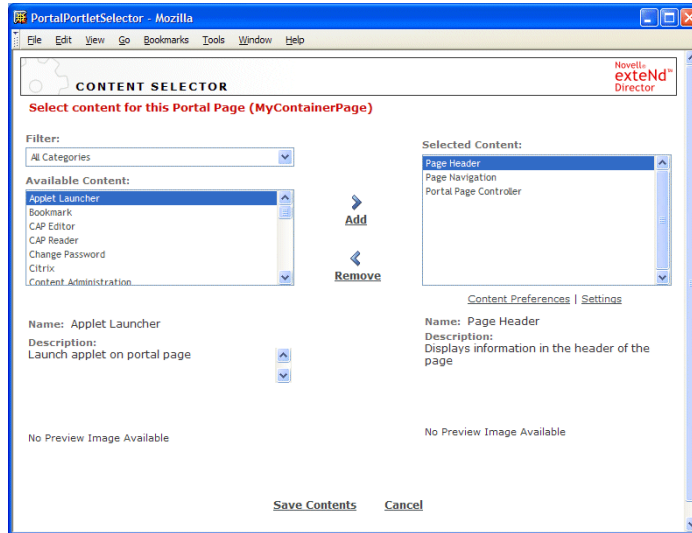
exteNd Director provides a set of prebuilt portlets that encapsulate business logic that you can add to your pages. You can also develop your own portlets in exteNd Director to generate custom content for portal pages, as described in [Strategies for Developing Portlets](#).

### ➤ To add content on a container page:

- 1 With your container page selected in the container page administration tool, select **Choose Content**:



The Content Selector tool opens in a new browser window.



- 2 Look at the **Available Content** list.

This is a list of all portlets that have been registered in the Express Portal application. Registered portlets are also called **portlet registrations**.

- 3 Look at the **Selected Content** list.

Note that three registered portlets have been added to the container page by default:

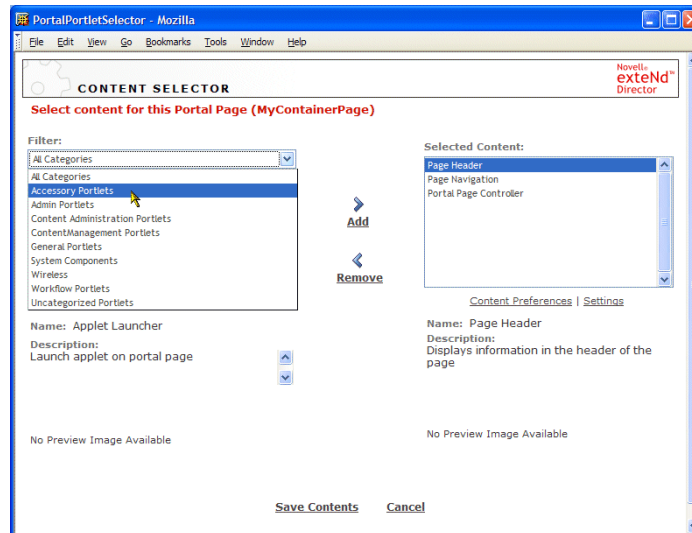
Portlet	Description
Page Header	Provides a mechanism for creating a customized look and feel for Web pages in an organization—typically in the header pane of a container page
Page Navigation	Provides a graphical user interface that lets users navigate to all container, shared, and personal pages that they are authorized to access—typically in the navigation pane of a container page
Portal Page Controller	Displays the currently selected shared page or personal page in the container page—typically in the content pane.  <b>IMPORTANT:</b> Every container page must contain one Portal Page Controller portlet to designate the area for displaying the content of a shared or personal page. The Portal Administration tool automatically adds this portlet to each container page you create.

You will learn more about these portlets in later exercises.

- 4 Add the Bookmark portlet to your container page by following these steps:



**4a** Select **Accessory Portlets** from the Filter dropdown:



The complete list of accessory portlets appears in the Available Content list.

**4b** Select **Bookmark** and click **Add**.

The **Bookmark** portlet is added to the Selected Content list.

**5** Click **Save Contents** to record your changes and dismiss the Content Selector.

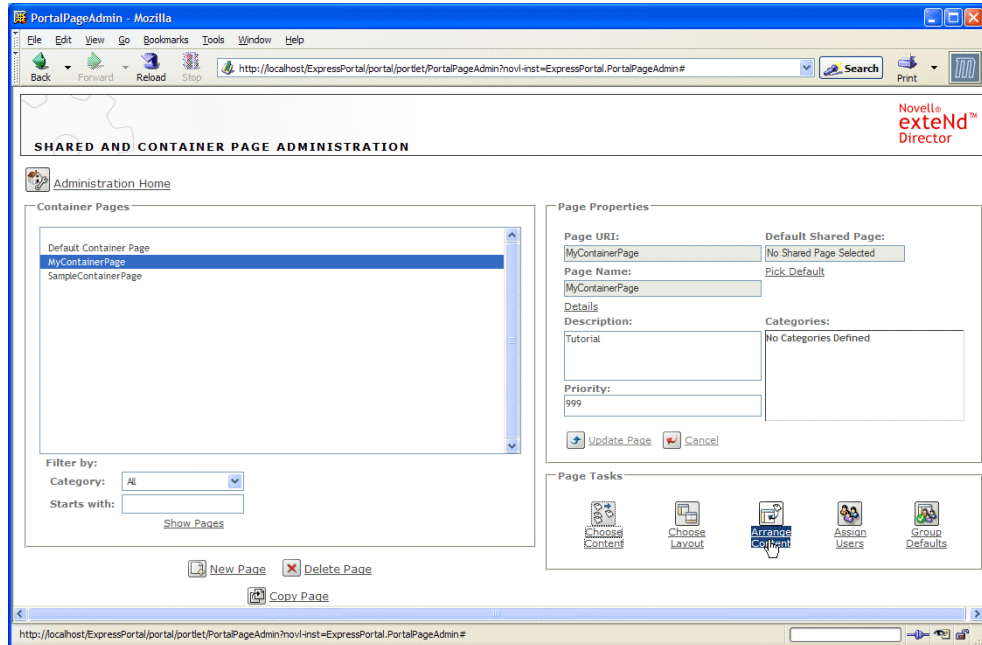
Now you are ready to arrange content based on the layout of your container page. Leave the page selected in the container page administration tool and move to the next exercise.

## Arranging content on a container page

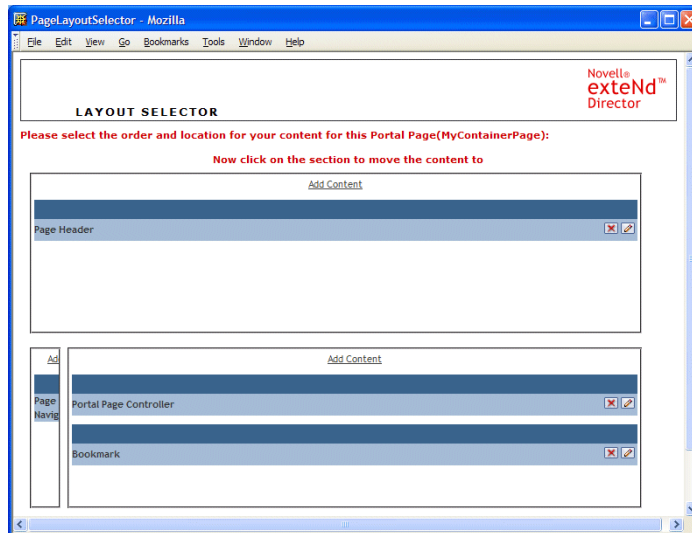
You use the Layout Selector to position portlets within the layout of the container page.

➤ **To arrange content on a container page:**

- 1 With your container page selected in the container page administration tool, select **Arrange Content**:



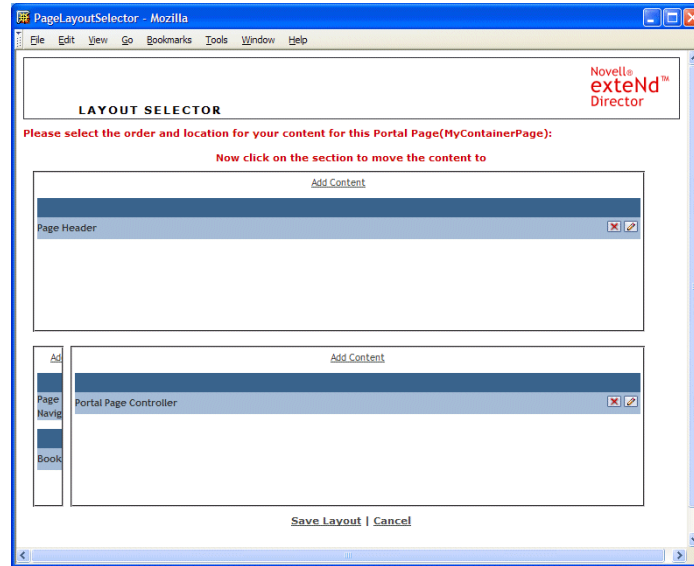
The Layout Selector tool opens in your browser.



**NOTE:** The Portal Administration tool makes its best guess as to where to place portlets within the Header Nav Content layout. For example, it appropriately places the Page Header portlet in the Header pane, Page Navigation portlet in the Nav pane, and Portal Page Controller portlet in the Content pane. However, you will move the Bookmark portlet to the Nav pane in the next step.

- 2 In the Layout Selector tool, click the title bar of the Bookmark portlet, then click the area under the Page Navigation portlet.

The Bookmark portlet should move under the Page Navigation portlet, as shown:



- 3 Click **Save Layout** to record your changes and dismiss the Layout Selector tool.

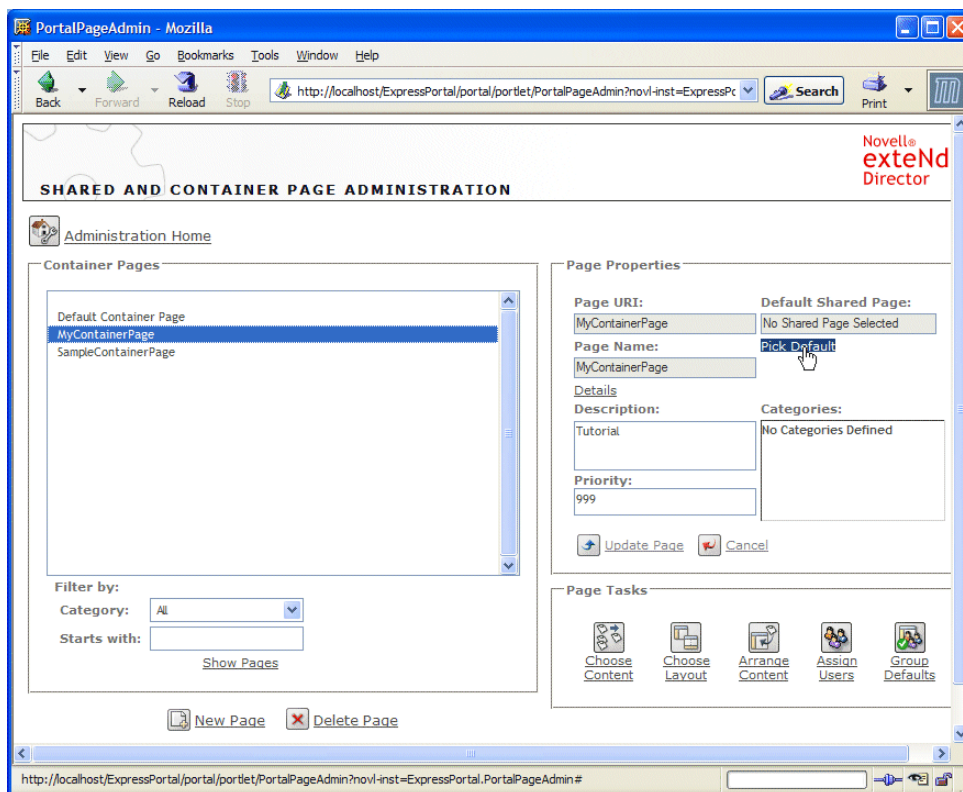
Now you are ready to choose a default shared page to display inside your new container page. Leave the page selected in the container page administration tool and move to the next exercise.

## Choosing a default shared page for a container page

In this exercise you will choose a default shared page to be displayed inside your container page (if no other shared or personal page has been selected).

### ➤ To choose a default shared page for a container page:

- 1 In the container page administration tool, select **MyContainerPage** in the list of Container Pages, then click **Pick Default** under the Default Shared Page field:



The Portal Shared Page Picker opens in a separate window.

- 2 Select **exteNd Welcome** from the list of shared pages and click **OK**.
- 3 Click **Update Page**.

Now you are ready to view your container page. Close all browser windows and move to the next exercise.

## Viewing a container page

There are several ways to view a container page:

- ◆ From a navigation link on a portal page
- ◆ By typing an URL directly in a browser

This section describes both procedures.

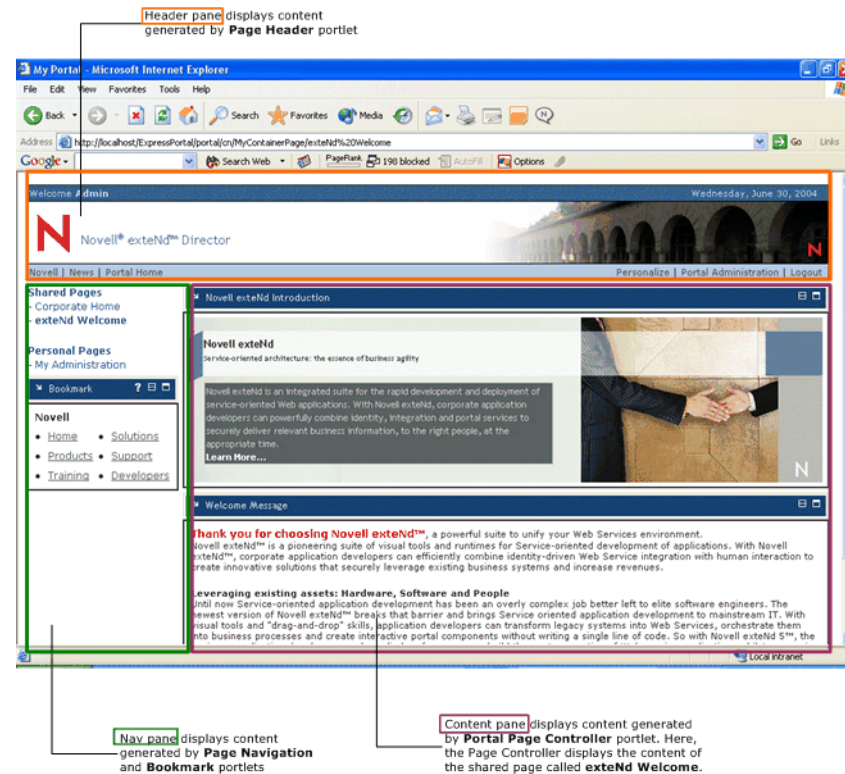
### ➤ To view a container page from a navigation link:

In this exercise, you will view your container page from a navigation link on the default portal page for portal administrators. The navigation links are generated by the Page Navigation portlet. You will learn more about this portlet in a later exercise.

- 1 Open a new browser, start the ExpressPortal application, and log in again as the same portal administrator.

**TIP:** You can review these steps in “Starting the Portal Administration tool” on page 33.

MyContainerPage displays in your browser:



As you can see, the Portal Page Controller portlet displays the content of exteNd Welcome—the page you designated as the default shared page for your container page in the exercise “Choosing a default shared page for a container page” on page 44. This shared page contains two portlets—Novell exteNd Introduction and Welcome Message—which generate the content you see in the Content pane of MyContainerPage.

➤ **To view a container page by typing an URL directly in a browser:**

- 1 In your current browser session, enter the following URL to view MyContainerPage:

`http://server/ExpressPortal/portal/cn/MyContainerPage`

For example, if your server is localhost, enter:

`http://localhost/ExpressPortal/portal/cn/MyContainerPage`

MyContainerPage displays in your browser.

**NOTE:** If you enter the URL in a new browser session, you will need to log in again as the portal administrator, as described in “Starting the Portal Administration tool” on page 33.

## What to do next

- ◆ [Customize page branding](#)
- ◆ [Learn about shared pages](#)
- ◆ [Learn about assigning pages to users](#)



# Customizing Page Branding

## Objective

To customize page branding by modifying preferences in the Page Header portlet.

**Before you begin** See “[About exteNd Director Tutorials](#)”.

**Audience** These exercises are designed for portal administrators—that is, users who belong to the PortalAdmin administrator ACL group.

## Concepts

- ◆ [Portal administrator ACL](#)
- ◆ [Portal administrator tasks](#)
- ◆ [About the Portal Administration tool](#)
- ◆ [Working with Container pages](#)
- ◆ [Page Header portlet](#)
- ◆ [Working with exteNd Director projects](#)
- ◆ [Resource sets](#)
- ◆ [Scoped paths](#)
- ◆ [Managing portlets in the Director Administration Console \(DAC\)](#)

## Exercises

This section provides exercises that show you how to perform the following tasks:

- ◆ [Adding new branding images to the Express Portal project](#)
- ◆ [Modifying the preferences of the Page Header portlet](#)
- ◆ [Viewing the rebranded container page](#)

### Adding new branding images to the Express Portal project

As part of the process of customizing page branding, you will configure the Page Header portlet to display new logo and background images on a container page. Before beginning this exercise, be sure you have downloaded the accessory ZIP file required for the exteNd Director tutorials, as described in the section on [how to download accessory files](#).

➤ **To add an image file to the Express Portal project:**

- 1 Open the accessory archive `Director52Tutorial.zip` and select the following image files:
  - ◆ `new_logo.gif`

- ◆ **new\_background.gif**

- 2 Click **Extract** and extract the files to the images directory of the Express Portal project's resource set:

```
exteNd suite install directory\Projects\Express\data\images
```

**NOTE:** Even though you have just added new resources to your Express Portal application, you do not need to redeploy the project. This is because exteNd Director supports dynamic loading of resources and classes within a resource set.

## Modifying the preferences of the Page Header portlet

exteNd Director provides a Page Header portlet that you can add to a portal page to generate content for a header. Often the header on a Web page provides text and images that brand a site with a corporate identity. If you add the Page Header portlet to a container page, it will automatically wrap all other page content in a Web site with the branded look and feel.

In this exercise you will use the Portal Administration tool to modify preferences of the Page Header portlet to customize branding on a particular container page.

**NOTE:** To modify the Page Header portlet so the changes appear on all pages in your application, you use the Director Administration Console (DAC) to edit preferences of a registered instance of the Page Header portlet. See the section on [administering registered portlets](#).

### ➤ To modify the logo image in the Page Header portlet:

- 1 Log in to the Express Portal application as a portal administrator and start the Portal Administration tool.

**TIP:** You can review these steps in the section on [starting the Portal Administration tool](#).

- 2 In the Portal Administration tool, select **Maintain Container Pages**.

The container page administration tool opens in your browser.

- 3 Select or create a container page that contains a Page Header portlet.

**TIP:** The default container page in Express Portal —DefaultContainerPage—comes with a Page Header portlet. You can also add a Page Header portlet to a page, as described in the tutorial on [creating a container page](#).

- 4 Click **Choose Content**.

The Content Selector tool for the selected container page opens in a new browser window.

- 5 Select **Page Header** in the Selected Content list and click **Content Preferences**.

The Content Preferences editor opens in your browser.

- 6 In the Logo Image preference, change the name of the image file in the value field from `portal_header_n.gif` to **new\_logo.gif**.

**NOTE:** `new_logo.gif` is one of the image files you added to the Express Portal project's resource set in the previous exercise.

The value of the Logo Image preference should now read:

```
${Portal/Url/Resource/images/new_logo.gif}
```

**NOTE:** The syntax `${Portal/Url/Resource/images}` is a scoped path that allows you to quickly access data in an exteNd Director application. In this example, the scoped path points to the images directory in the application's resource set without requiring that you specify absolute paths.

Now you are ready to modify the background image of the Page Header portlet. Leave the Content Preferences editor running and move to the next exercise.



➤ **To modify the background image of the Page Header portlet:**

- 1 Find the **Background Image** preference and change the name of the image file in the value field from `portal_header_arch_background.jpg` to **new\_background.gif**.

**NOTE:** `new_background.gif` is one of the image files you added to the Express Portal project's resource set in a previous exercise.

The value of the Background Image preference should now read:

```
${Portal/Url/Resource/images/new_background.gif}
```

- 2 Find the **Repeat Pattern** preference and select the value **Repeat on x axis** from the dropdown menu.
- 3 Find the **Background Position** preference and select the value **Top Left** from the dropdown menu.

Now you are ready to modify the site name of the Page Header portlet. Leave the Content Preferences editor running and move to the next exercise.

➤ **To modify the site name of the Page Header portlet:**

- 1 In the Content Preferences editor, scroll down to the **Site Name** preference. In its value field change the text **Novell** to **My Garden Supply Company**.

**TIP:** You may need to scroll right in the value field to find the text **Novell**.

- 2 Scroll further right in the value field and delete the following text:

```
exteNd&#8482; Director
```

- 3 Click **Save Preferences**.

The Content Preferences editor closes.

- 4 Click **Save Contents** to record your changes and dismiss the Content Selector tool.
- 5 Close all other Express Portal application windows.

Now you are ready to view the rebranded page. Move to the next exercise.

## Viewing the rebranded container page

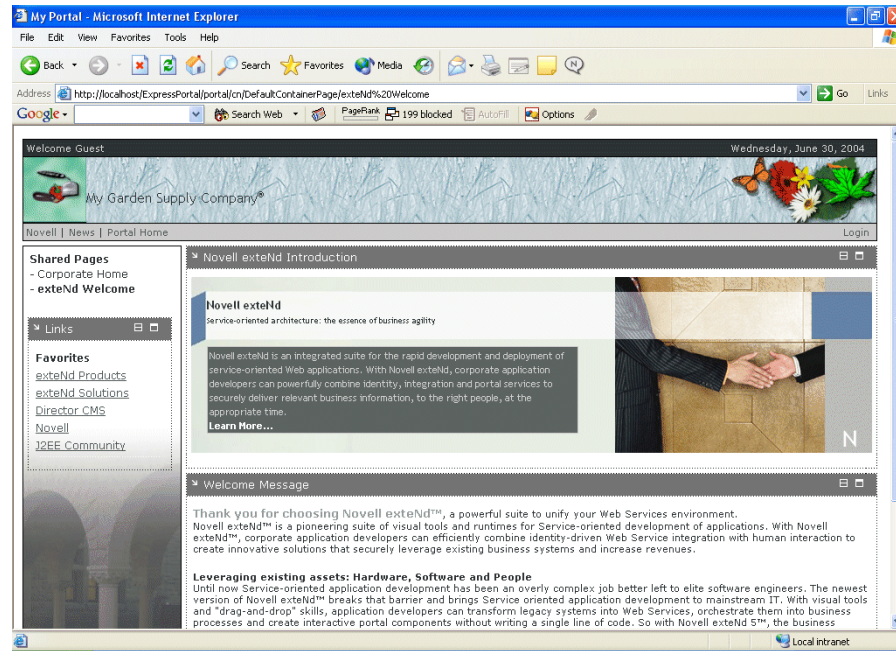
In these exercises you will see how your modifications to the Page Header portlet rebrand the container page. You will also learn about the scope of your modifications.

➤ **To test the rebranded container page:**

- 1 Start a new application server session.
- 2 Open a new browser and log in to the Express Portal application.
- 3 Open the container page that contains the rebranded header.

**TIP:** You can review how to open a container page in the section on [viewing a container page](#).

The rebranded header should look like this:



Note the new logo, site name, and background image in the page header.

**TIP:** The modifications you made apply only to this instance of the Page Header portlet, which appears on this particular container page. This is because you have not changed the **registered instance** of the Page Header portlet, only the **page instance**. If you add the registered Page Header portlet to a new page, the original logo, site name, and background will appear. Try this in the next exercise. Leave your modified page open in the browser.

➤ **Determining the scope of your Page Header modifications:**

- 1 With your modified page open in your browser, select **Portal Administration**.
- 2 Create a new container page with these properties:

Property	What to specify
Page Name	TestContainerPage
Priority	1

**TIP:** You can review these steps in the section on [creating a container page](#).

- 3 Click **Update Page** to record your changes.
- 4 Select **Choose Content**.

Recall that a registered Page Header portlet is added to new container pages by default (along with registered Page Navigation and Page Controller portlets).

- 5 Choose **Page Header**, then select **Content Preferences**.
- 6 In the Content Preferences editor, check the preferences you changed in the previous exercise:
  - ◆ Logo Image
  - ◆ Background Image
  - ◆ Repeat Pattern
  - ◆ Background Position
  - ◆ Site Name

Note that these preferences are set to their original values.

- 7 Close all browser windows.
- 8 View the rebranded container page and TestContainerPage in a new browser session to compare the headers.  
**TIP:** You can review the steps for viewing a container page in the section on [viewing a container page](#).

## What to do next

- ◆ [Learn about accessory portlets](#)
- ◆ [Learn about portlet definitions, portlet registrations, and portlet page instances](#)
- ◆ [Learn about shared pages](#)
- ◆ [Learn about assigning pages to users and groups](#)





## Using Accessory Portlets

Choose an exercise for a topic you want to learn about:

- [Working with Accessory Portlets](#)
- [Using Shortcut portlets for form-based authentication](#)
- [Using IFrame portlets for content management](#)
- [Creating shortcuts with images from the resource set](#)



# Working with Accessory Portlets

## Objective

Add some accessory portlets to a personal page, use the portlet options, and access portlet preferences.

**Before you begin** See [“About exteNd Director Tutorials”](#)

**Audience** This section is for portal end-users.

## Concepts

- ◆ [Working with installed portlets](#)
- ◆ [About the Portal Personalizer](#)
- ◆ [Working with Personal pages](#)
- ◆ [Working with portal layouts](#)
- ◆ [Working with portal options](#)
- ◆ [Portlet preferences](#)

## Exercises

This section provides exercises that show you how to perform the following tasks:

- ◆ [Adding accessory portlets to a page](#)
- ◆ [Using portal options](#)
- ◆ [Accessing help for accessory portlets](#)
- ◆ [Accessing portlet preferences](#)

### Adding accessory portlets to a page

**Accessory portlets** are a set of production-quality portlets that you can use on personal or shared pages in the ExpressPortal project or in your own exteNd Director project. They provide rich interaction with web sites, access to local applications, form-based authentication, and other functions of interest to general users. Some of the accessory portlets have been converted from Novell Portal System (NPS) **gadgets**. All of the accessory portlets conform to the Java Portlet 1.0 specification.

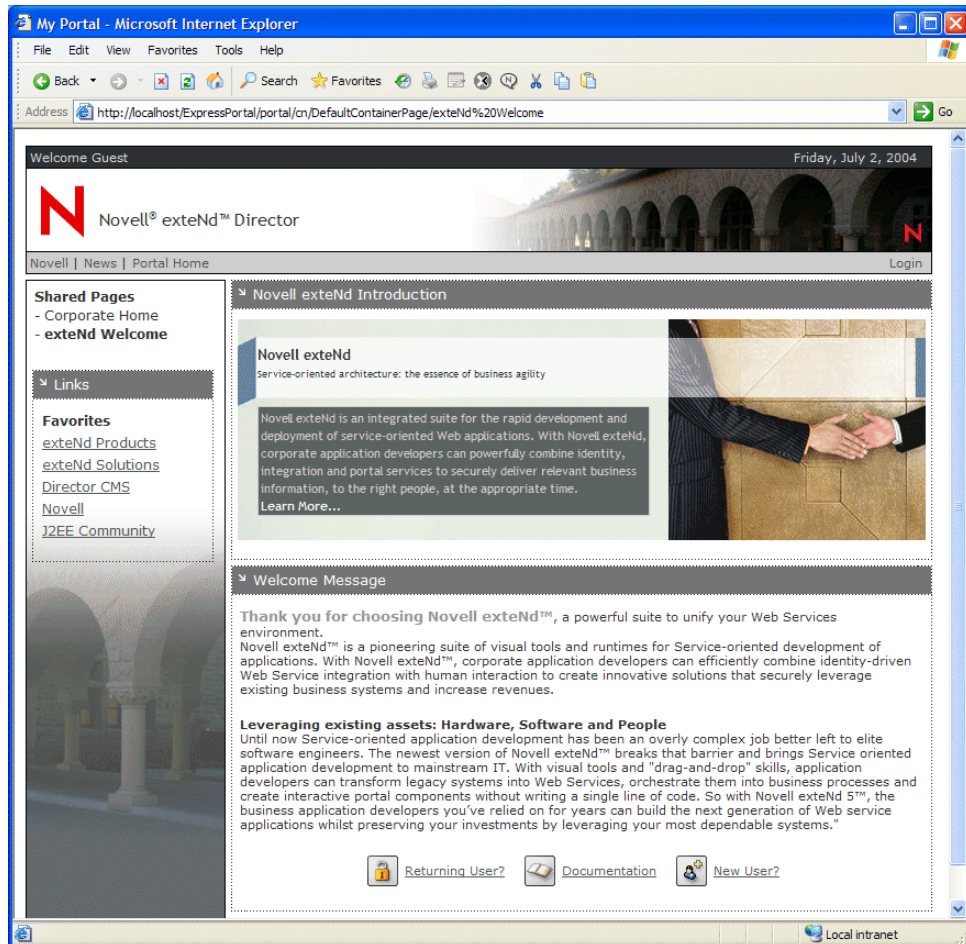
➤ **To access ExpressPortal:**

- 1 Start the exteNd Application Server where the Express Portal application has been deployed.
- 2 Start a browser.
- 3 Open the Express Portal application by typing this URL:

`http://host/ExpressPortal`

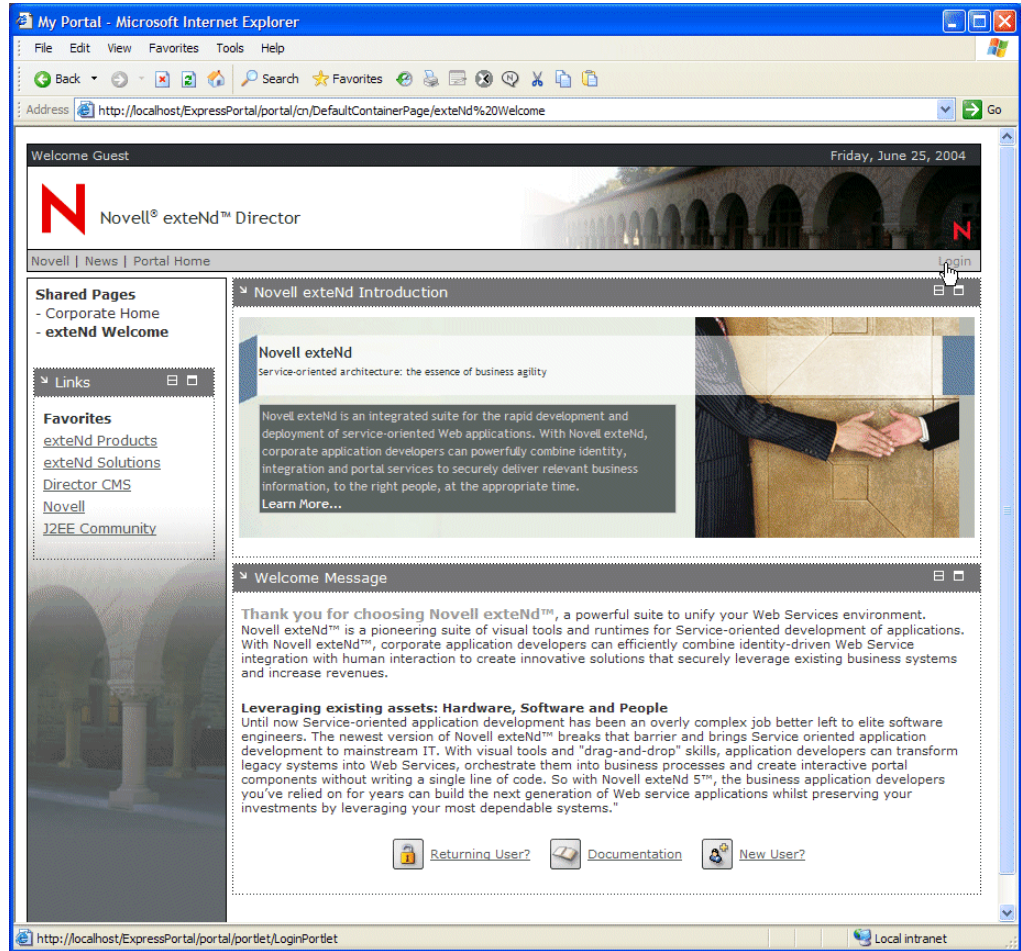
**NOTE:** *host* is the machine on which the Express Portal application is running. If the application is running on your local machine, use **localhost**.

The default page for a guest user opens in your browser:

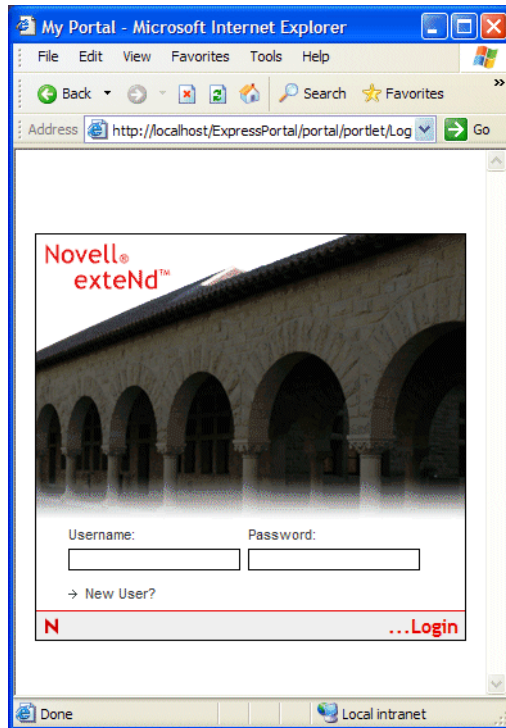




4 Click Login on the right side of the portal title bar.



The login page displays:



- 5 If you have logged in to ExpressPortal previously you can use the same name and password to access the default ExpressPortal page. Otherwise, create a new user by following these steps:

**5a** Click the **New User?** link on the login page.

**5b** Fill in all of the requested fields. For example:

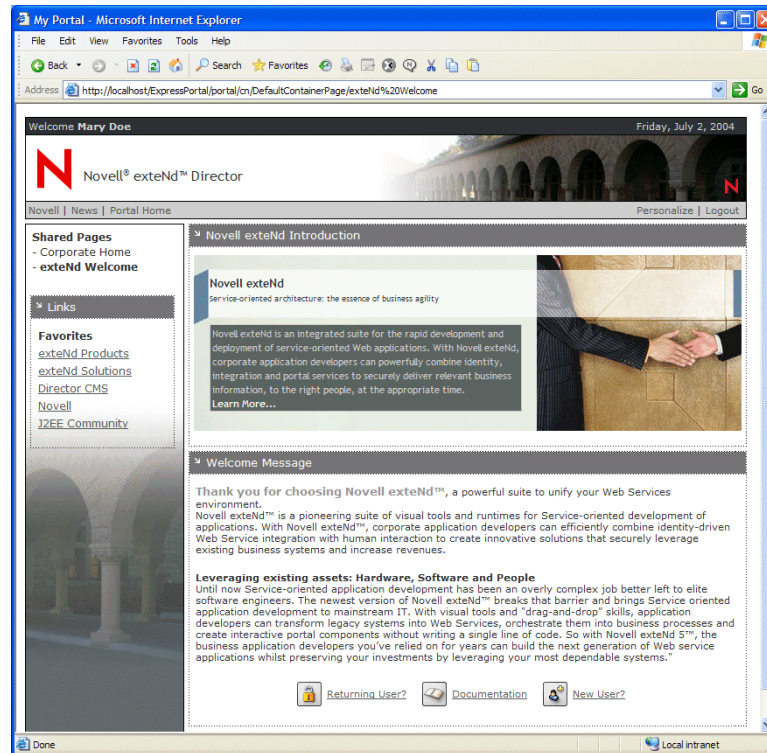
Field	Sample Entry
User ID	MDoe
password	mdoe
First Name	Mary
Last Name	Doe
Email	mdoe@tutorial.com

**5c** Click **Register**.

The login page reappears with a message indicating the new user has been successfully created.

- 6 Log in using the new user and password.

The default page for a non-administrator user opens in your browser.

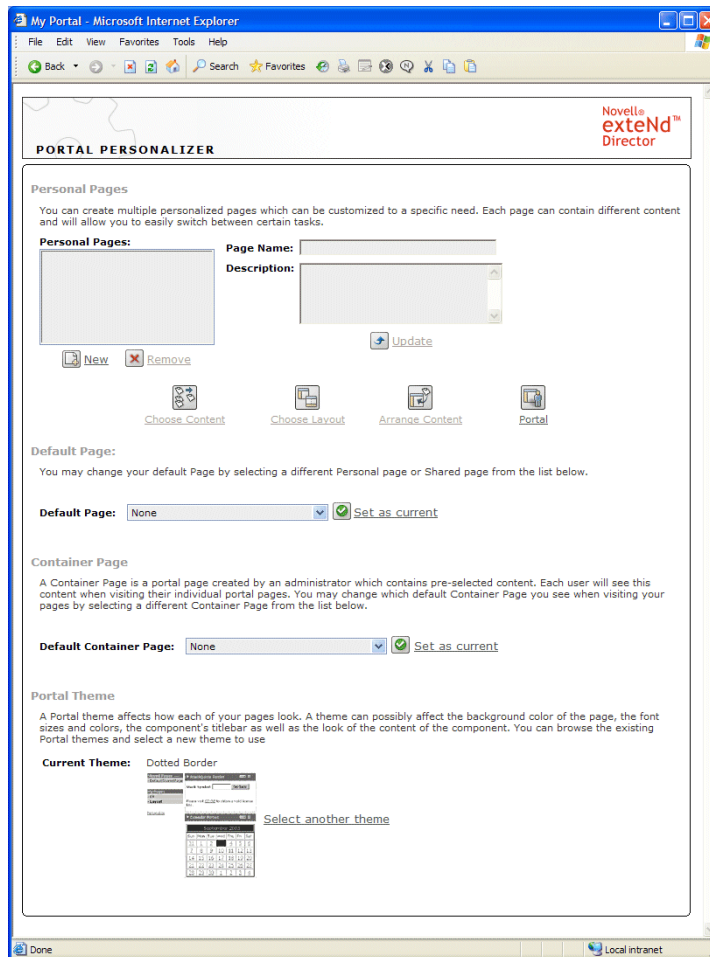


Now you are ready to create a personal page with accessory portlets. Leave the default user page running in the browser and move to the next exercise.

➤ **To create a personal page and add accessory portlets:**

- 1 Click **Personalize** on the right side of the page.

The Portal Personalizer opens in your browser:



- 2 Under Personal Pages select **New**.

- 3 Enter the following properties:

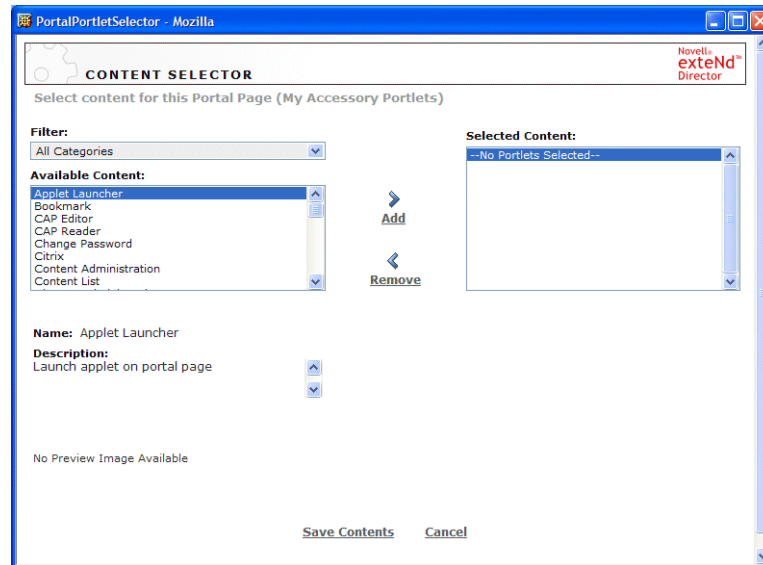
Property	What to specify
Page Name	Enter <b>My Accessory Portlets</b>
Description	Enter <b>Tutorial</b>

- 4 Click **Update**.

**My Accessory Portlets** is added to the **Personal Pages** list.

- 5 With the new page selected, click **Choose Content**.

