

FatWire | Content Server 7

Version 7.5 Patch 2

Installing Content Server with IBM WebSphere Portal Server

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Installing Content Server with IBM WebSphere Portal Server

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Chapter 1

Introduction

This document provides guidelines for installing Content Server on WebSphere Portal Server 6.1, connecting to the supported database of your choice.

Note

Anyone using this guide is expected to have experience installing and configuring databases, and portal servers. Selected information regarding the configuration of third-party products is given in this guide. For detailed information about a particular third-party product, refer to that project's documentation.

This chapter provides information that will help you prepare for the Content Server installation. It contains the following sections:

- [About This Guide](#)
- [Prerequisites](#)
- [Installation Quick Reference](#)

About This Guide

This guide covers the installation, configuration, and maintenance of the WebSphere Portal Server, as required to support Content Server. This includes configuration of one or more WebSphere Portal Server instances, and backend databases.

How This Guide Is Organized

The content of this guide is organized by function rather than the order in which installation steps are completed. For example, a function such as portal deployment is associated with the portal server. It is presented in Part II (which covers the portal server), even though it is performed, later, when Content Server is installed (Part III). Each major component of the Content Server installation is covered in its own part. A summary of the installation steps in the required order is given at the end of this chapter (see “[Installation Quick Reference](#),” on page 8).

Graphics in This Guide

Many steps in this guide include screen captures of dialog boxes and similar windows that you interact with in order to complete the steps. The screen captures are presented to help you follow the installation process. They are not intended to be sources of specific information, such as parameter values, options to select, or product version number.

Acronyms and Variables

This guide uses the following acronyms and variables:

Name used in this guide	Description
CS	Content Server
DM	Deployment Manager
lbe	LDAP Browser/Editor
WAS	WebSphere Application Server
<appserv_node>	The name of the application server node.
<DM_console_port>	The port number on which the Deployment Manager console is listening for connections.
<DM_host>	The host name or IP address of the Deployment Manager host.
<server_name>	The name of the WebSphere Portal server.
<WAS_home>	Path to the directory where WebSphere Portal Server is installed. The path includes the name of the directory.
<WAS_host>	The host name of the machine running the WebSphere Portal Server.

Prerequisites

Before installing and configuring Content Server with WebSphere Portal Server, make sure the prerequisites are satisfied:

- You have read the *Supported Platform Document* (SPD) and you are installing licensed copies of the certified software.

Note

The *Supported Platform Document* is available on the e-docs site:

<http://support.fatwire.com>

The site is password protected. New e-docs users can obtain their passwords from FatWire Technical Support at the same site.

- The LDAP server is supported by WebSphere Portal 6.1.0.1 (Tivoli Directory Server is recommended).
- You have downloaded the required WebSphere Portal 6.1.0.1 installation archives (the archives are determined by the operating system you are using). For more information about which archives are required, refer to the following URL:

<http://www-01.ibm.com/support/docview.wss?uid=swg21363952>

Note

- The installation documented in this guide is based on a 32-bit Linux installation. The following packages were downloaded for this operating system: C1TL1ML, C1TQ8ML, C1U2UML, C1U2XML, C1U30ML, and C1U34ML.
- WebSphere Portal 6.1.0.1 contains WebSphere 6.1.0.19 and IBM Java 1.5 (SR8a). Therefore, no updates are required for the Application Server or the JDK.

- Under UNIX, the **shell ksh** command is installed and present in the Path.
- Complete the following steps:
 1. Install the LDAP server. Instructions can be found in *Configuring Third-Party Software*.
 2. Ensure that your operating system meets requirements. For information about your operating system's requirements, visit the following URL:
<http://www-01.ibm.com/support/docview.wss?uid=swg24012959>
 3. Unzip all WebSphere portal archives (the zip and tgz files that you downloaded) into a temporary directory (you may have to overwrite a few files during the extraction process).
 - For .zip files, execute: **unzip -d <files name>**
Example: **#unzip -d C1U2UML.zip**
 - For .tgz files, execute: **tar -xvzf <file name>**
Example: **#tar -xvzf C1TQ8ML.tgz**

4. (Optional) If you need to free up disk space, remove the zip and tgz files.

Installation Quick Reference

After you install and configure the J2EE components that support Content Server, you will run the Content Server installer, which will guide you through the installation process. You will run the installer on each development, delivery, and management system on which you plan to use Content Server. During the Content Server installation, you will have the option to install sample sites and sample content.

Note

The names of the systems in your Content Server environment might differ from the names used in this document. Typically, the management system is also called “staging,” and the delivery system is also called “production.”

The steps below summarize the installation and configuration of Content Server and its supporting software. Keep the steps handy as a quick reference to installation procedures and to chapters that provide detailed instructions.

To install Content Server and its supporting software

Complete the steps below for each development, content management, and production environment.

I. Set Up the Database

Set up your choice of supported databases by installing the database management system, creating a database for Content Server, and configuring the database. For instructions, see *Configuring Third-Party Software*.

II. Set Up the Portal Server

Install and configure WebSphere Portal Server by following the steps described in [Chapter 3, “Installing and Configuring WebSphere Portal Server](#), and summarized below:

1. Configure the LDAP server for the WebSphere Portal Server, and add the required WebSphere Portal entries to the LDAP server. For more information and detailed instructions, see [“Configuring LDAP for WebSphere Portal,” on page 18](#).
2. Install WebSphere Portal Server and integrate it with LDAP. For more information and detailed instructions, see [“Installing WebSphere Portal,” on page 24](#), and [“Integrating the WebSphere Portal with LDAP,” on page 33](#).
3. Configure the WebSphere Portal instance for database communications, as shown in [“Configuring the WebSphere Portal Server Instance for Database Communications,” on page 48](#). This step requires you to:
 - a. Create a J2C Authentication. For instructions, see [“A. Creating a J2C Authentication,” on page 48](#).
 - b. Create a JDBC Provider. For instructions, see [“B. Creating a JDBC Provider,” on page 52](#).

- c. Create a JDBC Data Source. For instructions, see [“C. Creating a JDBC Data Source,”](#) on page 57.

III. Install and Configure Content Server

1. Install Content Server by running the supplied installer. The installer provides online help at each screen, should you need guidance. For more information, see [Chapter 4, “Installing Content Server.”](#)
2. Complete the Content Server installation by performing the following steps:
 - a. Verify that Content server has been installed properly. For instructions, see [“A. Verifying the Installation,”](#) on page 82
 - b. Integrate the Content Server installation with LDAP. For instructions, see [“B. Integrating Content Server with LDAP,”](#) on page 84.
 - c. Configure the portlets by adding new pages and then adding portlets to the new pages. For instructions and detailed informations, see [Chapter 5, “Configuring Portlets.”](#)
 - d. Once the entire installation is completed and verified, set up Content Server for its business purpose. For instructions, see the *Content Server Administrator’s Guide* and the *Content Server Developer’s Guide*.

Part 1

Database

This part contains a short chapter summarizing the databases that Content Server uses. Instructions on creating and configuring databases are given in *Configuring Third-Party Software*.

This part contains the following chapter:

- [Chapter 2, “Setting Up a Database](#)

Chapter 2

Setting Up a Database

Content Server requires access to a database that is configured specifically for Content Server. Supported databases (and other third-party components) are listed in the *Supported Platform Document (SPD)*, available on the e-docs site at:

<http://support.fatwire.com>

(New e-docs users can obtain their passwords from FatWire Technical Support at the same site.)

Before installing any other of Content Server's supporting software, you must complete the following steps:

1. Install the database management system.
For instructions, refer to the product vendor's documentation.
2. Create and configure a database for Content Server.
For instructions, consult our guide *Configuring Third-Party Software*. Note that database configuration is identical across different application servers.

Part 2

Portal Server

This part contains information about installing and configuring WebSphere Portal Server to support Content Server.

This part contains the following chapter:

- [Chapter 3, “Installing and Configuring WebSphere Portal Server](#)

Chapter 3

Installing and Configuring WebSphere Portal Server

This chapter provides you with instructions about installing the WebSphere Portal on your operating system.

This section includes the following:

- [Start/Stop Commands and Default Ports](#)
- [Configuring LDAP for WebSphere Portal](#)
- [Installing WebSphere Portal](#)
- [Configuring the WebSphere Portal Server Instance for Database Communications](#)
- [Verifying the WebSphere Portal Installation](#)

Start/Stop Commands and Default Ports

All commands are based on <WAS Portal Root>.

Action / Path	Command / Path
Stop servers	<ul style="list-style-type: none"> AppServer/bin/stopServer.sh server1 AppServer/bin/stopServer.sh WebSphere_Portal
Start servers	<ul style="list-style-type: none"> AppServer/bin/startServer.sh server1 AppServer/bin/startServer.sh WebSphere_Portal
Path to the Configuration Wizard	wp_profile/PortalServer/wizard/configwizard.sh
URL for the WebSphere Portal interface	http://vmrh5.vm.fatwire.com:10040/wps/portal
URL for the Admin console	https://10.120.19.188:10041/ibm/console/logon.jsp

Configuring LDAP for WebSphere Portal

In this guide we assume that you have installed and configured the Tivoli Directory Server as specified in *Configuring Third-Party Software*. If you are using a different LDAP server the configuration commands may differ from the commands documented in this guide. For commands of the LDAP server you are using, refer to *Configuring Third-Party Software*.

Note

All commands are executed on the server where Tivoli Directory Server is installed.