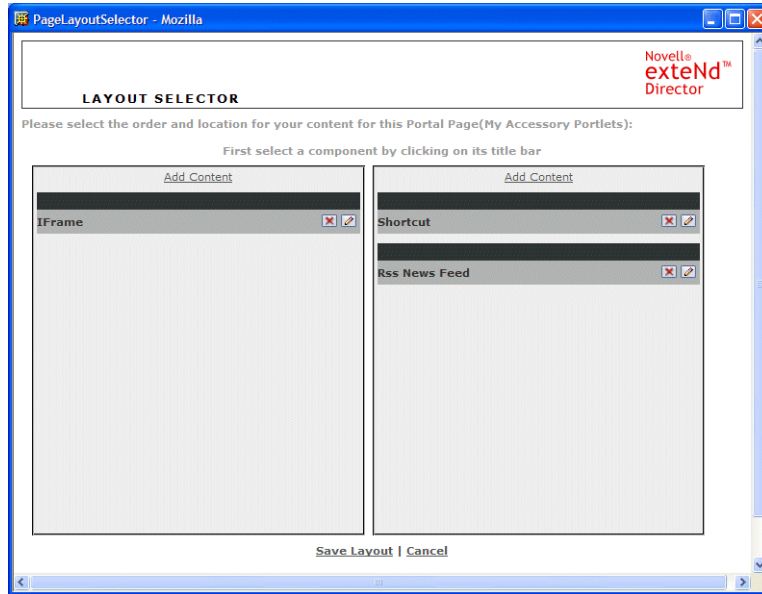
The Content Selector opens in a new browser window:



- 6 From the Filter dropdown list choose **Accessory Portlets**.
- 7 From the Available Content list, select the following portlets and add them to the page by clicking **Add**:
  - ◆ IFrame
  - ◆ Rss News Feed
  - ◆ Shortcut

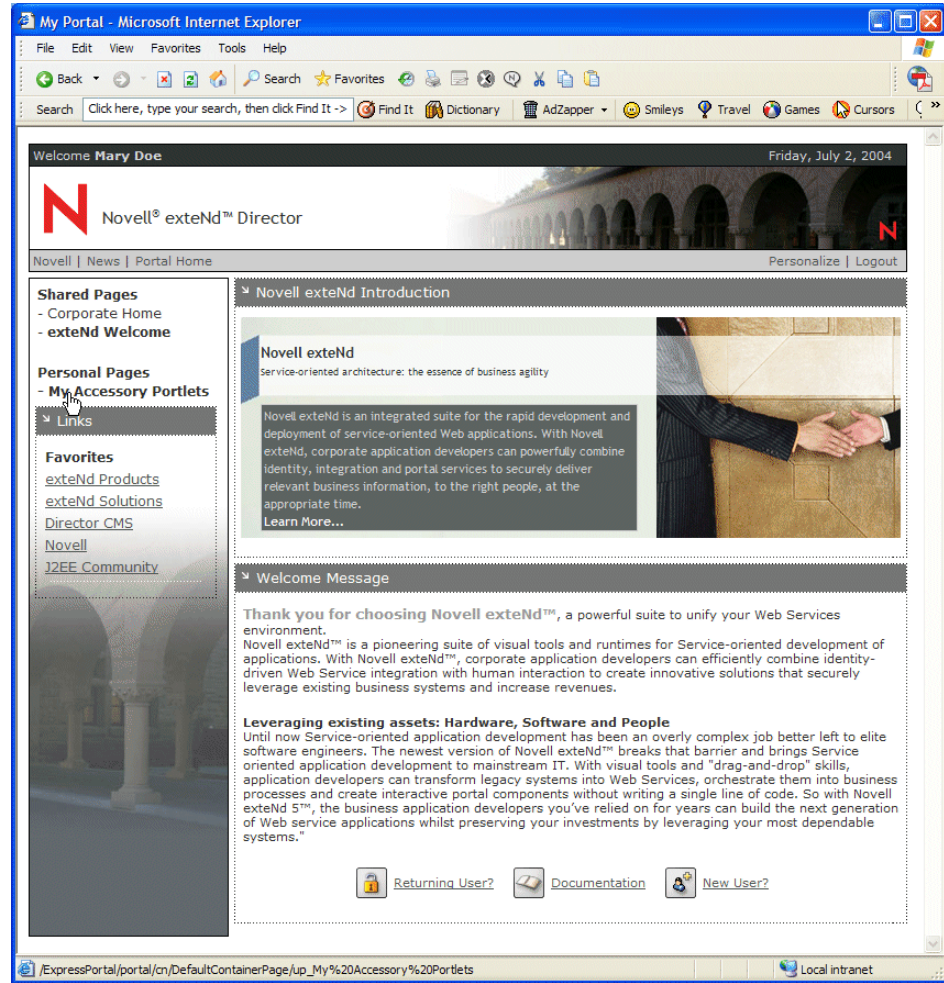
**TIP:** You can select multiple items by pressing the Ctrl key while clicking, then add all items as a group.
- 8 Close the Content Selector by clicking **Save Contents** at the bottom of the form.  
You return to the Portal Personalizer.
- 9 Choose **Arrange Content**.  
The Layout Selector opens in a new browser window.
- 10 Move **Shortcut** and **Rss News Feed** into the right column by clicking their title bars, then clicking inside the right column.

The Layout Selector should look like this:

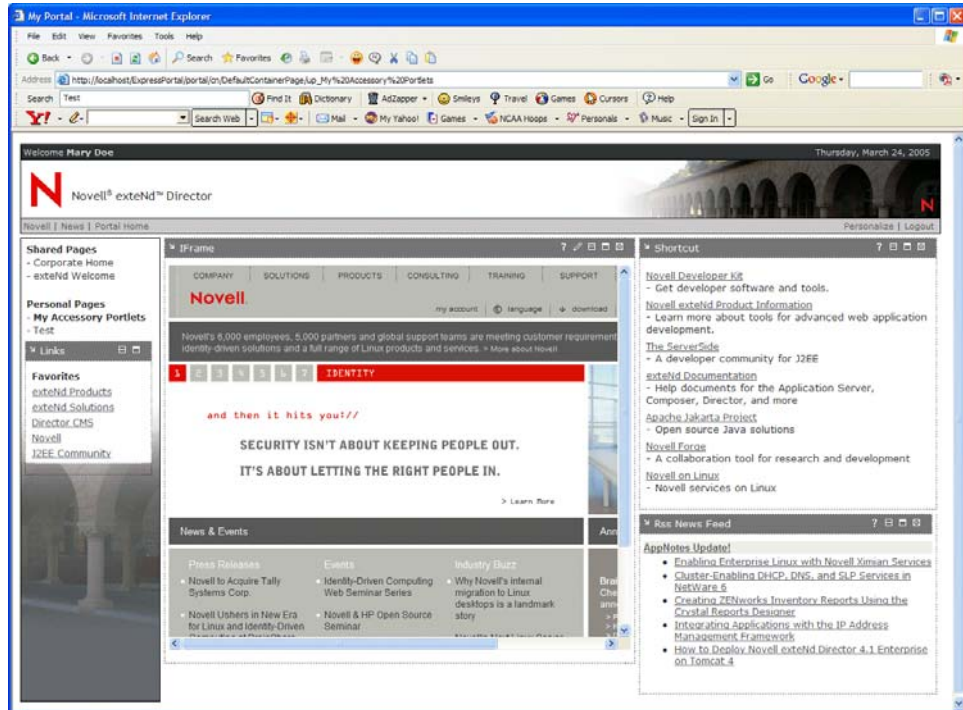


- 11 Click **Save Layout** at the bottom of the form.  
The Layout Selector closes and you return to the Portal Personalizer.
- 12 In the Portal Personalizer, choose **Portal**.  
The default ExpressPortal page opens in your browser.  
Notice the new page, **My Accessory Portlets**, listed under Personal Pages in the navigation pane

### 13 Select My Accessory Portlets.



The new page opens in your browser, displaying the IFrame, Shortcut, and Rss News Feed portlets in the content frame. It should look something like this:



Now you are ready to learn about portal options. Leave this page running in your browser and move to the next exercise.

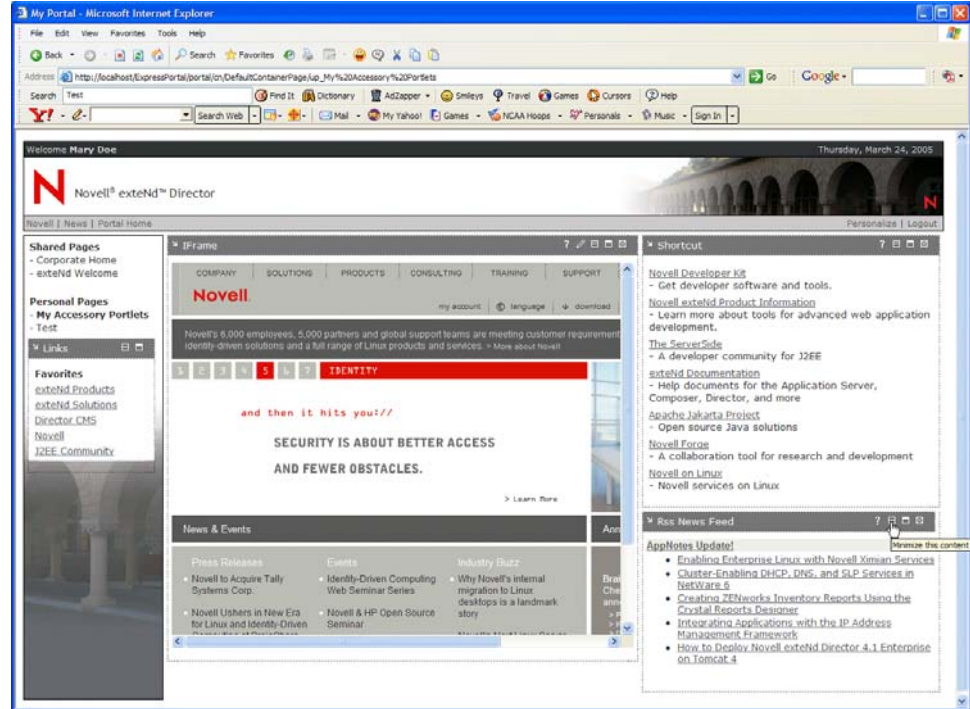
## Using portal options

A **portal option** is text or an image that appears in the title bar of a portlet. Each portal option specifies a link that controls which action will be performed when the user clicks on the option. For example, a portlet title bar can provide buttons to allow users to edit, minimize, or restore the portlet.



➤ To use portlet options:

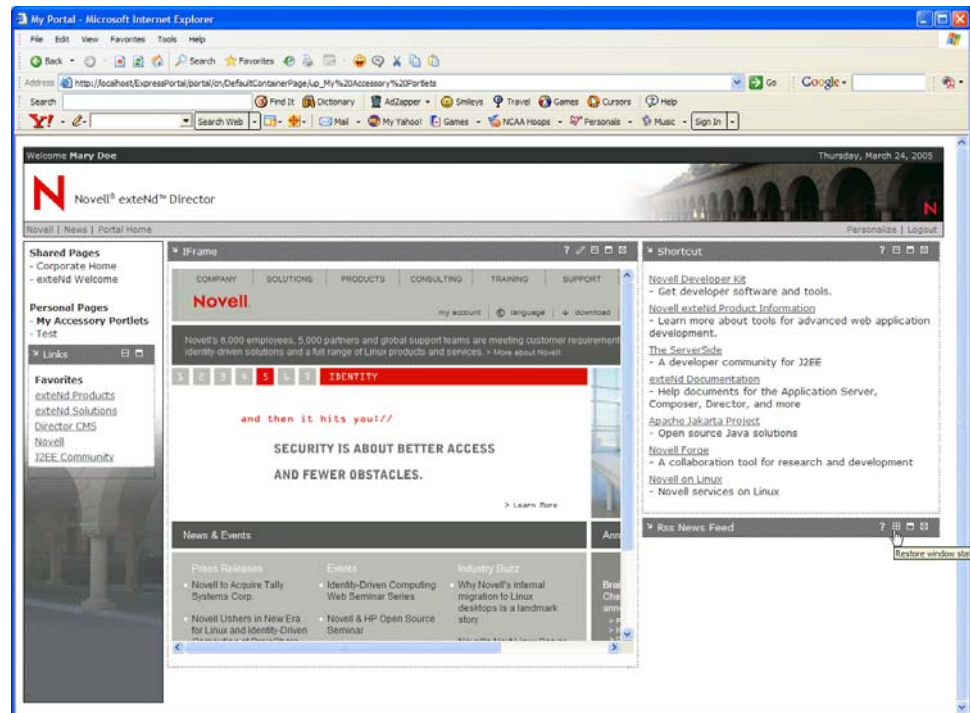
- 1 Move your cursor to the title bar of the RSS News Feed portlet and click the minimize button, as in this example:



**TIP:** To display a tool tip, hover over the option with your mouse.

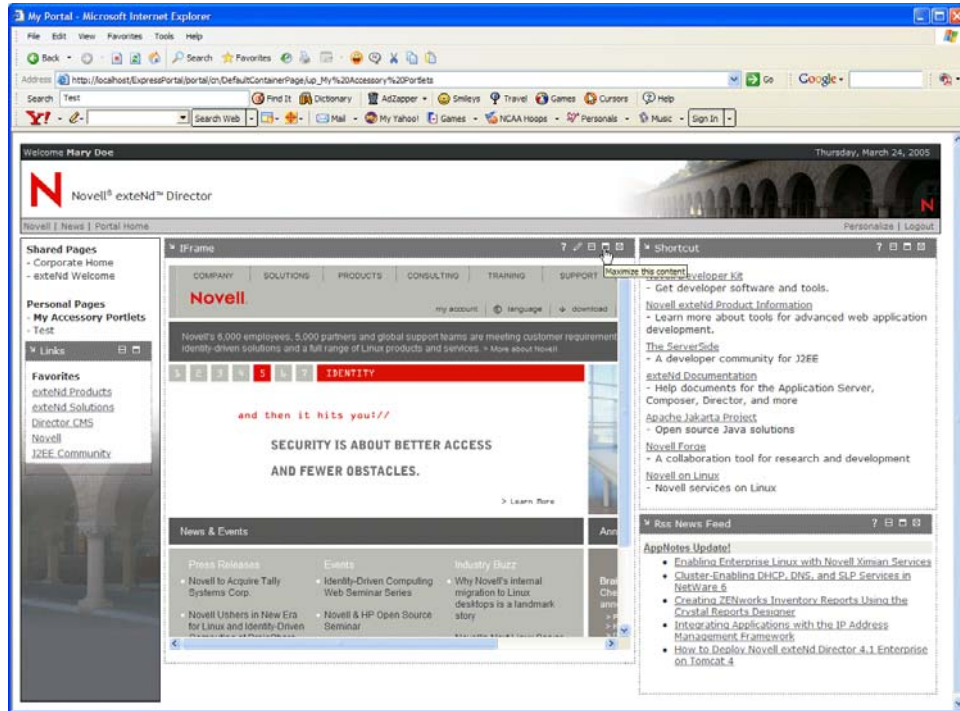
The RSS News Feed portlet window is minimized and the minimize button is replaced with a restore button.

- 2 Click the restore button.



The Rss News Feed portlet is restored to its original size.

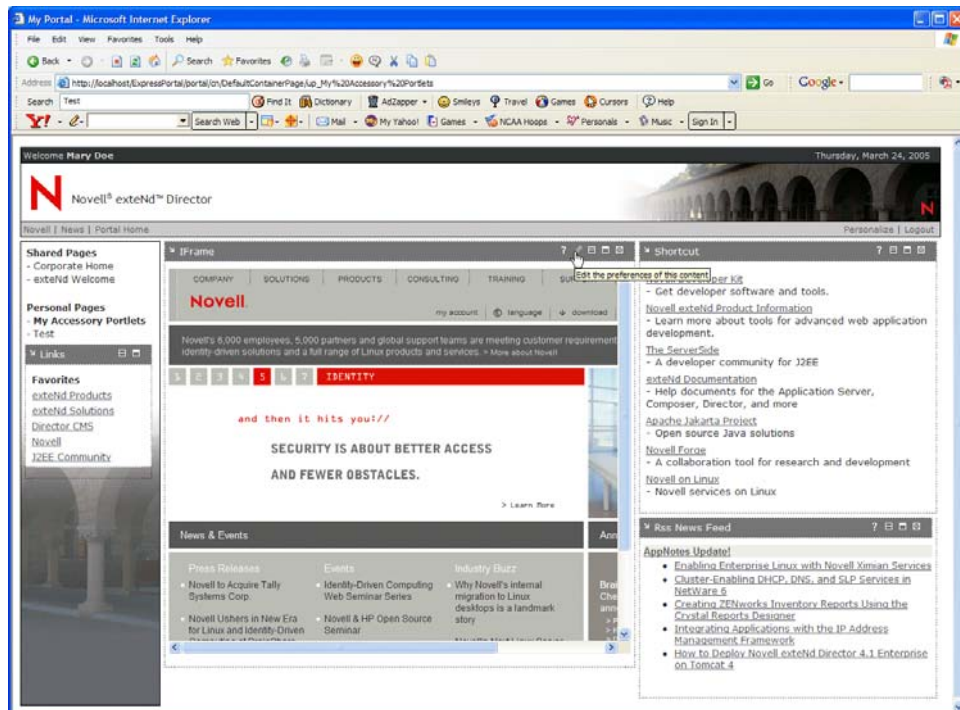
- 3 Move your cursor to the title bar of the IFrame portlet and click the maximize button:



The IFrame portlet window is maximized to occupy the entire browser window. The maximize button is replaced with a restore button.

- 4 Click the restore button to return the IFrame portlet to its original size.

**NOTE:** The IFrame portlet also has an edit option that allows you to access and modify the preferences defined for this portlet:

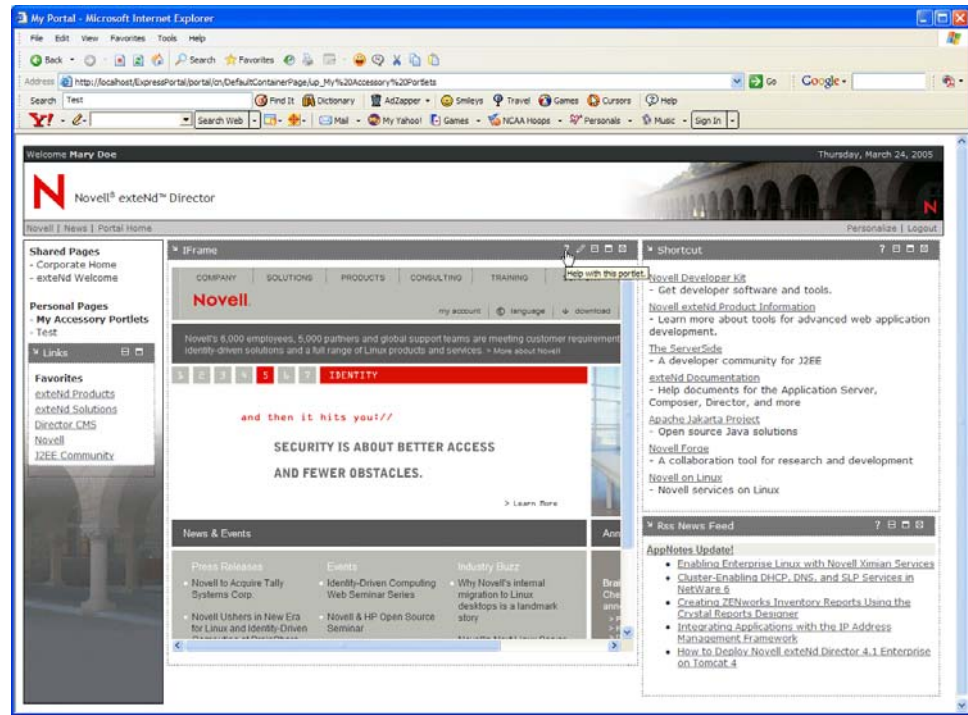


## Accessing help for accessory portlets

Each accessory portlet provides online help that can be accessed from an option in its title bar.

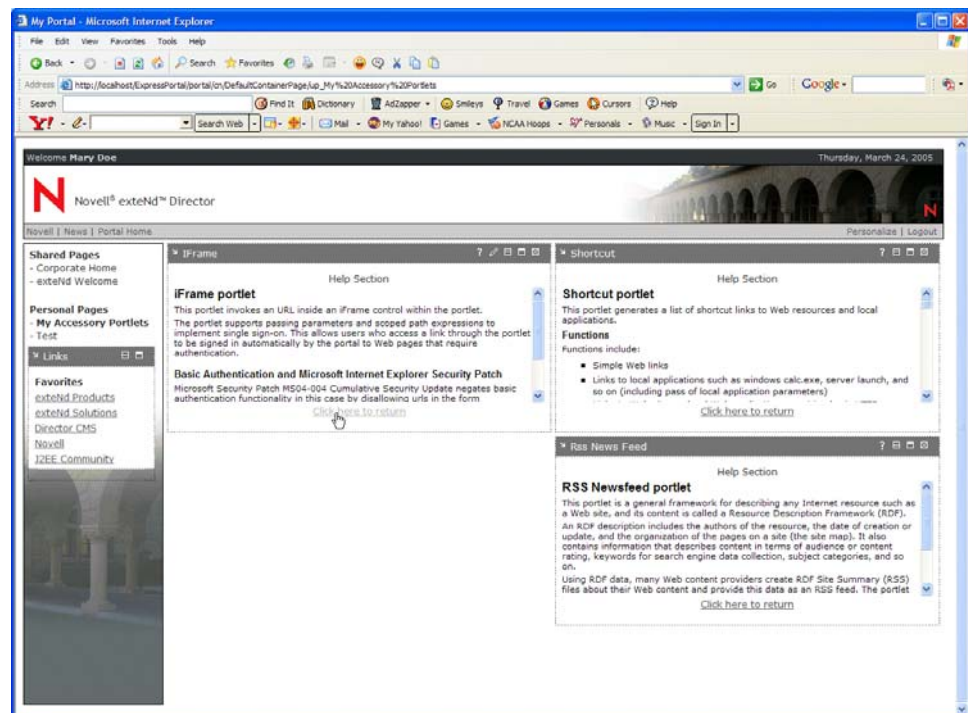
### ➤ To access help for accessory portlets:

- 1 Click the help icon in the title bar of each portlet.



A general description of the portlet appears in the portlet window.

- 2 Choose **Click here to Return** at the bottom of each help window to dismiss the help text and restore the original content:



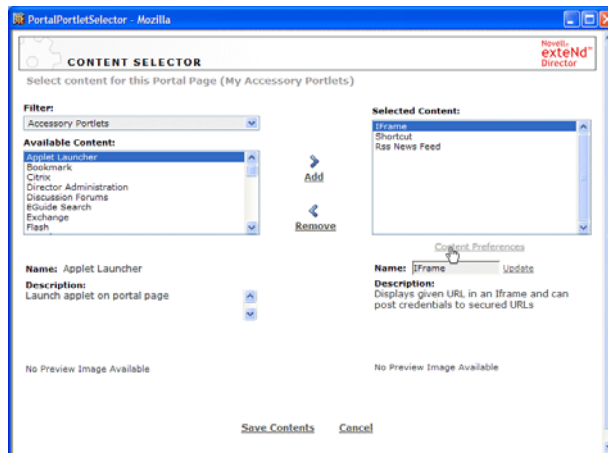
Now you are ready to learn about portlet preferences. Leave your My Accessory Portlets page running in your browser and move to the next exercise.

## Accessing portlet preferences

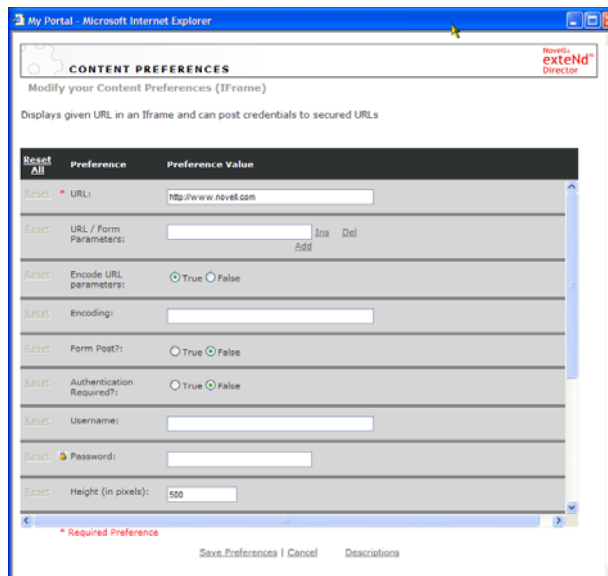
Each of the accessory portlets has default content and behavior, defined and stored as preferences. You can customize portlets by modifying **portlet preferences**.

➤ **To access preferences for a portlet:**

- 1 Click **Personalize** on the right side of the My Accessory Portlets page.  
The Portal Personalizer opens.
- 2 In the Portal Personalizer select **Choose Content**.
- 3 From the Selected Content box select **IFrame** and choose **Content Preferences**:



The Content Preferences editor opens for the IFrame portlet:

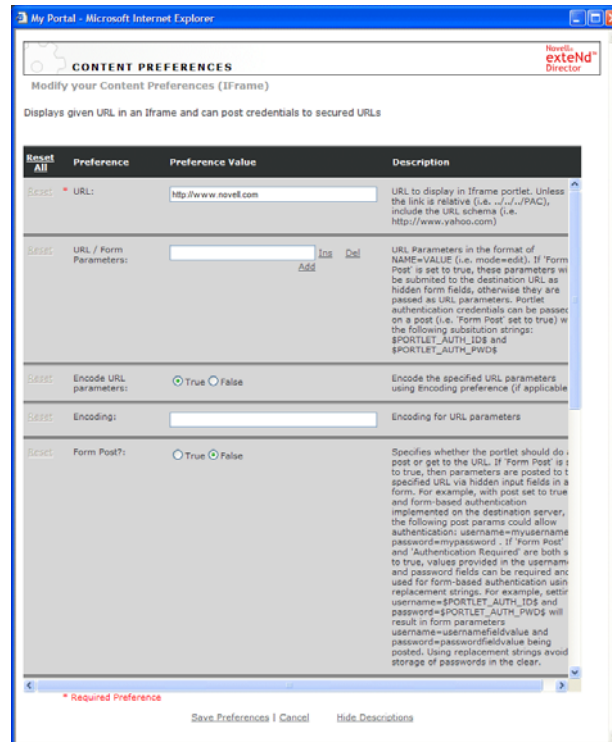


Now you are ready to access help for portlet preferences. Leave the Content Preferences editor open and move to the next exercise.

➤ To access help for portlet preferences:

- 1 Select **Descriptions** at the bottom of the Content Preferences editor.

Help for each preference appears in the Descriptions column of the editor:



- 2 Select **Hide Descriptions**.
- 3 Close all browser windows.

## What to do next

- ◆ [Create a container page](#)
- ◆ [Brand a container page](#)
- ◆ [Create shortcuts with images from the resource set](#)
- ◆ [Use Shortcut portlets for form-based authentication](#)
- ◆ [Use IFrame portlets for content management](#)



# Using Shortcut portlets for form-based authentication

## Objective

To enable form-based authentication using replacement strings in Shortcut portlets.

A *Shortcut portlet* generates a list of shortcut links to Web resources and local applications.

*Replacement strings* are keywords that reference values that can change dynamically at runtime, such as a user's login name and password.

**Before you begin** See “[About exteNd Director Tutorials](#)”.

**Audience** This section is for all users, whether or not they have administrative privileges.

## Concepts

- ◆ [Why use form-based authentication?](#)
- ◆ [Impact of the Internet Explorer security patch](#)
- ◆ [Replacement strings](#)
- ◆ [Working with portal pages](#)
- ◆ [About the Portal Personalizer](#)
- ◆ [About portlets](#)
- ◆ [Portlet window](#)
- ◆ [Working with installed portlets](#)

## Why use form-based authentication?

exteNd Director supports several mechanisms for authenticating users of Web applications:

- ◆ *Basic authentication*: The Web server authenticates a user against the user name and password obtained from the Web client.
- ◆ *Form-based authentication*: The Web server provides an application-specific form for logging in and specifying credentials.

There are several reasons for using form-based authentication instead of basic authentication with exteNd Director:

- ◆ To customize the authentication user interface—for example, the login and error pages presented to users of your Web application through an HTTP browser
- ◆ To work around the limitations imposed on basic authentication by the Microsoft Security Patch [MS Bulletin MS04-004](#) Cumulative Security Update, as described in “[Impact of the Internet Explorer security patch](#)” on page 72.

## Impact of the Internet Explorer security patch

The Microsoft Security Patch [MS Bulletin MS04-004](#) Cumulative Security Update impedes basic authentication in several Accessory portlets that ship with exteNd Director: Shortcut, IFrame, NetMail, Notes, and Exchange. If you install this patch, you should configure these portlets to use form-based authentication (instead of basic authentication) for target Web sites and destination servers that support form-based authentication.

**NOTE:** The exteNd Application Server supports form-based authentication.

To address a potential security breach, the Microsoft patch removes support from Internet Explorer and Windows Explorer for the clear-text authentication syntax

`http(s)://username:password@server/resource.ext`. exteNd Director uses this syntax to support basic authentication in its Accessory portlets by generating URLs that pass clear-text authentication credentials to the target Web site. If the patch has been installed, these URLs generate an invalid syntax error from the browser.

## Exercises

The exercises in this section show you how to configure a Shortcut portlet to use form-based authentication when you log in to Novell Forge, a collaborative Web site for developing open-source projects.

It also provides guidelines for implementing form-based authentication with other Accessory portlets.

- ◆ [Creating an account on Novell Forge](#)
- ◆ [Adding a Shortcut portlet to a personal page](#)
- ◆ [Configuring the Shortcut portlet to use form-based authentication](#)
- ◆ [Using replacement strings to secure credentials in form-based authentication](#)
- ◆ [Implementing form-based authentication with other Accessory portlets](#)

### Creating an account on Novell Forge

In this exercise, you will create an account on Novell Forge, a Web site that supports form-based authentication. Novell Forge provides the ability to create, manage, and contribute to open-source software development projects.

After completing the tutorial exercises, you can use your Novell Forge account to explore ways in which you may use site and the tools it offers.

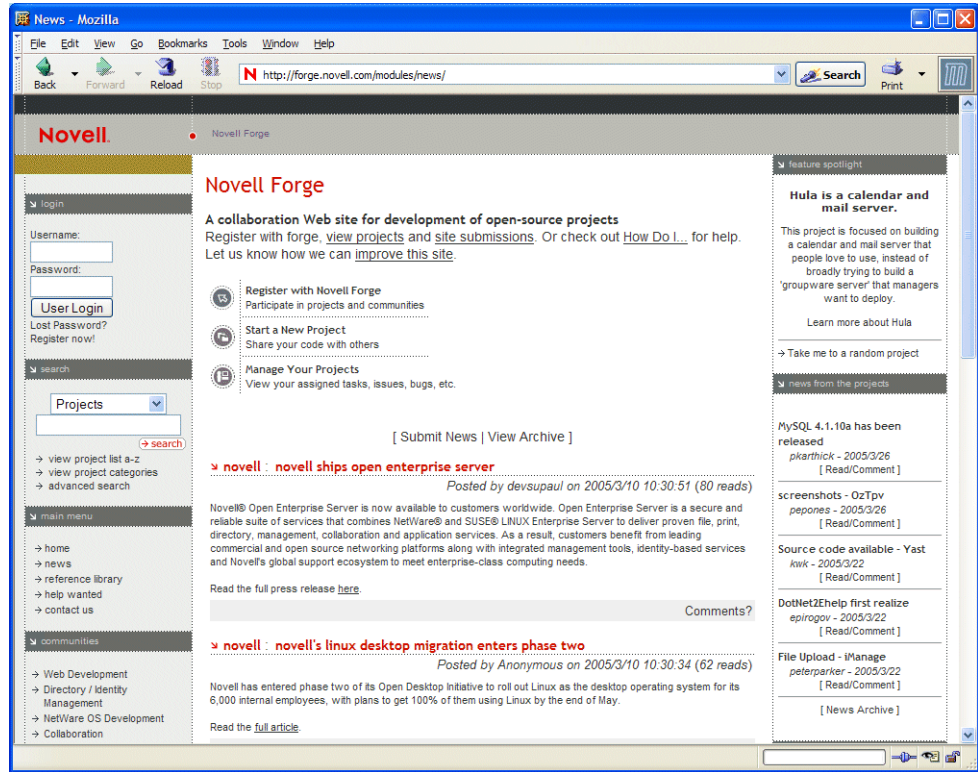
➤ **To create an account on Novell Forge:**

- 1 Open a browser and enter this URL:

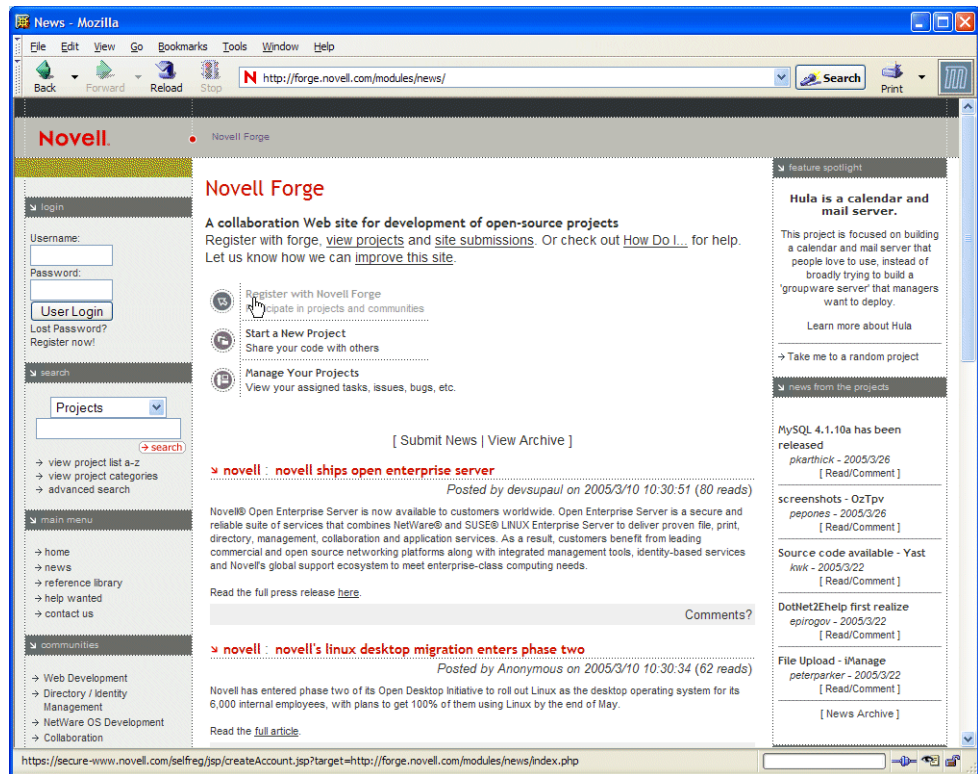
`http://forge.novell.com`



The Novell Forge home page opens in your browser. The page should look something like this:



2 Click Register with Novell Forge.



The Novell Account form appears in your browser.

The screenshot shows a Mozilla browser window titled "NOVELL: Novell Login - Account Creation Step 1 - Mozilla". The address bar shows the URL "https://secure-www.novell.com/selfreg/jsp/createAccount.jsp?target". The browser interface includes a menu bar (File, Edit, View, Go, Bookmarks, Tools, Window, Help) and navigation buttons (Back, Forward, Reload, Stop). The Novell logo is visible in the top left, and a navigation menu (COMPANY, SOLUTIONS, PRODUCTS, CONSULTING, TRAINING, SUPPORT, PARTNERS, DEVELOPERS) is at the top. A sidebar on the left contains links: learn, create account, manage account, change password, forgot password, forgot username, and forgot all. The main content area is titled "Novell Account" and contains the text: "The first step to creating an account is to enter your basic profile information." Below this is a form titled "1 Basic Novell Account Information" with the following fields: Username, Password, Repeat Password, Password Hint, Password Response, Repeat Password Response, First Name, Last Name, Company, Street Address, Address 2, Address 3, City, State/Province, and Zip/Postal Code. Each field has a small asterisk to its right. There are two "Please Note" sections: one for the password requirements (at least 6 characters, one letter, one numeric or punctuation character) and one for the password hint and response (used to reset the password, should be secure and hard to guess).

- 3 Fill out the profile according to the instructions on the page, then click **next** at the bottom of the page.  
**TIP:** Remember the user name and password that you enter. You will need these credentials for a later exercise.
- 4 Fill out the account synchronization form as appropriate and click **finish** at the bottom of the page. A confirmation window should appear, indicating that you have registered successfully with Novell Forge.

Now you are ready to add a Shortcut portlet to a personal page. Leave your browser running and move to the next exercise.

## Adding a Shortcut portlet to a personal page

In this exercise you will create a personal page and add a Shortcut portlet to the page.

### Creating a personal page

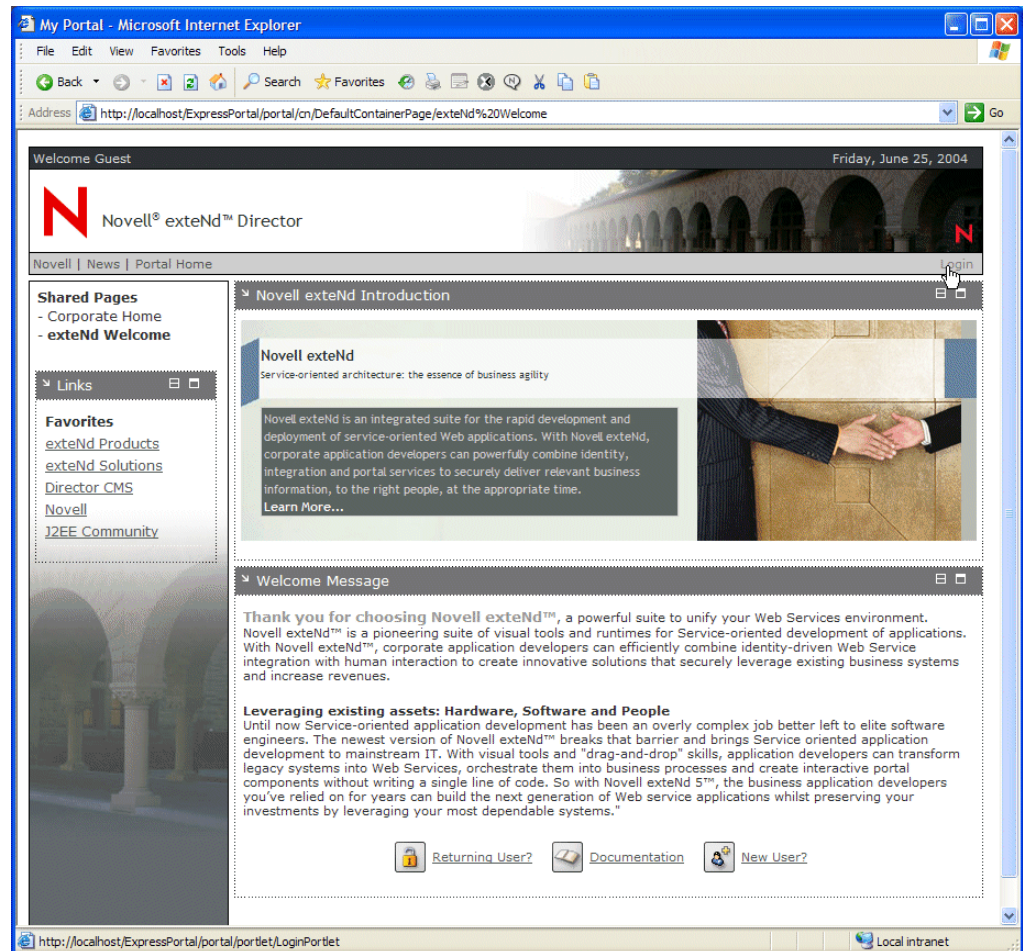
➤ **To create a personal page:**

- 1 Start the exteNd Application Server where the Express Portal application has been deployed.
- 2 Start the Express Portal application by entering this URL in your browser:

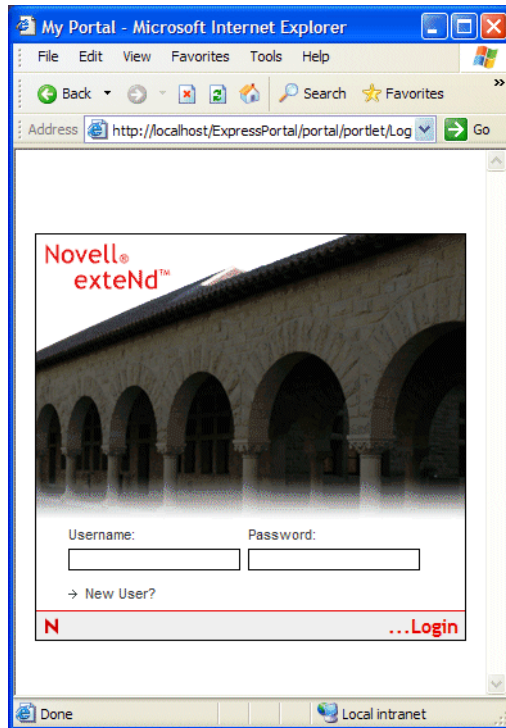
**http://host/ExpressPortal**

The default page for a guest user opens in your browser.

- 3 Click Login.



The Login dialog opens in your browser:



- 4 Log in as an authorized user, then click **login** or the **Enter** key.  
**TIP:** If you need to create a user, see the exercise on [adding a new user](#).  
The default page for the user you specified opens in your browser.

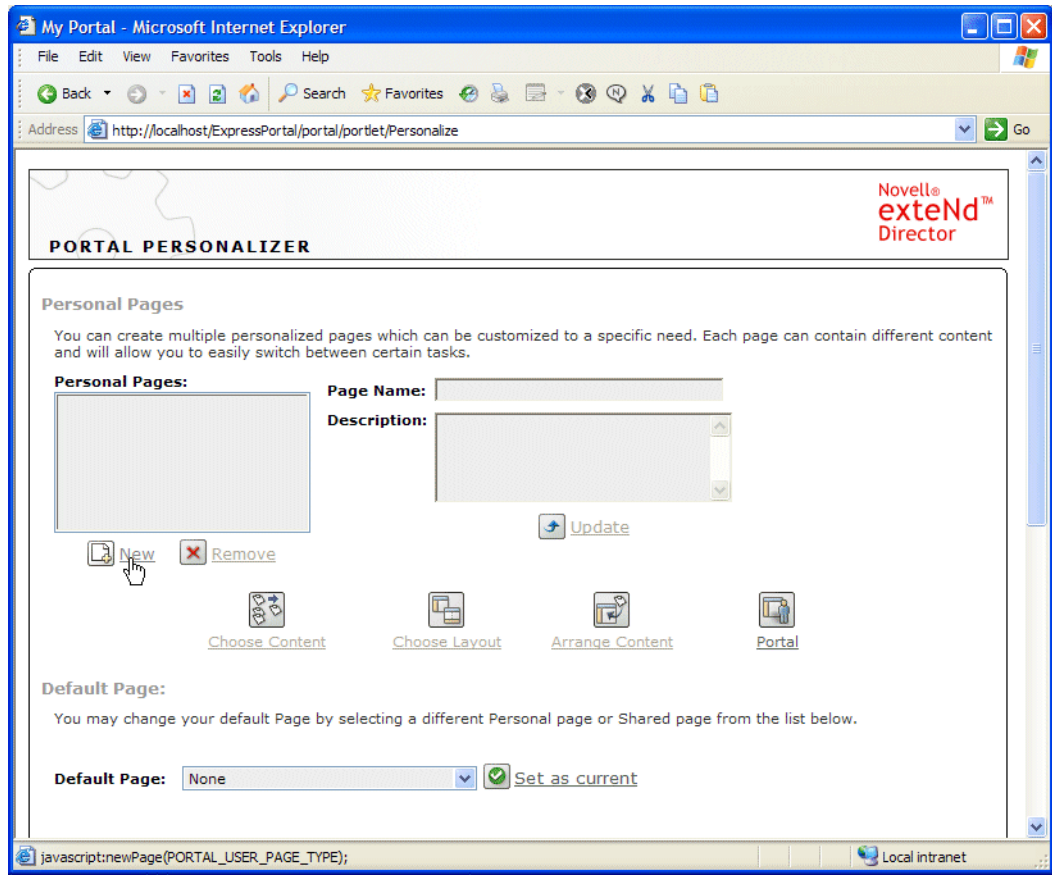
5 On the default page, select **Personalize**.



**NOTE:** This is the default page for a user who is not an administrator. Your default page will look different if you logged in as an administrator, but the Personalize option is still available in a similar location on the page.

The Portal Personalizer opens in your browser.

- 6 Under Personal Pages select New.



An untitled page is added to the list of personal pages.

- 7 Enter the following properties for the new page:

Property	What to specify
Page Name	My Authentication Page
Description	Tutorial

- 8 Click **Update**.

The new page appears in the list of personal pages.

Now you are ready to add a Shortcut portlet to the new personal page. You will configure the portlet to use form-based authentication when logging in to the Novell Forge site. Leave the Personalizer running and move to the next exercise.

### Adding a Shortcut portlet to a page using the Content Selector tool

In this exercise, you will use the Content Selector to add a Shortcut portlet to My Authentication Page, the personal page you just created.

- **To add a Shortcut portlet to your personal page using the Content Selector:**
  - 1 Select **My Authentication Page** in the Personal Pages list and click **Choose Content**.  
The Content Selector displays in a new window.
  - 2 From the Filter dropdown list choose **Accessory Portlets**.
  - 3 From the Available Content list select **Shortcut** and add it to the page by clicking **Add**.

Now you are ready to configure the Shortcut portlet to provide form-based authentication when you log in to the Novell Forge Web site. Leave the Content Selector open and move to the next exercise.

## Configuring the Shortcut portlet to use form-based authentication

In this section, you will perform the following exercises:

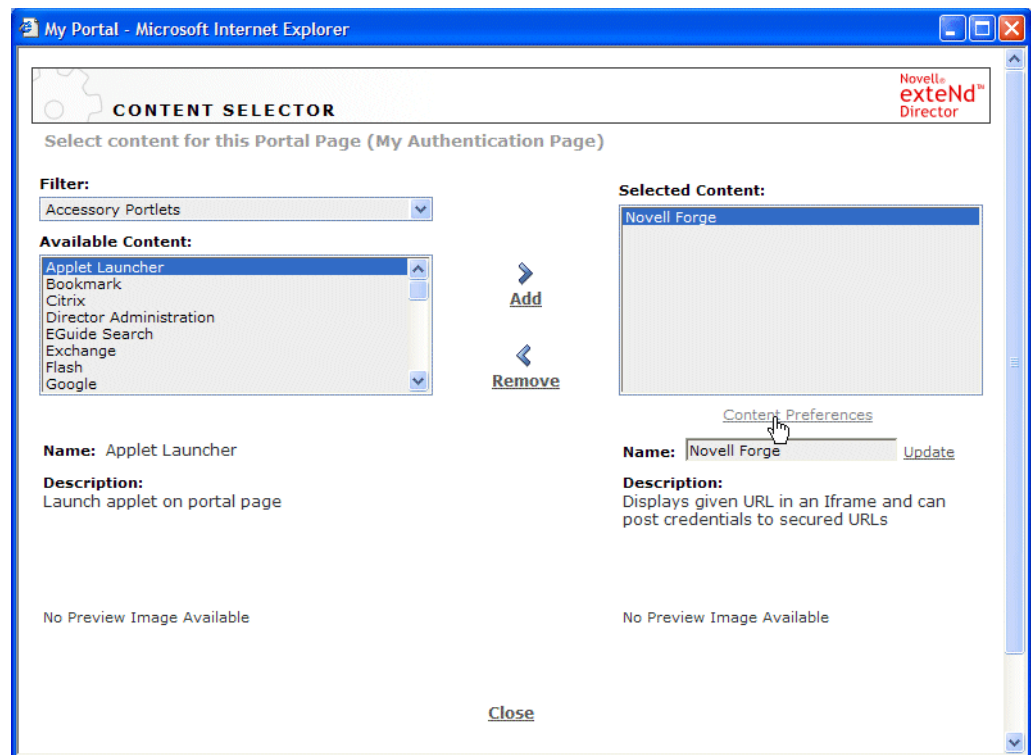
- ◆ Configure the Shortcut portlet to use form-based authentication for the **Novell Forge** Web site, as described in “[Configuring the Shortcut portlet for form-based authentication](#)” on page 79.
- ◆ Test the runtime behavior when you log in to the **Novell Forge** site, as described in “[Testing form-based authentication for Novell Forge](#)” on page 87.

### Configuring the Shortcut portlet for form-based authentication

The Shortcut portlet provides a wizard that automatically generates site-specific POST parameters. You will learn how to use this wizard in the following exercise.

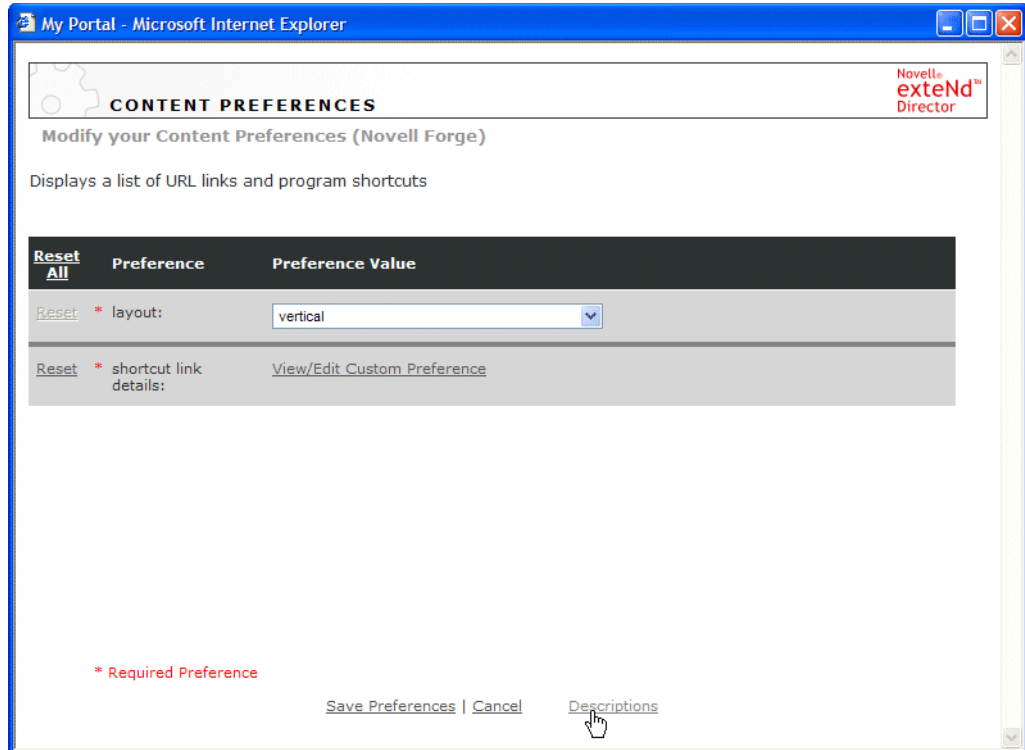
➤ **To configure the Shortcut portlet to use form-based authentication:**

- 1 Select the Shortcut portlet in the Selected Content list and click **Content Preferences**.

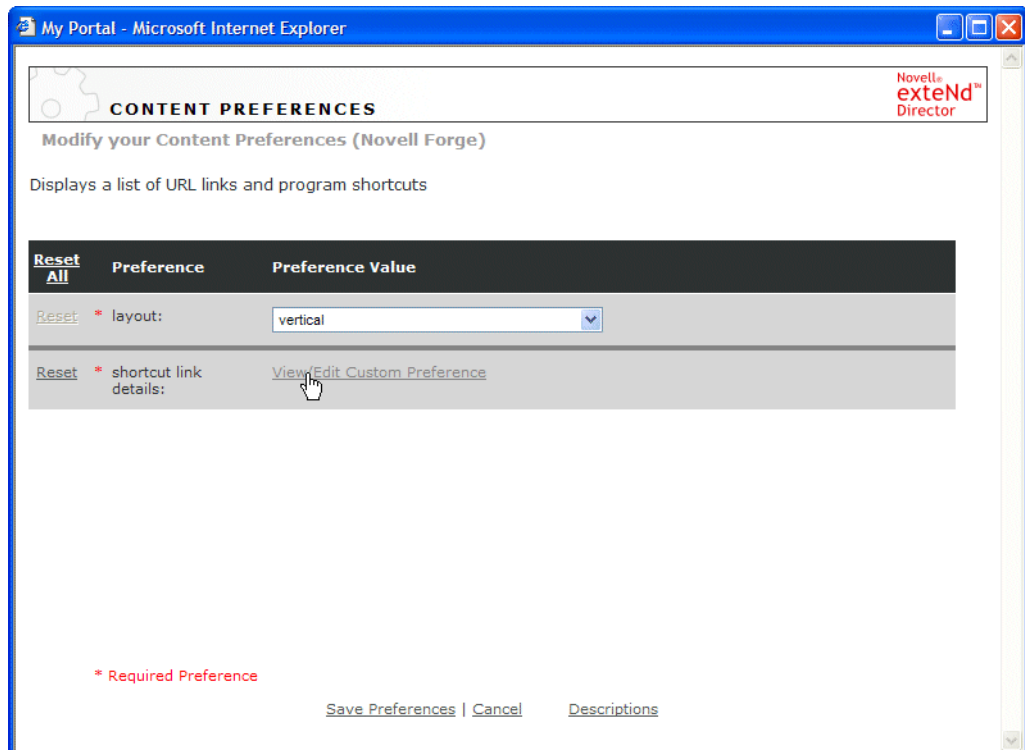


The Content Preferences sheet for the Shortcut portlet opens.

**TIP:** To get more information about preferences, click **Descriptions** at the bottom of the preference sheet:



- 2 In the Preference Value column for the shortcut link preference, click the **View/Edit Custom Preference** link.

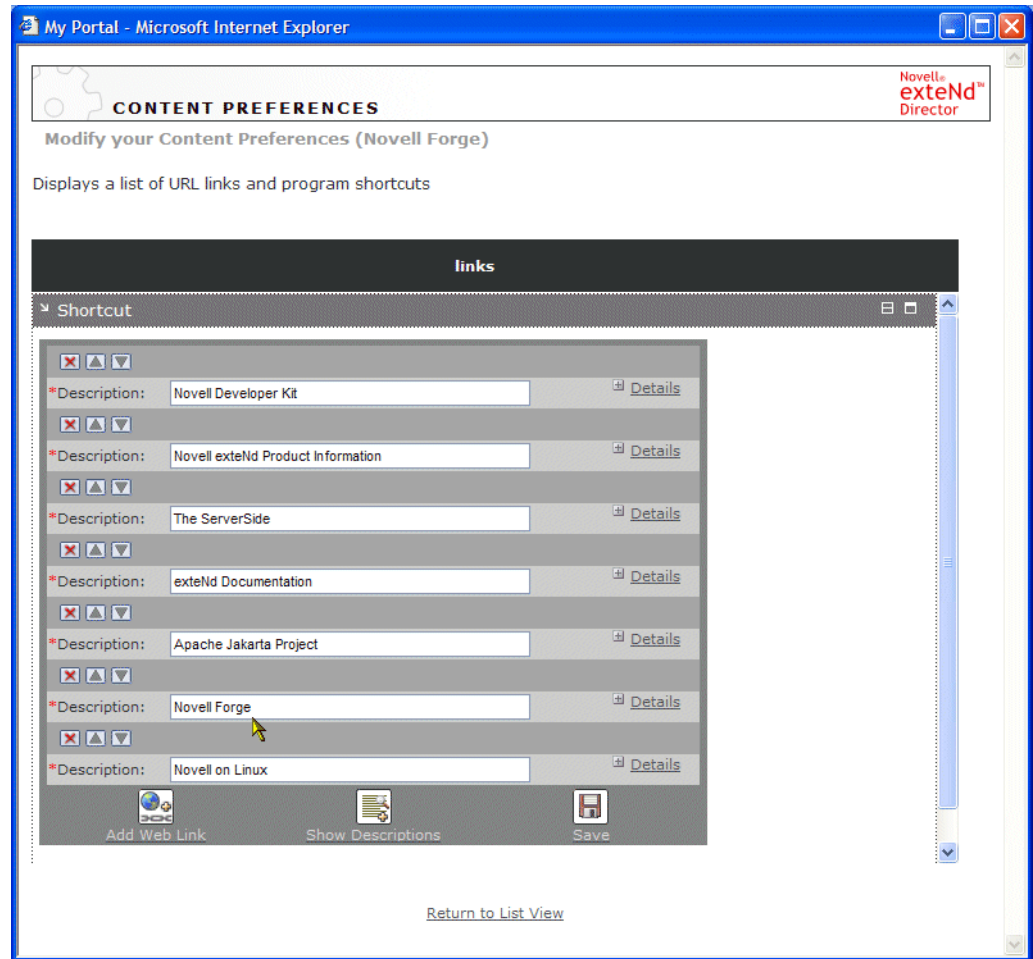


A second preference sheet opens in your browser containing a set of predefined shortcuts, each with its own set of preferences. You can also add new shortcuts.

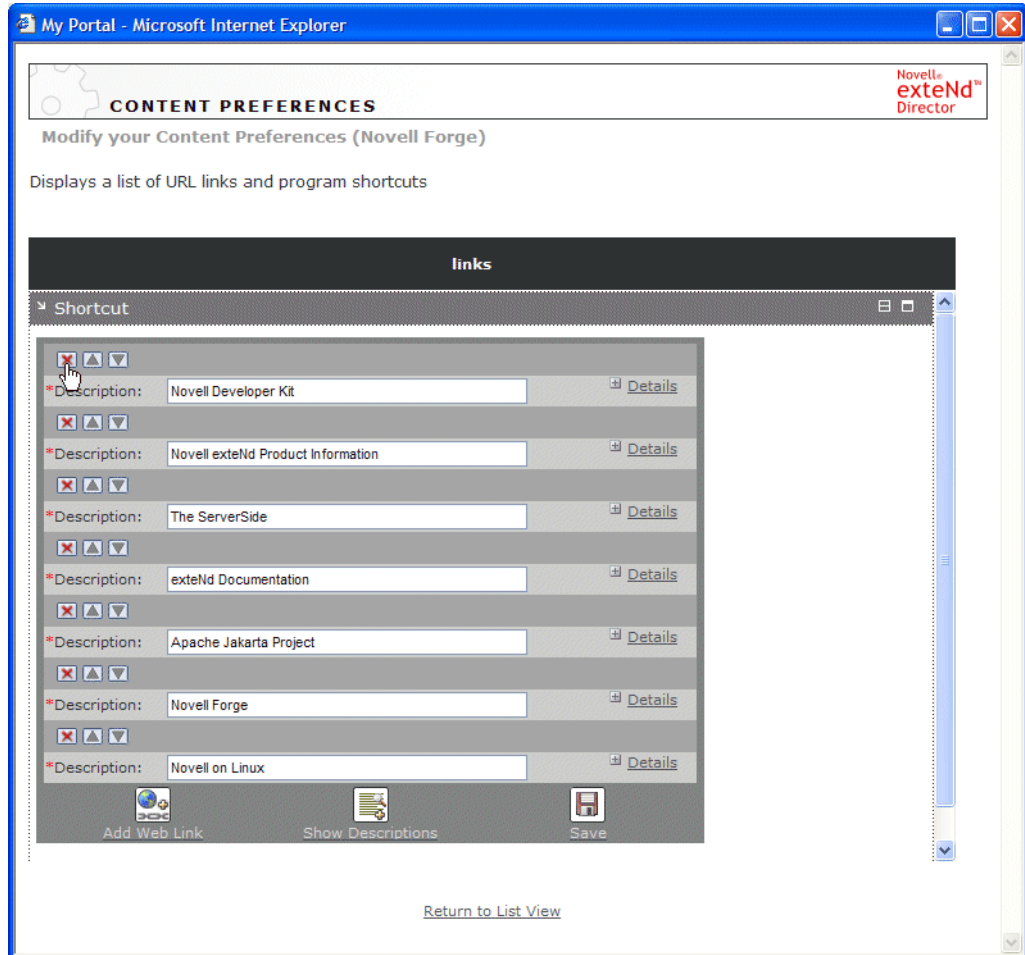


3 Maximize the preference sheet.

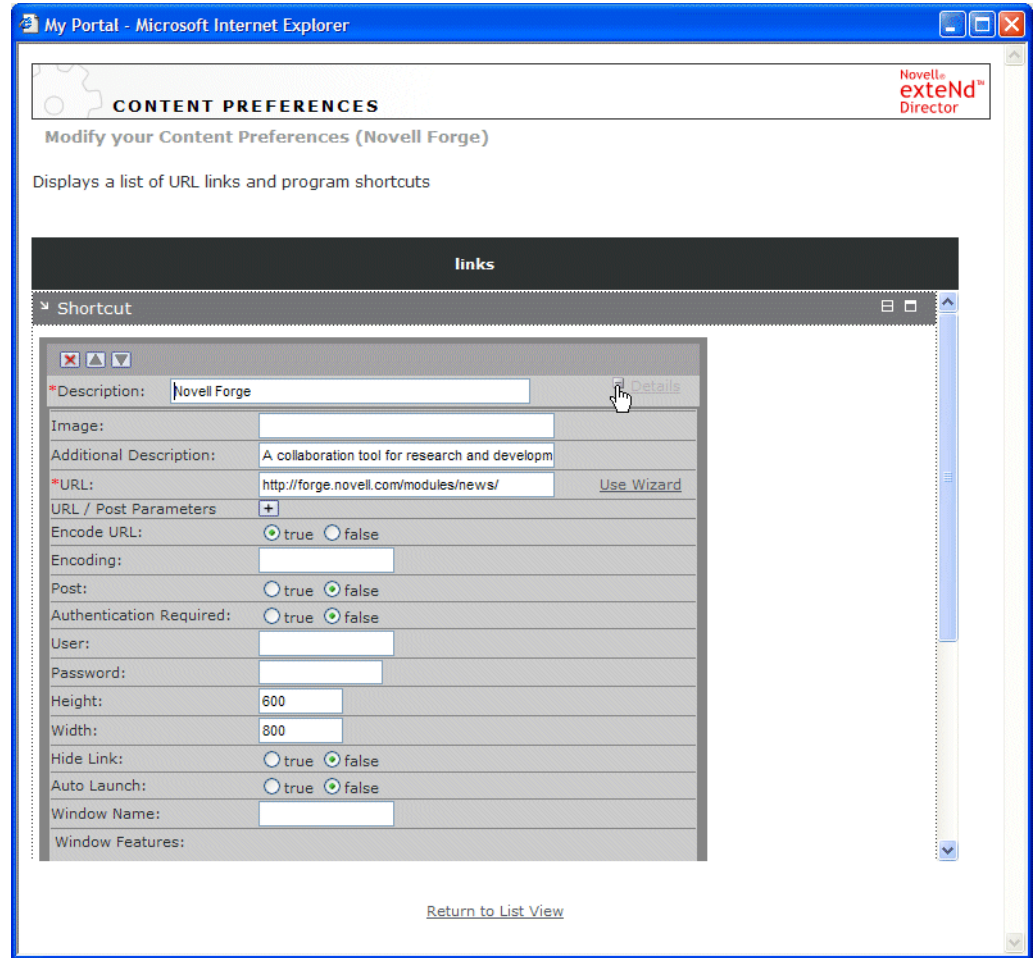
Note that a shortcut is already defined for the Novell Forge Web site:



- 4 Delete all predefined shortcuts except Novell Forge by clicking their delete buttons:

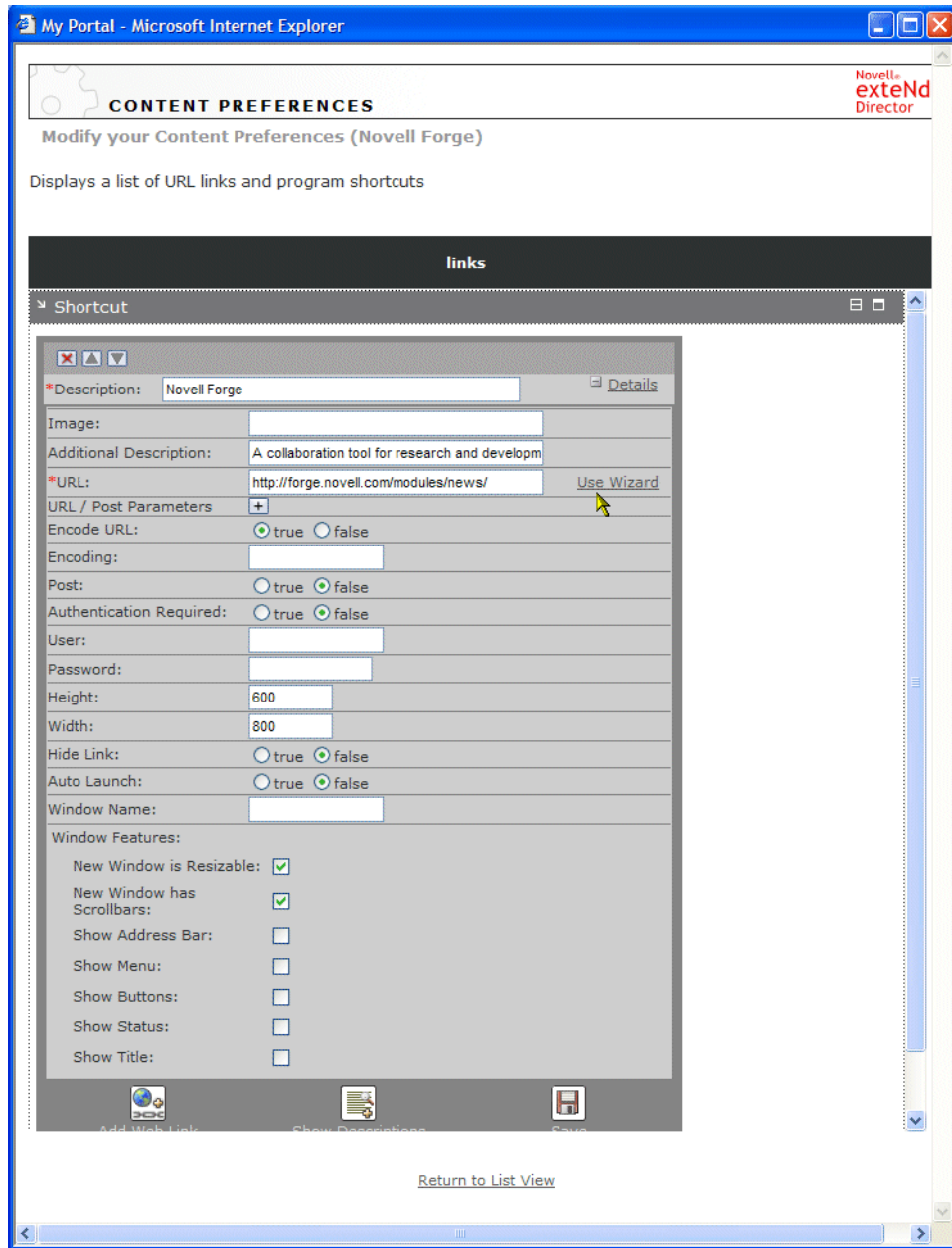


- 5 Display the preferences for the Novell Forge shortcut by clicking the plus sign to the left of Details:



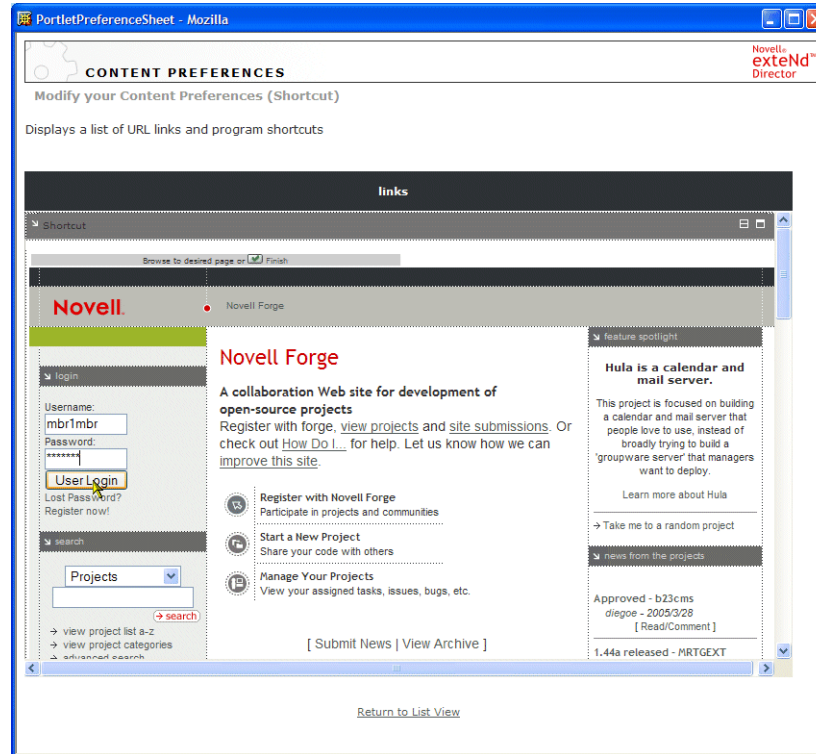
If a popup opens, asking you to select a user name for the form, click **Cancel**. You will use the Wizard instead.

6 Click Use Wizard for the URL preference:



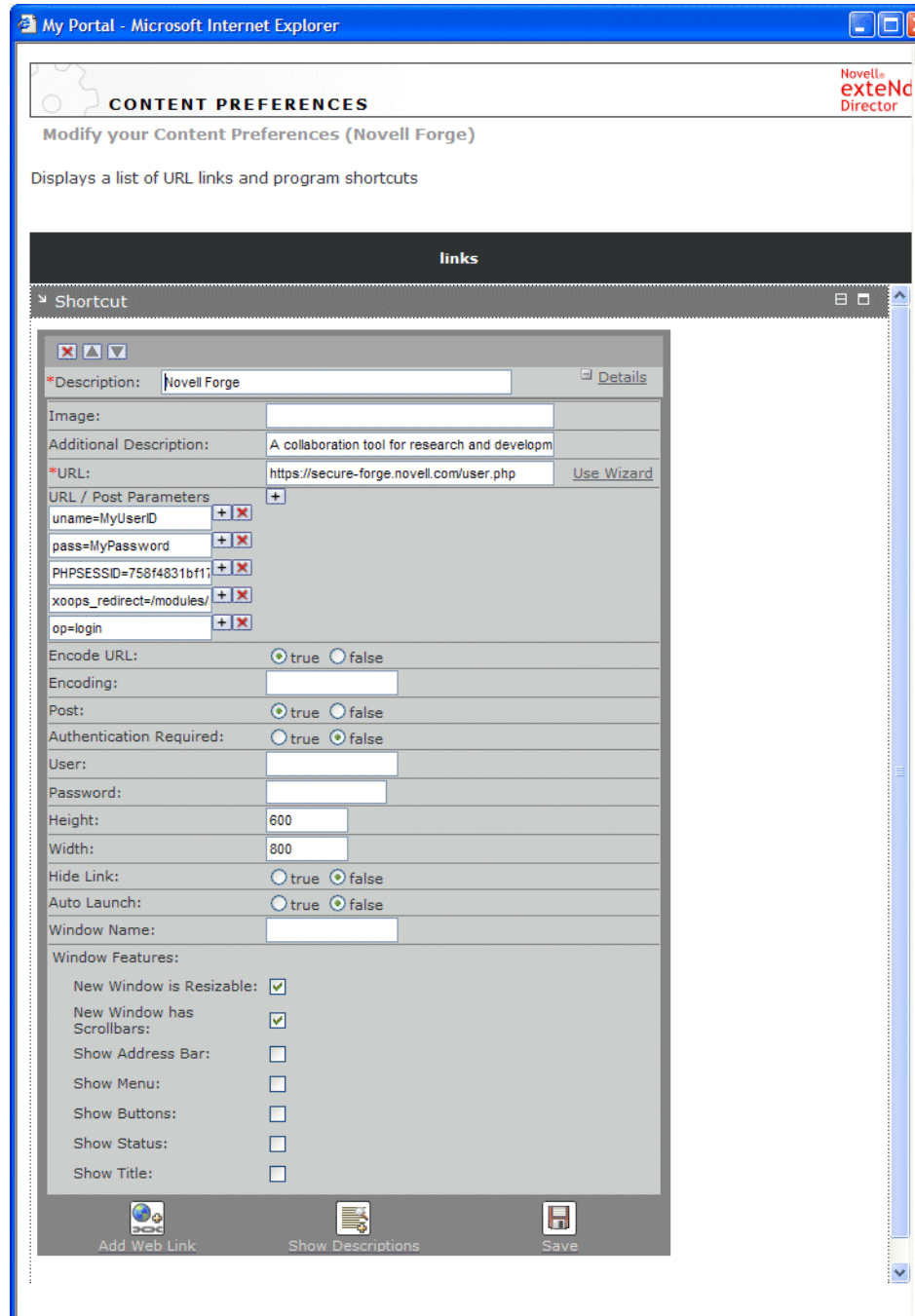
A view of the home page for the Novell Forge Web site opens in the wizard.

- 7 In the login area, fill in the Username and Password fields with the Novell Forge credentials you created in “Creating an account on Novell Forge” on page 72. Then, click **User Login**.



- 8 If an alert box appears, asking if you want Password Manager to remember your login credentials, respond as appropriate.
- 9 If a popup opens, asking you to select a user name for the form, click **Cancel**.

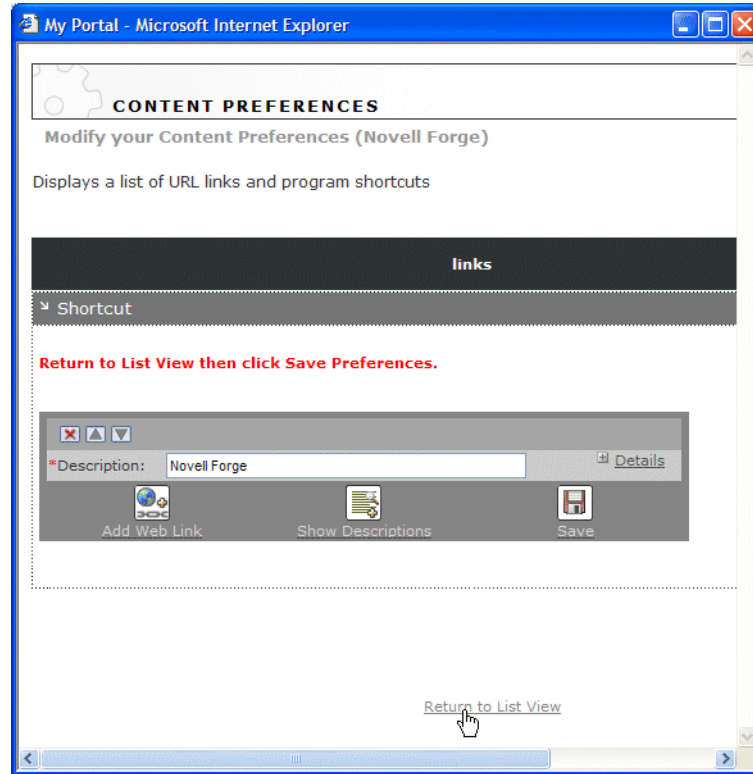
The Shortcut preferences sheet opens in the wizard, automatically configured for form-based authentication. Note that Post is set to **true** and that several URL/Post parameters are defined for the Novell Forge site, including the username and password you entered in **Step 7**, as in this example:



**NOTE:** Notice that your password appears in the clear in the **password** field. To avoid exposing your password on the preference sheet, you can use replacement strings, as illustrated in a later exercise, **“Using replacement strings to secure credentials in form-based authentication”** on **page 89**.

- 10 Click **Save** at the bottom of the preference sheet.  
Your values are recorded and you exit the wizard.

- 11 Back in the Shortcut preference sheet, click **Return to List View**.



- 12 Click **Save Preferences**.

The Content Preferences sheet closes, returning you to the Content Selector.

- 13 Click **Save Contents** to record your changes and dismiss the Content Selector.
- 14 Close the Personalizer and all other browser windows.

By default, sensitive URL/Post parameters (such as passwords) that you enter in the Shortcut Portlet wizard are stored as encrypted values in the exteNd Director database.

Now you are ready to test form-based authentication in your Shortcut portlet. Move to the next exercise.

## Testing form-based authentication for Novell Forge

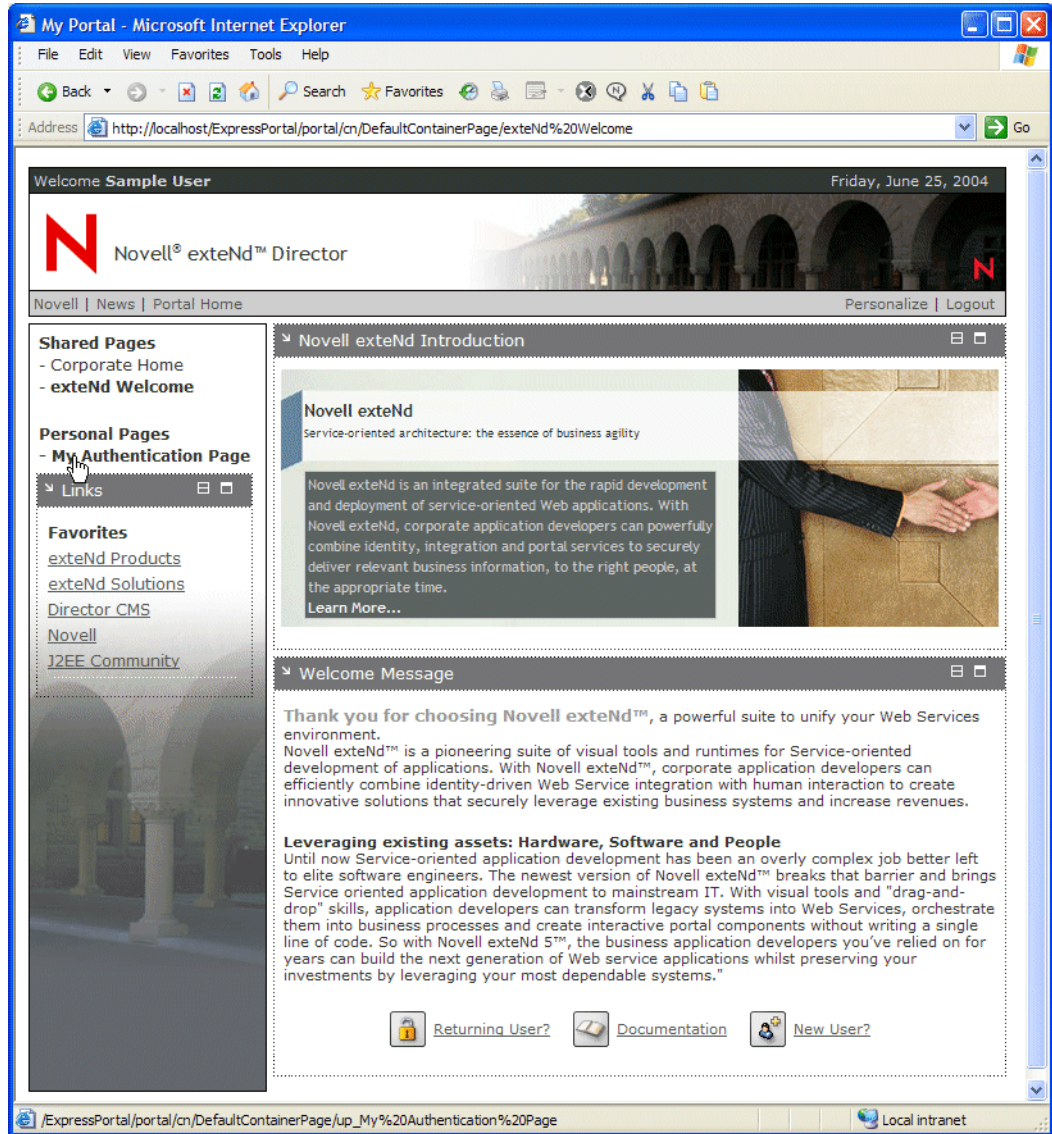
In this exercise, you will log in to the Novell Forge Web site using form-based authentication. You will then open a new browser session to demonstrate that parameters used in the POST to the Novell Forge site are persisted as portlet preferences in the portal application database, rather than in the current browser session.

### ➤ To test form-based authentication for Novell Forge:

- 1 Start a new browser and log in to the Express Portal application.

**TIP:** If you need to review these steps, see **“Adding a Shortcut portlet to a personal page” on page 75.**

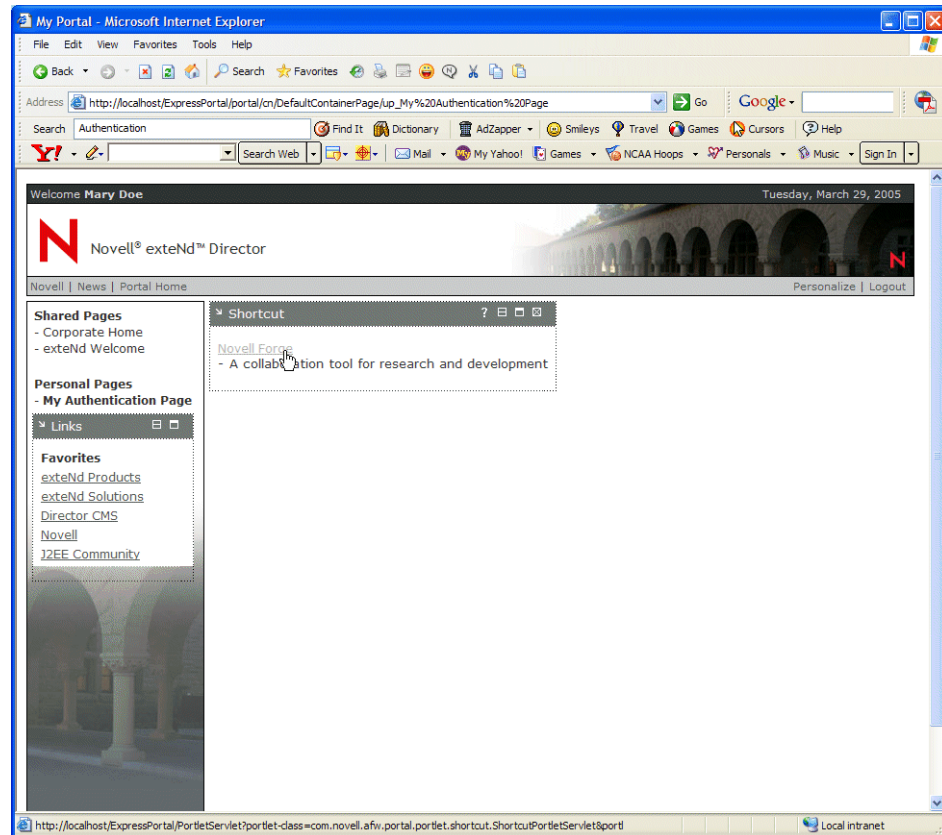
- 2 When your default portal page opens in the browser, click **My Authentication Page** under Personal Pages in the navigation area.



My Authentication Page appears in the content area of your browser, displaying your Shortcut portlet.



- 3 Click the Novell Forge shortcut link.



A Security Alert appears, indicating you are about to be redirected to a nonsecure connection.

- 4 Confirm that you want to proceed.

You are automatically logged in to the Novell Forge application. When you clicked the Novell Forge shortcut link, the Shortcut portlet used form-based authentication to post the credentials from a persistent data store, the exteNd Director database.

Now you are ready to use replacement strings to secure your credentials in form-based authentication. Close the Novell Forge application, but leave My Authentication Page running in the portal in your browser.

## Using replacement strings to secure credentials in form-based authentication

When you entered credentials for form-based authentication in a previous exercise, the username and password were exposed, or *in the clear*. In these exercises, you will secure the identity of your password by using replacement strings, then test the runtime behavior when you log in to the Novell Forge site.

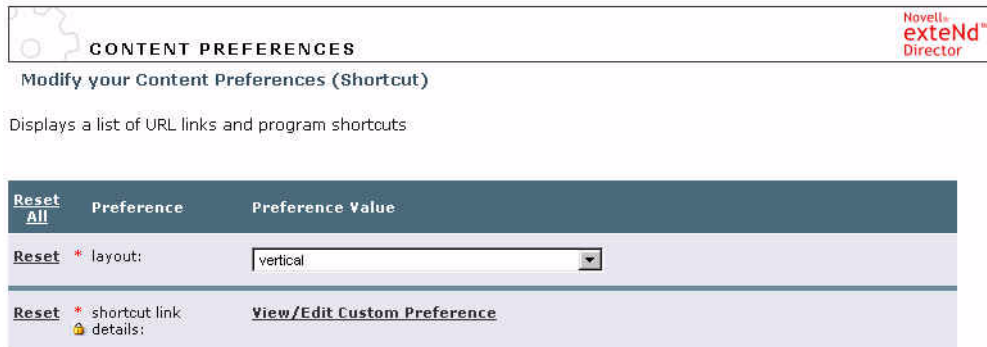
Recall that replacement strings are keywords that reference values that can change dynamically at runtime, such as a user's login name and password.