1. Change to the `sbin` directory under the location where Tivoli is installed (the default location is: `/opt/IBM/ldap/V6.1`).
2. Execute the command `./idsi1ist`, to return a list of configured instances:

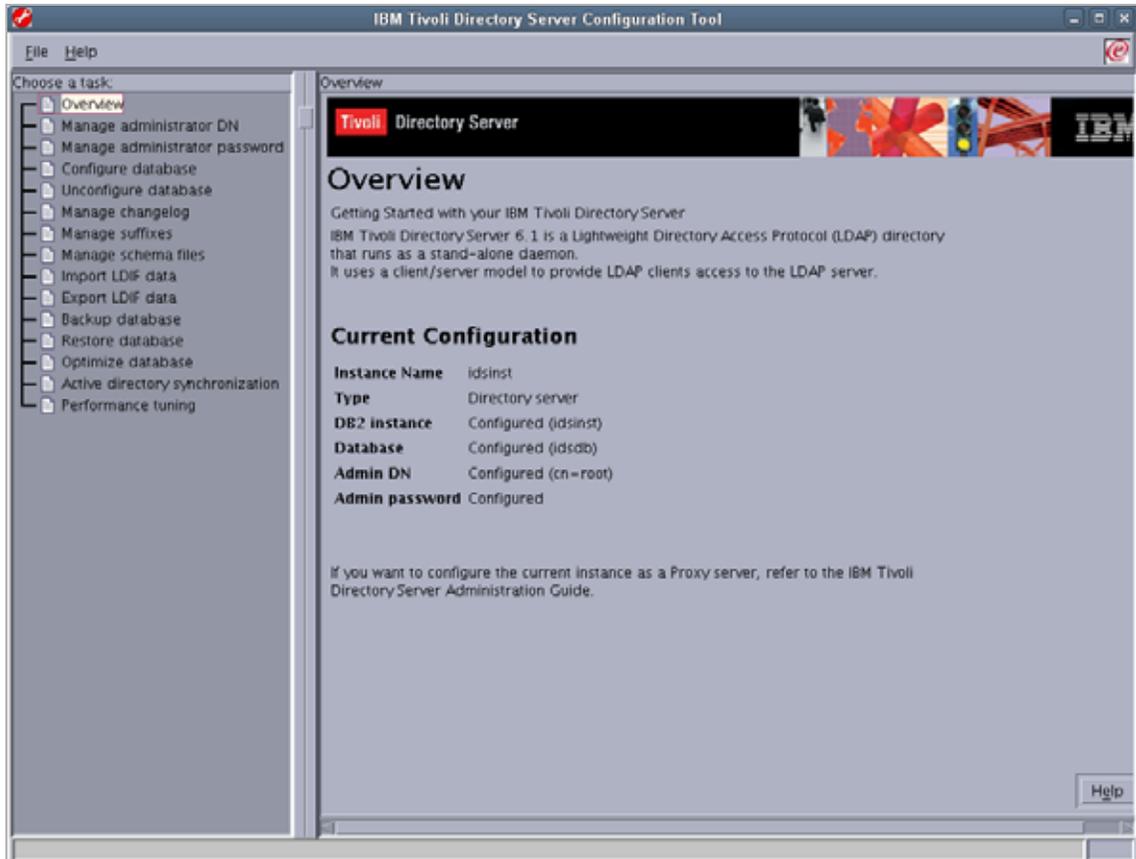

```
# ./idsi1ist
Directory server instances:
idsinst
```
3. Shut down the instance:


```
# ./idssl1apd -k -I <instance name>
GLPSRV176I Terminated directory server instance 'idsinst' normally.
```

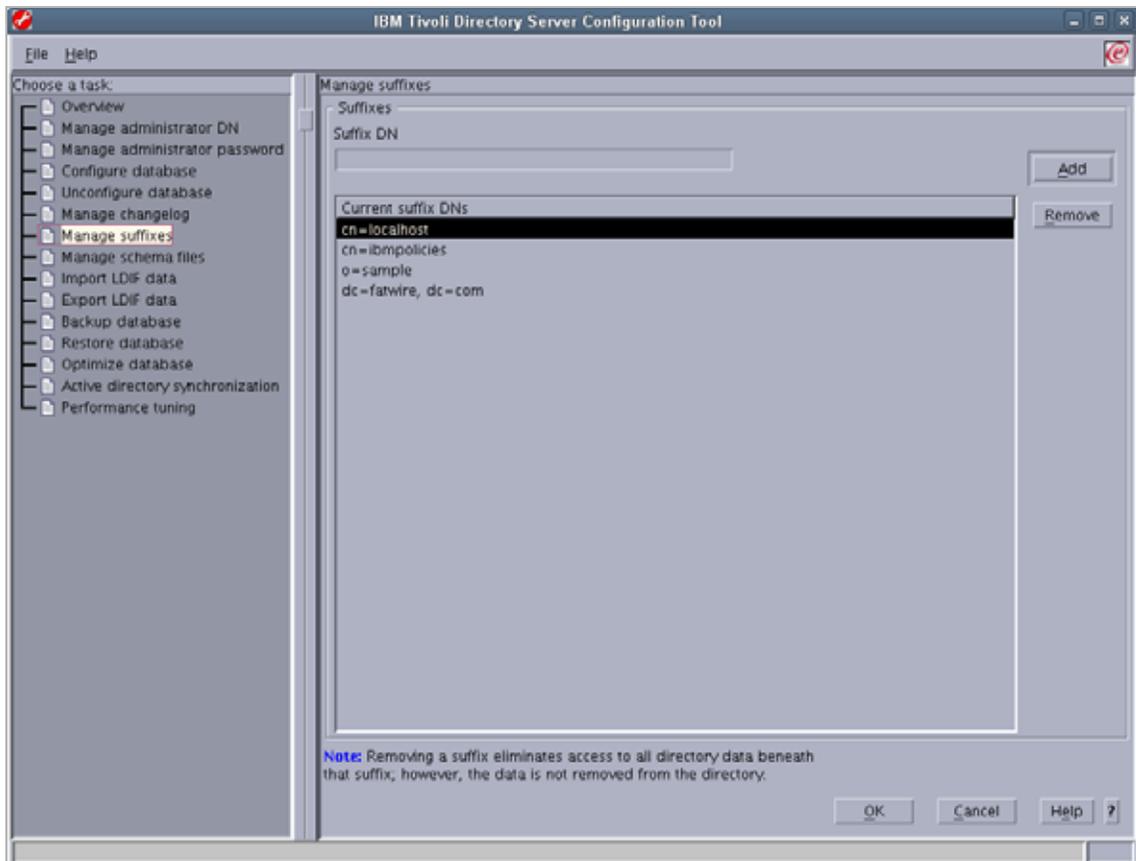
4. Start the LDAP server “Configuration Tool” using the following command:

```
# ./idsxcfg -I <instance name>
```

The “Configuration Tool” window loads:



5. In the “Configuration Tool” window, select **Manage suffixes** from the left navigation tree.



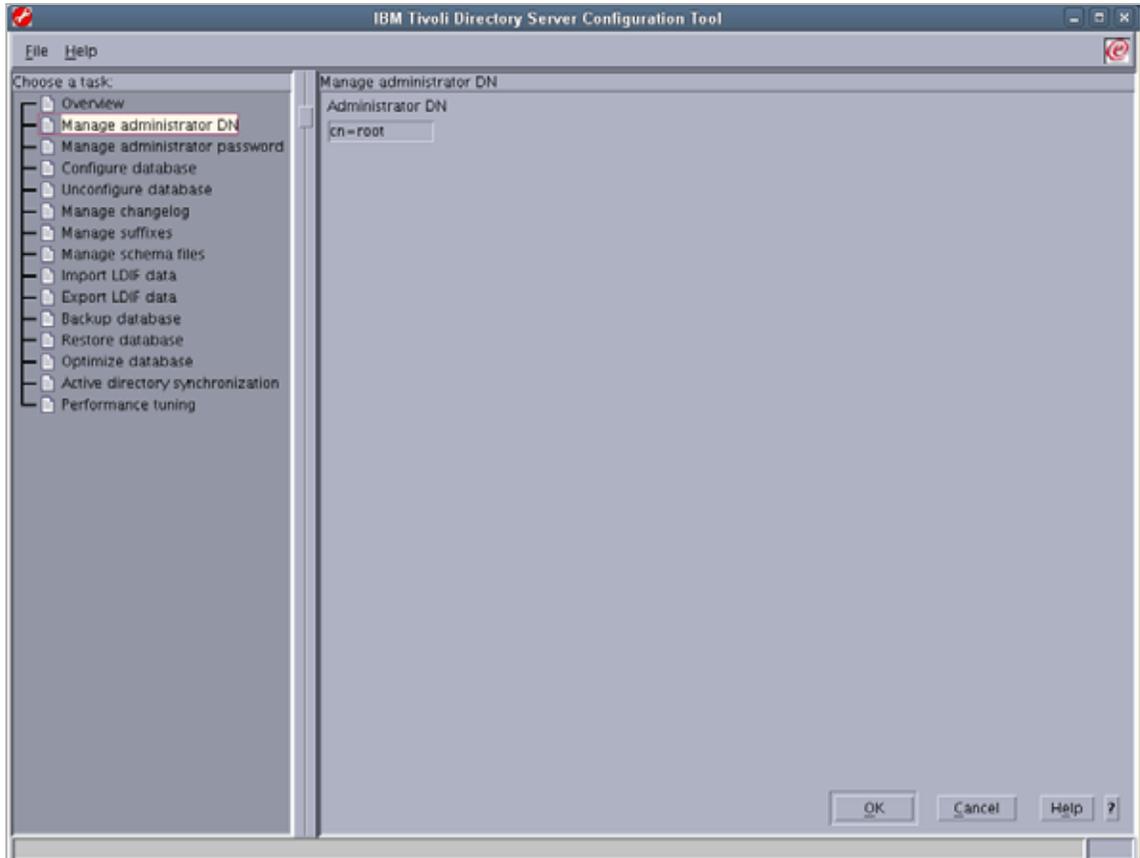
- a. In the **Suffix DN** field, enter a new suffix DN.

Note

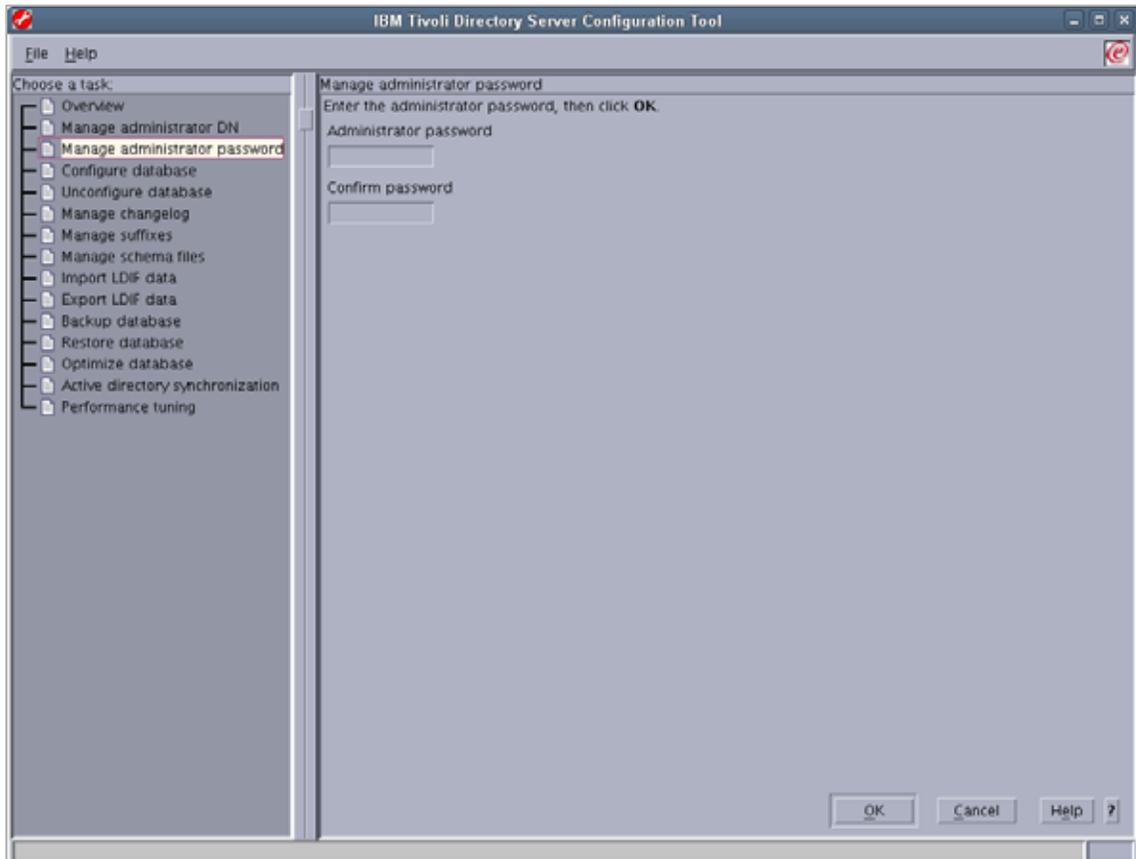
For this example (and throughout this guide), the test suffix used for the portal is: `dc=test,dc=com`.

- b. Click **Add**.
6. Click **OK**.

7. In the left navigation tree, click **Manage administrator DN**. Make sure the “Administration DN” field is set with the value `cn=root`.



8. In the left navigation tree, click **Manage administrator password**. Fill in the following fields, and then click **OK**:
 - **Administration password**: Enter a password.
 - **Confirm password**: Re-enter the password.



9. In the top menu, select **File > Close**
10. Start the LDAP Server:

```
# ./idsslapd -I <instance name>
GLPSRV041I Server starting.
...
GLPSRV180I Pass-through authentication is disabled.
GLPCOM003I Non-SSL port initialized to 389.
```
11. The Tivoli Directory Server setup is complete. Throughout the rest of this guide you will not have to access the Tivoli server again.
12. Continue to next section, [“Adding Required WebSphere Portal Entries to the LDAP Server,”](#) on page 23.

Adding Required WebSphere Portal Entries to the LDAP Server

To set up WebSphere Portal with LDAP authentication, a number of entries must be added to the LDAP server via an LDIF file.

1. Navigate to the `PortalUsers.ldif` file, located in the WebSphere Portal installer directory (the temporary directory where `install.sh` is located).
2. Edit the `PortalUsers.ldif` file:
 - a. Open the `PortalUsers.ldif` file in a text editor.
 - b. Replace every occurrence of `dc=yourco,dc=com` with the suffix in the LDAP server (for this guide the suffix is `dc=test,dc=com`).

For example, locate the following section:

```
dn: dc=yourco,dc=com
objectclass: domain
objectclass: top
# Add lines according to this scheme that correspond to
your suffix
dc: yourco,dc=com
dc: yourco
```

and replace it with:

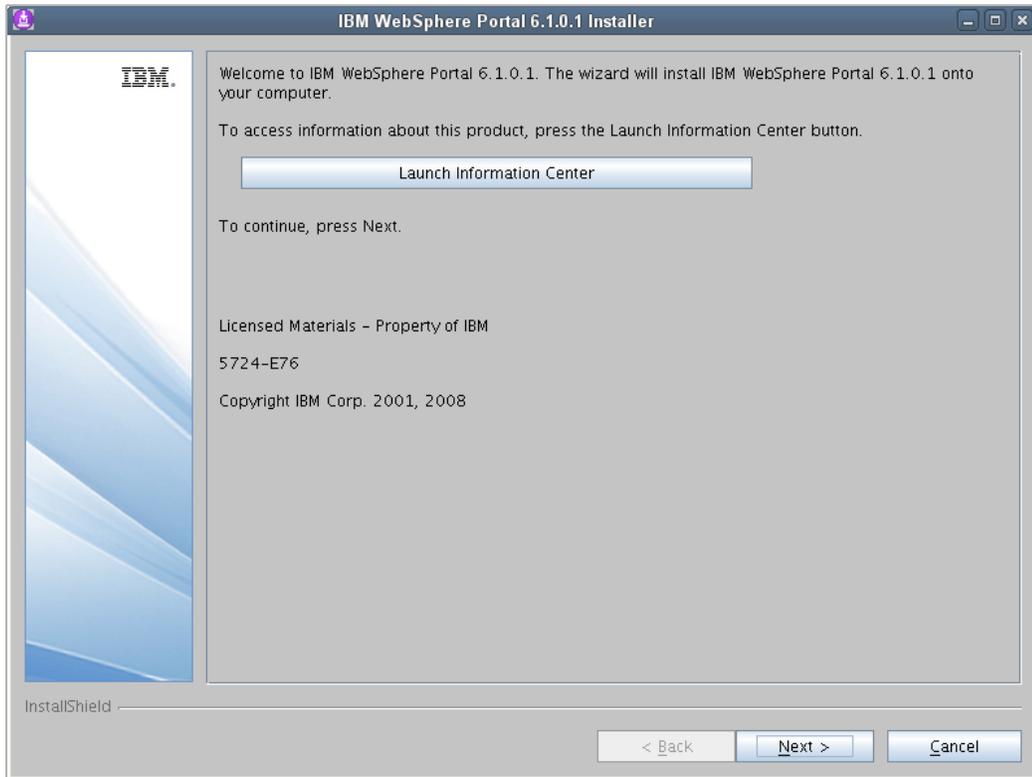
```
dn: dc=test,dc=com
objectclass: domain
objectclass: top
# Add lines according to this scheme that correspond to
your suffix
dc: test,dc=com
dc: test
```

- c. Save the modified file.
3. Start an LDAP browser (LDAP Browser\Editor lbe is suggested).

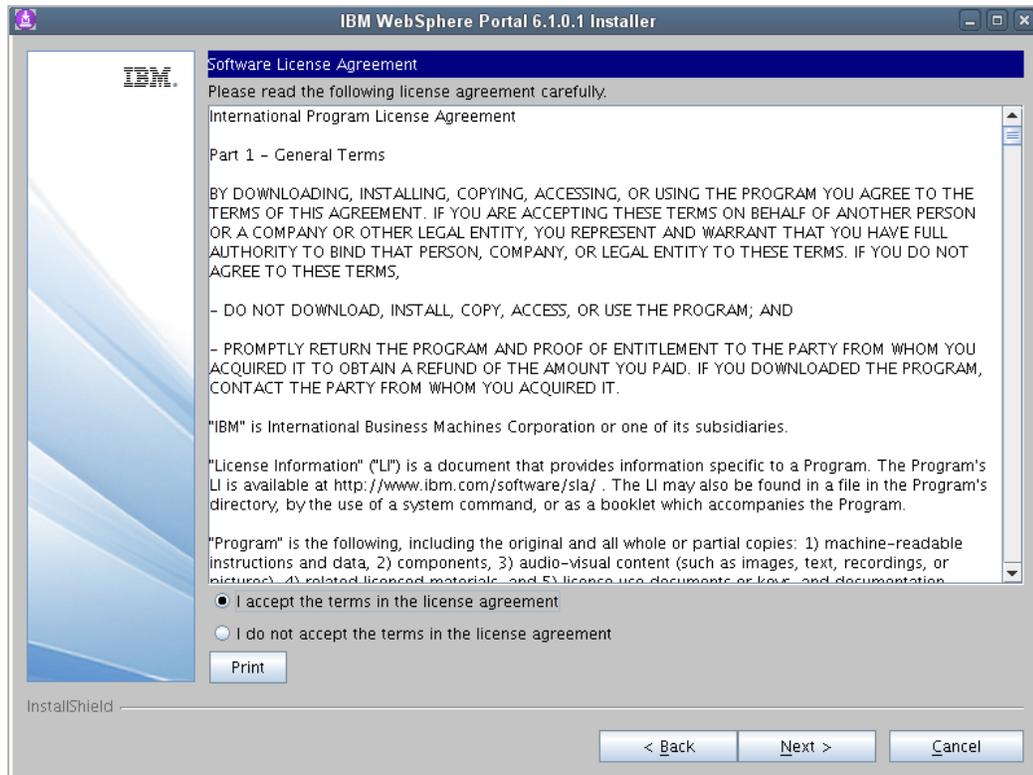
For information and instructions about starting LDAP Browser\Editor lbe (or if you wish to start an LDAP browser other than LDAP Browser/Editor lbe), see *Configuring Third-Party Software*.
 4. Import the LDIF file that you created in [step 2](#).
 5. Close lbe.