### ➤ Using replacement strings to secure credentials in form-based authentication:

- 1 In My Authentication Page, click **Personalize**.  
The Portal Personalizer opens in your browser.
- 2 Select **My Authentication Page** in the Personal Pages list, then click **Choose Content**.  
The Content Selector opens in a separate browser window.
- 3 Choose **Novell Forge** in the Selected Content list, then click **Content Preferences**.

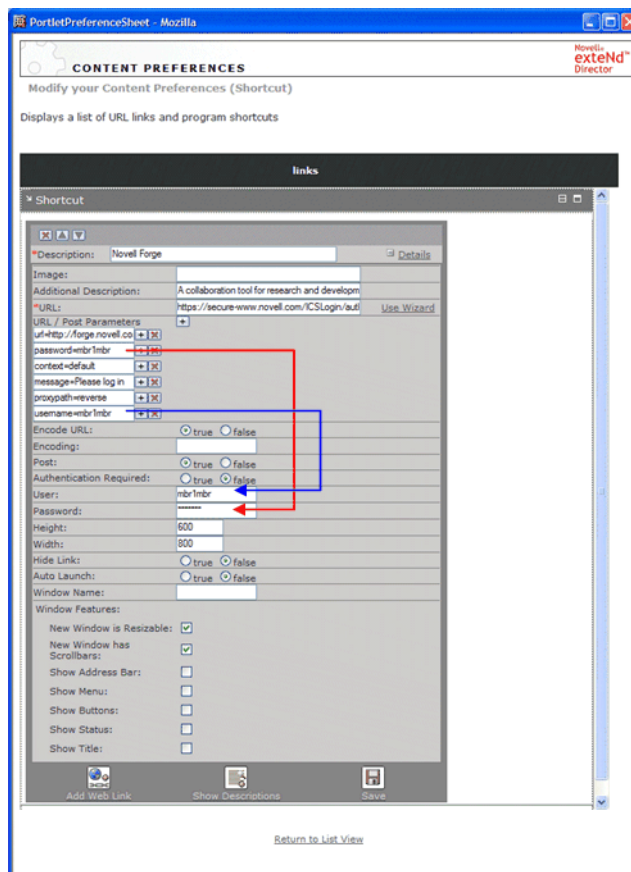
The preference sheet for your Novell Forge portlet opens in your browser.

**NOTE:** The preference sheet displays a lock symbol next to details, as in this example:



This symbol indicates that preferences are stored as encrypted values.

- 4 Click **View/Edit Custom Preference** to open the preference sheet for the Novell Forge shortcut link.
- 5 Click **Details** to display the preferences, then maximize the browser window.
- 6 Copy your login credentials from the URL/Post Parameter fields to the User and Password fields further down on the preference sheet:



**NOTE:** Filling in the **User** and **Password** fields stores the credentials permanently in the preference so they persist across sessions. The value you copy to the Password field is not exposed on the preference sheet.

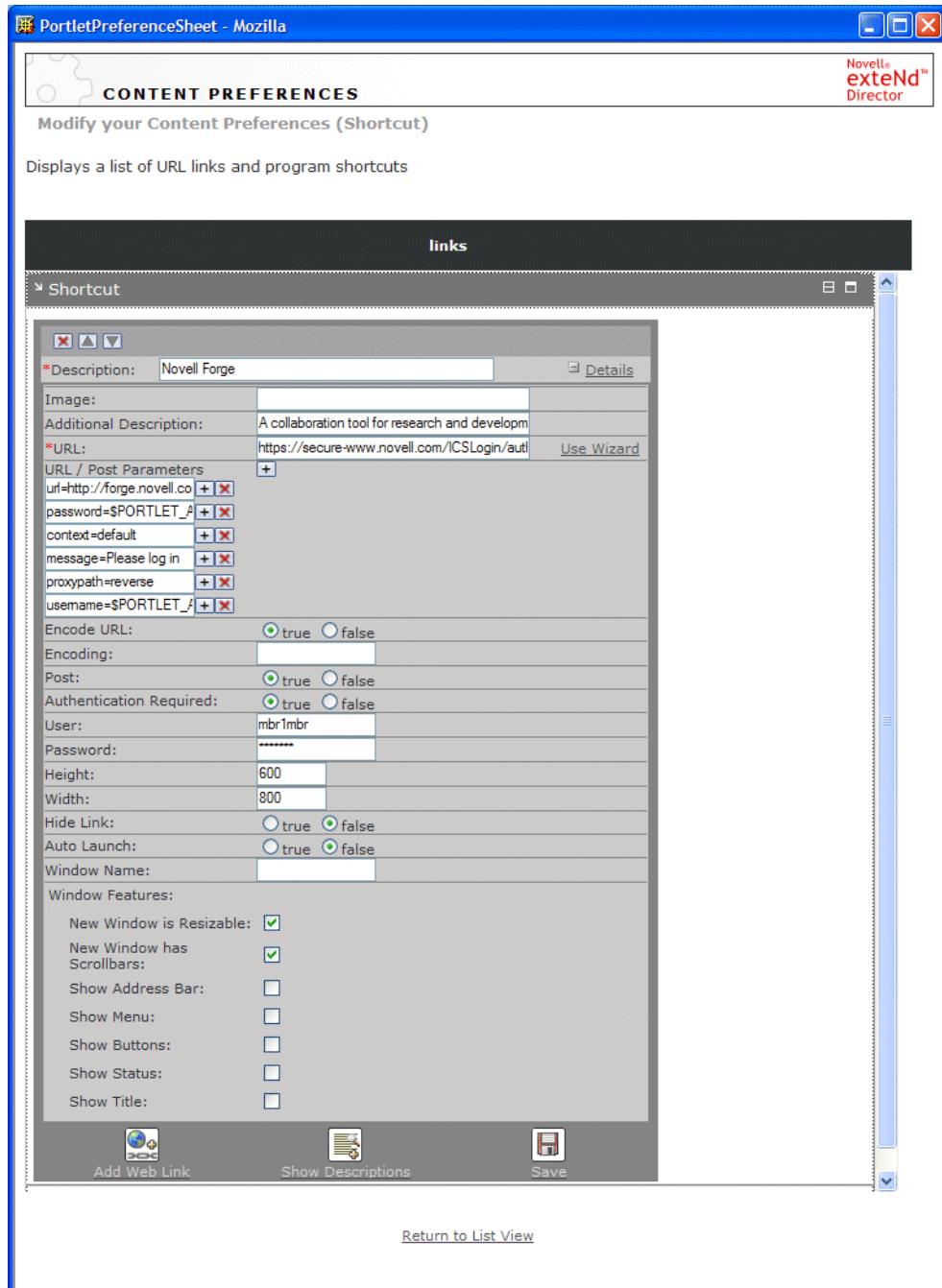
- 7 In the URL/Post Parameter list, substitute the following replacement strings for the values of username and password:

URL/Post Parameter key	Replacement string
username	\$PORTLET_AUTH_ID\$
password	\$PORTLET_AUTH_PWD\$

At runtime, the values you entered in **Step 6** will be substituted for the associated replacement strings and passed as your credentials to be validated by the server. In addition, the password is stored as an encrypted value in the database.

- 8 Set Authentication Required to **true**.

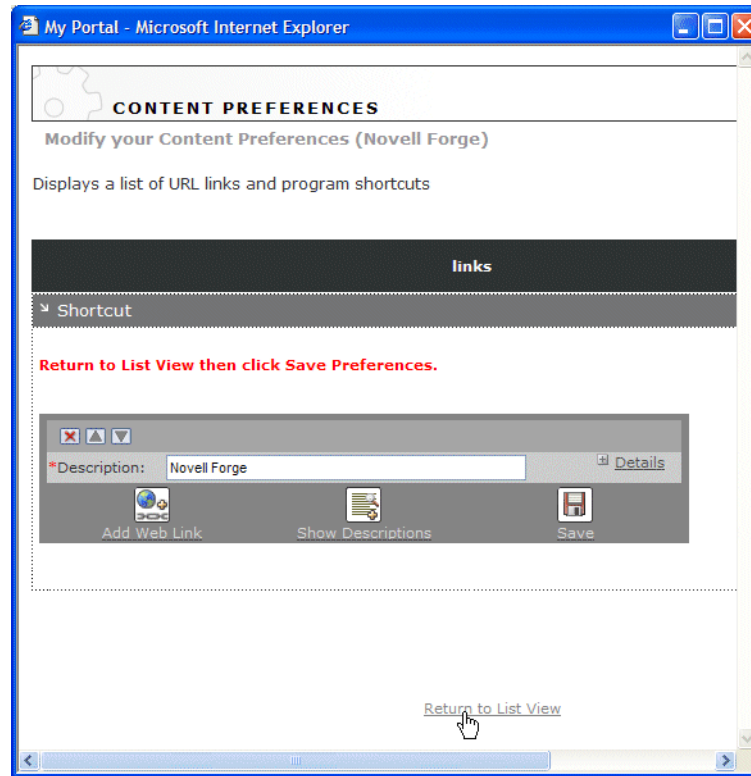
Your preference sheet should look something like this:



- 9 Click **Save** at the bottom of the preference sheet.
- 10 If an alert box appears, asking if you want Password Manager to remember your login credentials, respond as appropriate.

Your values are recorded and you exit the wizard.

- 11 Back in the Shortcut preference sheet, click **Return to List View**.



- 12 Click **Save Preferences**.

The Content Preferences sheet closes, returning you to the Content Selector.

- 13 Click **Save Contents** to dismiss the Content Selector.

- 14 Close all other browser windows.

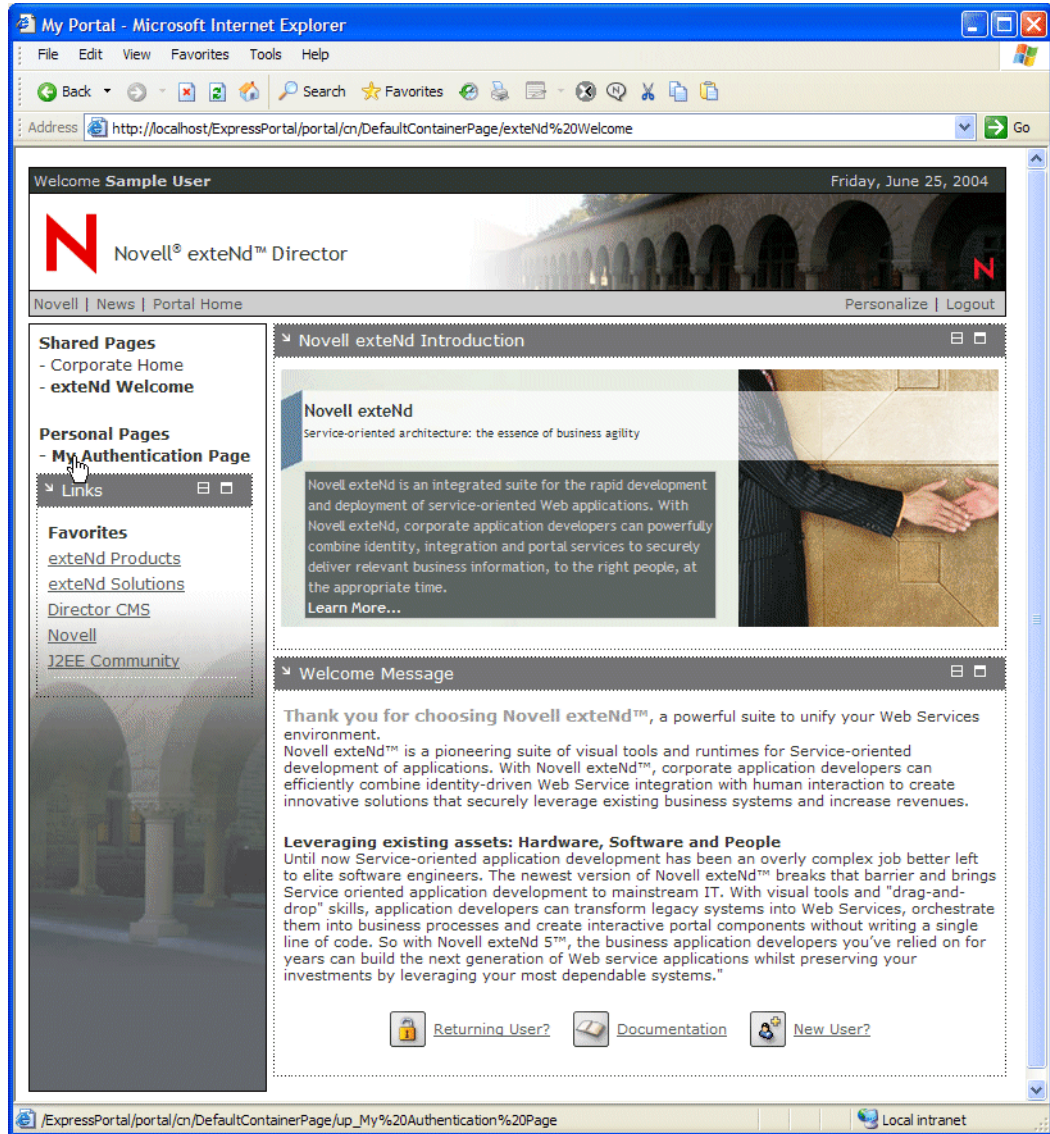
Now you are ready to test form-based authentication using replacement strings. Move to the next exercise.

➤ **To test form-based authentication using replacement strings:**

- 1 Start a new browser and log in to the Express Portal application.

**TIP:** If you need to review these steps, see **“Adding a Shortcut portlet to a personal page” on page 75.**

- 2 When your default portal page opens in the browser, click **My Authentication Page** under Personal Pages in the navigation area.



My Authentication Page appears in the content area of your browser, displaying your Novell Forge portlet. This time, the Novell Forge shortcut link appears with a button next to it:



This symbol indicates that stored credentials exist for this shortcut link. If you click this image, you can modify the stored credentials associated with this shortcut link—in this case, the credentials for the **Novell Forge** site.

- 3 Click the **Novell Forge** shortcut link.  
A Security Alert appears, indicating you are about to be redirected to a nonsecure connection.
- 4 Click **Yes** to proceed.  
You are automatically logged in to the Novell Forge application, again demonstrating that single sign-on was achieved using credentials that persist across sessions.

## Implementing form-based authentication with other Accessory portlets

In the previous exercises, you learned how to configure the Shortcut portlet to use form-based authentication. You can also implement form-based authentication with other Accessory portlets that ship with exteNd Director:

Accessory portlet	Description	To implement form-based authentication
IFrame	Displays a given URL in an IFrame	See “Configuring IFrame, NetMail, and Exchange portlets for form-based authentication” on page 95.
NetMail	Provides Novell NetMail calendar and messaging functions	See “Configuring IFrame, NetMail, and Exchange portlets for form-based authentication” on page 95.
Exchange	Provides access to Microsoft Exchange calendar and messaging functions	See “Configuring IFrame, NetMail, and Exchange portlets for form-based authentication” on page 95.
Notes	Provides access to Lotus Notes/Domino HTTP email	See “Configuring Notes portlets for form-based authentication” on page 95.

### Configuring IFrame, NetMail, and Exchange portlets for form-based authentication

Unlike Shortcut, the IFrame, NetMail, and Exchange portlets do not have wizards for setting site-specific URL/Post parameters automatically. As an alternative, you can use the Shortcut portlet wizard to define the key/value pairs for the target site, then copy these pairs manually to the URL/Post parameter fields in the IFrame, NetMail, or Exchange portlet.

### Configuring Notes portlets for form-based authentication

For the Notes portlet, the URL/Post parameters are hard-coded specifically for the Lotus Notes/Domino server.

The Notes portlet posts to an URL of this form:

```
protocol + "://" + IP address + ":" + port + "/names.nsf?Login"
```

Here is an example:

```
http://weddev2:80?names.nsf?Login
```

The Notes portlet also provides the following parameters on the POST:

Parameter key	Description
Username	Lotus Notes user ID
Password	Lotus Notes password
RedirectTo	Lotus Notes URL to redirect to after a successful login

If you need more flexibility in specifying an URL and POST parameters, use the IFrame portlet instead of the Notes portlet for form-based authentication.

## What to do next

- ◆ Browse the Novell Forge site for information about collaborative, open-source development projects.
- ◆ Configure the IFrame, NetMail, and Notes portlets to use form-based authentication.
- ◆ [Learn about shared pages.](#)
- ◆ [Learn about container pages.](#)
- ◆ [Create a container page.](#)
- ◆ [Brand a container page.](#)
- ◆ [Learn how to develop a custom portlet.](#)
- ◆ [Create shortcuts with images from a resource set](#)
- ◆ [Create a content management page using IFrame portlets](#)



# Using IFrame portlets for content management

## Objective

To set up a content management portal page using IFrame portlets. An *IFrame portlet* invokes an URL inside an IFrame within the portlet window. An *IFrame*, or *inline frame*, gets content referenced by an URL and displays it in a browser subwindow—in this case, the window of the portlet on the browser page.

**Before you begin** See “[About exteNd Director Tutorials](#)”.

**Audience** This section is for content administrators.

**Prerequisites** This tutorial requires the following software:

- ◆ Content Management subsystem. The exteNd Enterprise Suite comes with Content Management; the Professional Suite does not include this subsystem.
- ◆ Internet Explorer version 5.5 or higher, a requirement for running the Content Management tool in the Director Administration console.

**TIP:** If you want to access content management functions using portlets that run in all supported browsers and platforms, check out the [Content Administration portlets](#) that ship with exteNd Director.

## Concepts

- ◆ [About the Content Management subsystem](#)
- ◆ [The content repository](#)
- ◆ [Content administrator](#)
- ◆ [Importing and exporting content](#)
- ◆ [Checking documents in and out](#)
- ◆ [Publishing content](#)
- ◆ [Working with portal pages](#)
- ◆ [About the Portal Personalizer](#)
- ◆ [Managing users and groups](#)
- ◆ [Using the Directory section of the Director Administration Console \(DAC\)](#)
- ◆ [ACL subsystem administrators](#)
- ◆ [About portlets](#)
- ◆ [Portlet window](#)
- ◆ [Working with installed portlets](#)

## Exercises

The exercises in this section show you how to use IFrame portlets to access several content management functions from a single portal page. You will also learn how to assign content administrator privileges to a user and import sample content.

- ◆ [Designating a content administrator](#)
- ◆ [Importing folders and documents into the content repository](#)
- ◆ [Browsing the content repository from a personal page](#)
- ◆ [Creating documents from a personal page](#)

### Designating a content administrator

In this exercise, you will assign [content administrator](#) privileges to a new user. To perform these administrative tasks, you need to log in as a user with locksmith privileges.

#### Adding a new user

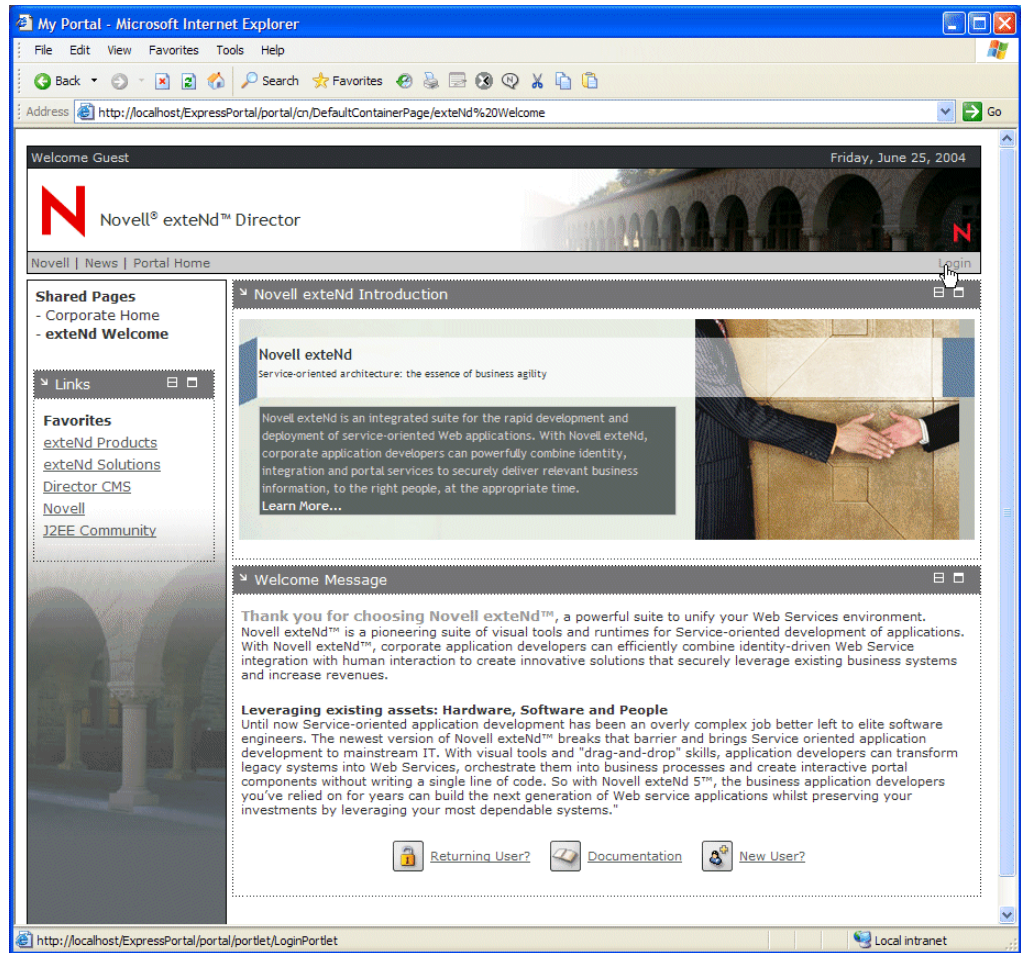
➤ **To add a new user:**

- 1 Start the exteNd Application Server where the Express Portal application has been deployed.
- 2 Start an Internet Explorer browser (version 5.5 or higher).
- 3 Start the Express Portal application by entering this URL in your browser:

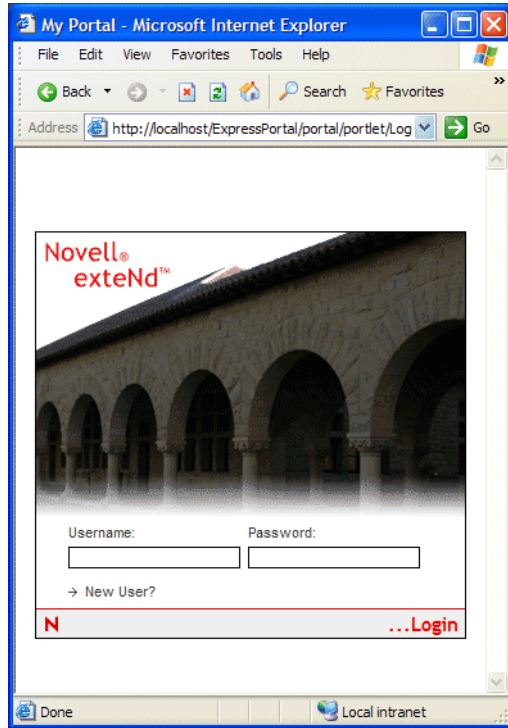
**`http://host/ExpressPortal`**

The default home page for a guest user opens in your browser.

#### 4 Click Login.

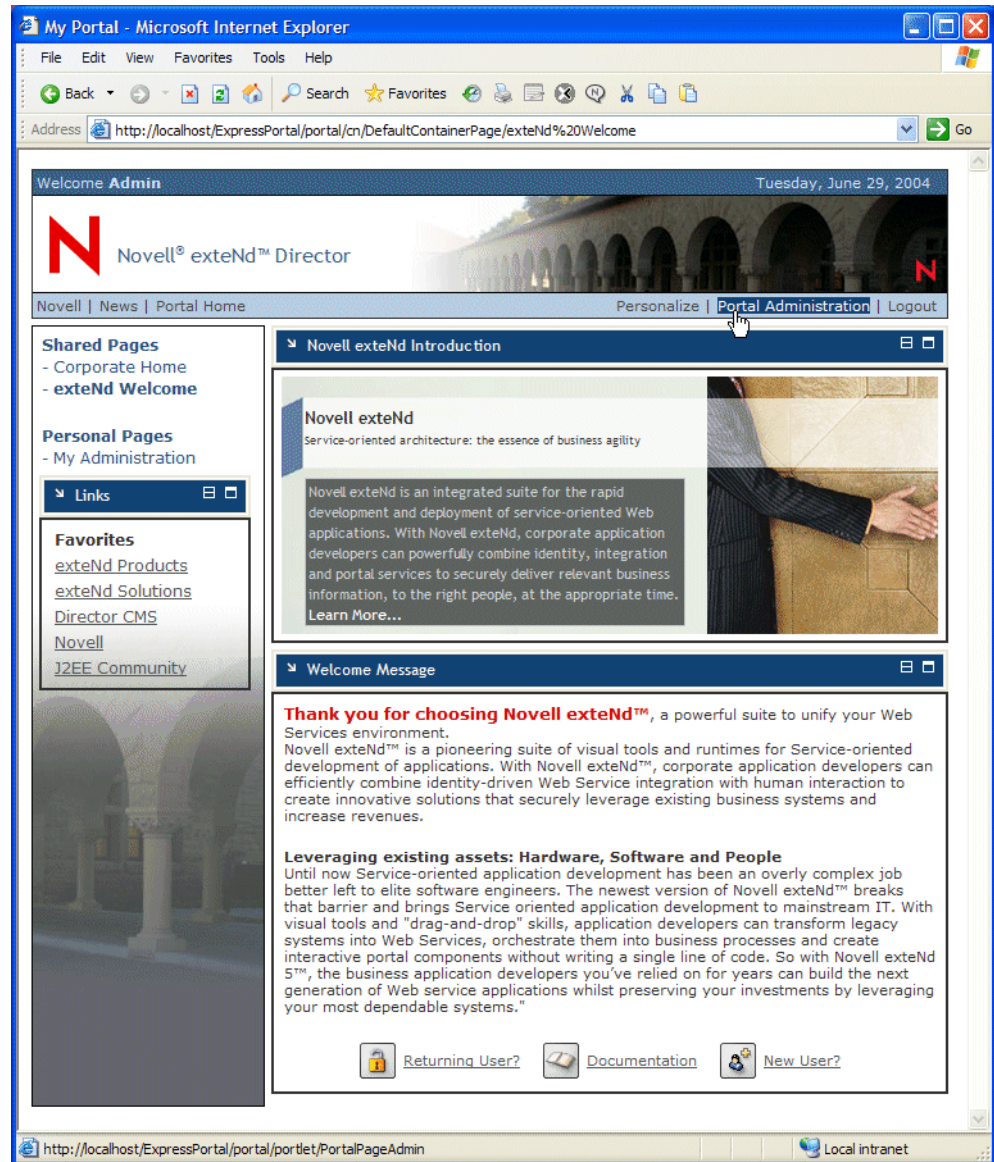


The Login dialog opens in your browser:



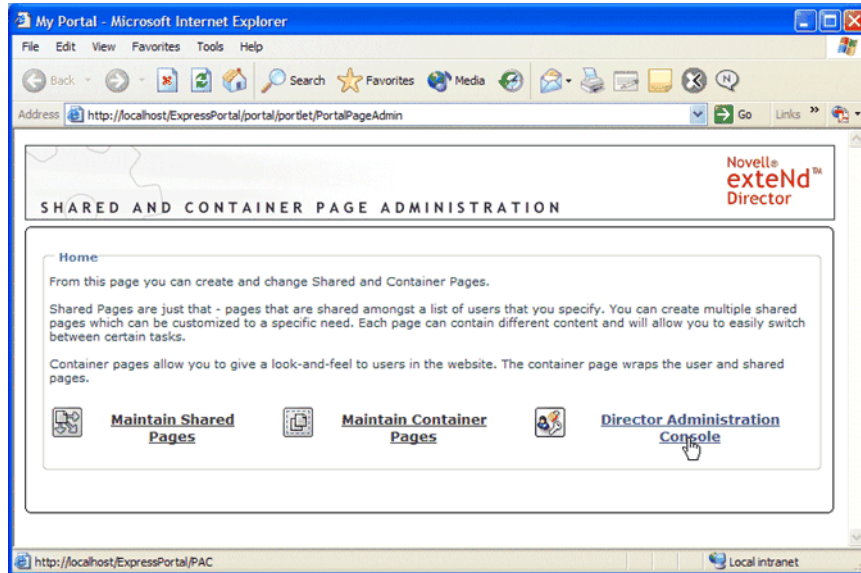
- 5 Log in as a locksmith user, then click **login** or the **Enter** key.  
**TIP:** A locksmith is a user who is a member of the LocksmithElementType administrator ACL group. Check with your system administrator for the user name and password to use.  
The default home page for administrators opens in your browser.

6 Start the Portal Administration tool by selecting **Portal Administration**.



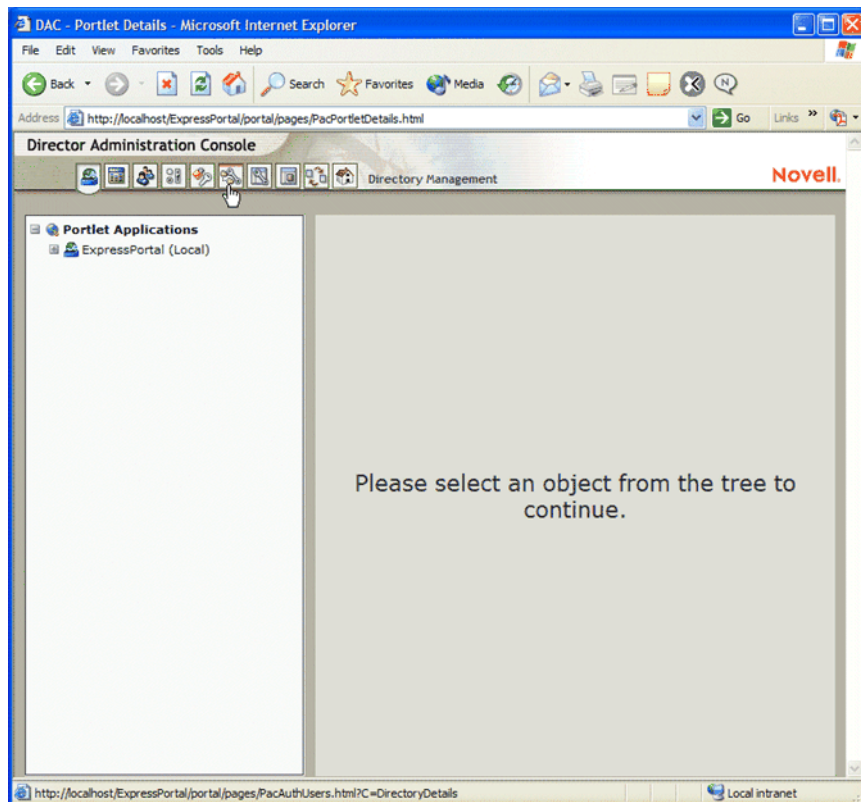
The Portal Administration tool opens in your browser.

7 Select Director Administration Console.



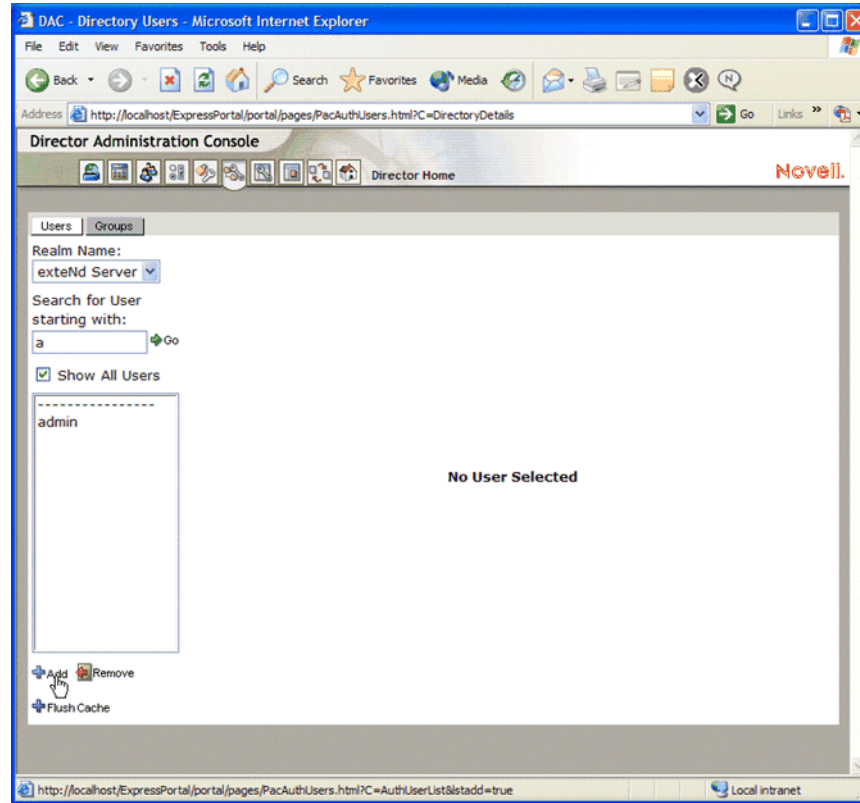
The Director Administration Console (DAC) opens in your browser.

8 Click the Directory Management icon.



The Directory Management tool opens in your browser with the Users tab selected.

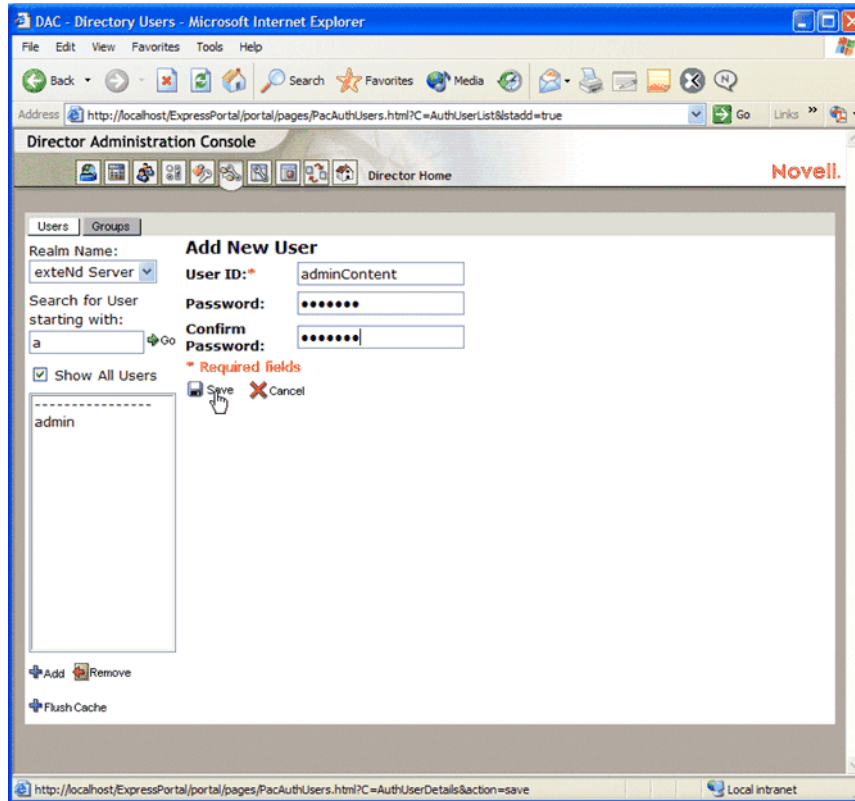
- 9 Click **Add** to add a new user.



- 10 Enter the following information for your new user:

Field	What to specify
User ID	adminContent
Password and Confirm Password	content

11 Click Save to record your entries.



The new user **adminContent** is added to your portal application.

Now you are ready to assign content administrator privileges to the new user. Leave the Director Administration Console running and move to the next exercise.

### Assigning security privileges to a content administrator

This exercise shows you how to assign content administrator and search administrator privileges to the **adminContent** user you just added to the Express Portal application. There are several permissions that provide varying levels of access to documents, folders, metadata, and other elements in the content repository:

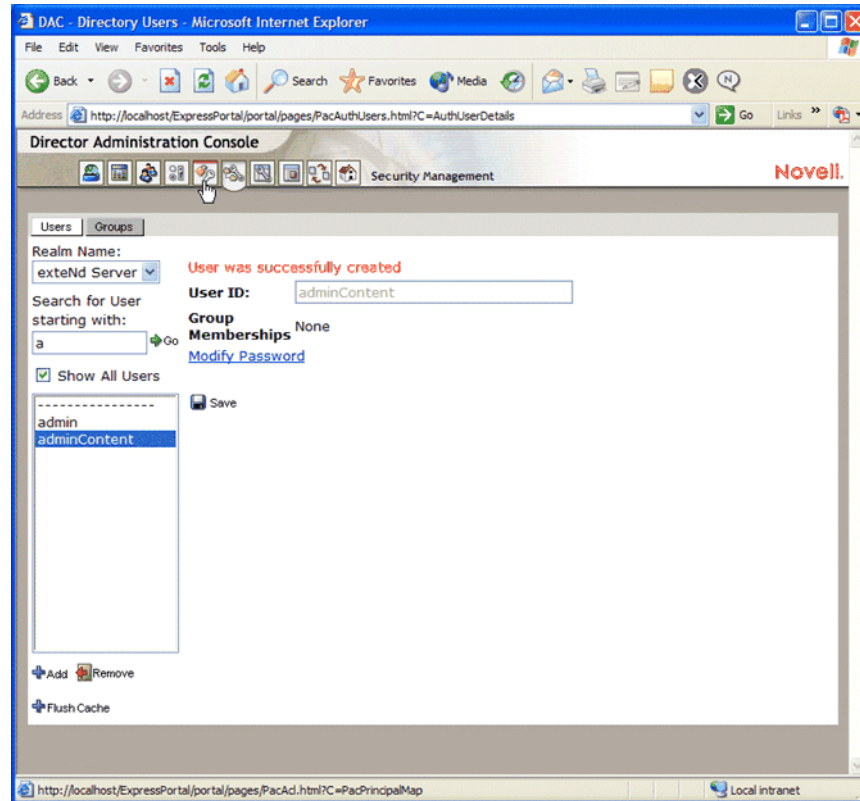
Admin type	Permission	Level of access
ContentAdmin	PROTECT	Set security on content elements
ContentAdmin	READ	View content and metadata
ContentAdmin	WRITE	Create, modify, and save content elements
SearchAdmin	WRITE	Create, modify, and save fields in document types

In this exercise, you will grant all of these permissions to the content administrator.



➤ **To assign security privileges to a content administrator:**

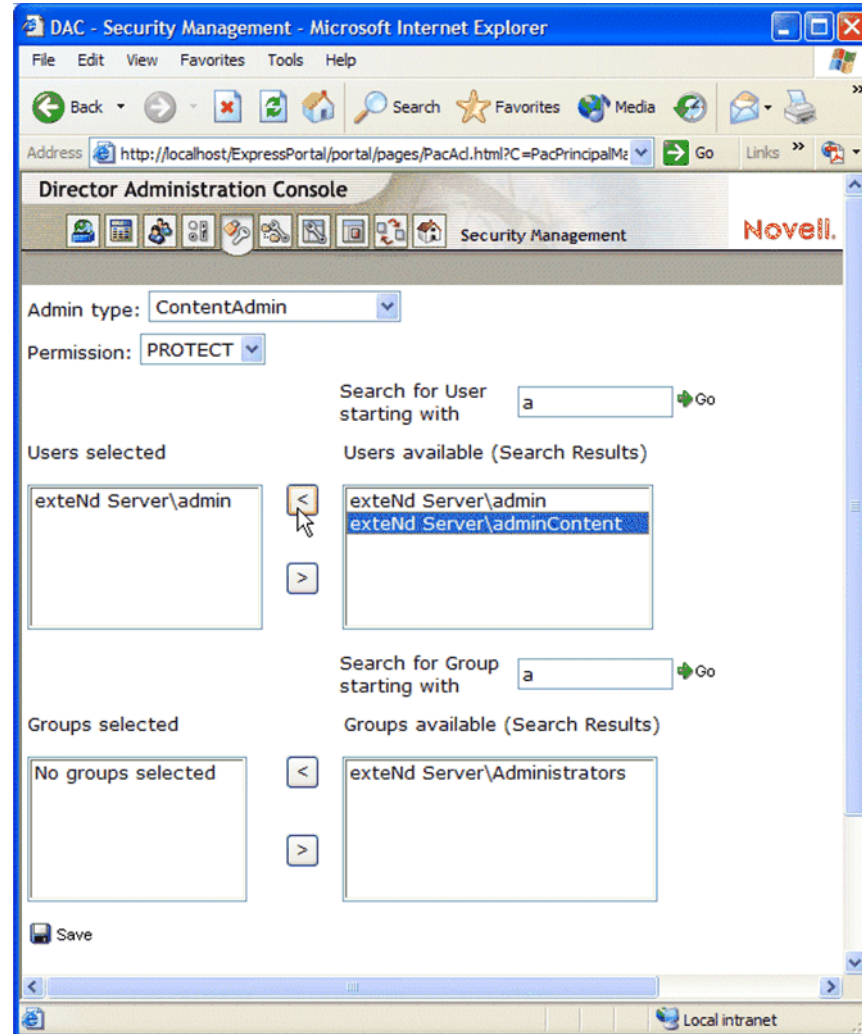
- 1 In the Director Administration Console, click the Security Management icon.