The LDAP server setup for the WebSphere Portal is complete.
 6. Continue to the next section to install WebSphere Portal.

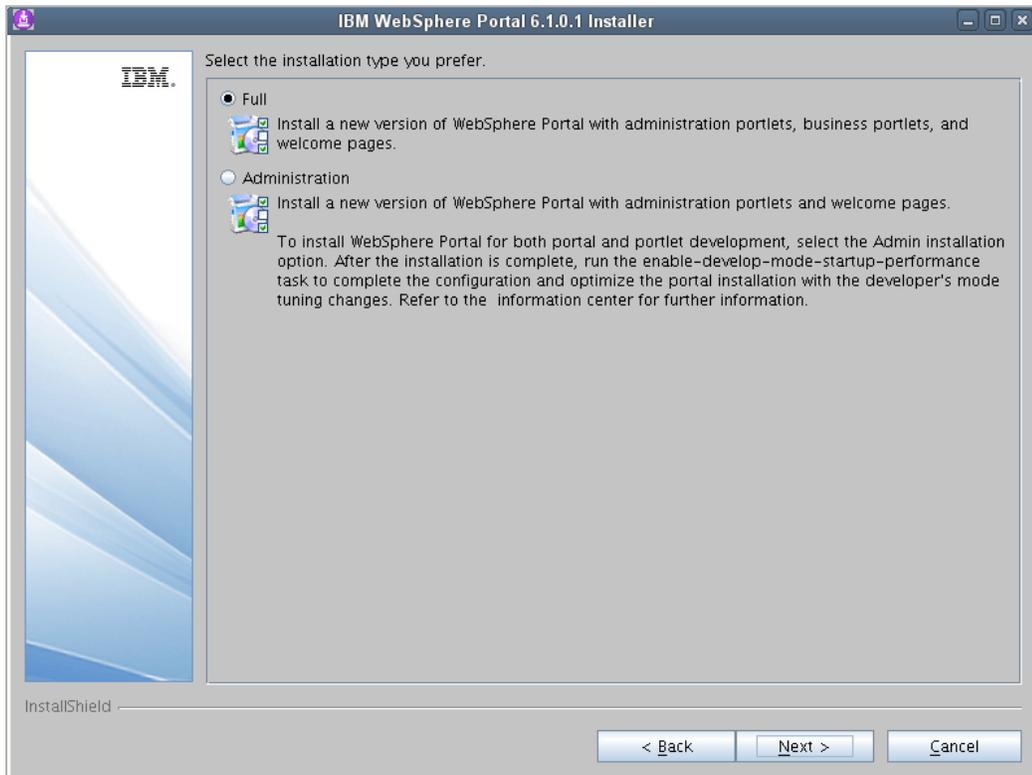
3. The WebSphere portal installer opens. Click **Next**.



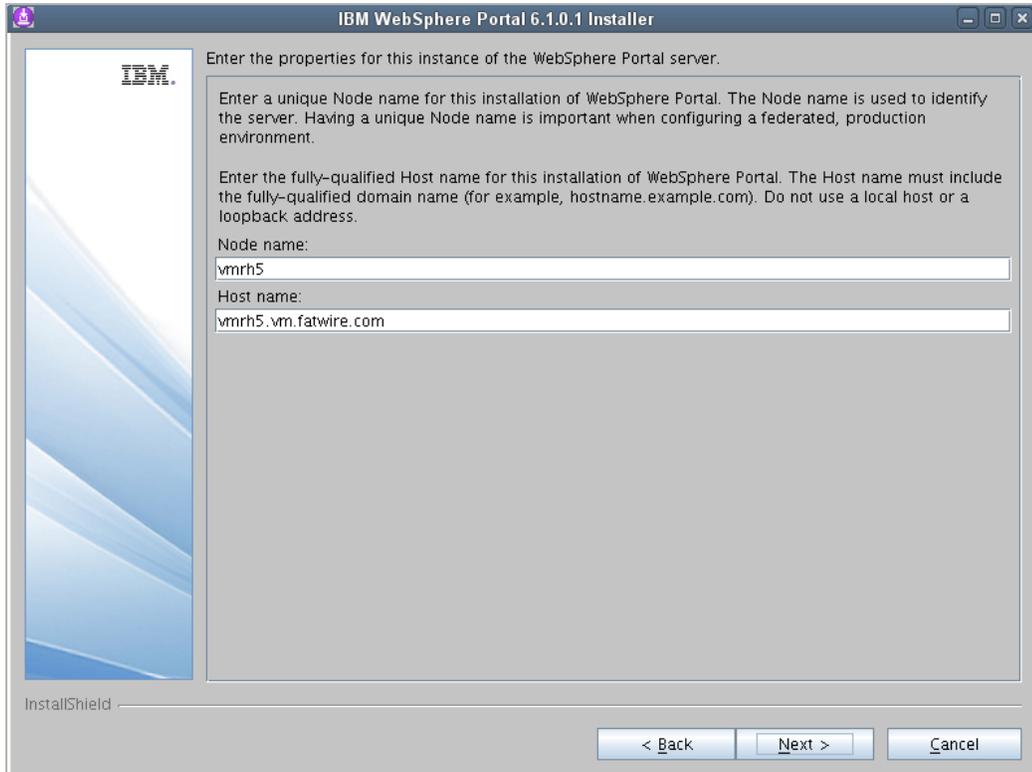
4. Accept the terms in the license agreement and then click **Next**.



5. In the “Installation Type” screen, select **Full**, and then click **Next**.



6. Once the initial validation is completed, fill in the **Node name** and **Host name** fields, and then click **Next**.



IBM

Enter the properties for this instance of the WebSphere Portal server.

Enter a unique Node name for this installation of WebSphere Portal. The Node name is used to identify the server. Having a unique Node name is important when configuring a federated, production environment.

Enter the fully-qualified Host name for this installation of WebSphere Portal. The Host name must include the fully-qualified domain name (for example, hostname.example.com). Do not use a local host or a loopback address.

Node name:
vmrh5

Host name:
vmrh5.vm.fatwire.com

InstallShield

< Back Next > Cancel

Note

If the system has a proper DNS name, the fields will be pre-populated with the value of the DNS name.

7. Fill out the **Administrative user ID** field and the password fields:
 - **Administrative user ID** – wpsadmin
 - **Password** – Enter the password for the administrative user.

Click **Next**.

IBM WebSphere Portal 6.1.0.1 Installer

Enter the WebSphere Portal administrative user ID and password.

This user ID is used to access WebSphere Portal and WebSphere Application Server with administrator authority after the installation; it is not related to any user IDs used to access the operating system.

Administrative user ID:
wpsadmin

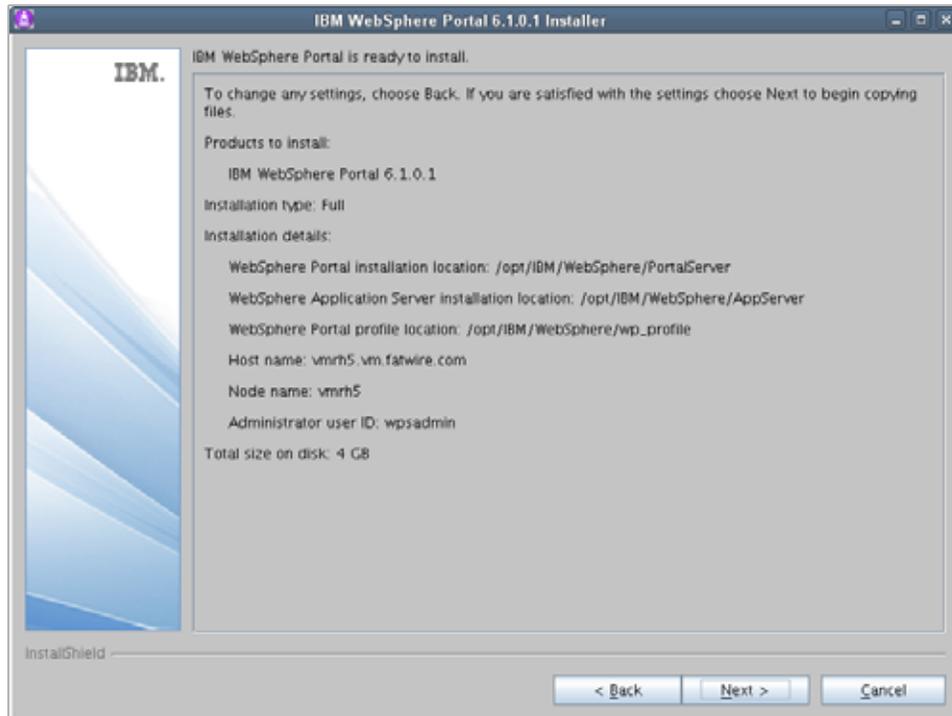
Administrative password:

Confirm password:

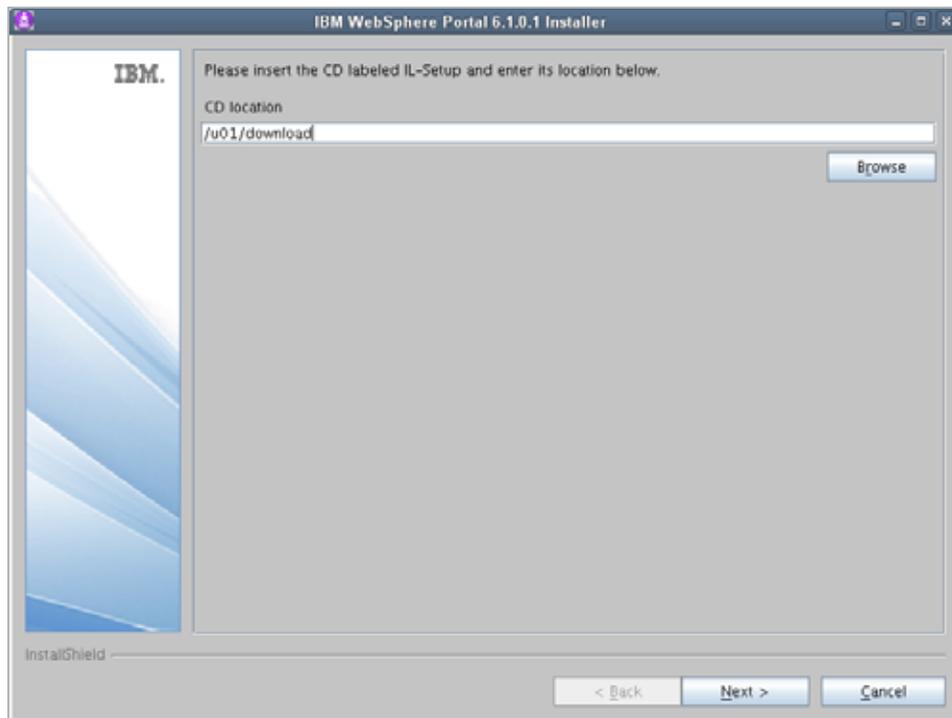
InstallShield

< Back Next > Cancel

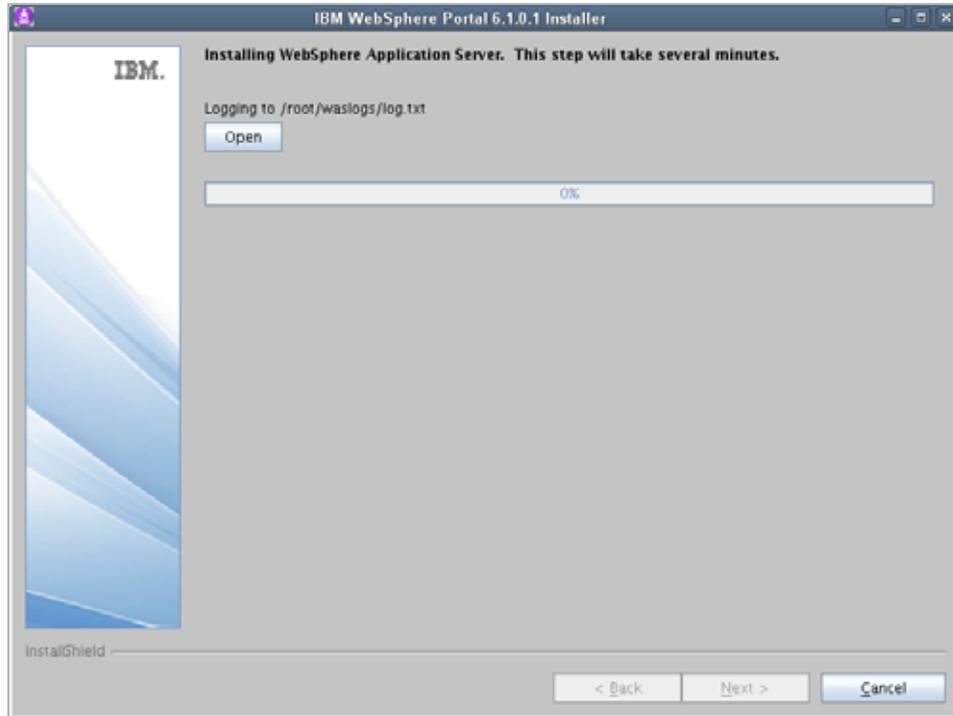
8. In the summary screen confirm all information is correct, and then click **Next**.



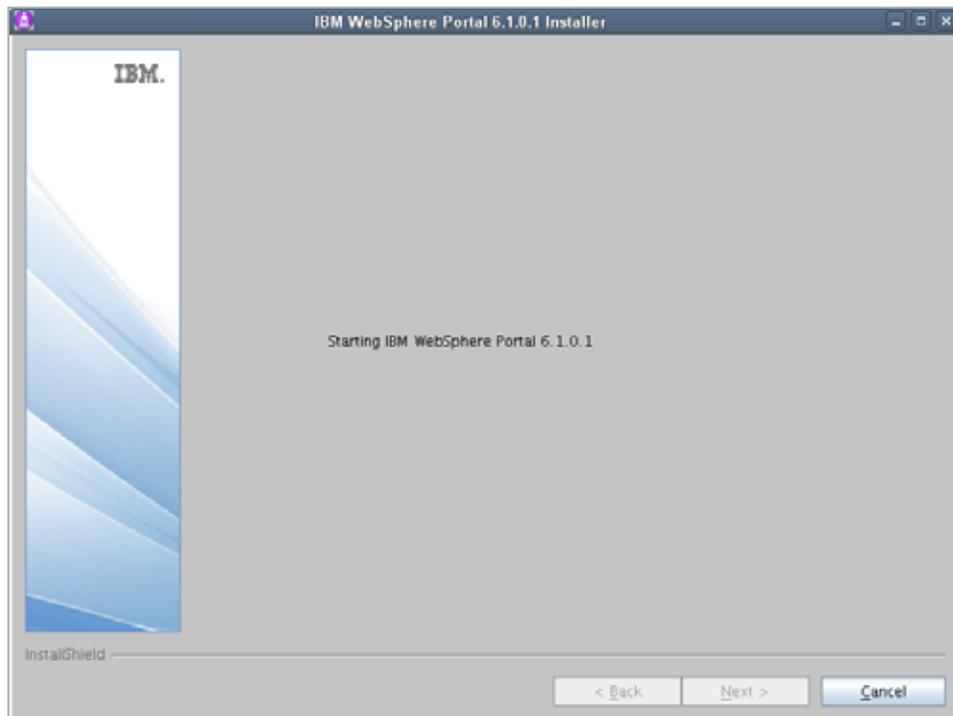
9. In the **CD location** field, enter the temporary directory where WebSphere Portal is located (this is the same directory where `install.sh` is located), then click **Next**.



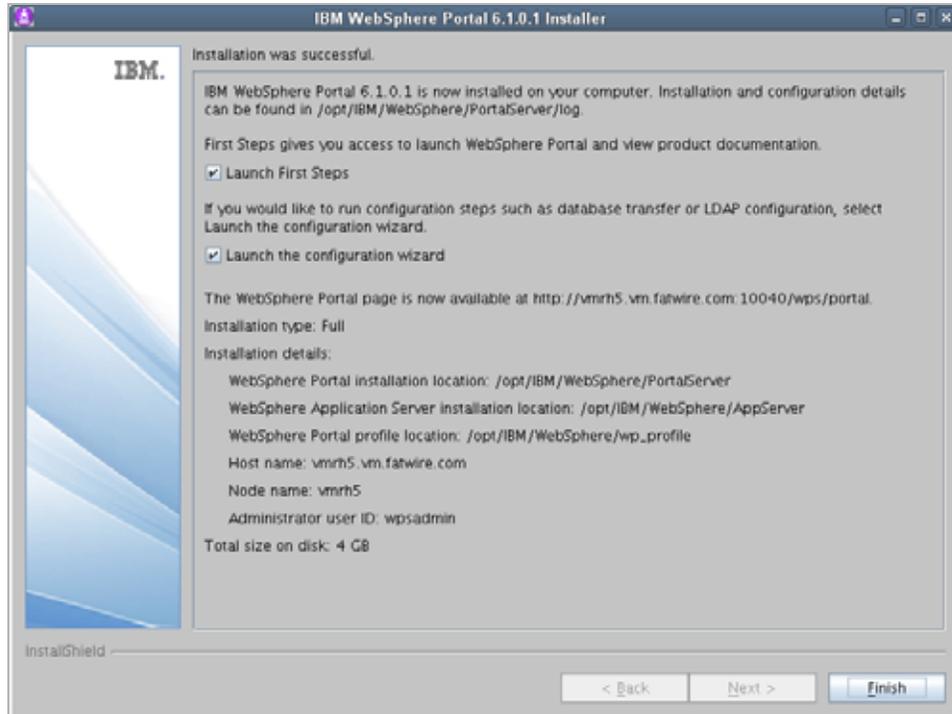
The automated installation starts. You can determine the status of the installation by monitoring the installer and logs.