The Security Management tool opens in your browser.

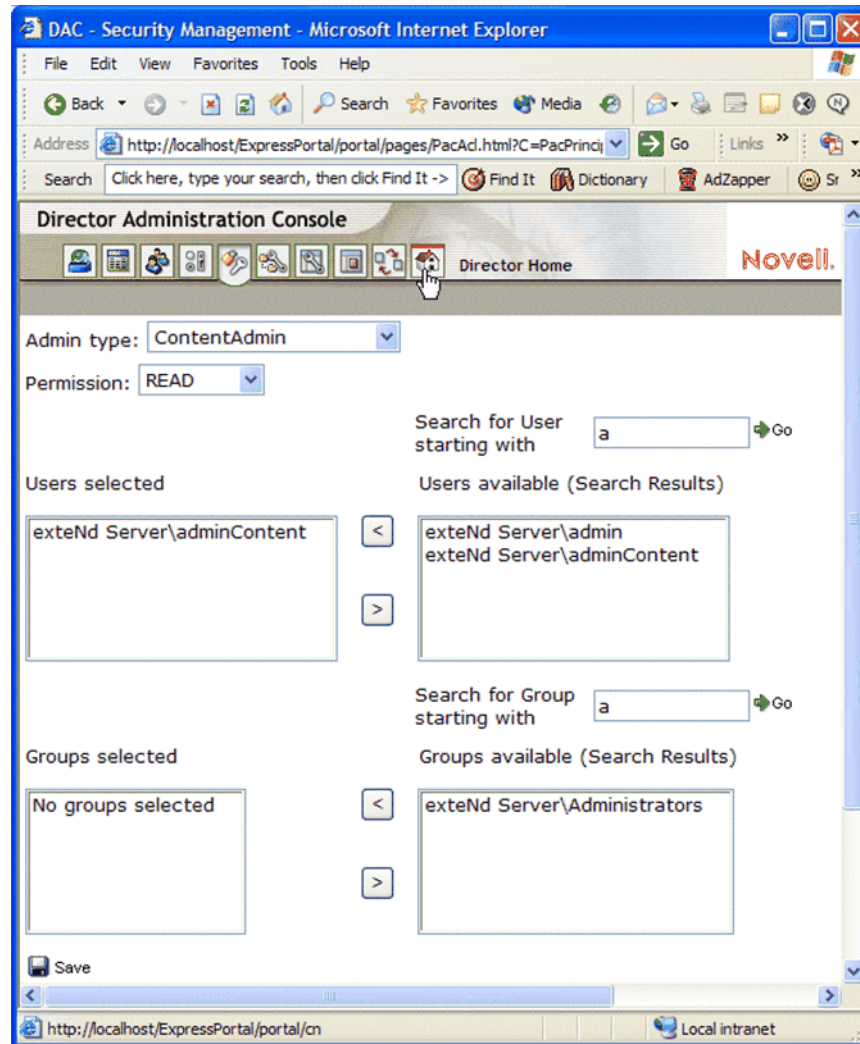
- 2 In the Admin type dropdown menu, select **ContentAdmin**.
- 3 Leave **PROTECT** selected in the Permission dropdown menu.

- 4 Assign content administrator permissions to the adminContent user by following these steps:
  - 4a In the Users available list, select exteNd Server\adminContent.
  - 4b Click < to add the adminContent user to the selected administrator ACL group.

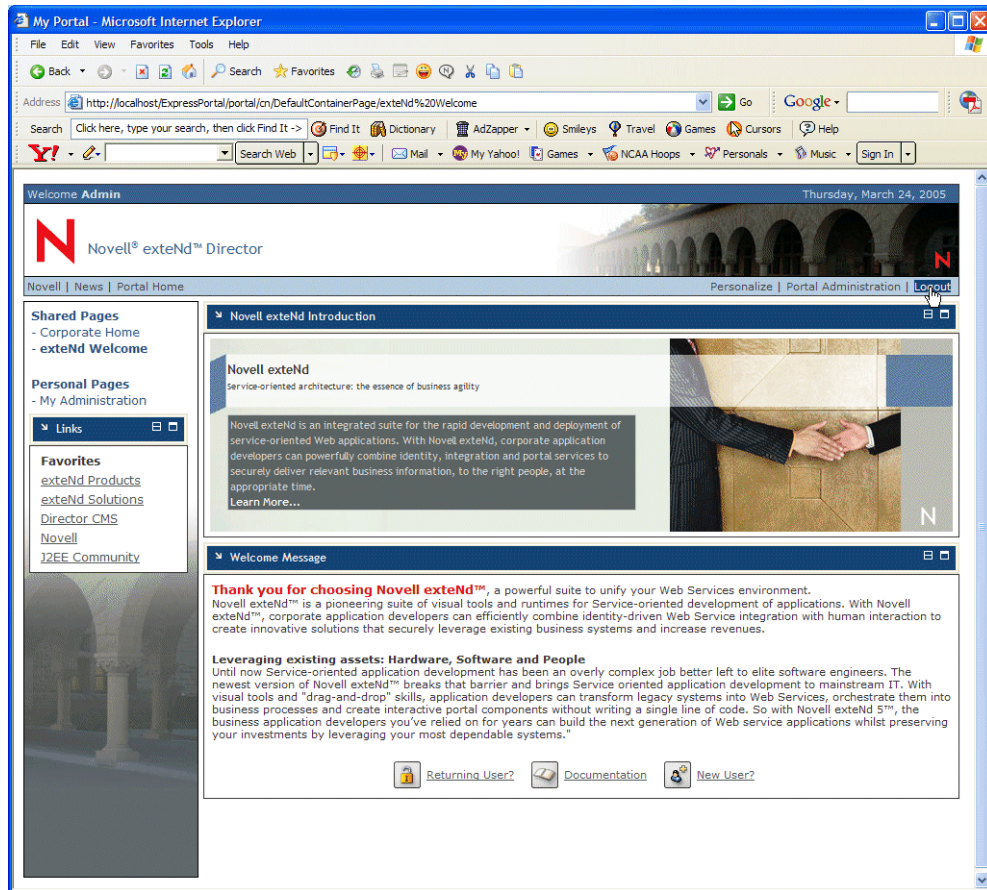


- 4c Click Save.
- 5 Select **WRITE** in the Permission dropdown menu and repeat **Step 4**.
- 6 Select **READ** in the Permission dropdown menu and repeat **Step 4**.
- 7 Now assign search administrator write permission to the adminContent user by following these steps:
  - 7a In the Admin type dropdown menu, select **SearchAdmin**.
  - 7b In the Permission dropdown menu, select **WRITE**.
  - 7c Repeat **Step 4**.

8 Click the **Director Home** icon to return to your home page:



9 On the home page, click logout:



10 Log back in as the content administrator user you just created:

Recall that the user name is **adminContent** and password is **content**.

Now you are ready to import folders and documents into the content repository. Leave the home page open in your browser and move to the next exercise.

## Importing folders and documents into the content repository

exteNd Director provides a repository for storing content through its Content Management (CM) subsystem. The content repository can store any type of content that can be digitized including:

- ◆ Plain text, XML, and HTML documents
- ◆ Image, sound, and executable files
- ◆ Other types of binary data

In this exercise you will import sample documents and folders into the repository. This content will be used in subsequent exercises to test your ability to browse the repository and create new documents via IFrame portlets.

Before beginning this exercise, be sure you have downloaded the accessory ZIP file required for the exteNd Director tutorials, as described in [how to download accessory files](#).

### ➤ To import folders and documents into the content repository:

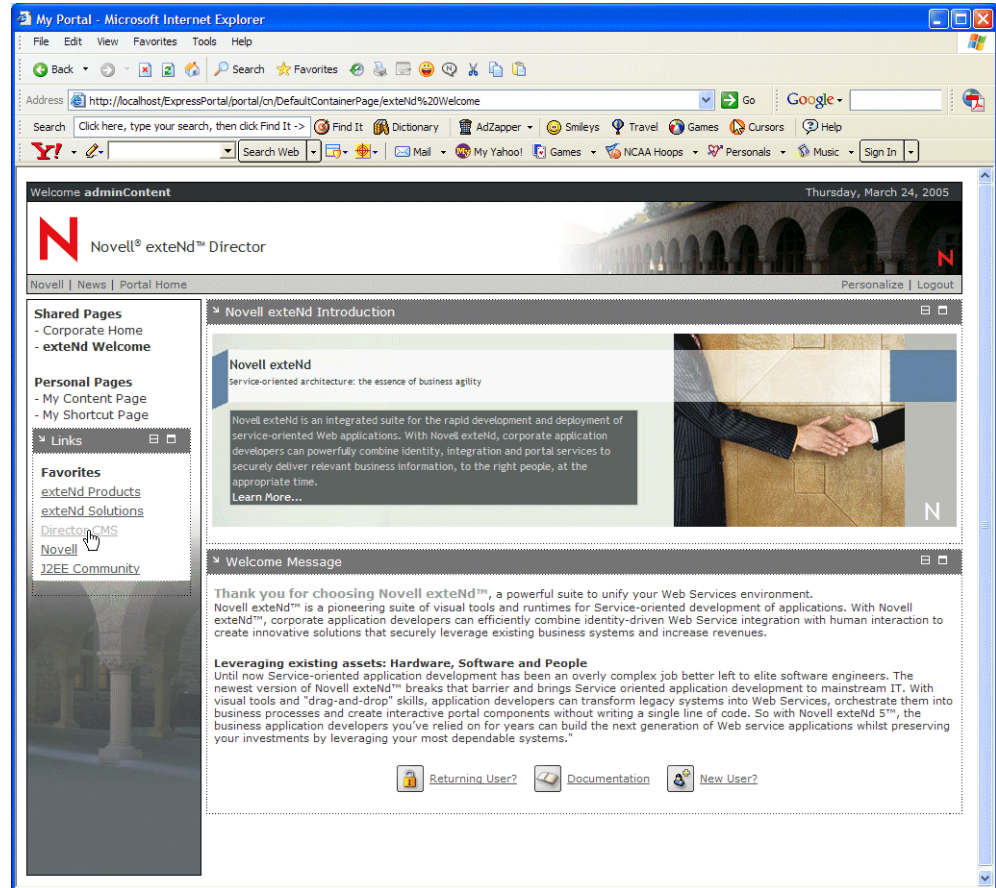
- 1 Open the accessory archive **Director52Tutorial.zip** and select **Director5\_data.zip**.

**NOTE:** The file **Director5\_data.zip** contains XML descriptors of documents, folders, and other content elements, as described in [structure of the data import or export archive](#).

2 Click **Extract** and extract the file to a location of your choice.

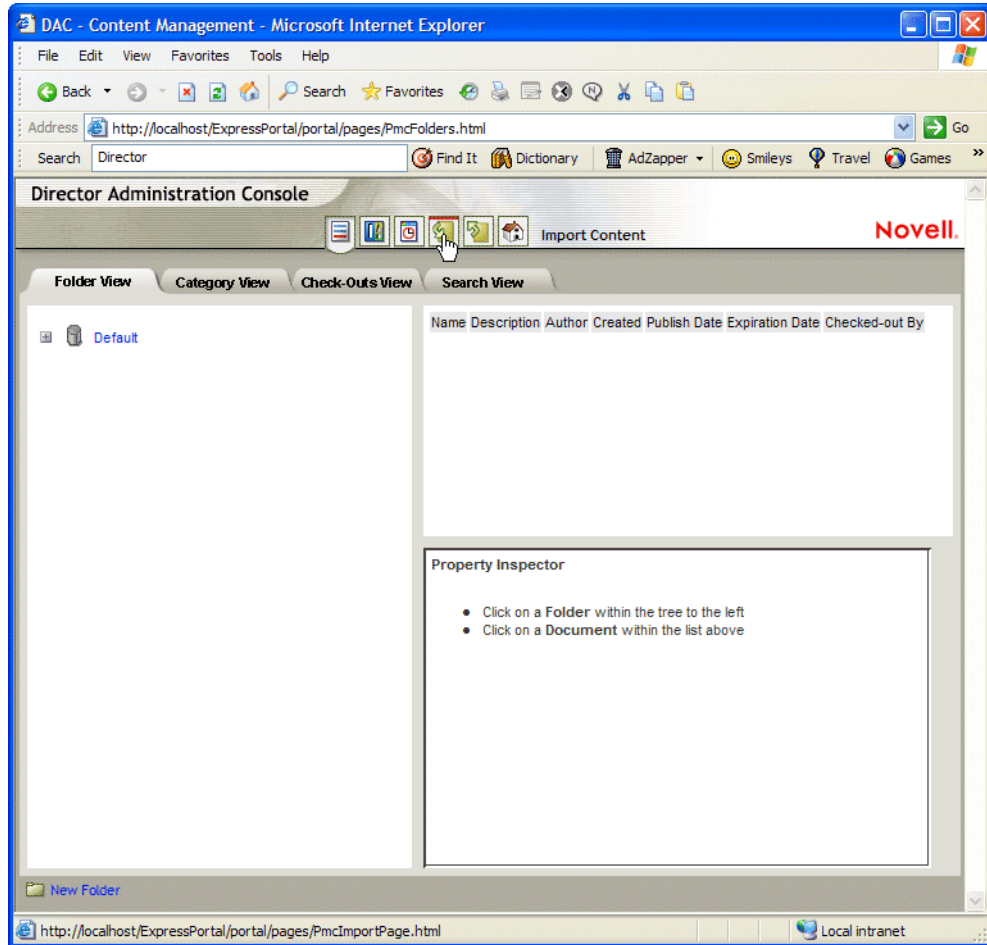
**TIP:** Be sure to remember the location of the file because you will be entering its path in a later step in this exercise.

3 On the home page, click the **Director CMS** link in the Favorites list:



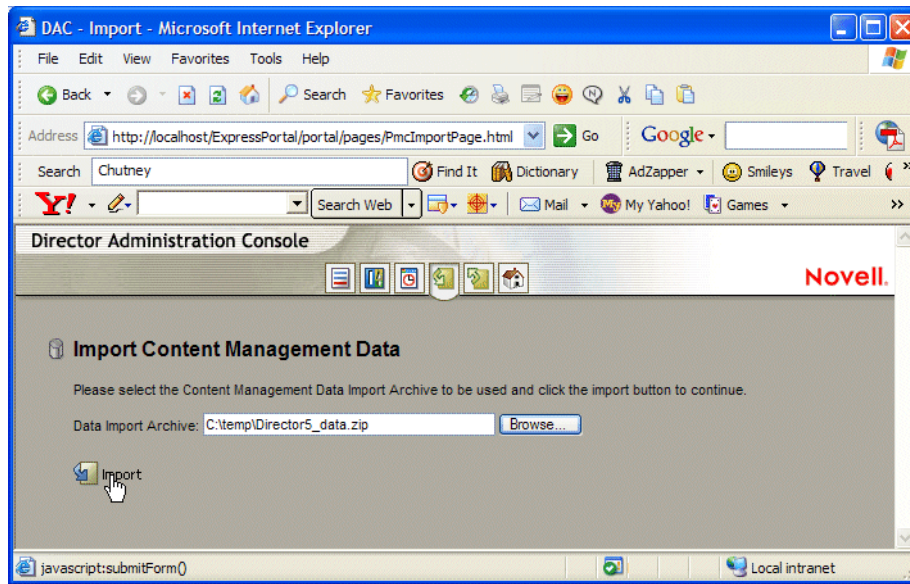
The Content Management tool opens in a separate browser window.

- 4 Select the **Import Content** icon:

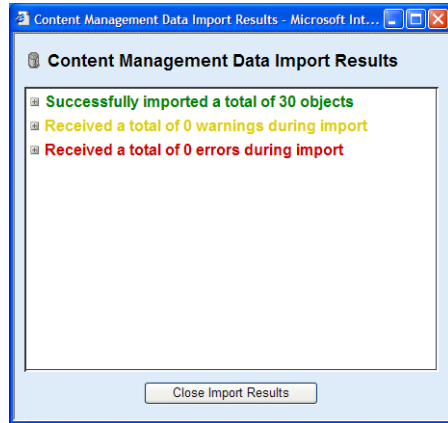


The Import Content Management Data panel appears in your browser.

- 5 In the Data Import Archive field, enter the path to Director5\_data.zip and click **Import**, as in this example:



When the import completes, a summary window displays the following information:



**NOTE:** The summary window will not appear if your browser uses a popup blocker. To view the summary window (and verify success), disable the popup blocker and reimport the content.

The imported content includes corporate news stories for various departments in a fictitious organization, as well as folders and document types. In exteNd Director, a document type is like a template that specifies formats and metadata for documents you create.

- 6 Click **Close Import Results**.
- 7 Close the Content Management tool.

Now you are ready to add a content browser to a personal page, using the IFrame portlet. Leave the home page open in your browser and move to the next exercise.

## Browsing the content repository from a personal page

In this exercise you will create and configure a personal page to allow you to browse the exteNd Director content repository through an IFrame portlet.

## Creating a personal page

### ➤ To create a personal page:

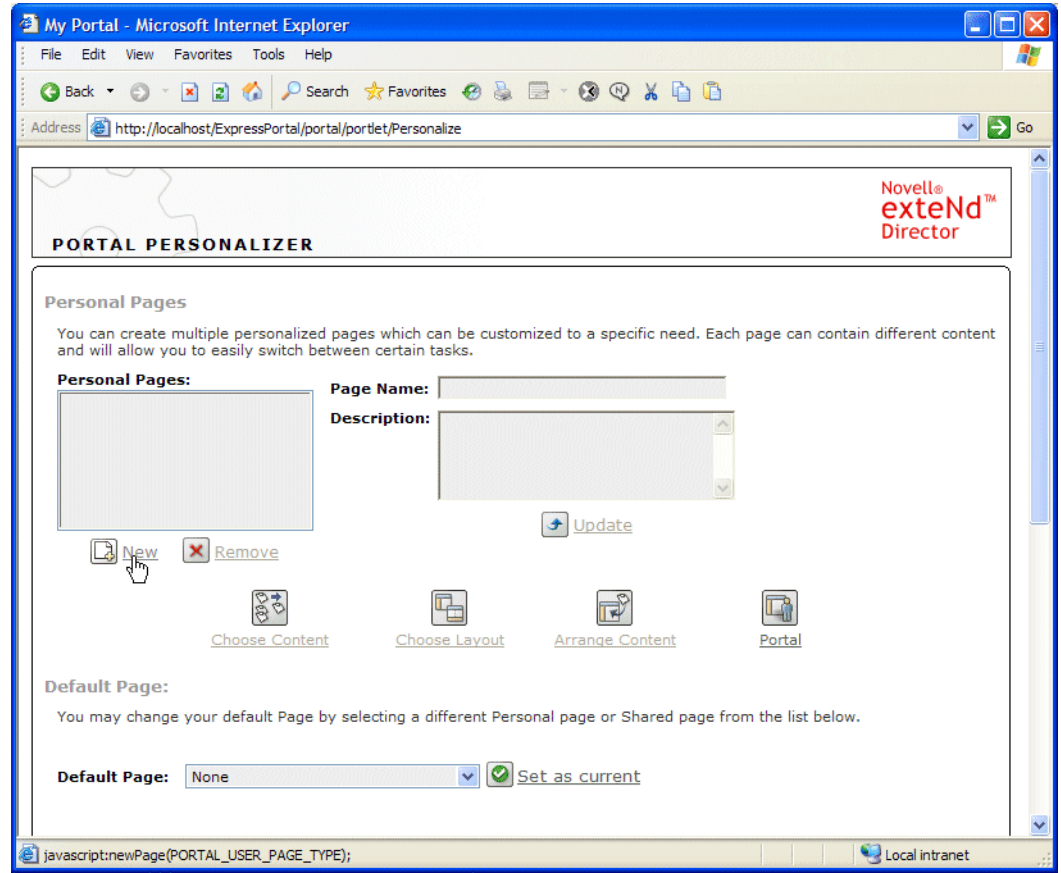
- 1 On the exteNd Director home page, select **Personalize**.



The Portal Personalizer opens in your browser.



- 2 Under Personal Pages select New.



An untitled page is added to the list of personal pages.

- 3 Enter the following properties for the new page:

Property	What to specify
Page Name	My Content Management Page
Description	Tutorial

- 4 Click **Update**.

The new page appears in the list of personal pages.

Now you are ready to add an IFrame portlet to your personal page and configure it to operate as a content browser. Leave the Portal Personalizer running and move to the next exercise.

### Adding an IFrame portlet to a page using the Content Selector tool

In this exercise, you will use the Content Selector to add an IFrame portlet to My Content Management Page, the personal page you just created. In a later exercise you will learn how to add a portlet to a page using the Layout Selector tool (see [“Adding an IFrame portlet to a page using the Layout Selector tool” on page 118](#)).

#### ➤ To add an IFrame portlet to your personal page using the Content Selector:

- 1 Select **My Content Management Page** in the Personal Pages list and click **Choose Content**.  
The Content Selector displays in a new window.
- 2 From the Filter dropdown list choose **Accessory Portlets**.

- 3 From the Available Content list select **IFrame** and add it to the page by clicking **Add**.

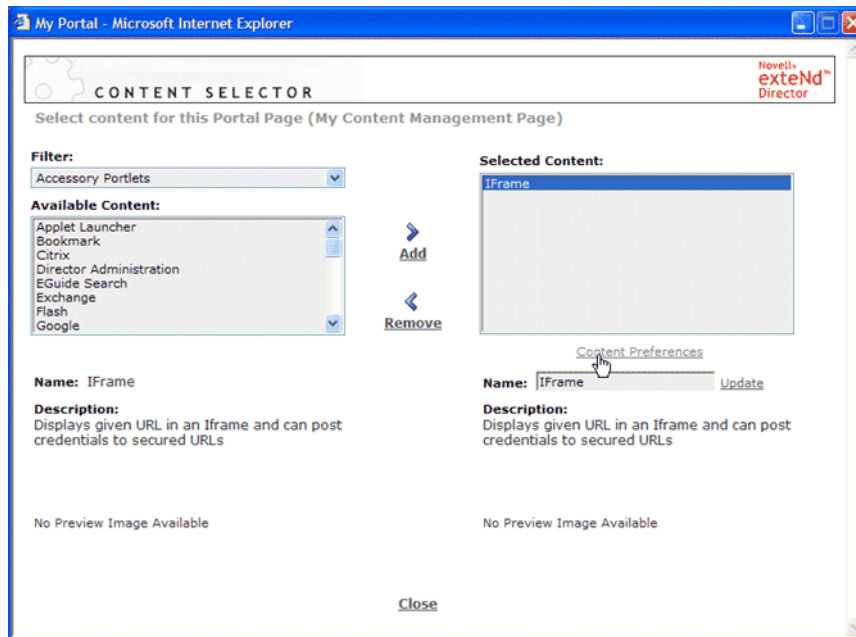
The IFrame portlet appears in the Selected Content list.

Now you are ready to configure the IFrame portlet as a content browser. Leave the Content Selector open and move to the next exercise.

## Configuring the IFrame portlet as a content browser

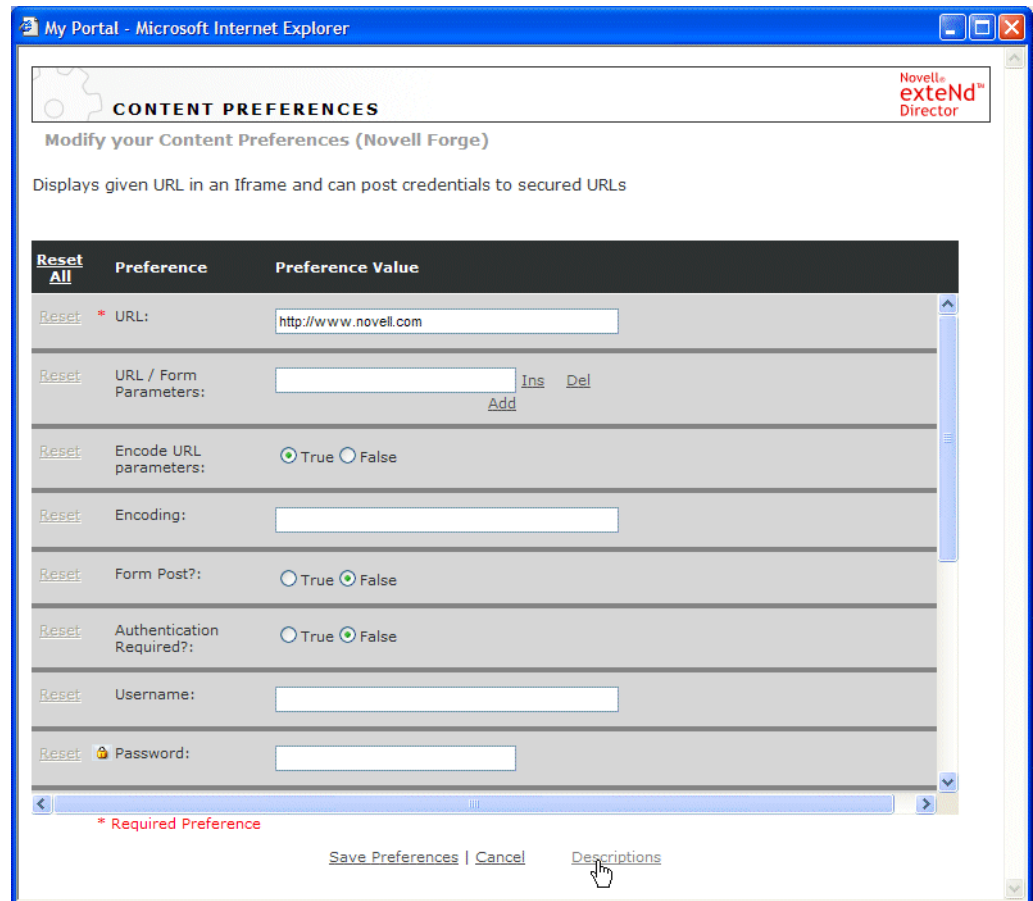
➤ **To configure the IFrame portlet as a content browser:**

- 1 Select the IFrame portlet in the Selected Content list and click **Content Preferences**.



The Content Preferences sheet opens.

**TIP:** To get more information about each preference, click **Descriptions** at the bottom of the sheet:



- 2 Change the values of the following preferences:

Preference	What to specify
URL	http:// <i>host name</i> /ExpressPortal/xresources
Width	500

**NOTE:** xresources is the extended Content Management resource servlet, which provides access to folders and documents in the exteNd Director content repository.

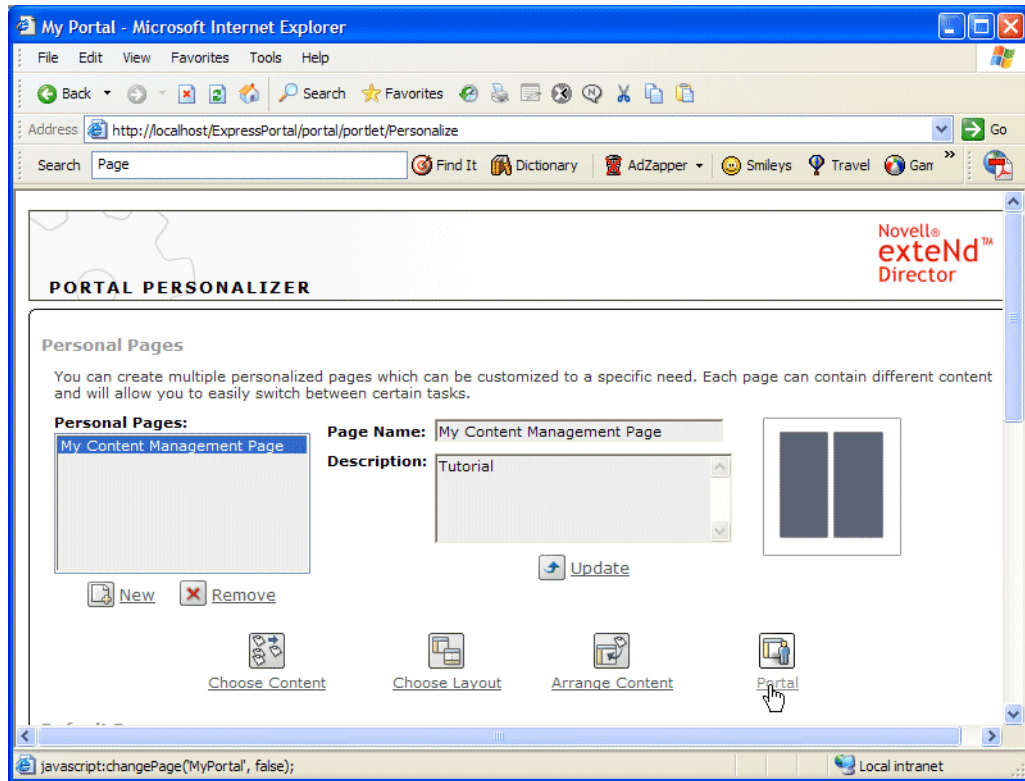
- 3 Click **Save Preferences**.  
The Content Preferences sheet closes, returning you to the Content Selector.
- 4 Click **Save Contents** to dismiss the Content Selector.  
The Portal Personalizer should still be running.

Now you are ready to test your content browser. Leave the Portal Personalizer running in your browser and move to the next exercise.

## Testing the IFrame portlet—Browse the content repository

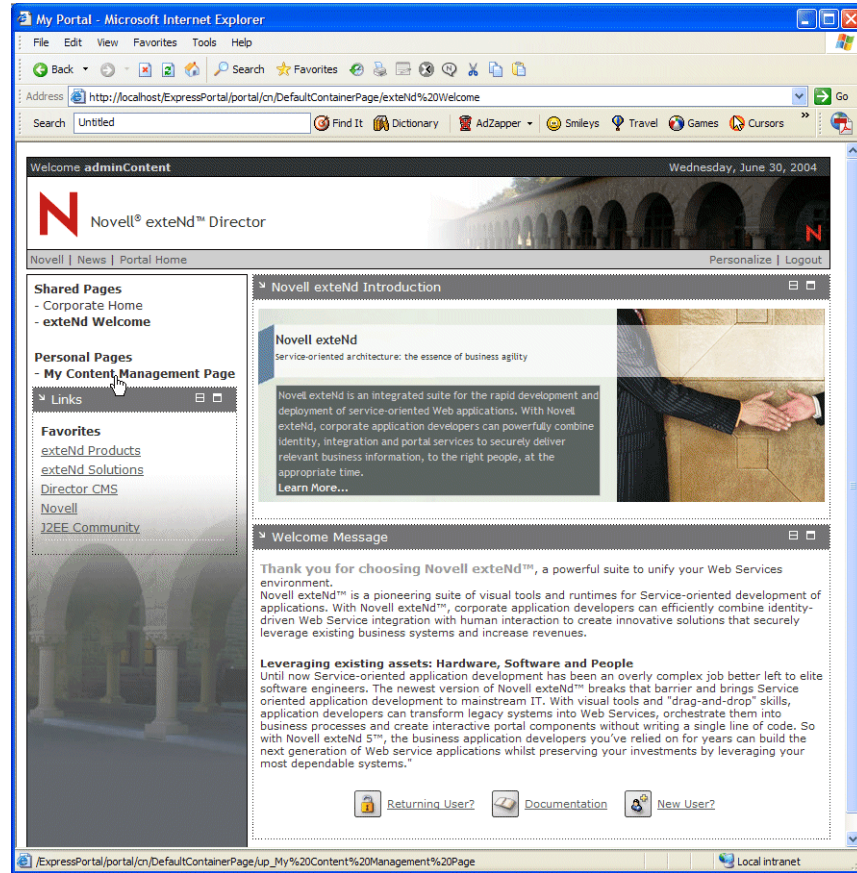
➤ To browse the content repository from your portal page:

- 1 In the Portal Personalizer, click **Portal**.



Your home portal page opens in your browser.

2 Under Personal Pages in the navigation area of the page, click My Content Management Page.



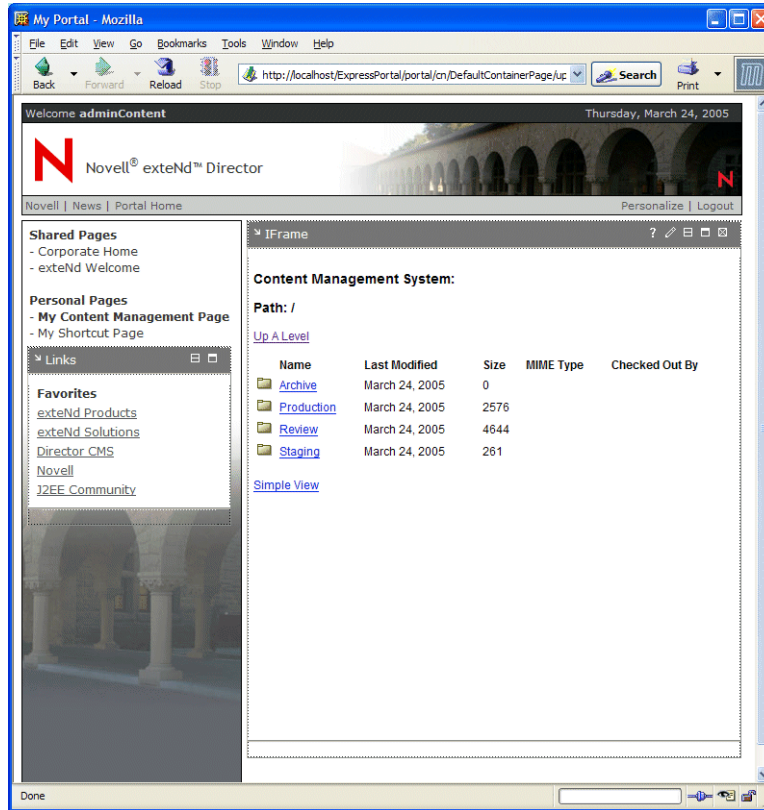
My Content Management Page appears in the content area of your browser, displaying the exteNd Director content repository in your content browser portlet window.

The portlet displays the extended view of the content repository, which includes the following information about each content element:

- ◆ Name
- ◆ Date last modified
- ◆ File size
- ◆ MIME type
- ◆ Whether it has been checked out—and by whom

You will see only those folders and documents you are authorized to view. As a content administrator, you can access all content in the repository.

Your portal page should look something like this:



**NOTE:** This image shows only the content you imported into the repository in “[Importing folders and documents into the content repository](#)” on page 108. You will be able to view and browse any other content in your repository as well.

- 3 Browse the content. Click the names of folders and documents to open them.

For example:

**3a** Click the **Production** folder.

**3b** In the Production folder, click the **Sales** folder.

**3c** In the Sales folder, click the **New Sales Region** document.

The content of the document opens in the browser. Use the Back button of your browser to move up a level, or click **Up A Level** from folder views.

Now you are ready to add document creation capability to your Content Management Page. Leave your home page open in your browser and move to the next exercise.

## Creating documents from a personal page

In this exercise, you will configure a second IFrame portlet to provide access to the document creation utilities of the exteNd Director Content Management system.

### Adding an IFrame portlet to a page using the Layout Selector tool

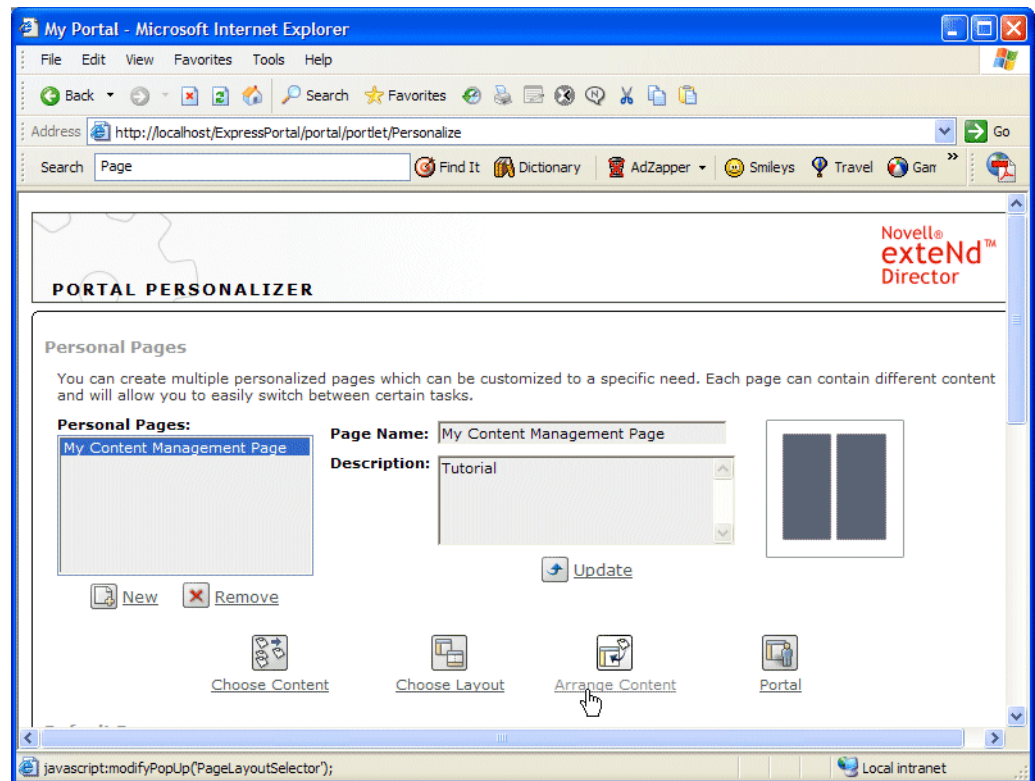
In this exercise, you will use the Layout Selector to add an IFrame portlet to My Content Management Page, the personal page that you just created. Recall that in a previous exercise you added a portlet to a page using the Content Selector tool (see “[Adding an IFrame portlet to a page using the Content Selector tool](#)” on page 113).

➤ **To add an IFrame portlet to your personal page using the Layout Selector:**

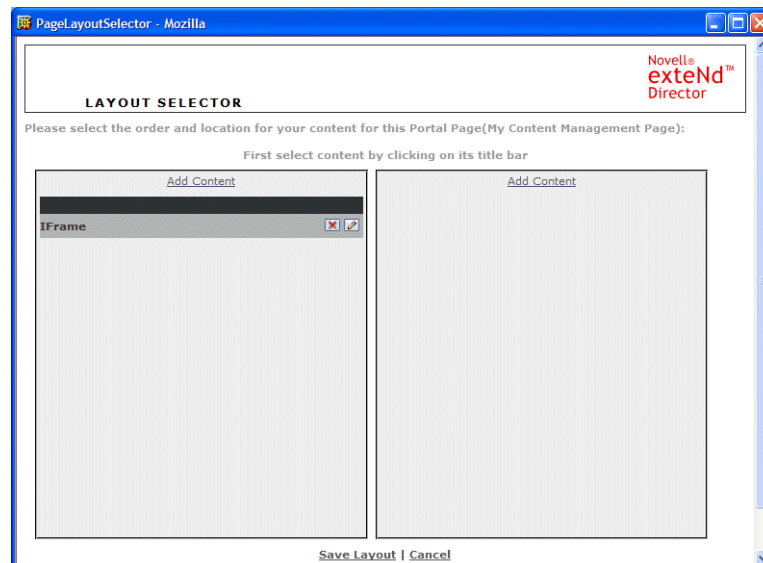
1 On your home page, select **Personalize**.

The Portal Personalizer opens in your browser.

2 Select **My Content Management Page** in the Personal Pages list and click **Arrange Content**.

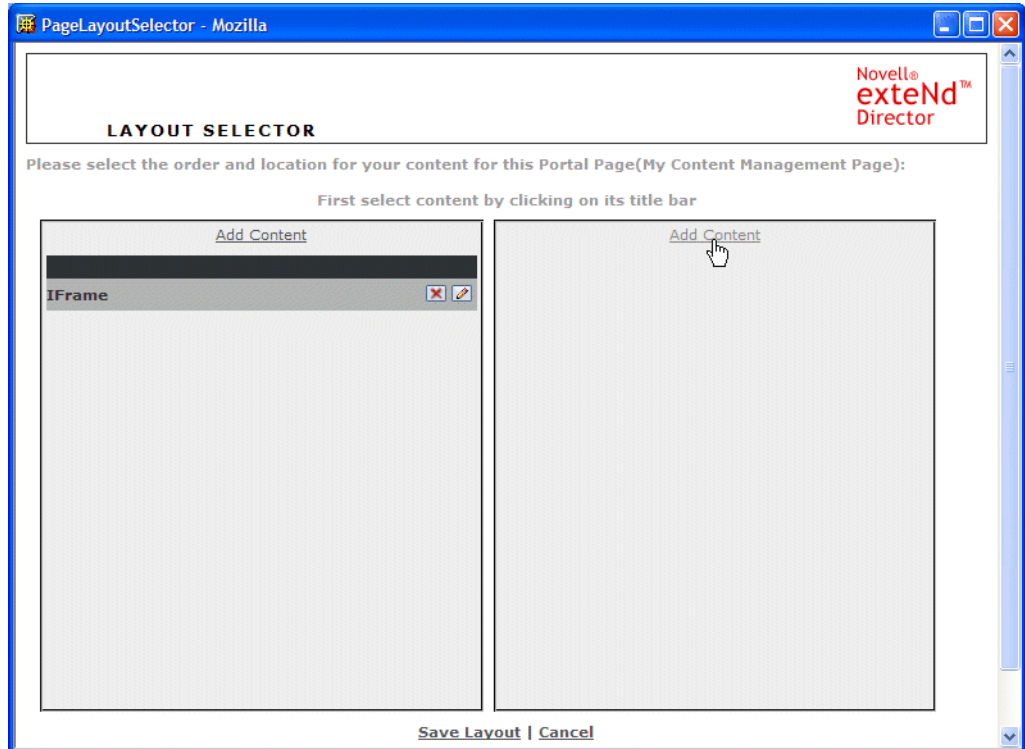


The Layout Selector opens in a new window:



As you can see, the default layout for personal pages is a two-column layout. The content browser portlet that you added in a previous exercise is placed in the first column of the page by default. This Layout Selector view allows you to add new portlets to specific locations in your layout and to reorganize the page by moving existing portlets to new locations.