Once the installation is complete, WebSphere portal starts.



10. In the summary screen, deselect the **Launch First Steps** check box, then click **Finished**.

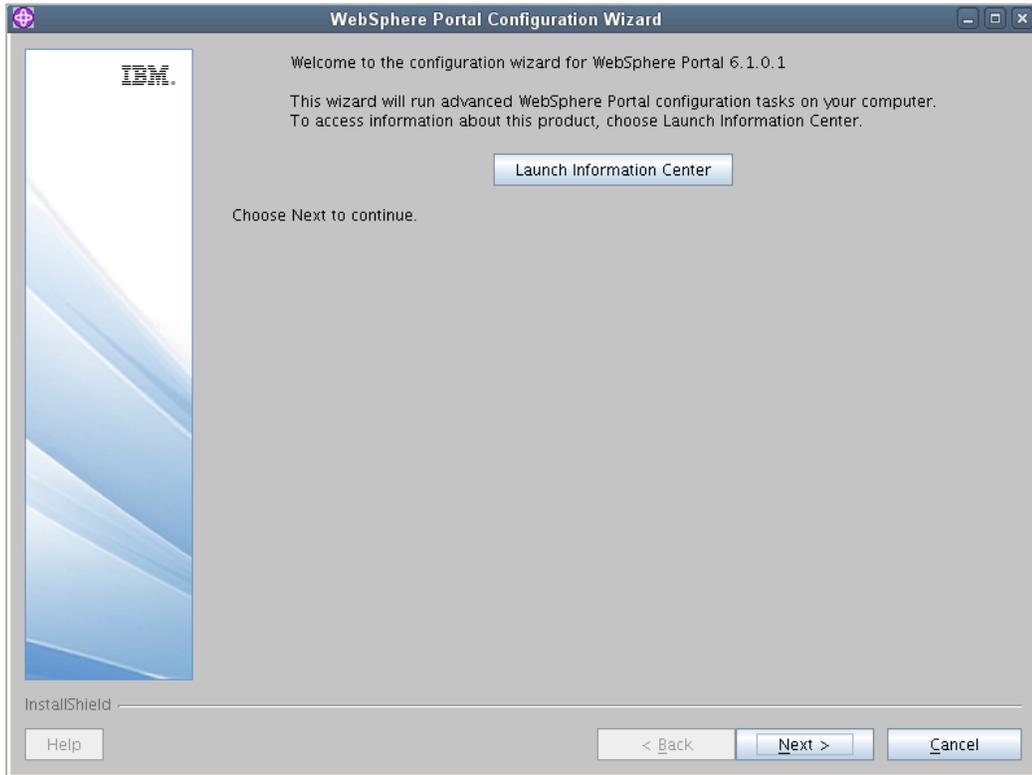


11. Continue to the next section to integrate WebSphere portal with LDAP.

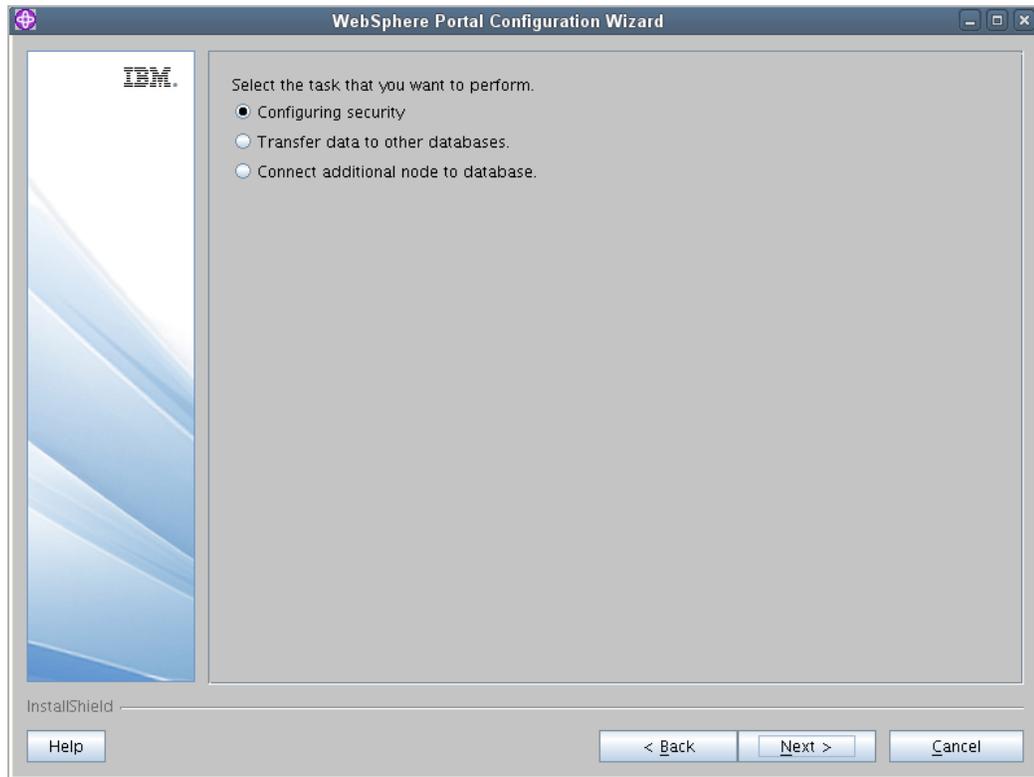
Integrating the WebSphere Portal with LDAP

In this section, you will be using the WebSphere Portal configuration wizard to configure LDAP integration for your WebSphere Portal installation.

1. In the Configuration wizard's "Welcome" screen, click **Next**.



2. Select **Configuring Security**, then click **Next**.



3. Specify the administrator ID and password for the WebSphere Portal Server by filling in the following fields:
 - **Username:** Do not change the information in this field.
 - **Password:** Enter the password given during the WebSphere Portal installation, (see [step 7 on page 29](#)).

Click **Next**.

WebSphere Portal Configuration Wizard

Specify the administrator ID and password for the WebSphere Application Server.

IBM.

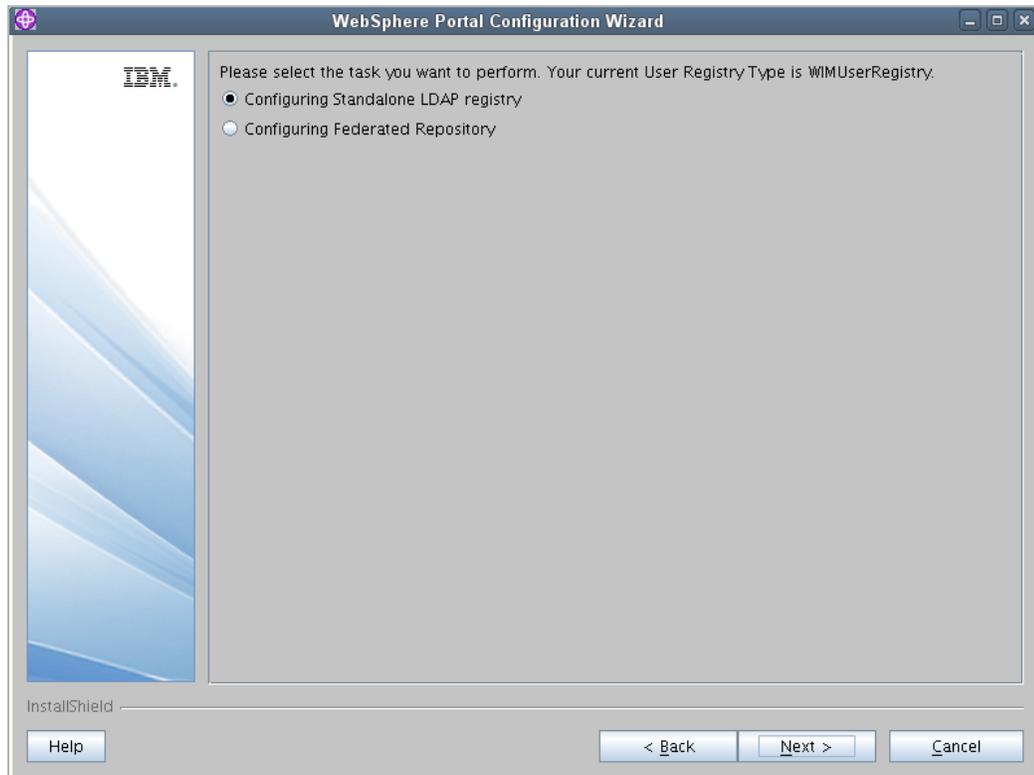
Username:
uid=wpsadmin,o=defaultWIMFileBasedRealm

Password:

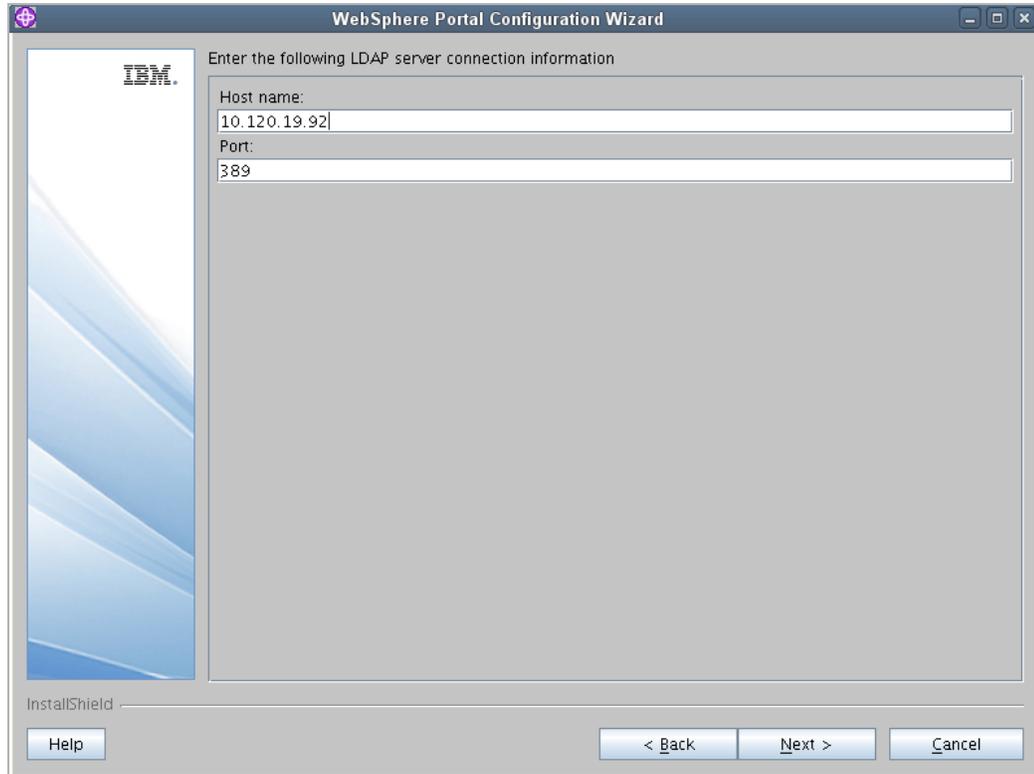
InstallShield

Help < Back Next > Cancel

4. Select the **Configuring Standalone LDAP registry** option, then click **Next**.



5. Enter the **Host name** and **port** of the LDAP server you previously configured. Click **Next**.



WebSphere Portal Configuration Wizard

Enter the following LDAP server connection information

Host name:
10.120.19.92

Port:
389

IBM

InstallShield

Help < Back Next > Cancel

6. Specify the LDAP user settings for authentication with the servers. Fill in the fields:
- **LDAP Type** – Select the LDAP server type.
 - **Bind distinguished name** – Enter the same DN that you used to connect when using lbe.
 - **Password** – Enter the password you used to connect using lbe.

WebSphere Portal Configuration Wizard

Specify the LDAP user settings for authenticating with the servers.

LDAP Type:
IBM Directory Server6

Bind distinguished name:
cn=root

Password:

InstallShield

Help < Back Next > Cancel

7. In this screen, specify the primary administrative user and group. Fill in the fields:
- **Primary administrative user name** and **Primary Portal administrative user name** – Set the user names to **wpsadmin**, and set the DN to the value you entered in [step 5 on page 20](#) when setting up the LDAP server (in this guide the DN value is `DC=TEST,DC=COM`).
 - **Password** fields – for both the “Primary administrative user name” and the “Primary Portal administrative user name,” enter the password you used when setting up lbe.
 - **Primary Portal administrative group name** – Enter the user name **wpsadmin**, and the DN that you entered when setting up the LDAP server [step 5 on page 20](#) (in this guide the DN value is `DC=TEST,DC=COM`).
- Click **Next**.

WebSphere Portal Configuration Wizard

Please specify the primary administrative user and group:

Primary administrative user name:
uid=wpsadmin,cn=users,dc=test,dc=com

Password:

Primary Portal administrative user name:
uid=wpsadmin,cn=users,dc=test,dc=com

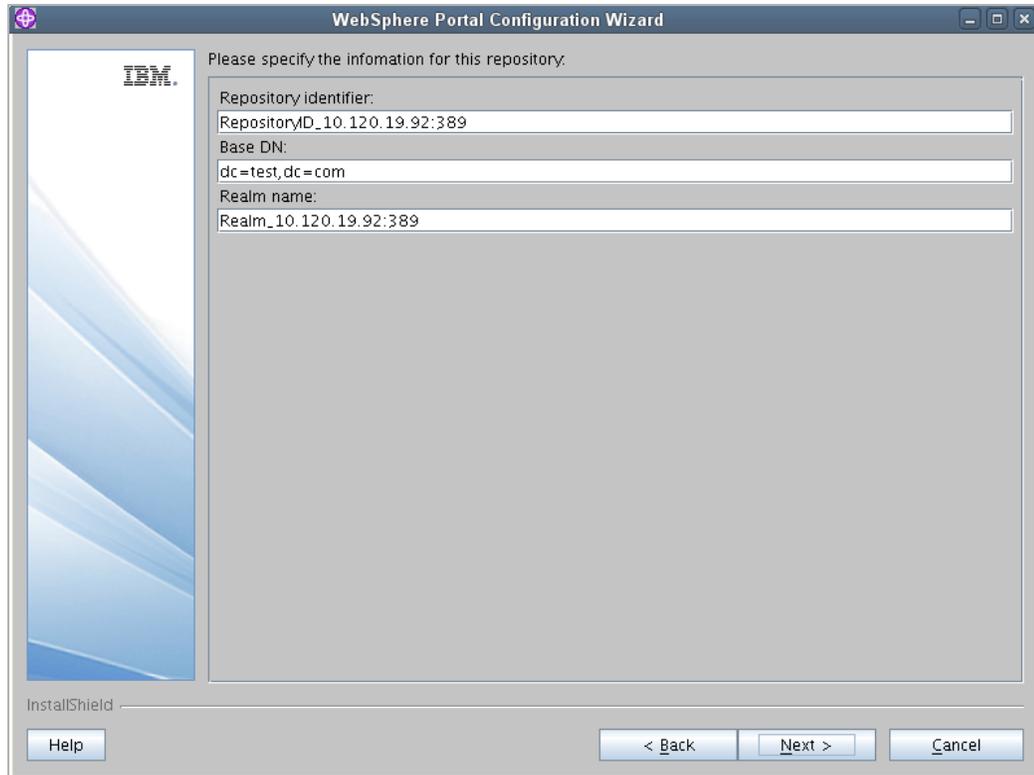
Password:

Primary Portal administrative group name:
cn=wpsadmins,cn=groups,dc=test,dc=com

InstallShield

Help < Back Next > Cancel

8. Make sure all field information is correct. (The “Realm name” should be correct for the install, but confirm the “Base DN” before you proceed with the rest of this section.) Click **Next**.



WebSphere Portal Configuration Wizard

Please specify the information for this repository.