- 3 In the second column of the page, click **Add Content**:



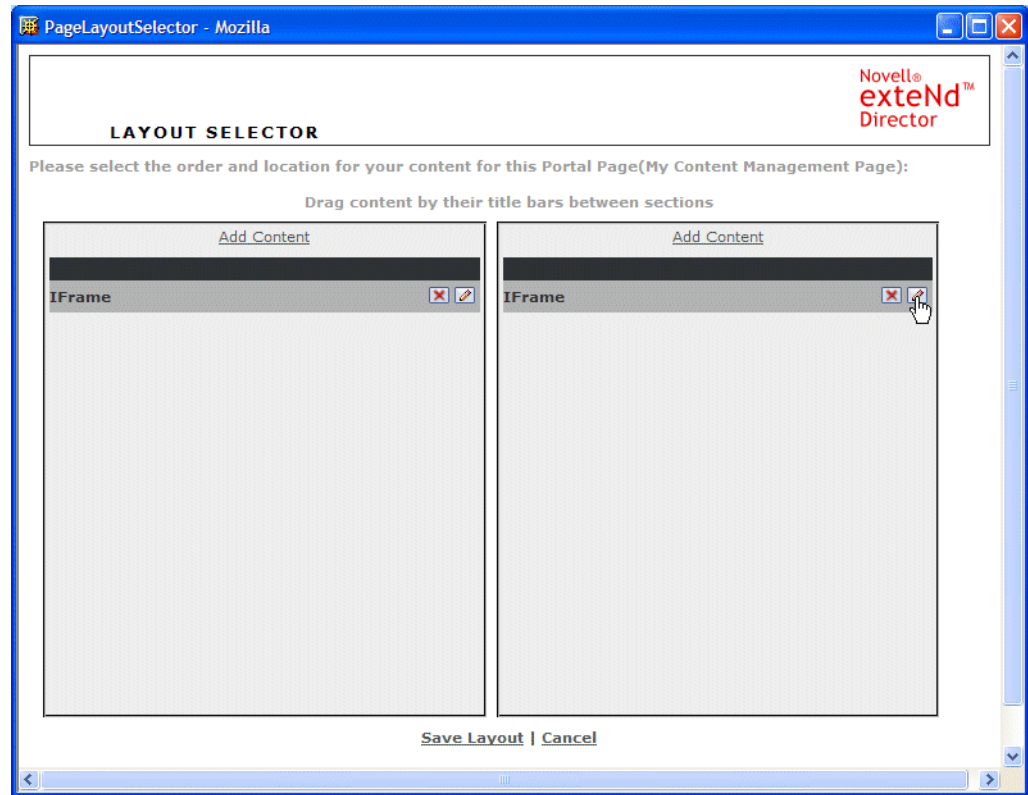
A content selector opens in a new window.

- 4 From the content selector, select an IFrame portlet from the Available Content list, then click **Select Content**.

The content selector closes and an IFrame portlet is added to the second column of the layout view of your personal page.



- 5 In the tool bar of the IFrame portlet, click the Edit button to modify its properties:



A confirmation window appears, asking if you want to save the layout.

- 6 Click **OK** to save the layout.  
The Content Preferences sheet opens.
- 7 Change the values of the following preferences:

Preference	What to specify
URL	<code>http://host name/ExpressPortal/portal/pages/PmcTemplates.html</code>
Height	700
Width	800

**NOTE:** This URL gives you access to the document creation utilities of the exteNd Director Content Management system.

- 8 Click **Save Preferences** to record your changes and return to the Layout Selector.
- 9 Click **Save Layout** to return to the Personalizer.

Now you are ready to test the portal page by creating a document and adding it to the content repository. Leave the Personalizer running in your browser and move to the next exercise.

### Creating a document in the content repository

In this exercise you will use your IFrame portlet to create an HTML document in the exteNd Director content repository. Your document will be based on a pre-existing document type called **News Article**, which you imported along with other content in the earlier exercise **“Importing folders and documents into the content repository”** on page 108.

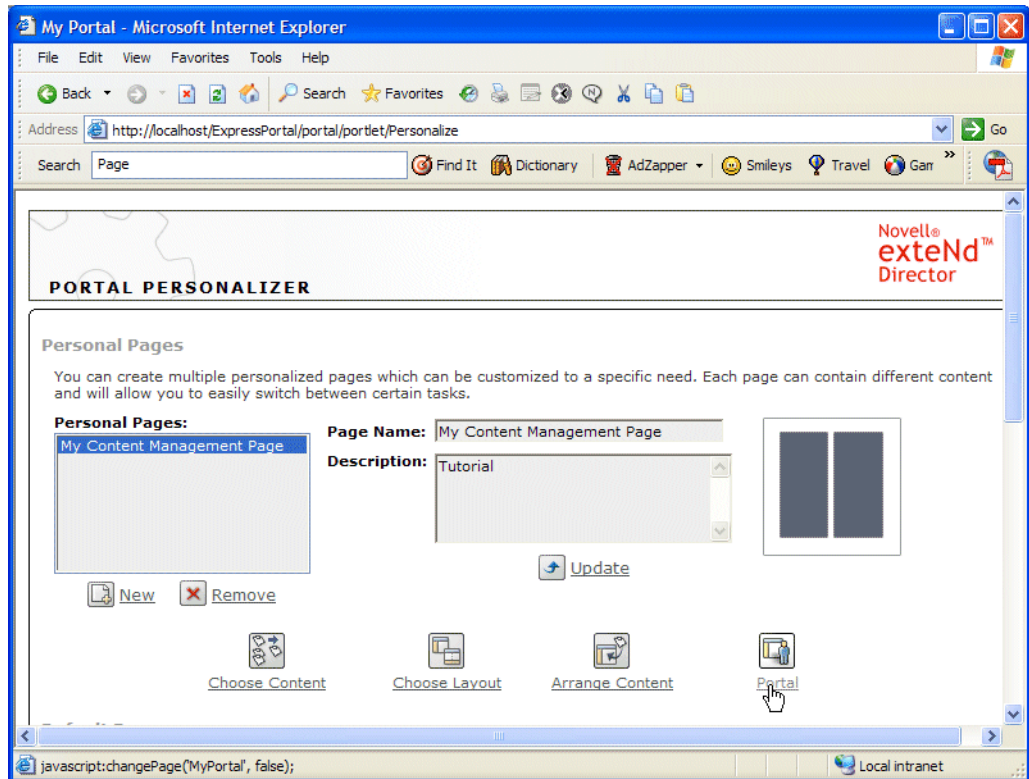
A document type is like a template, used to define custom fields and styles to associate with a group of documents. Custom fields are often used to speed up content queries because they can be searched quickly using a database lookup, as opposed to searching document text.

The document type News Article defines a custom field called **Department**. Using this field, you can specify the department that wrote the article. In this example, you will create a short news article for Human Resources and store the document in the Production folder for the Human Resources department.

After creating the document, you will publish it and view its content from your content browser portlet.

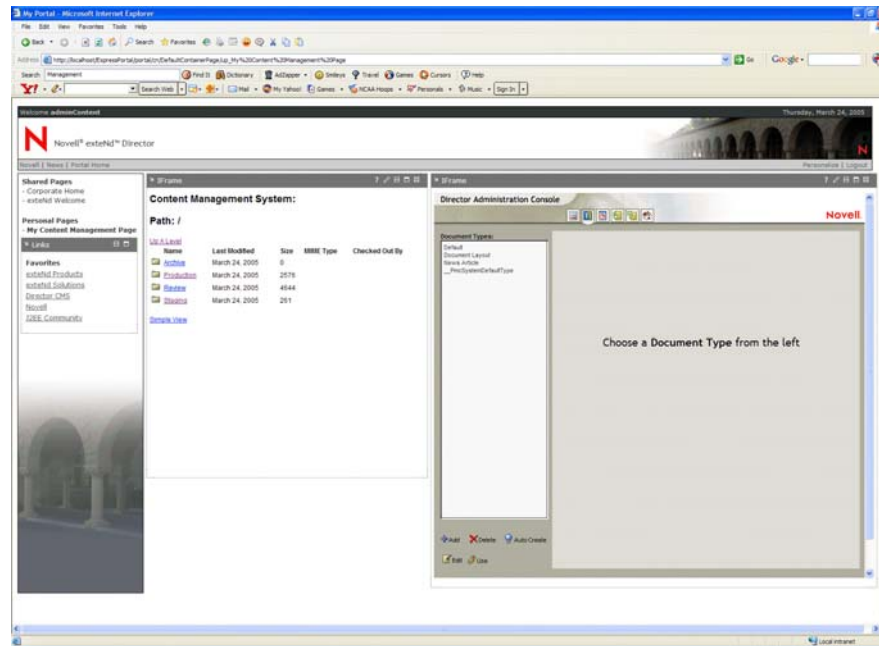
➤ **To create a new document in the content repository from your portal page:**

- 1 In the Portal Personalizer, click **Portal**.



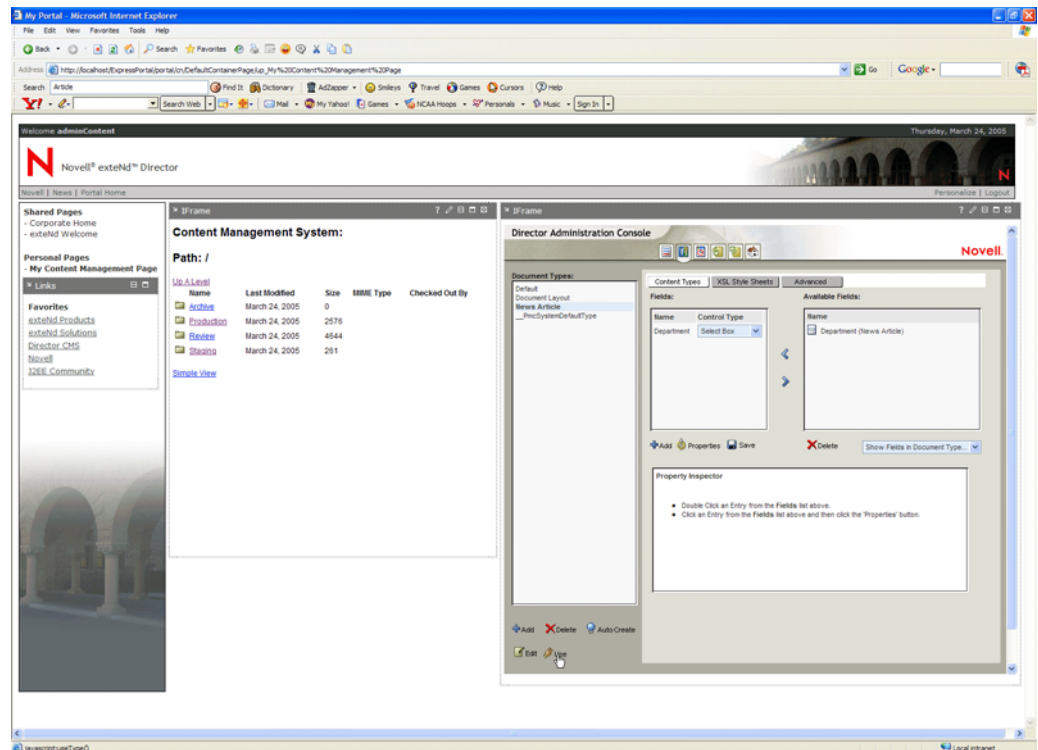
- 2 In the navigation area of the page, click **My Content Management Page**.

My Content Management Page, appears in the content area of your browser. The page displays the content browser on the left and the exteNd Director document creation utility on the right, as shown:



You may want to maximize your browser window to see the content of both portlets.

- 3 In the document creation portlet, select News Article in the Document Types list and click Use.



A create document dialog opens in a new window with the General tab selected.

- 4 In the General tab panel, enter the following values in the required fields:

Required field	What to specify
Name	Play
Title	Corporate Theatre Production
Author	adminContent
Folder	Follow these steps: <ol style="list-style-type: none"><li>1 Click the ellipsis next to the Folder field.</li><li>2 Navigate to <b>Default/Production/Human Resources</b>.</li><li>3 Select <b>Human Resources</b> and click <b>Done</b>.</li></ol>

- 5 Select the **Custom Fields** tab.

A panel appears showing the custom field **Department** along with a list of values you can assign to the field.

- 6 Select **Human Resources** from the list.

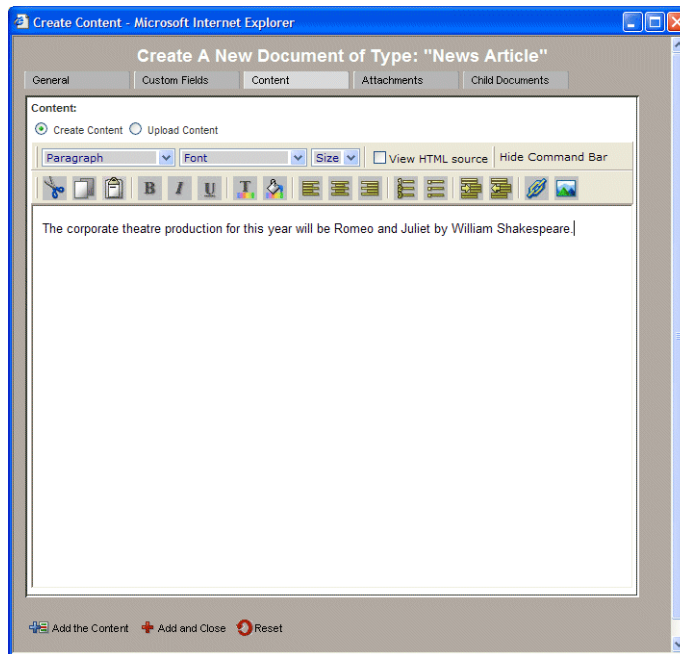
- 7 Select the **Content** tab.

The **Create Content** radio button should be selected by default.

- 8 Click inside the content area and type the following text:

The corporate theatre production for this year will be Romeo and Juliet by William Shakespeare.

Your content area should look like this:



- 9 Click **Add and Close** in the bottom tool bar

The document is added to the repository and the Create Content dialog closes.

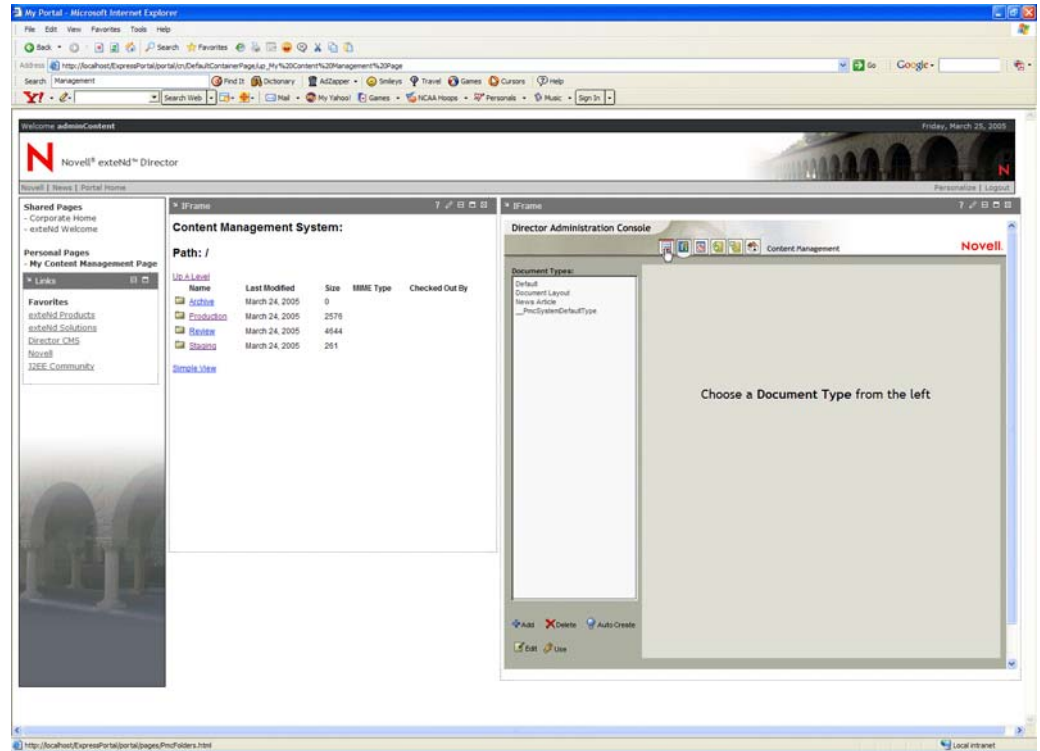
Now you are ready to publish the document you just created. Leave My Content Management Page open in your browser and move to the next exercise.

## Publishing your document

To view the content of a document in your content browser portlet, you must first publish the document. In this exercise you will learn how to publish a version of your document.

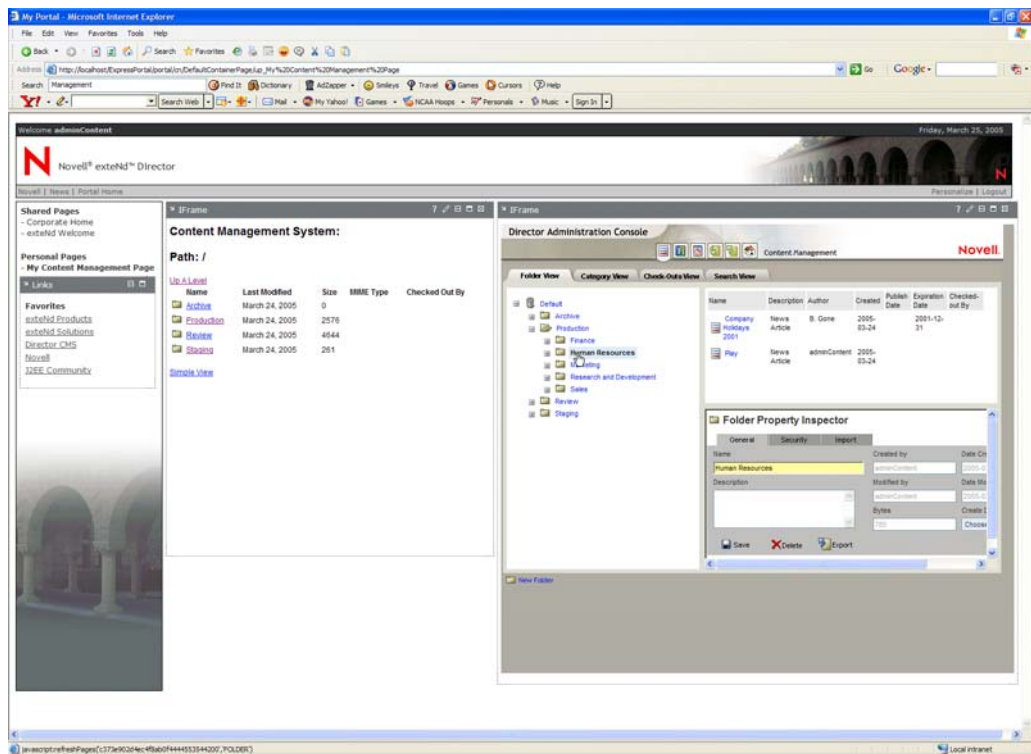
### ➤ To publish a document:

- 1 Back in your document creation portlet, click the Content Management icon:



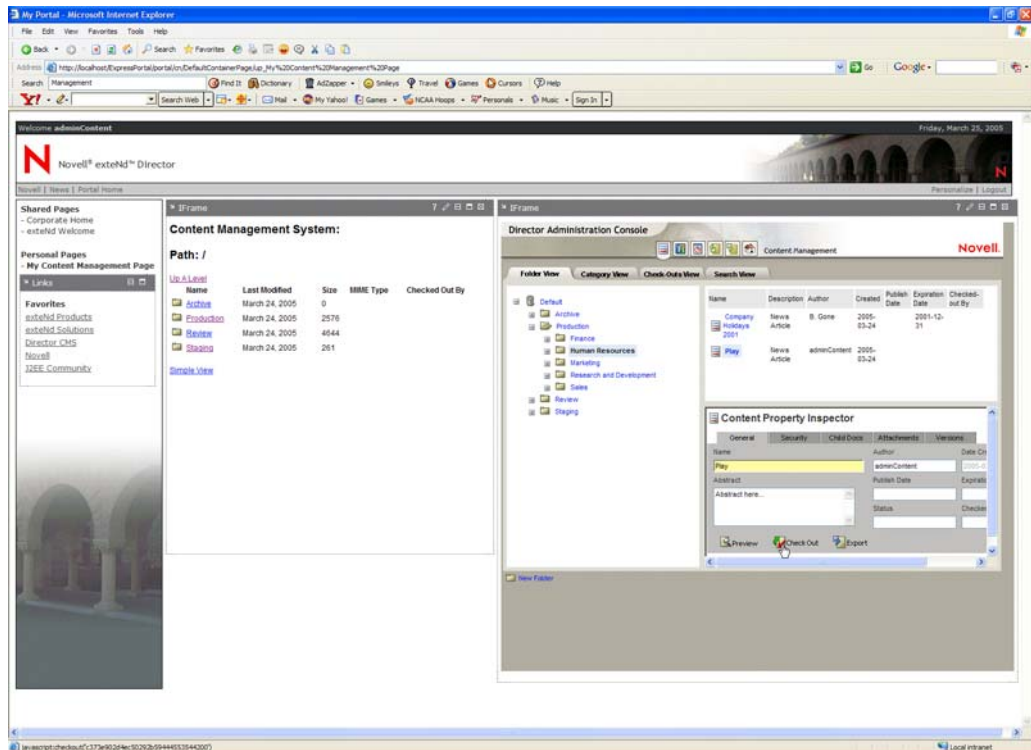
The Content Management tool opens in the IFrame portlet window.

- 2 In Folder View of the Content Management tool, navigate to and select **Default/Production/Human Resources**.



Your new file **Play** should appear in the list of documents in the upper right panel.

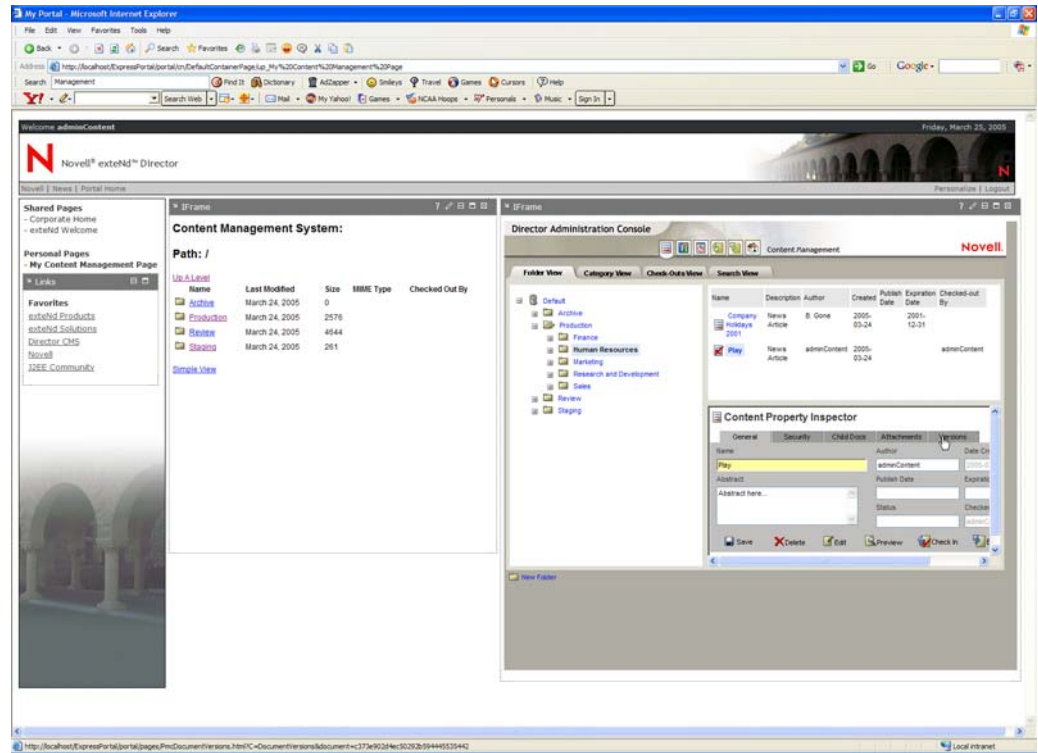
- 3 Select **Play**, then click **Check Out** in the Content Property Inspector.



A red check mark appears next to **Play** to indicate it has been checked out.

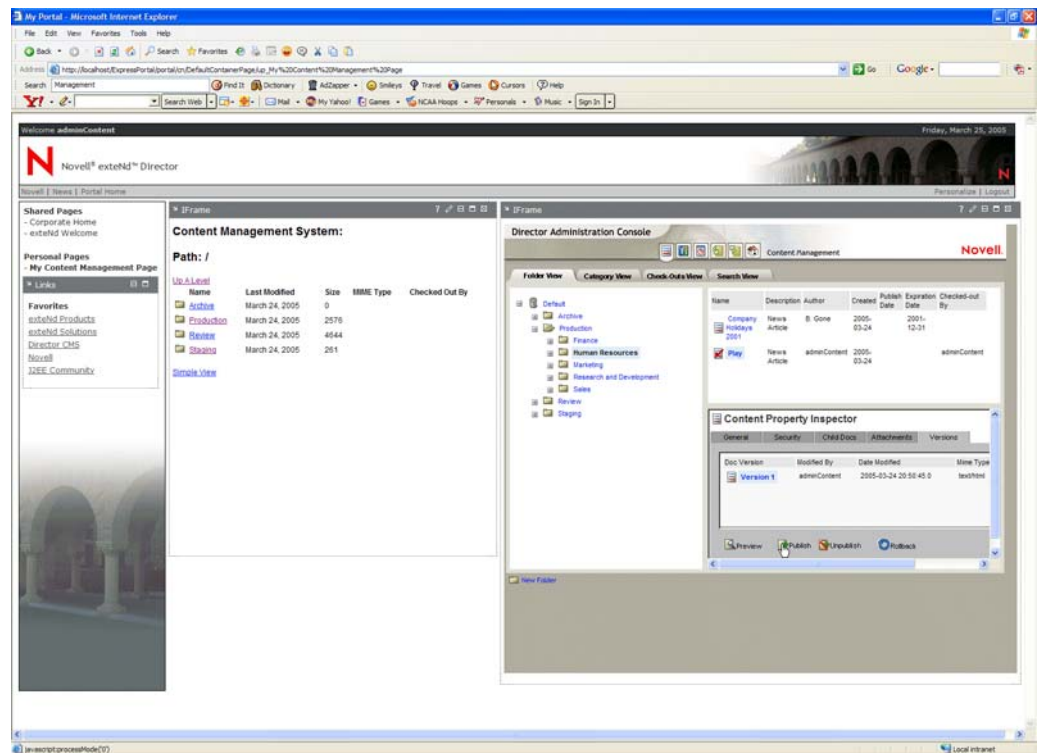
**NOTE:** Checking out a document locks it, preventing other users from modifying the content. You must check out a document before you can publish it.

- In the Content Property Inspector, select the Versions tab.



**TIP:** You may need to scroll right in the Content Property Inspector to bring the Versions tab into view.

- In the Versions panel of the Content Property Inspector select Version 1, then click Publish.



The Version 1 icon appears with a green border to indicate it has been published.

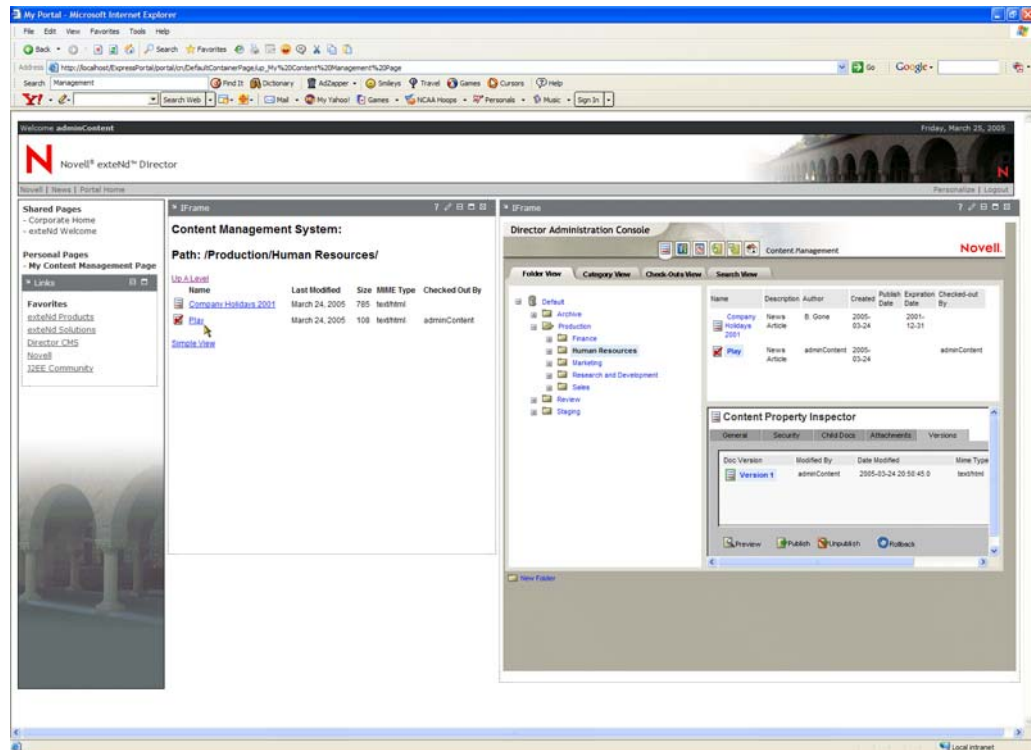
Now you are ready to open the new document in your content browser. Leave My Content Management Page open in your browser and move to the next exercise.

## Opening a document in the content browser portlet

In this exercise, you will navigate to your new document and open it in the content browser. You can view published content only.

### ➤ To open a document in the content browser

- 1 In the content browser on your personal page, navigate to and select **Production/Human Resources**—the folder in the content repository where you created the new document. The document **Play** should appear in the list of documents:

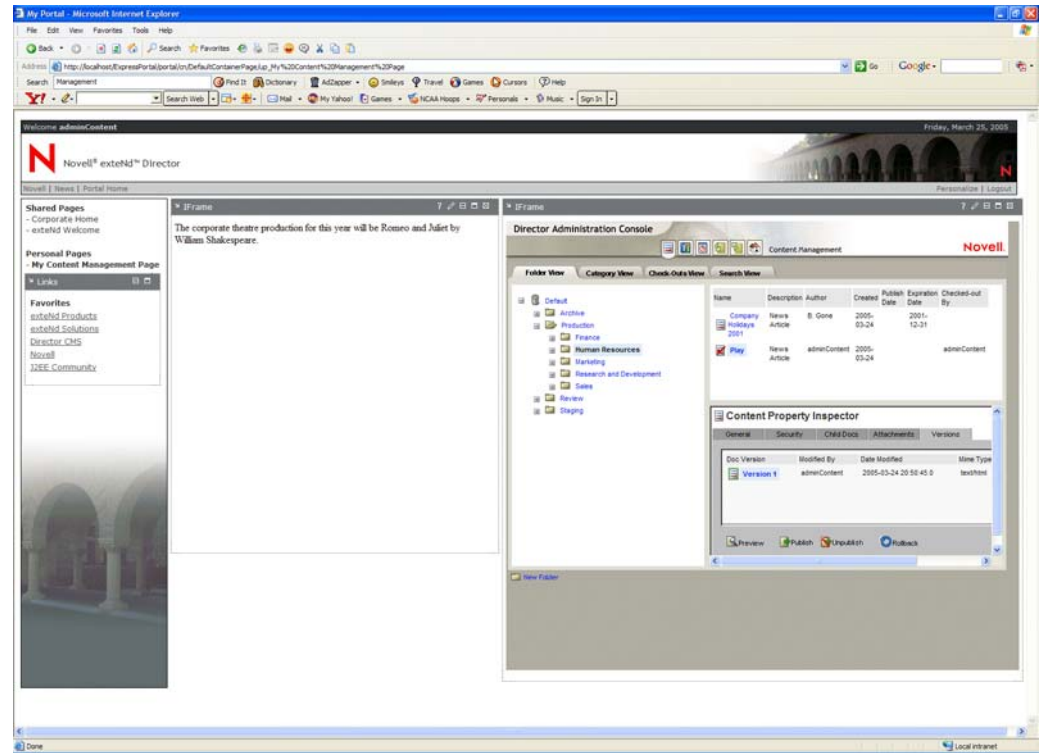


**NOTE:** As you can see, the content browser accurately reflects the status of the document **Play**—specifically, that it is currently checked out to **adminContent**. Since you are the user who checked out the document, you will be able to open it in the content browser.

- 2 Click **Play** in the content browser.



The content you entered for this document appears in the content browser window:



- 3 Use the Back button of your browser to move up a level to Production/Human Resources in the content repository.
  - 4 Back in the document creation portlet, select the **General** tab in the Content Property Inspector.  
**TIP:** You may need to scroll left in the Content Property Inspector to bring the General tab into view.
  - 5 Select **Play**, then click **Check In** in the Content Property Inspector.  
**TIP:** You may need to scroll right in the Content Property Inspector to bring the Check In icon into view.
- The document is checked in.
- 6 Refresh the content browser portlet to update the status of the Play document.  
**TIP:** Right-click in the content browser portlet window and select **Refresh**.
  - 7 Close the browser.

## What to do next

- ◆ Use the Content Selector to change the name of your second IFrame portlet from IFrame to **Content Creator**.  
**TIP:** The instructions for changing the name of a portlet that you add to a page appear in the procedure for **"Adding an IFrame portlet to a page using the Content Selector tool" on page 113**.
- ◆ [Create a container page.](#)
- ◆ [Brand a container page.](#)
- ◆ [Learn how to develop a custom portlet.](#)
- ◆ [Create shortcuts with images from a resource set](#)
- ◆ [Use the Shortcut portlet for form-based authentication](#)



# Creating shortcuts with images from the resource set

## Objective

To use scoped paths in the Shortcut portlet for creating dynamic URLs using images from the resource set.

A *Shortcut portlet* generates a list of shortcut links to Web resources and local applications.

*Scoped paths* are constructs that allow you to quickly access persistent and nonpersistent data in exteNd Director applications using XPath-like expressions.

A *resource set* is a location in an exteNd Director project containing application resources that are not stored in a database or defined in the configuration and service files. For example, resource sets can store portlets, pageflows, styles, images, and Java classes.

**Before you begin** See [“About exteNd Director Tutorials”](#)

**Audience** This section is for all users, whether or not they have administrative privileges.

## Concepts

- ◆ [Working with portal pages](#)
- ◆ [About the Portal Personalizer](#)
- ◆ [Resource sets](#)
- ◆ [Scoped paths](#)
- ◆ [Working with installed portlets](#)

## Exercises

- ◆ [Creating a personal page](#)
- ◆ [Adding a Shortcut portlet to your personal page](#)
- ◆ [Configuring a Shortcut portlet to create dynamic URLs with images](#)
- ◆ [Testing the dynamic image URL](#)

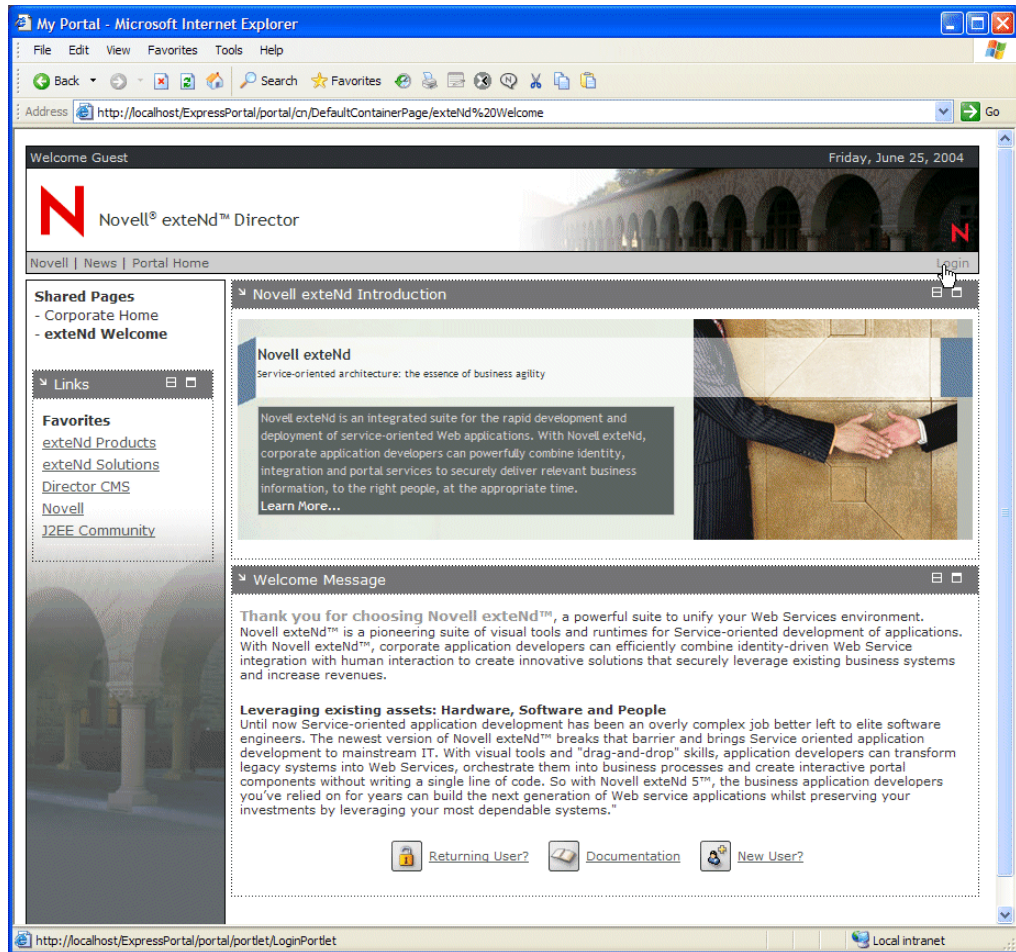
### Creating a personal page

In this exercise, you will create a new personal page. Later, you will add a Shortcut portlet to this page.

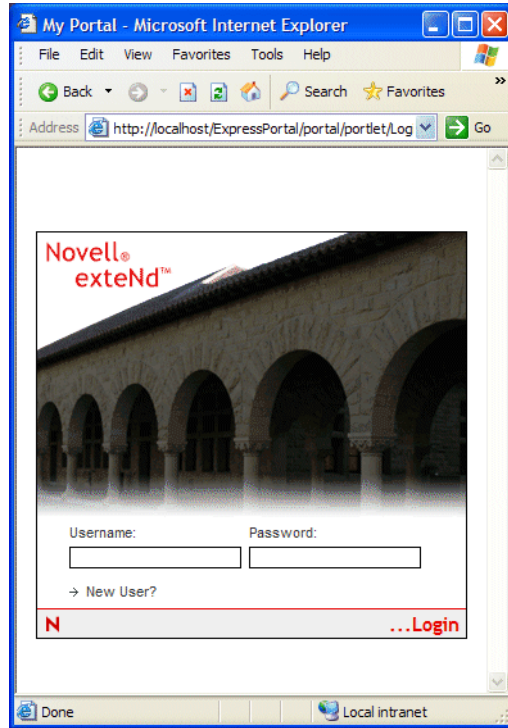
➤ **To create a personal page:**

- 1 Start the exteNd Application Server where the Express Portal application has been deployed.
- 2 Start a browser.

- 3 Start the Express Portal application by entering this URL in your browser:  
**http://host/ExpressPortal**  
The default page for a guest user opens in your browser.
- 4 Click Login.



The Login dialog opens in your browser:



- 5 Log in as an authorized user, then click **login** or the **Enter** key.  
**TIP:** If you need to create a user, see the exercise on [adding a new user](#).  
The default page for the user you specified opens in your browser.

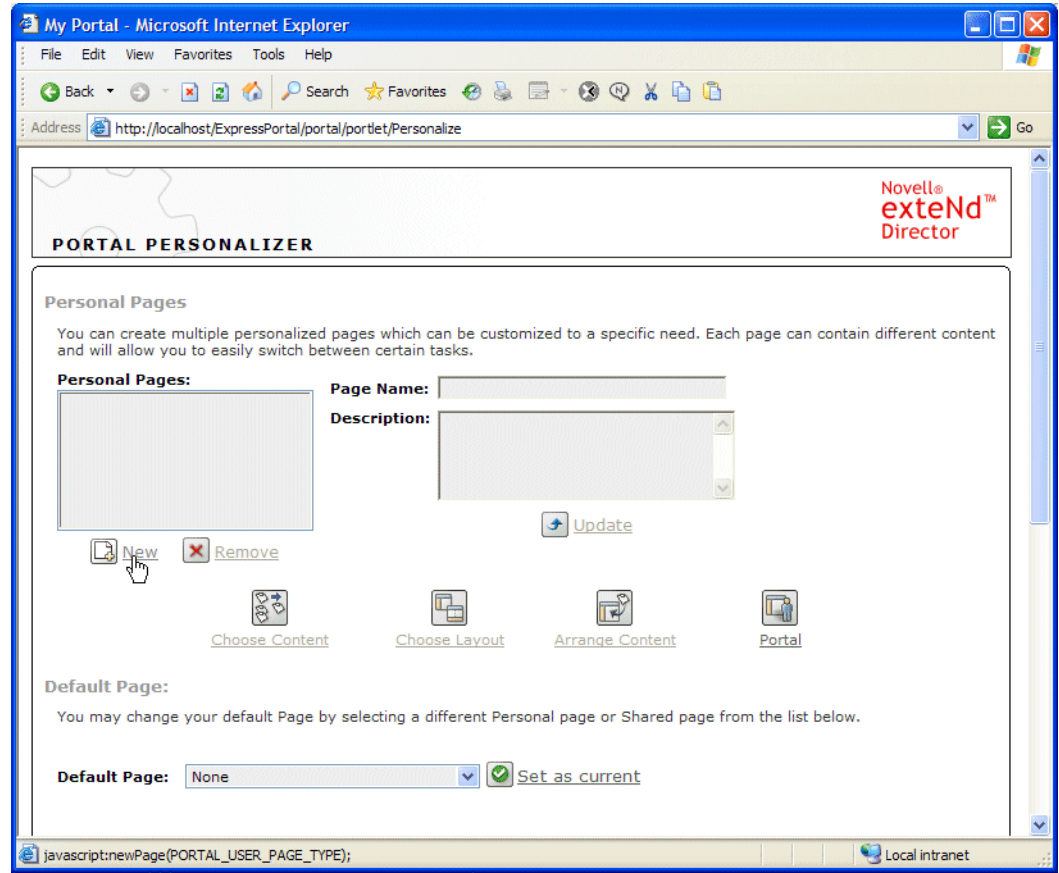
6 On the default page, select **Personalize**.



**NOTE:** This is the default page for a user who is not an administrator. Your default page will look different if you logged in as an administrator, but the Personalize option is still available in a similar location on the page.

The Portal Personalizer opens in your browser.

- 7 Under Personal Pages select New.



An untitled page is added to the list of personal pages.

- 8 Enter the following properties for the new page:

Property	What to specify
Page Name	My Shortcut Page
Description	Tutorial

- 9 Click **Update**.

The new page appears in the list of personal pages.

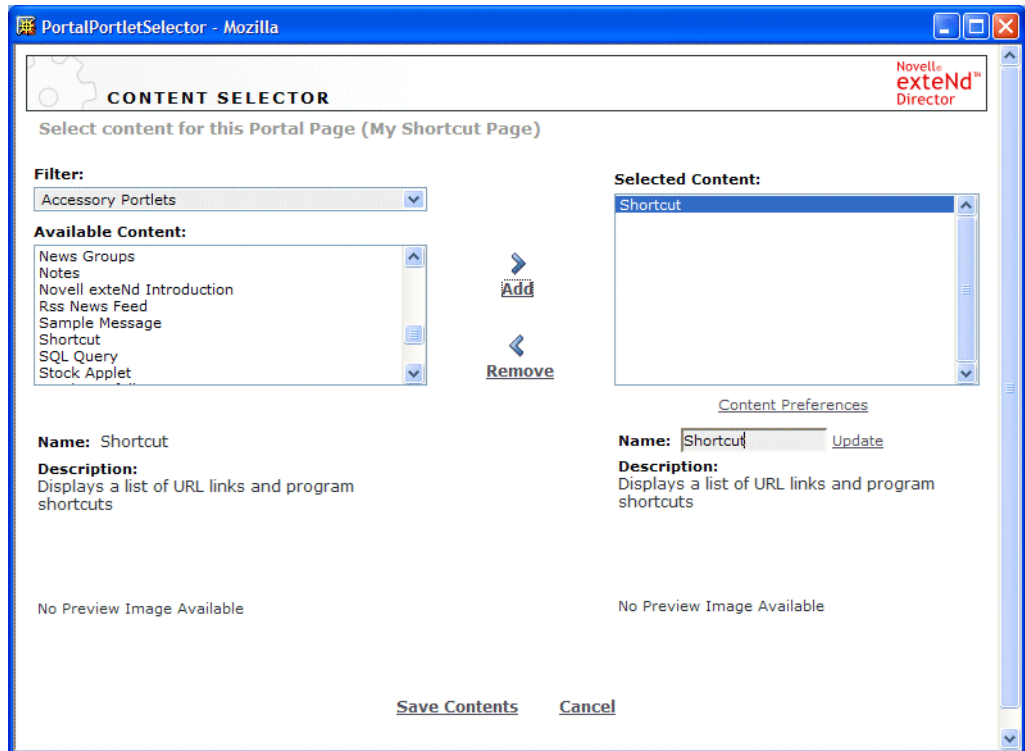
Now you are ready to add a Shortcut portlet to your personal page. You will configure the portlet to display dynamic URLs using an image from the Express Portal project's resource set. Leave the Personalizer running and move to the next exercise.

## Adding a Shortcut portlet to your personal page

### ➤ To add a Shortcut portlet to a personal page:

- 1 Select **My Shortcut Page** in the Personal Pages list and click **Choose Content**. The Content Selector displays in a new window.
- 2 From the Filter dropdown list choose **Accessory Portlets**.
- 3 From the Available Content list select **Shortcut** and add it to the page by clicking **Add**.

Your Content Selector window should look like this:



Now you are ready to configure the Shortcut portlet to create dynamic URLs with images. Leave the Content Selector open and move to the next exercise.

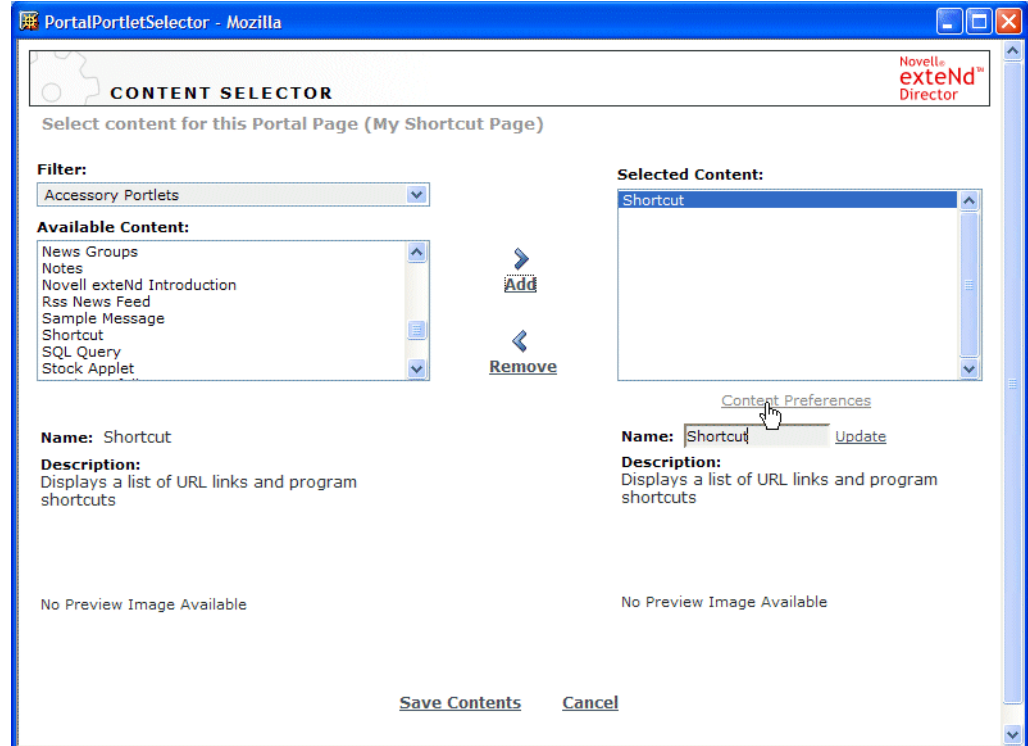
## Configuring a Shortcut portlet to create dynamic URLs with images

In this exercise you will configure the Shortcut portlet to create dynamic URLs with an image from the Express Portal project's resource set. You will use the predefined [Resource Set scoped path](#) which accesses persistent data stored in your exteNd Director project resource set.



➤ To create a dynamic URL with an image:

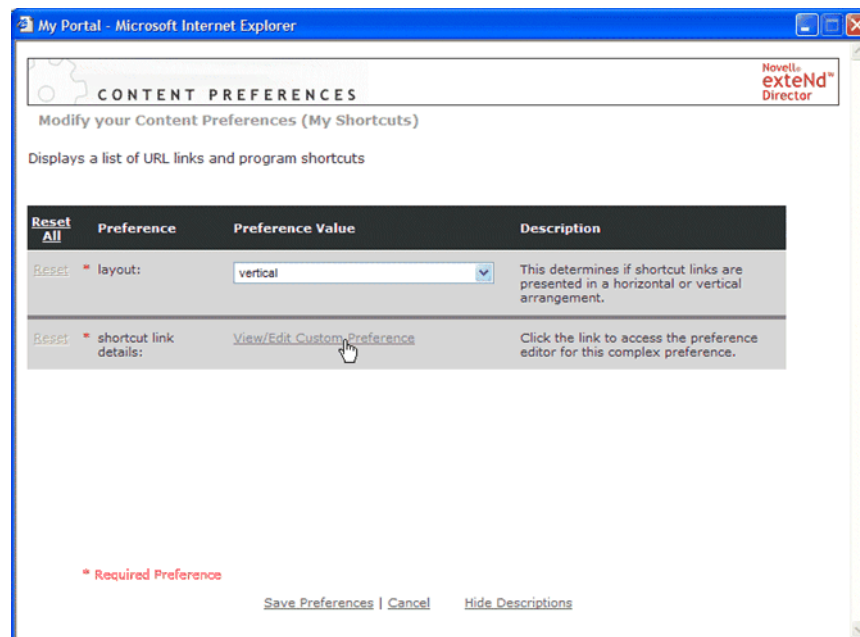
- 1 In the Content Selector, select the **Shortcut** portlet in the Selected Content list and click **Content Preferences**.



The Content Preferences sheet opens.

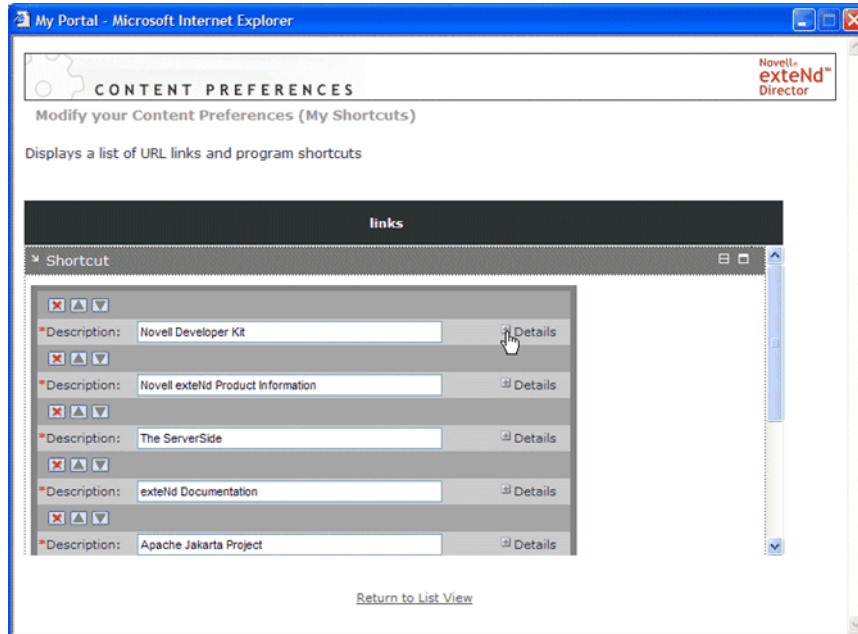
**TIP:** To get more information about each preference, click **Descriptions** at the bottom of the sheet.

- 2 In the Preference Value column for the shortcut link preference, click the **View/Edit Custom Preference** link.



A second preference sheet opens in your browser containing a set of predefined shortcuts, each with its own set of preferences. You can also add new shortcuts.

- 3 Display the preferences for the first predefined shortcut—**Novell Developer Kit**— by clicking the plus sign to the left of Details.



The preferences for the Novell Developer Kit shortcut are displayed on the preference sheet.

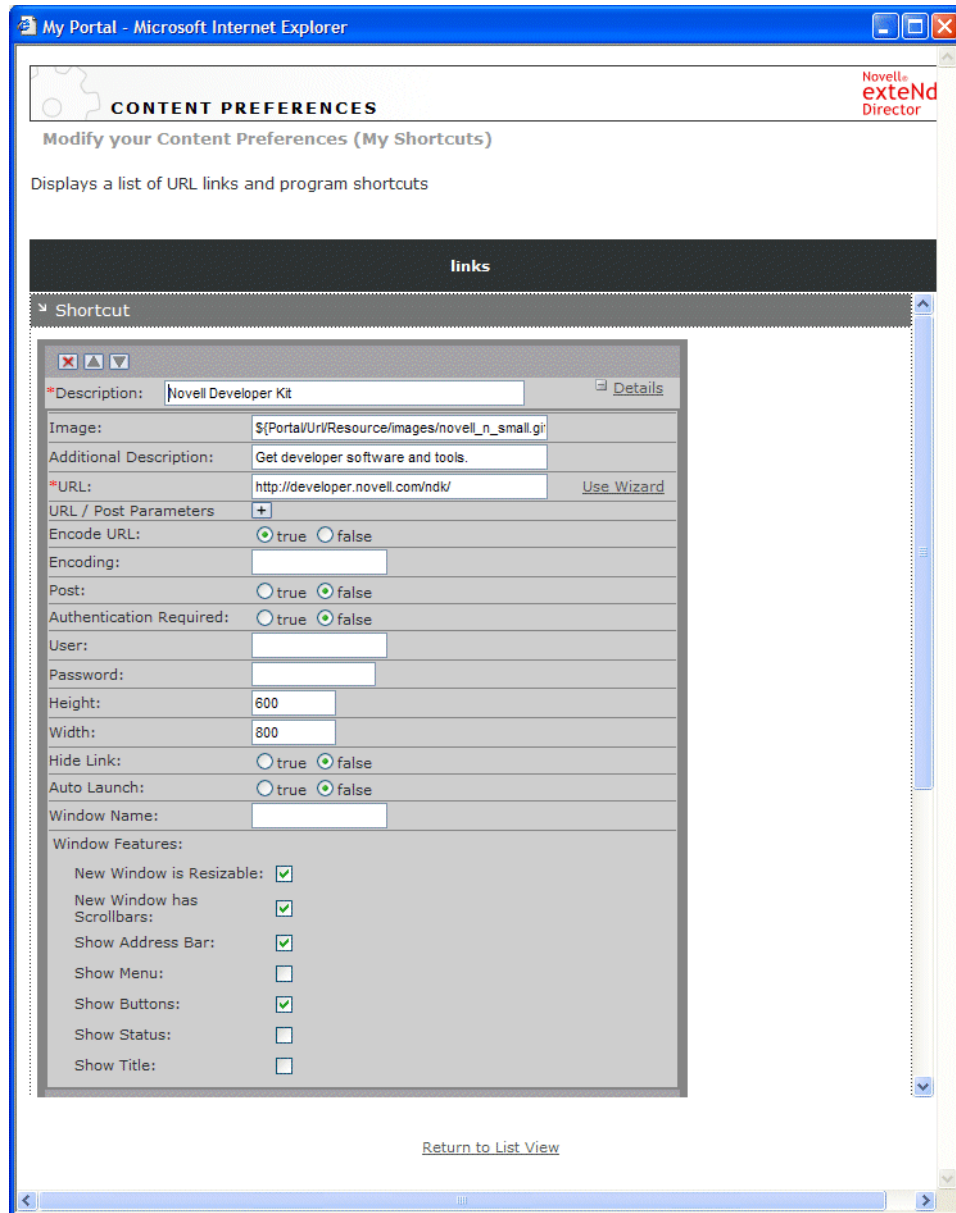
**TIP:** To view descriptions for each preference, scroll to the bottom of the preference sheet and click **Show Descriptions**.

- 4 In the Image field for the Novell Developer Kit shortcut, enter the following scoped path:

```
${Portal/Url/Resource/images/novell_n_small.gif}
```

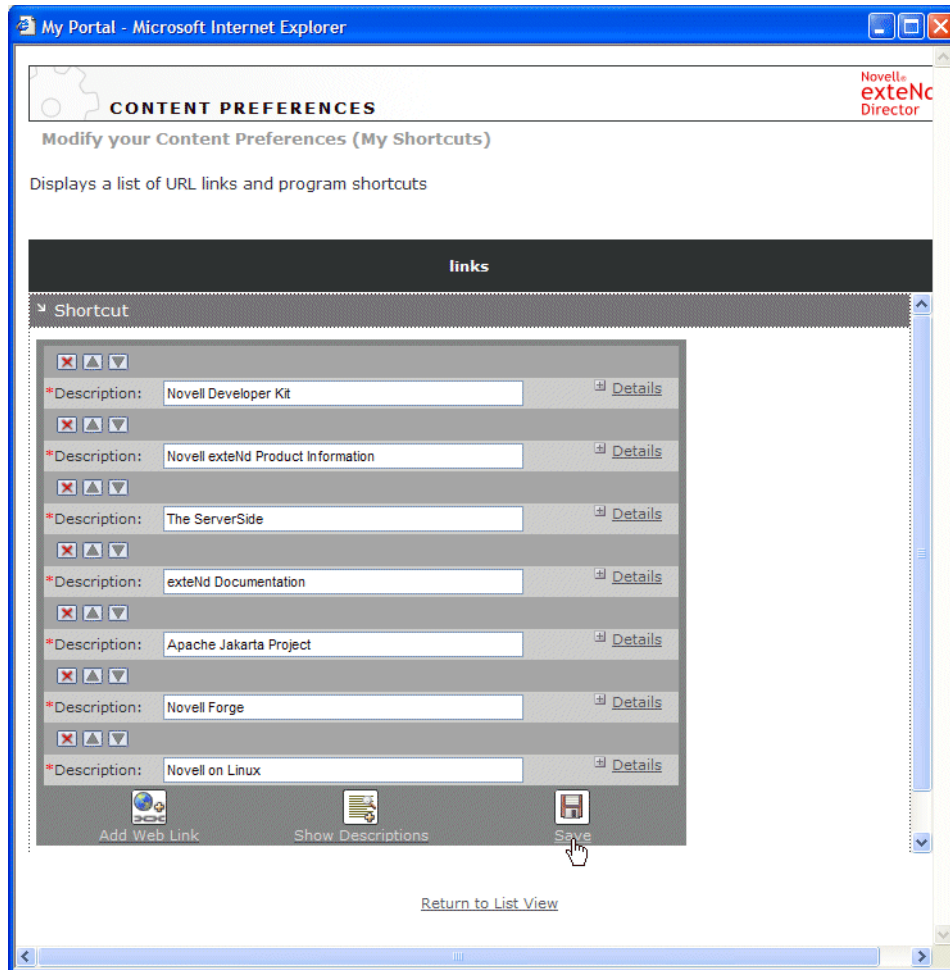
**NOTE:** The syntax for entering a scoped path in a portlet preference is *`\${scoped path}*. In this example, the scoped path **Portal/Url/Resource/images/novell\_n\_small.gif** accesses a GIF image in the Portal application's resource set. As its name suggests, the image is a small version of the Novell logo (red **N**).

Your preference sheet should look like this:



- 5 Close the preferences for the Novell Developer Kit shortcut by clicking the minus sign to the left of Details.
- 6 Repeat **Step 3** through **Step 5** for the other predefined shortcuts to Novell sites that appear on the preference sheet:
  - 6a Novell exteNd Product Information
  - 6b exteNd Documentation
  - 6c Novell Forge
  - 6d Novell on Linux

- 7 Scroll to the bottom of the preference sheet and click the **Save** button.



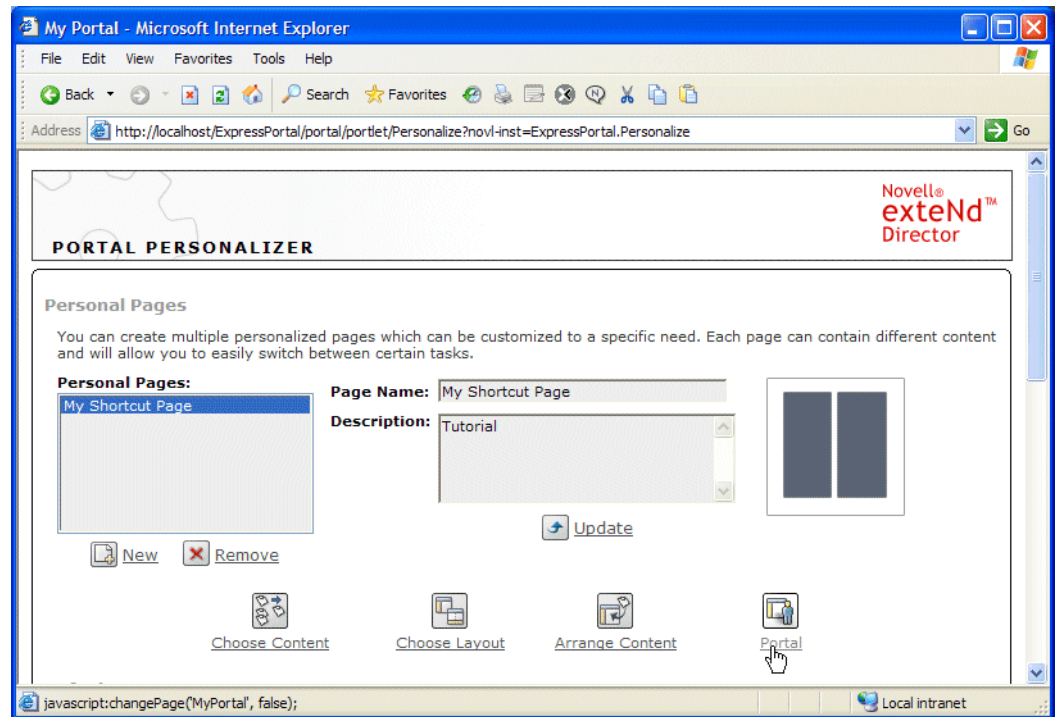
- 8 Click **Return to List View**.
- 9 Click **Save Preferences**.  
Your changes are recorded and you return to the Content Selector.
- 10 Click **Save Contents** to dismiss the Content Selector.

Now you are ready to test the dynamic image URL you just created in your My Shortcuts portlet. Leave the Portal Personalizer running and move to the next exercise.

## Testing the dynamic image URL

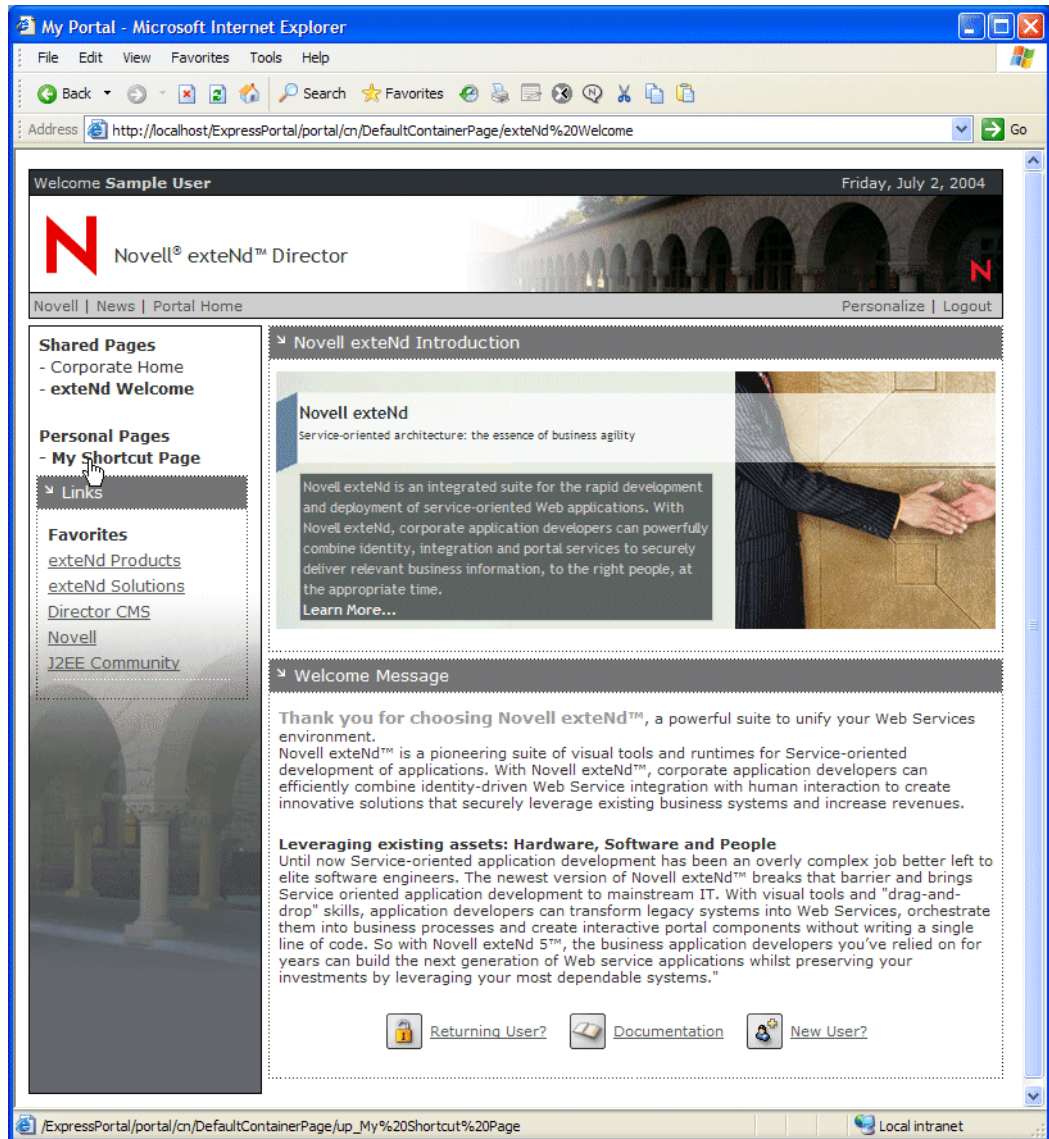
➤ To test the dynamic image URL:

- 1 In the Portal Personalizer, click **Portal**.

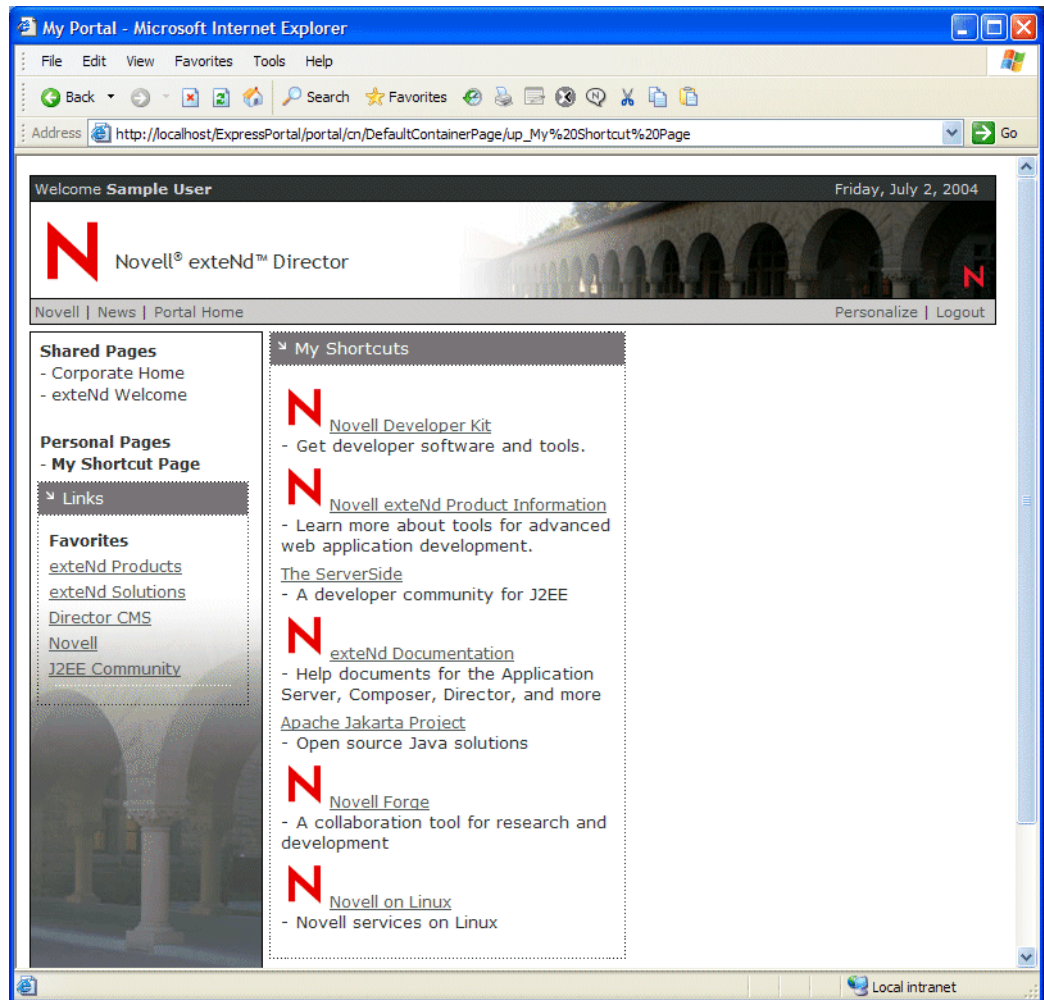


Your default portal page opens in the browser.

- 2 Select **My Shortcut Page** under **Personal Pages** in the navigation list.

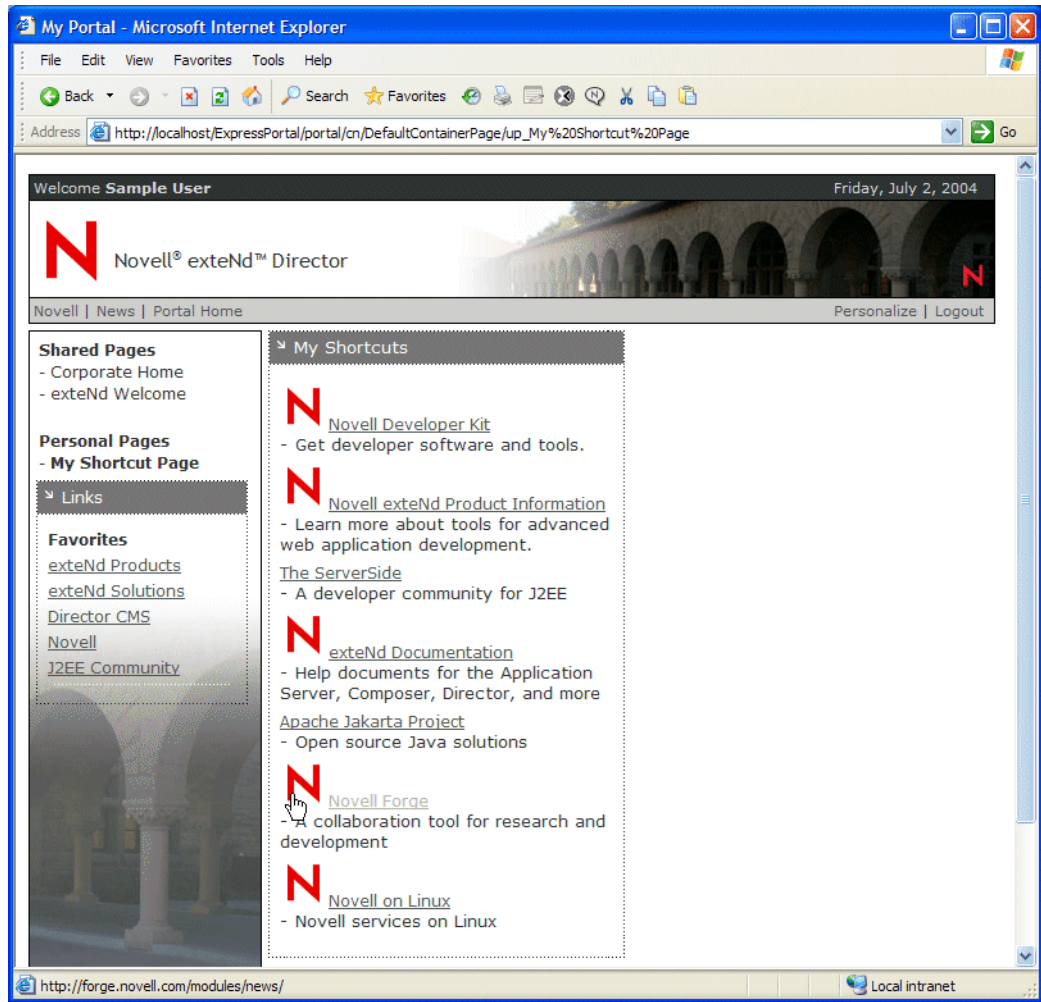


My Shortcut Page appears in the content area of your browser, displaying all the predefined shortcuts in the My Shortcuts portlet window. Note that the Novell logo image (red N) appears next to each of the predefined Novell shortcuts:



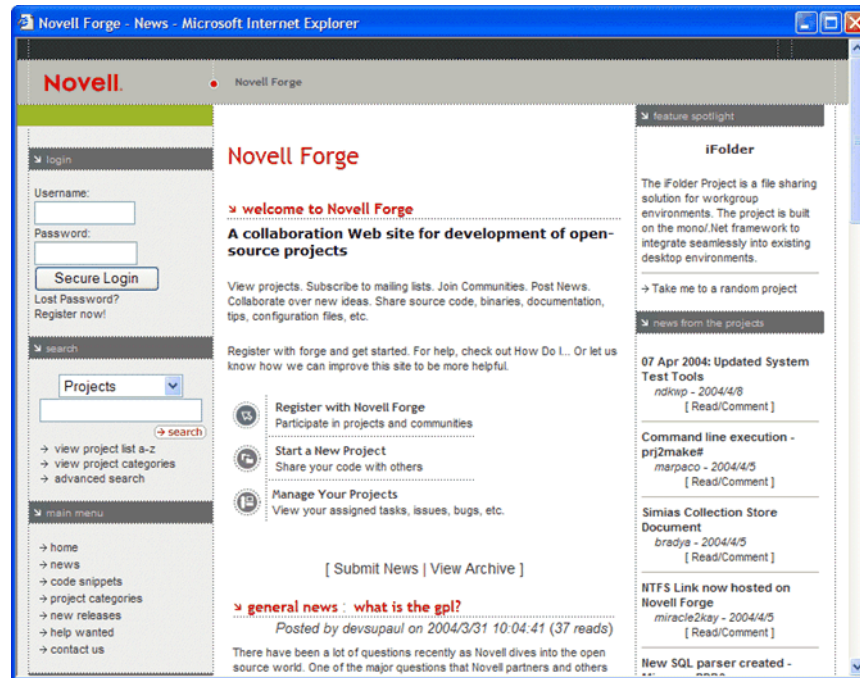
Each logo image is a dynamic link to the associated Web page or application specified in the shortcut.

3 Click the red **N** next to Novell Forge.





- 4 The Novell Forge Web site opens in a new browser window, as in this example:



**TIP:** To learn how to register with Novell Forge and log in using form-based authentication, see the tutorial ["Using Shortcut portlets for form-based authentication" on page 71](#).

## What to do next

- ◆ Add an image to the Express Portal project resource set and use it to create a dynamic URL in a shortcut.  
**TIP:** You can add the supplied image `new_logo.gif` to the resource set, as described in the exercise ["Adding new branding images to the Express Portal project" on page 47](#). Then, you can reference that image using the following scoped path:  

```
#{Portal/Url/Resource/images/new_logo.gif}
```
- ◆ [Create a content management page using IFrame portlets](#)
- ◆ [Configure portlets for form-based authentication](#)
- ◆ [Learn about shared pages.](#)
- ◆ [Learn about container pages.](#)
- ◆ [Create a container page.](#)
- ◆ [Brand a container page.](#)
- ◆ [Learn how to develop a custom portlet.](#)



# IV

## Working with Pageflows and Forms

Choose an exercise for a topic you want to learn about:

- [Creating a Database Pageflow](#)
- [Customizing Pageflow-generated Forms](#)
- [Using the Form Designer Wizard](#)



# Creating a Database Pageflow

## Objective

To create a database pageflow using the Database Pageflow Wizard.

The pageflow you create in this exercise accesses two tables that are related by a one-to-many (**master/detail**) relationship. When you build a database pageflow that combines data from tables that have a master/detail relationship, the wizard generates **multiple pageflow processes**, one for each level within the query.

Before creating the pageflow, you first need to create a database that has two tables that have a master/detail relationship. In addition, you need to create a connection pool and a database profile.

**NOTE:** The Director52Tutorial.zip file includes a SQL file called **DBPageFlowTutorial.sql** that you can use to create the database for this exercise. Details for loading and executing this file are provided below.

**Before you begin** See [“About exteNd Director Tutorials”](#).

## Concepts

- ◆ [About Pageflows and XForms](#)
- ◆ [About the Database Pageflow Wizard](#)

## Exercises

- ◆ [To create the database required for this exercise:](#)
- ◆ [To create a connection pool for the database:](#)
- ◆ [To create a database profile:](#)
- ◆ [To create the database pageflow:](#)
- ◆ [To create a personal page that displays the portlet for the pageflow:](#)
- ◆ [To test the pageflow:](#)

➤ **To create the database required for this exercise:**

- 1 Start MySQL monitor in a command window:

Platform	Instructions
Linux	Navigate to the MySQL/scripts folder and run the StartMySQLClient.sh script. For example, to login with the user <code>root</code> and password <code>novell</code> , you would execute this command: <pre>StartMySQLClient root novell</pre>
Windows	Navigate to the MySQL\bin folder and run the mysql executable. For example, to login with the user <code>root</code> and the password <code>novell</code> , you would type this command: <pre>mysql -uroot -pnovell</pre>

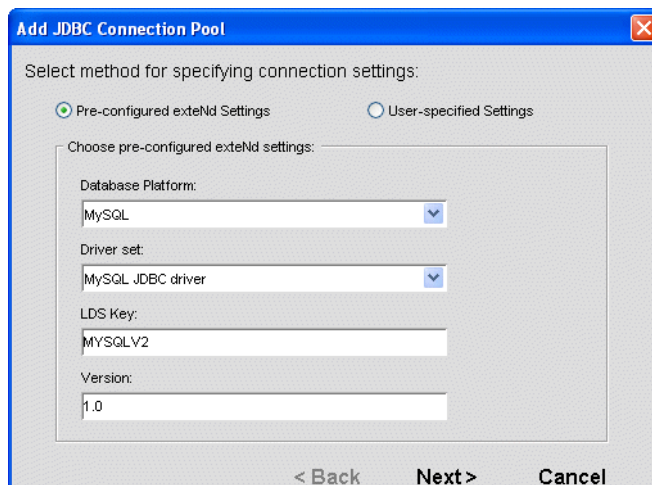
- 2 Create the database for the tutorial by executing the DBPageFlowTutorial.sql script:

```
source c:\sql\DBPageFlowTutorial.sql
```

**NOTE:** The **DBPageFlowTutorial.sql** file is included in the Director52Tutorial.zip file. You need to extract this file to a location on disk (such as `c:\sql`) before you execute the script.

➤ **To create a connection pool for the database:**

- 1 Start the application server.  
**TIP:** Click the **Start** menu and navigate to **Novell exteNd 5.2.1>AppServer>Application Server**.
- 2 Start the **SMC**.  
**TIP:** Click the **Start** menu and navigate to **Novell exteNd 5.2.1>AppServer>Server Management Console**.
- 3 Select the **Configuration** icon from the toolbar, if it's not selected already.
- 4 Click **Pools**.
- 5 Choose **JDBC** and click **Add**.
- 6 Select the **Pre-configured exteNd Settings** radio button, if it's not selected.
- 7 Select **MySQL** as the database platform and use the default settings for this platform.



- 8 Click **Next**.

- 9 Specify **TutorialDB** as the pool name and enter the root user ID and password for MySQL.

The screenshot shows a dialog box titled "Add JDBC Connection Pool". It has a blue title bar with a close button. The main area is light gray. On the left, there are three input fields: "Pool Name:" with "TutorialDB", "User Name:" with "root", and "Password:" with "\*\*\*\*\*". Below these are two checkboxes: "Global Transaction (XA)" and "Optimize Connection Pooling", both of which are unchecked. On the right side, there is instructional text: "Enter the pool name, user id and password to be used." and "Also specify if the connection pool will participate in global transactions (default is true). If true, specify if pool optimization is to be used." At the bottom, there are three buttons: "< Back", "Next >", and "Cancel".

- 10 Click **Next**.

- 11 Enter this string as the JDBC URL:

```
jdbc:mysql://localhost:63306/tutorialdb?profileSql=false&maxRows=0
```

The screenshot shows the same dialog box, but now the "JDBC Driver:" field contains "com.mysql.jdbc.Driver", the "JDBC URL:" field contains "jdbc:mysql://localhost:63306/tutorialdb?profileSql=false&maxRows=0", and the "JDBC URL attributes:" field is empty. The instructional text on the right is: "Enter the JDBC driver settings. See your JDBC driver manual for more information. For the JDBC URL, substitute the %...% parts with the appropriate pieces of information." The navigation buttons at the bottom are the same.

- 12 Click **Next**.

- 13 Click **Next** on each subsequent panel to accept the default settings.

- 14 On the final panel of the connection pool wizard, click **Finish**.

➤ **To create a database profile:**

- 1 Start exteNd Director.

**TIP:** Click the **Start** menu and navigate to **Novell exteNd 5.2.1>Director>Director Designer**.

- 2 Open the Express Portal project if it's not open already.

- 3 Select **Profiles** from the **Tools** menu.

- 4 Choose the **Databases** tab and click **New**.

- 5 Specify **TutorialDB** as the profile name.

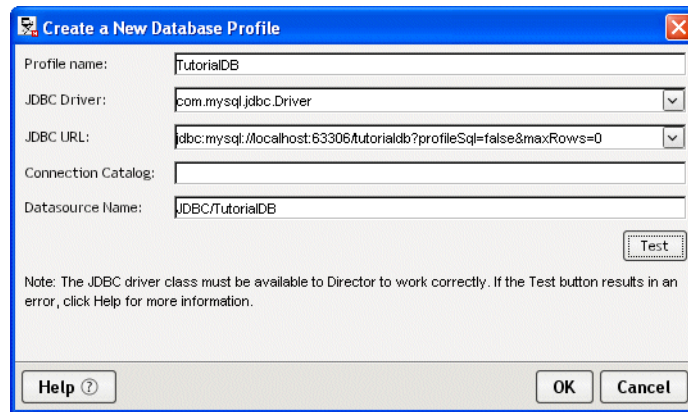
- 6 Select **com.mysql.jdbc.Driver** as the JDBC driver.

- 7 Enter this string as the JDBC URL:

```
jdbc:mysql://localhost:63306/tutorialdb?profileSql=false&maxRows=0
```

- 8 Enter this string as the datasource name:

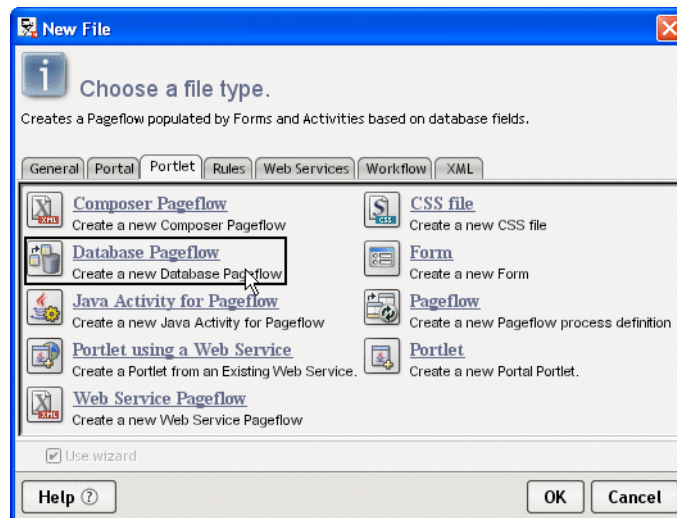
JDBC/TutorialDB



- 9 Click Test to be sure your settings are correct.
- 10 If the test is successful, click **OK** to save the settings.
- 11 Click **OK** to close the Profiles dialog.

➤ **To create the database pageflow:**

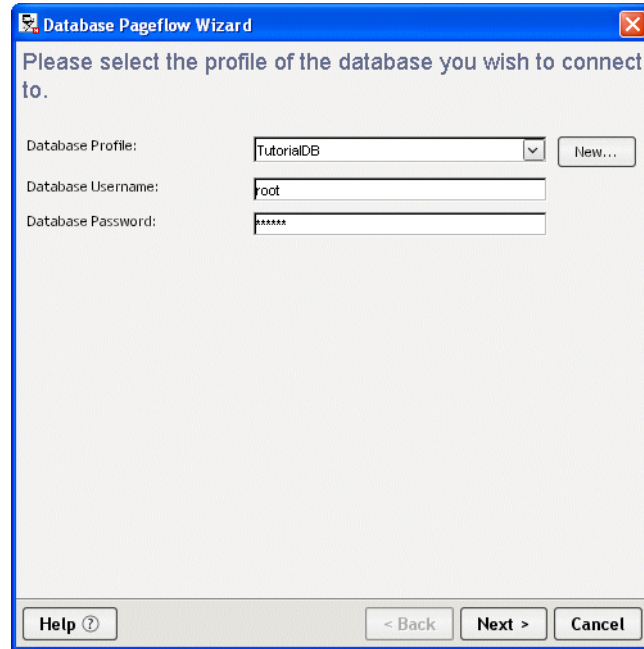
- 1 With the Express Portal project open in exteNd Director, select **File>New>File**.
- 2 Click the **Portlet** tab.
- 3 Select **Database Pageflow** and click **OK**:



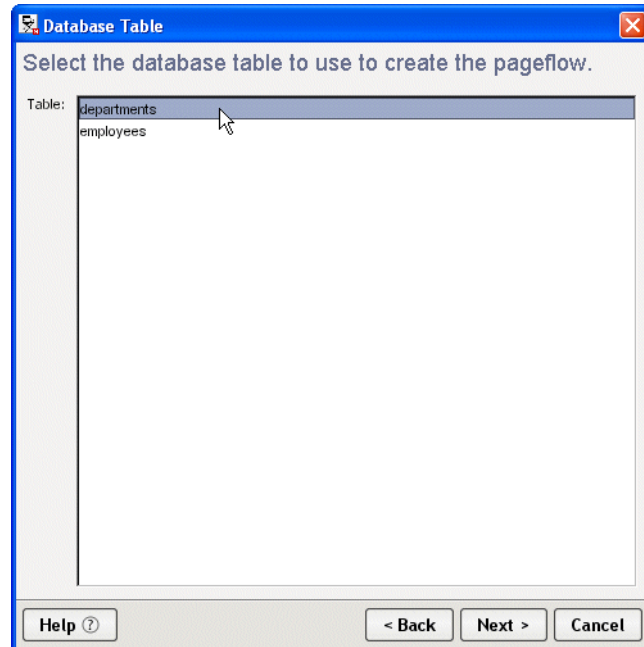
- 4 Select **TutorialDB** as the database profile enter the root user ID and password for MySQL.



5 Click Next.



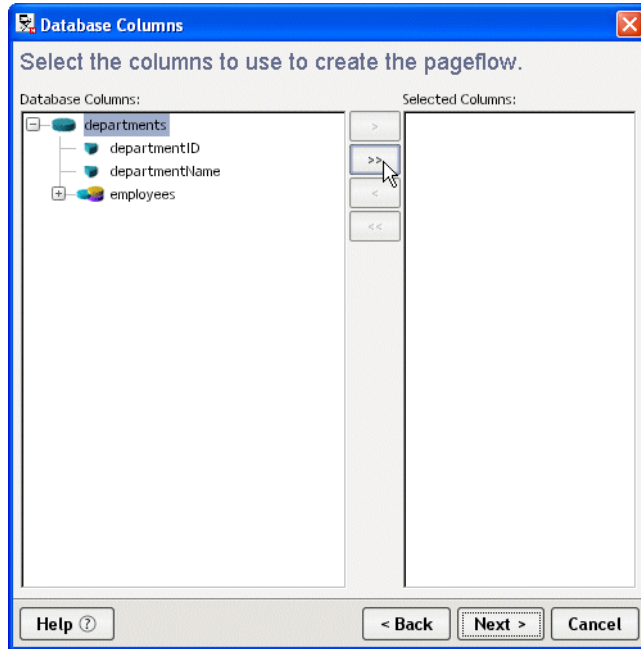
6 Select departments as the primary table for your pageflow.



7 Click Next.

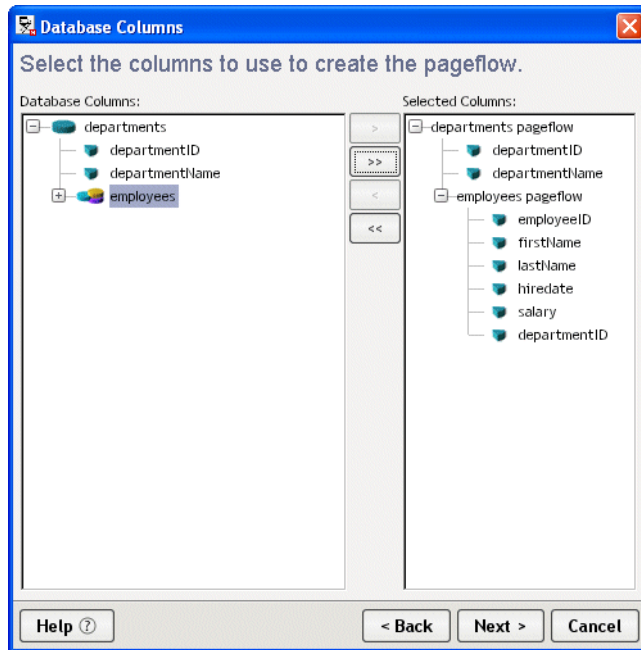
The Database Columns dialog displays, showing any tables directly related to the primary table, along with columns defined on these tables.

- 8 Select **departments** in the Database Columns box and add all columns for this table:



- 9 Select **employees** in the Database Columns box. Add all columns for this table just as you did for the departments table.

The Selected Columns list should show all of the columns for both tables in the database:



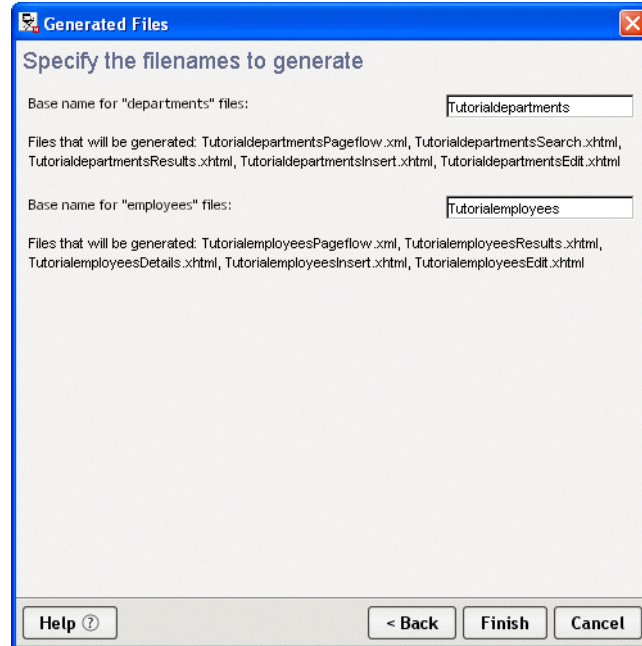
- 10 Click **Next**.  
11 Click **Next** to accept the default settings on the UI Options panel.  
12 Click **Next** to accept the default settings on the Specify Formatting panel.

These settings control the appearance of controls on the Search, View Details, Edit Record, and New Record forms.

- 13 Click **Next** to accept the default settings on the Column Details panel.  
14 Click **Next** to accept the default settings on the Update Strategy panel.

- 15 Type the prefix **Tutorial** in front of the words departments and employees on the Generated Files panel.

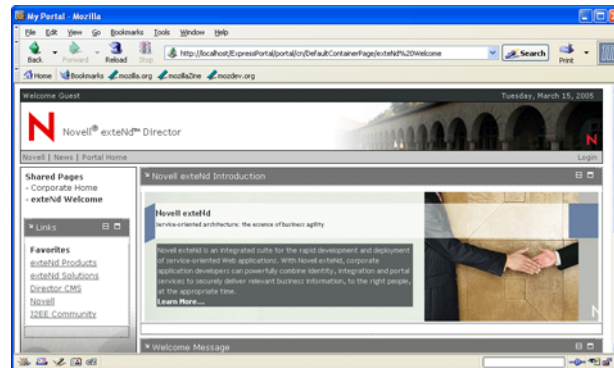
These strings will be used as the base names for the files that will be generated by the wizard. You need to specify a separate base name for each database table you select.



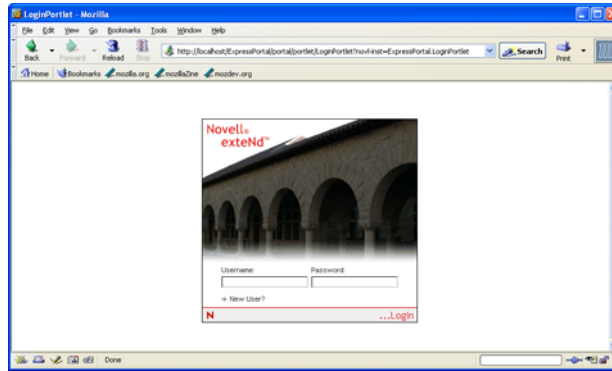
- 16 Click **Finish**.

➤ **To create a personal page that displays the portlet for the pageflow:**

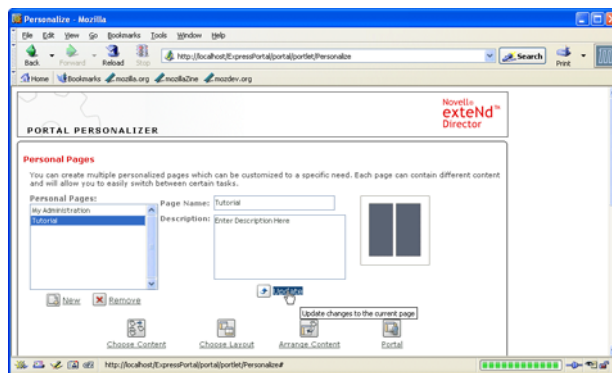
- 1 Start a browser.
- 2 Open the Express Portal application by typing this URL:  
**http://host/ExpressPortal**  
The default page for a guest user opens in your browser.
- 3 Click **Login**.



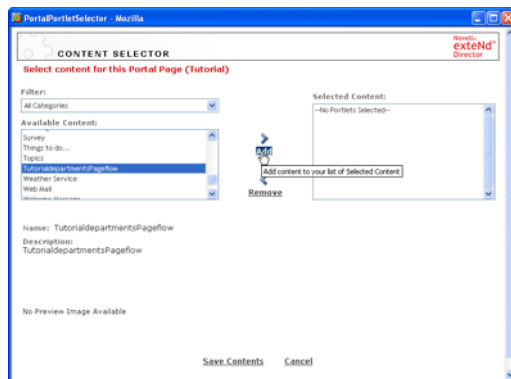
The Login dialog opens in your browser:



- 4 Log in as a portal administrator or as a user, then click **login** or the **Enter** key.  
The default page for the user you specified opens in your browser.
- 5 Click **Personalize**.
- 6 Click **New**.
- 7 Type **Tutorial** as the page name and click **Update**.



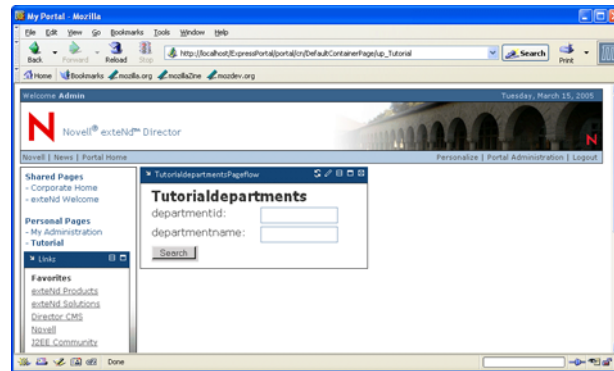
- 8 Click **Choose Content**.
- 9 In the **Available Content** box, select the **TutorialdepartmentsPageflow** and click **Add**.



- 10 Click **Save Contents**.
- 11 Click **Portal**.

12 Under **Personal Pages**, select **Tutorial**.

The portlet is initiated and the Search Form is displayed.



➤ **To test the pageflow:**

- 1 Click the **Search** button to see a list of all departments in the database.

A screenshot of a web browser window titled "TutorialdepartmentsPageflow". The page displays a table of search results for departments. The table has two columns: "departmentid" and "departmentname". Each row includes a department ID, name, and three links: "View", "Edit", and "Delete". Below the table, it shows "Results 1 - 9 of 9" and a "New Record" link.

departmentid	departmentname			
1	Product Development	<a href="#">View</a>	<a href="#">Edit</a>	<a href="#">Delete</a>
2	QA	<a href="#">View</a>	<a href="#">Edit</a>	<a href="#">Delete</a>
3	Documentation	<a href="#">View</a>	<a href="#">Edit</a>	<a href="#">Delete</a>
4	Support	<a href="#">View</a>	<a href="#">Edit</a>	<a href="#">Delete</a>
5	Consulting	<a href="#">View</a>	<a href="#">Edit</a>	<a href="#">Delete</a>
6	Marketing	<a href="#">View</a>	<a href="#">Edit</a>	<a href="#">Delete</a>
7	Human resources	<a href="#">View</a>	<a href="#">Edit</a>	<a href="#">Delete</a>
8	Finance	<a href="#">View</a>	<a href="#">Edit</a>	<a href="#">Delete</a>
9	Sales	<a href="#">View</a>	<a href="#">Edit</a>	<a href="#">Delete</a>

Results 1 - 9 of 9

[New Record](#)

**TIP:** You can also narrow the search by entering one or more characters in either of the fields on the Search Form. For example, you might enter `DOC` to search for the Documentation department.

- 2 Click the **View** link for the Documentation department:

The screenshot shows a web application window titled "TutorialdepartmentsPageflow". It displays the "Tutorialdepartments" record detail for departmentid: 3, departmentname: Documentator. Below this, there are navigation links: Edit, Prev, Next, Back. The main section is titled "Tutorialemployees" and contains a table with columns: employeeid, firstname, lastname, View, Edit, Delete. The table lists five employees: Charlie Parker (id 3), John Coltrane (id 4), Miles Davis (id 5), Bill Evans (id 6), and Django Reinhardt (id 10). Below the table, it says "Results 1 - 5 of 5" and a "New Record" link.

- 3 Click the **View** link for employee John Coltrane.
- 4 Click the **Edit** link at the bottom of the form.
- 5 Change the salary for John Coltrane to 50000.00 and click **Update**.

The screenshot shows the "Tutorialemployees" "Update Record" form. It contains input fields for: employeeid (4), firstname (John), lastname (Coltrane), hiredate (12/31/2001), salary (50000.00), and departmentid (3). At the bottom, there are "Update" and "Cancel" buttons.

- 6 Click **New Record** at the bottom of the screen.
- 7 Specify values for a new employee. When you're done, click **Save**.

**TIP:** To insert a new employee row, you need to specify a department ID that already exists in the database. Valid department IDs are 1 through 9.

## What to do next

- ◆ [Learn about customizing the generated forms](#)
- ◆ [Learn about modifying database pageflows](#)
- ◆ [Learn about pageflow activities](#)
- ◆ [Learn about pageflow links](#)

# Customizing Pageflow-generated Forms

## Objective

To learn how to use the Form Designer to:

- ◆ Apply Novell data type formats to form controls
- ◆ Use the Style Manager to change fonts
- ◆ Define Model Item Properties on a bind element

**Before you begin** See [“About exteNd Director Tutorials”](#).

**Prerequisites** You must complete the exercises in [“Creating a Database Pageflow”](#) on page 149.

## Concepts

- ◆ [About the Form Designer](#)
- ◆ [About the Form tab](#)
- ◆ [About the Model tab](#)
- ◆ [About the Event Editor](#)

## Exercises

- ◆ [“Displaying data with a custom format”](#) on page 160
- ◆ [“Adding class style rules”](#) on page 160
- ◆ [“Adding model item properties”](#) on page 164

**Before you get started** You’ll be working with forms that you generated when you did the [“Creating a Database Pageflow”](#) on page 149. You’ll be working with the following forms:

- ◆ TutorialemployeesDetails.xhtml
- ◆ TutorialdepartmentsEdit.xhtml

You can open these forms in the Form Designer by:

- ◆ Navigating to **ExpressPortal-resource.spf\data/form** directory (make sure you are viewing the ExpressPortal.spf file using **source layout**), then selecting the form and:

- ◆ Double-clicking it

or

- ◆ Right mouse-clicking and choosing **Open**

or

- ◆ Opening the form from within the Pageflow (Tutorialemployees.xml and Tutorialdepartments.xml).

## Displaying data with a custom format

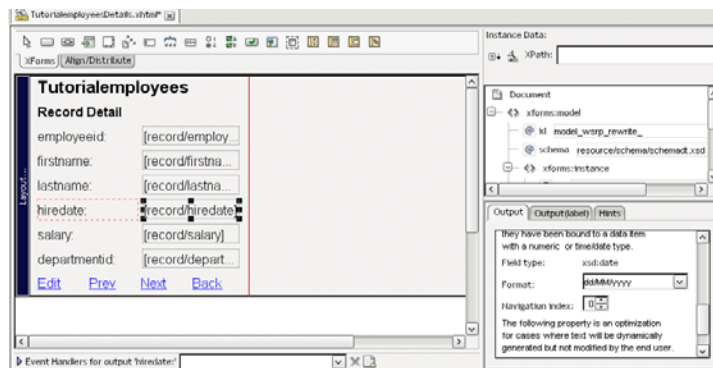
➤ **To specify a data type for a bind element:**

- 1 Open **TutorialemployeesDetails.xhtml**.
- 2 Click the **Form** tab.
- 3 Select **hiredate**.
- 4 Navigate to the Property Inspector (in the lower right pane).

**TIP:** Make sure you select the **Output** tab of the Property Inspector and **not** the **Output (label)** tab.

- 5 Change the Format property as follows:

Control name	Format property value
hiredate	dd/MM/yyyy



- 6 Select **salary**.
- 7 Navigate to the Property Inspector (in the lower right pane) and make the following changes to the Format property:

Control name	Format property value
salary	CURRENCY

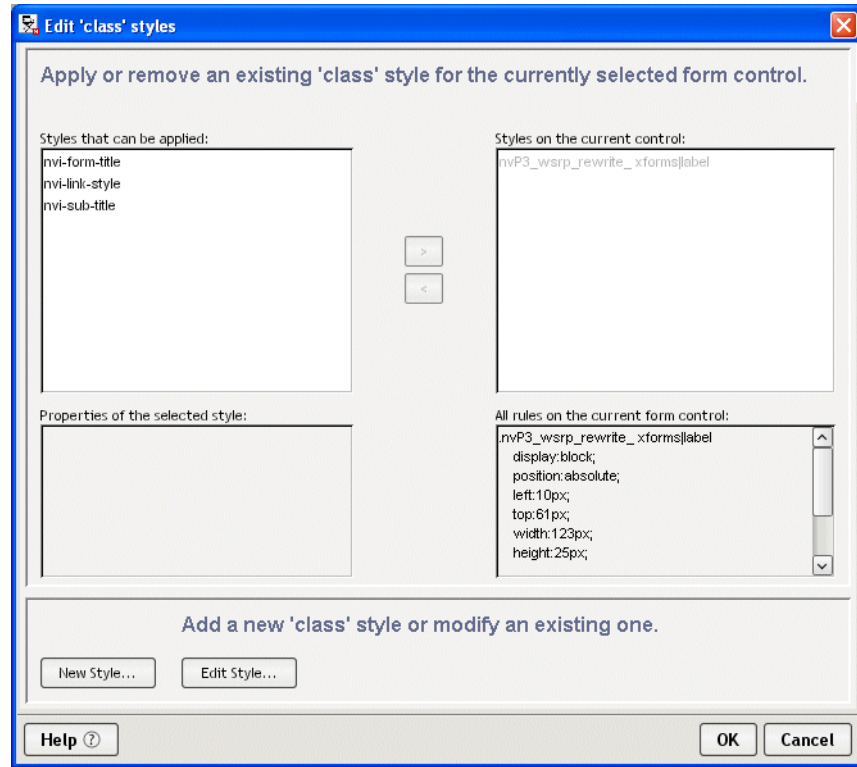
- 8 Click **Save**.

## Adding class style rules

➤ **To add a class style rule:**

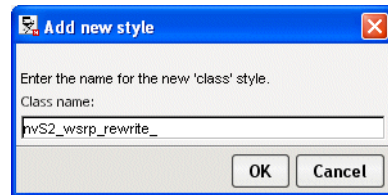
- 1 Open **TutorialemployeesDetails.xhtml** (located in the ExpressPortal project under ExpressPortal-resource.spf\data/form).
- 2 In the Form tab, select the **employeeid** label.
- 3 In the Property Inspector select the **Output(label)** tab.
- 4 Click **Edit class style rules**. The Edit class styles dialog displays:





- 5 Click **New Style**.

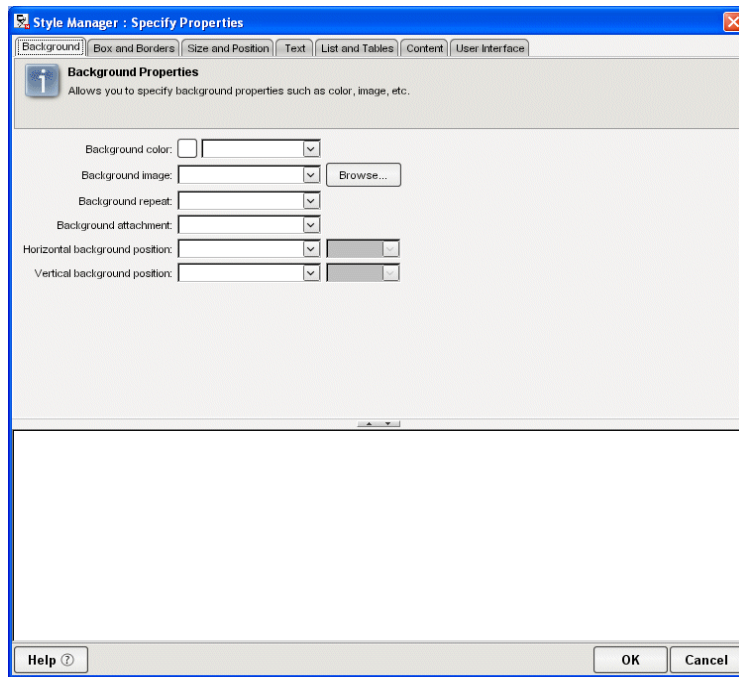
The Add new style dialog displays:



(Class name is a generated value, so the value in your dialog might be different.)

- 6 Accept the default class name and click **OK**.

The Style Manager dialog displays:



- 7 Select the **Text** tab and supply these values:

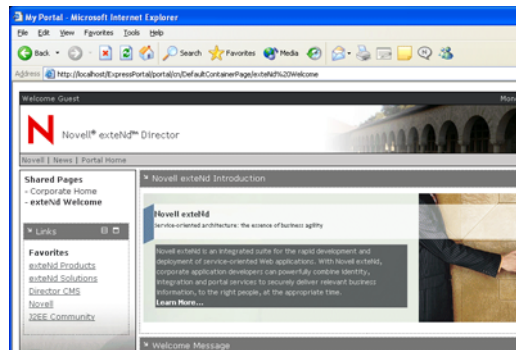
Property	Value
Font family	Arial, Helvetica, sans-serif
Font size	12 pt
Font weight	bold

- 8 Click **OK** to close the Font properties dialog.  
 9 Click **OK** to close the Style Manager dialog.  
 10 Click **Save**.

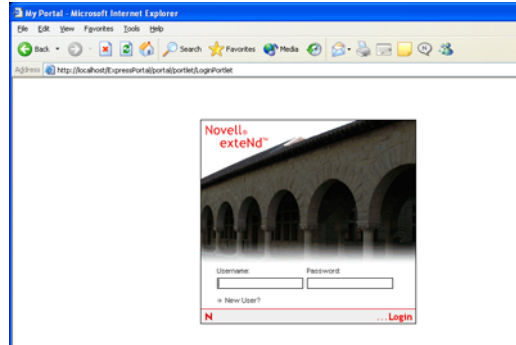
You can see the changes on the form when you run it in Preview mode (clicking the XForms Preview tab in the Form Designer) or by running the form within the Pageflow.

➤ **To test the format and font changes:**

- 1 Start a new application server session.
- 2 Start a new browser instance.
- 3 Open the Express Portal application by typing this URL:  
**http://host/ExpressPortal**  
 The default page for a guest user opens in your browser.
- 4 Click **Login**.



The Login dialog opens in your browser:



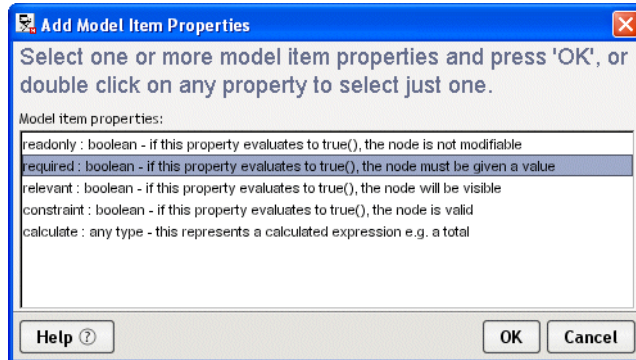
- 5 Log in as a portal administrator or as a user, then click **login** or the **Enter** key.  
The default page for the user you specified opens in your browser.
- 6 Click **Tutorial** (under Personal Pages).
- 7 Click **Search**.
- 8 Click **View** to view a list of employee records for a department (for example, Product Development).
- 9 Choose an employee (for example, Duke Ellington) and click **View**.  
You will see the employee record with:
  - ◆ The currency format applied to the salary field and the date format applied to the hire date field.
  - ◆ The employeeid label style changes



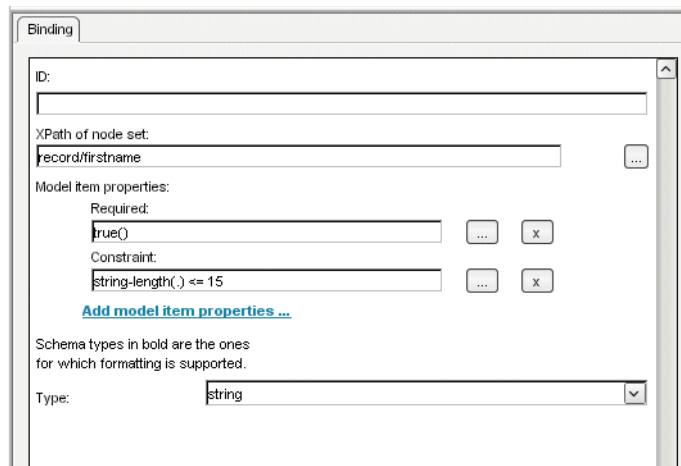
## Adding model item properties

➤ To define an instance element as Required

- 1 Open `TutorialemployeesEdit.xhtml`.
- 2 In the Model tab, select the `bind:nodeset=record/firstname` element.
- 3 In the Property Inspector, click **Add Model Item Properties**.
- 4 In the Add Model Item Properties dialog, select **Required**, then click **OK**.



- 5 In the Property Inspector, change the Required value to `true()`.



- 6 Click **Save**.

➤ To test the changes:

- 1 Restart your application server and browser instances.
- 2 Click **Search**.
- 3 Click **View** to view any of the employee records.
- 4 Choose an employee and click **Edit**.
- 5 Clear the First Name field and click **Update**.

The first time you do this, you are notified by a dialog that the data is invalid. When you clear the dialog, the field causing the problem is displayed in red. If you click Update again without correcting the problem, you'll see a second dialog indicating a submission error. These message actions are created by default when the forms are created. You can modify the messages in the Model tab of the Form Designer.

# Using the Form Designer Wizard

## Objective

To learn how to use the Form Designer Wizard to:

- ◆ Create a new form using sample instance data
- ◆ Reference an external schema file
- ◆ Apply formats to the instance data

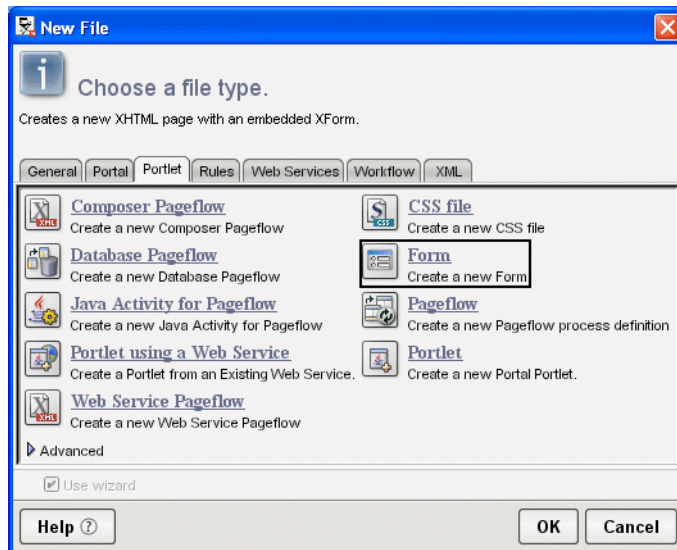
**Before you begin** See “[About exteNd Director Tutorials](#)”.

## Concepts

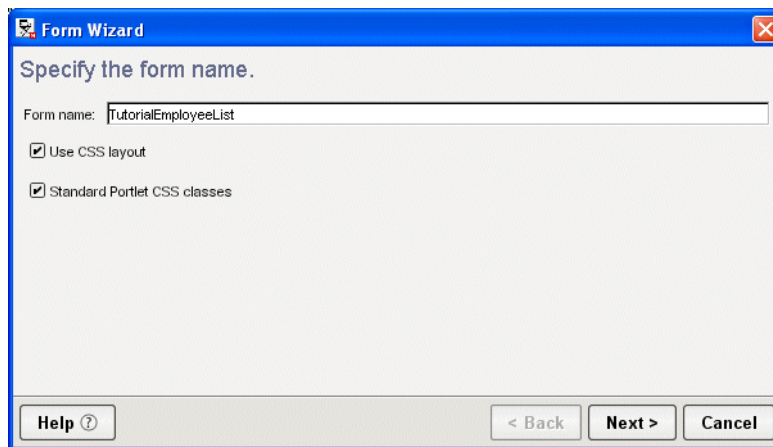
- ◆ [About the Form Designer](#)
- ◆ [About the Form tab](#)
- ◆ [About the Model tab](#)
- ◆ [About the Event Editor](#)

## Exercises

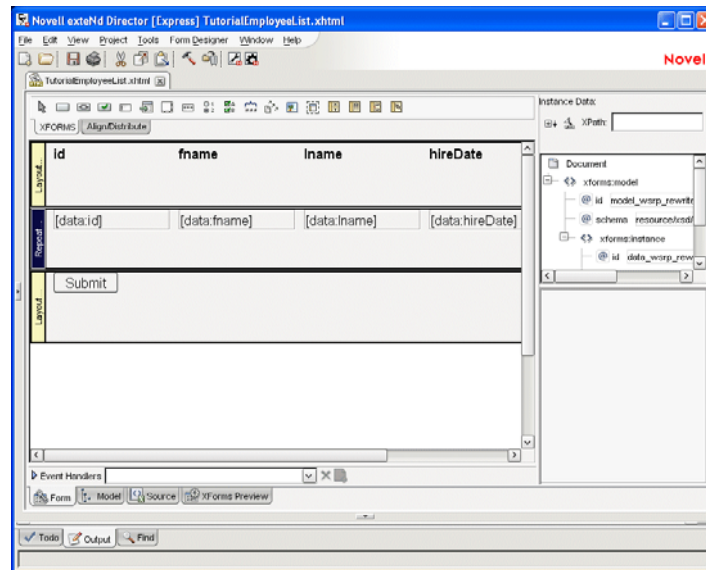
- ◆ [To access the schema file needed for this exercise:](#)
  - ◆ [To create a form using the Form Designer Wizard:](#)
  - ◆ [To test the form:](#)
  - ◆ [To reference an external schema:](#)
  - ◆ [To apply data type formats:](#)
- **To access the schema file needed for this exercise:**
- 1 Navigate to the Projects\Express\data directory (under the exteNd installation directory).
  - 2 Create two new subdirectories called **xsd** and **xml**.
  - 3 Copy **EmployeeList.xsd** to the xsd directory and **EmployeeListData.xml** to the xml directory. (Both files are located in the Director52Tutorial.zip file).
- **To create a form using the Form Designer Wizard:**
- 1 With the Express Portal project open in exteNd Director, select **File>New>File**.
  - 2 Click the **Portlet** tab.
  - 3 Select **Form**.



- 4 Click **OK**.
- 5 Enter **TutorialEmployeeList** as the Form name.

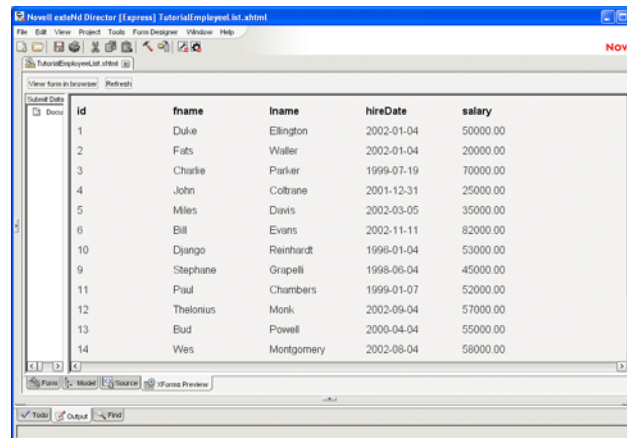


- 6 Click **Next**.
- 7 With the **Sample XML data** radio button selected, click **Browse**.
- 8 Select **EmployeeListData.xml** and click **Next**. (You copied this file to the Projects\Express\data\xml directory earlier).
- 9 Click **Next** to accept the defaults on the controls formatting panel.
- 10 Click **Finish**. When the Form Designer Wizard completes, your generated form should contain two layout boxes and a repeat look like this:



➤ **To test the form:**

- 1 With the TutorialEmployeesList form open in the Form Designer, click **XForms Preview**. Your form should look like this:

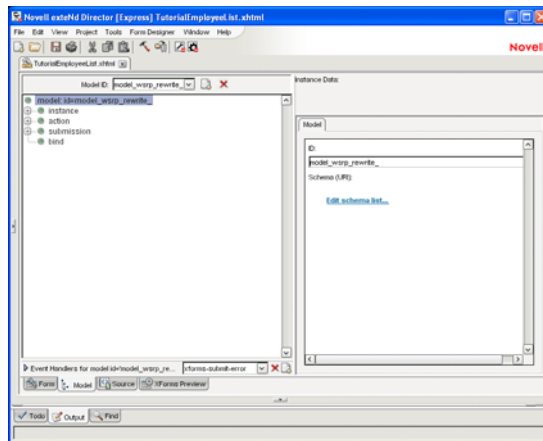


You can also use XForms Preview mode to verify the format of the data your form submits by clicking the form's submit button and viewing the results in the left-most pane.

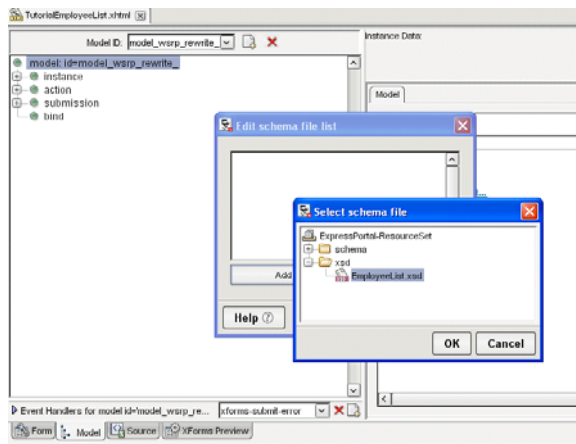
Click **View form in browser** to see get an idea of what the form looks like within the browser environment. You cannot test submissions in the browser environment though.

➤ **To reference an external schema:**

- 1 With the form open in the Form Designer, choose the **Model** tab.
- 2 Select the Model root node.



- 3 In the Property Inspector, click **Edit schema list**.
- 4 Click **Add**.
- 5 Click **EmployeeList.xsd** from the ExpressPortal-ResourceSet\xsd directory.



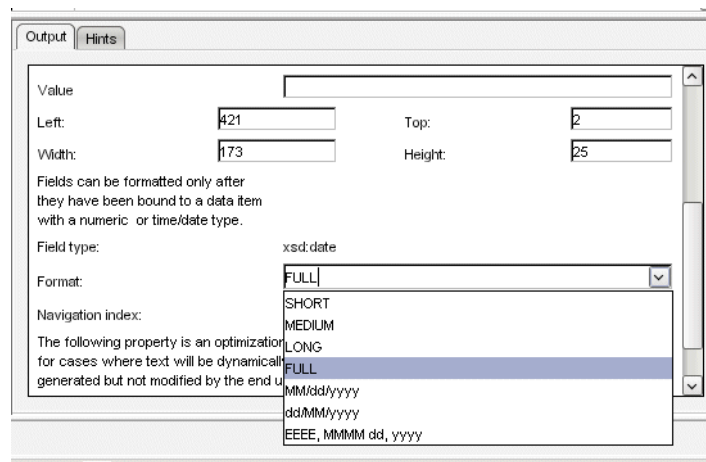
- 6 Click **OK**.
- 7 Click **OK**.
- 8 Save the form.

➤ **To apply data type formats:**

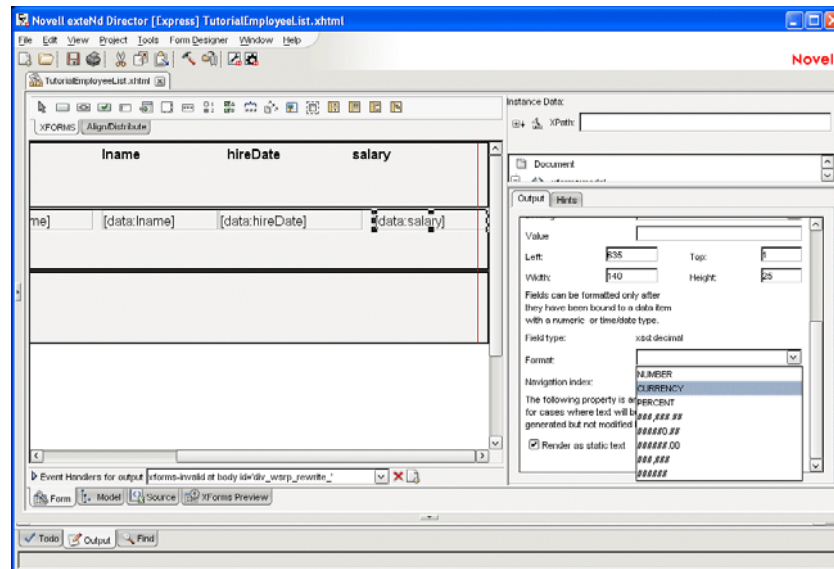
Now that the model is associated with a schema, you can apply data type formats to the bound controls.

- 1 With the form open in the Form Designer, choose the **Form** tab.
- 2 In the Repeat block, select **data:hireDate**.
- 3 In the Property Inspector, change the:
  - ◆ Width property to **173**
  - ◆ Format property to **FULL**





- 4 In the Repeat block, select **data:salary**.
- 5 In the Property Inspector, change the:
  - ◆ Format property to **CURRENCY**



- 6 Click **Save**.
- 7 Click **XForms Preview** to see the changes to the form.