Repository identifier:
RepositoryID_10.120.19.92:389

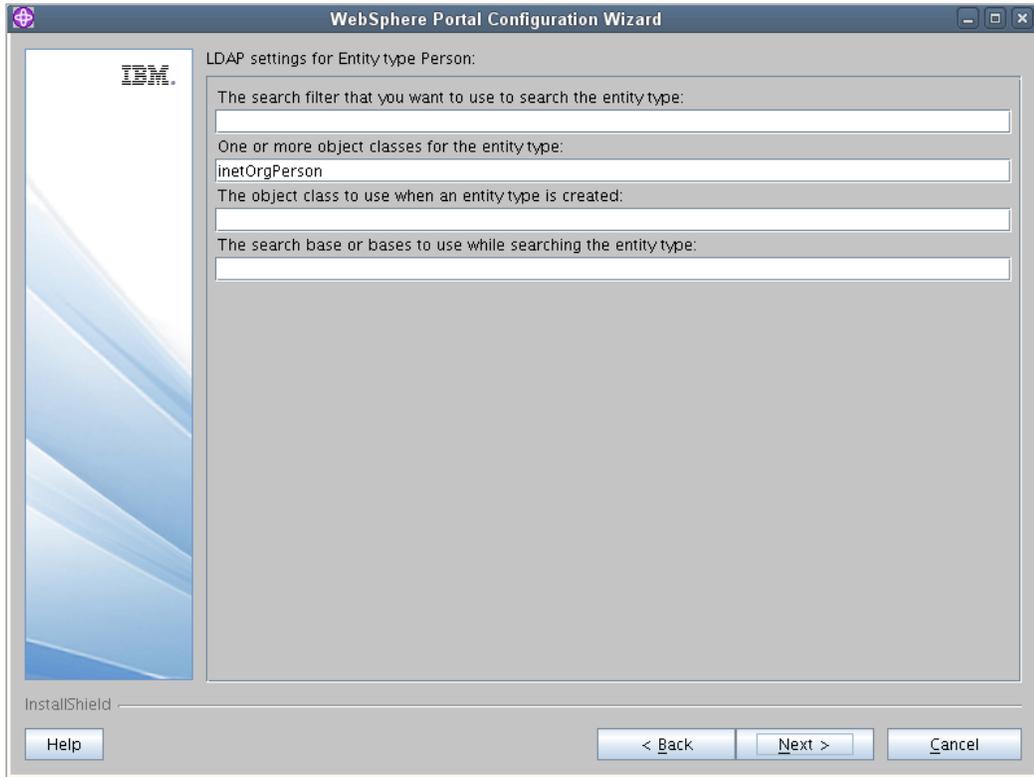
Base DN:
dc=test,dc=com

Realm name:
Realm_10.120.19.92:389

InstallShield

Help < Back Next > Cancel

9. In this screen, leave the default values and click **Next**.

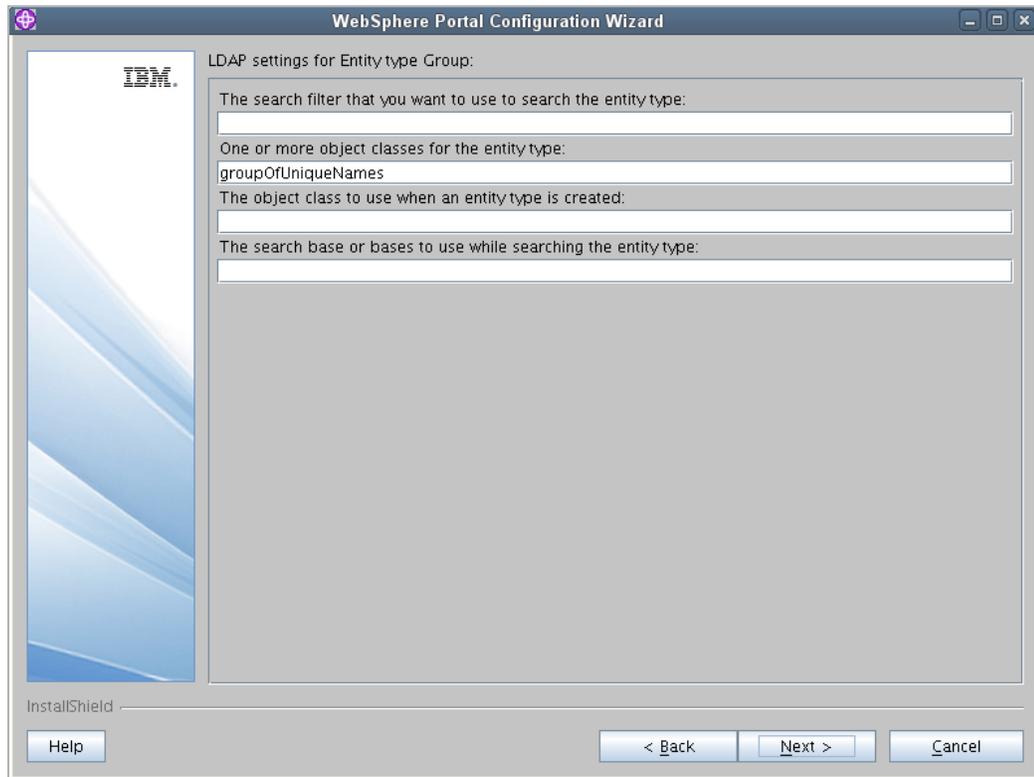


The image shows a screenshot of the 'WebSphere Portal Configuration Wizard' window. The title bar reads 'WebSphere Portal Configuration Wizard'. The main content area is titled 'LDAP settings for Entity type Person:'. It contains four text input fields with the following labels and default values:

- 'The search filter that you want to use to search the entity type:' (empty)
- 'One or more object classes for the entity type:' (default value: 'inetOrgPerson')
- 'The object class to use when an entity type is created:' (empty)
- 'The search base or bases to use while searching the entity type:' (empty)

At the bottom of the window, there are three buttons: 'Help', '< Back', and 'Next >', and a 'Cancel' button. The 'InstallShield' logo is visible in the bottom left corner.

10. In this screen, leave the default values and then click **Next**.

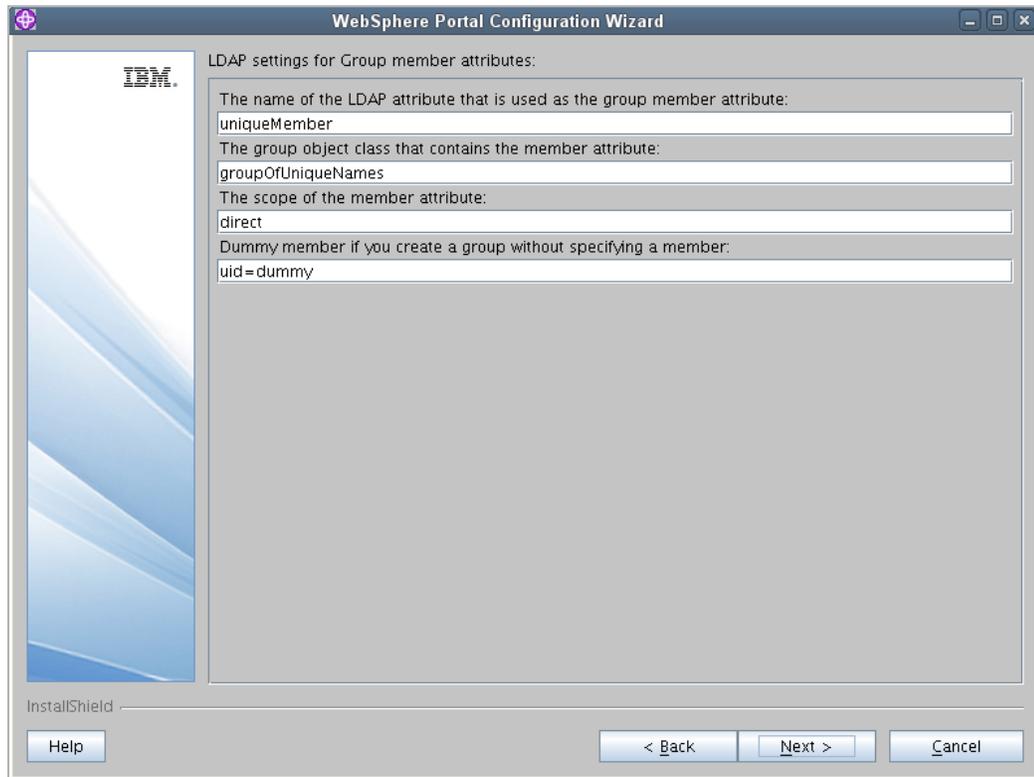


The screenshot shows the "WebSphere Portal Configuration Wizard" window. The title bar includes the IBM logo and the text "WebSphere Portal Configuration Wizard". The main content area is titled "LDAP settings for Entity type Group:" and contains four text input fields with the following labels:

- The search filter that you want to use to search the entity type:
- One or more object classes for the entity type:
groupOfUniqueNames
- The object class to use when an entity type is created:
- The search base or bases to use while searching the entity type:

At the bottom of the window, there is an "InstallShield" label, a "Help" button, and three navigation buttons: "< Back", "Next >", and "Cancel".

11. In this screen, leave the default values and then click **Next**.

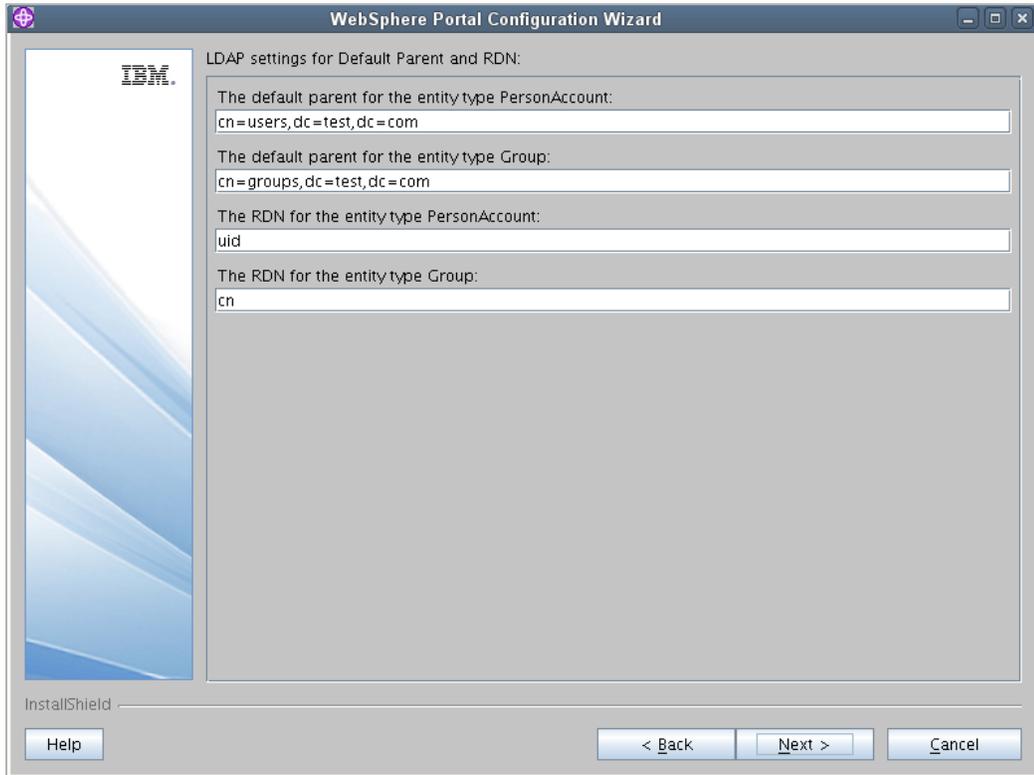


The image shows a screenshot of the "WebSphere Portal Configuration Wizard" dialog box. The title bar reads "WebSphere Portal Configuration Wizard". On the left side, there is an IBM logo and a blue decorative graphic. The main area is titled "LDAP settings for Group member attributes:" and contains four text input fields with the following labels and values:

- The name of the LDAP attribute that is used as the group member attribute: `uniqueMember`
- The group object class that contains the member attribute: `groupOfUniqueNames`
- The scope of the member attribute: `direct`
- Dummy member if you create a group without specifying a member: `uid=dummy`

At the bottom of the dialog, there is an "InstallShield" label, a "Help" button, and three navigation buttons: "< Back", "Next >", and "Cancel".

12. In this screen, leave the default values and then click **Next**.



The screenshot shows the 'WebSphere Portal Configuration Wizard' window. The title bar reads 'WebSphere Portal Configuration Wizard'. The main content area is titled 'LDAP settings for Default Parent and RDN:'. It contains four text input fields with the following labels and values:

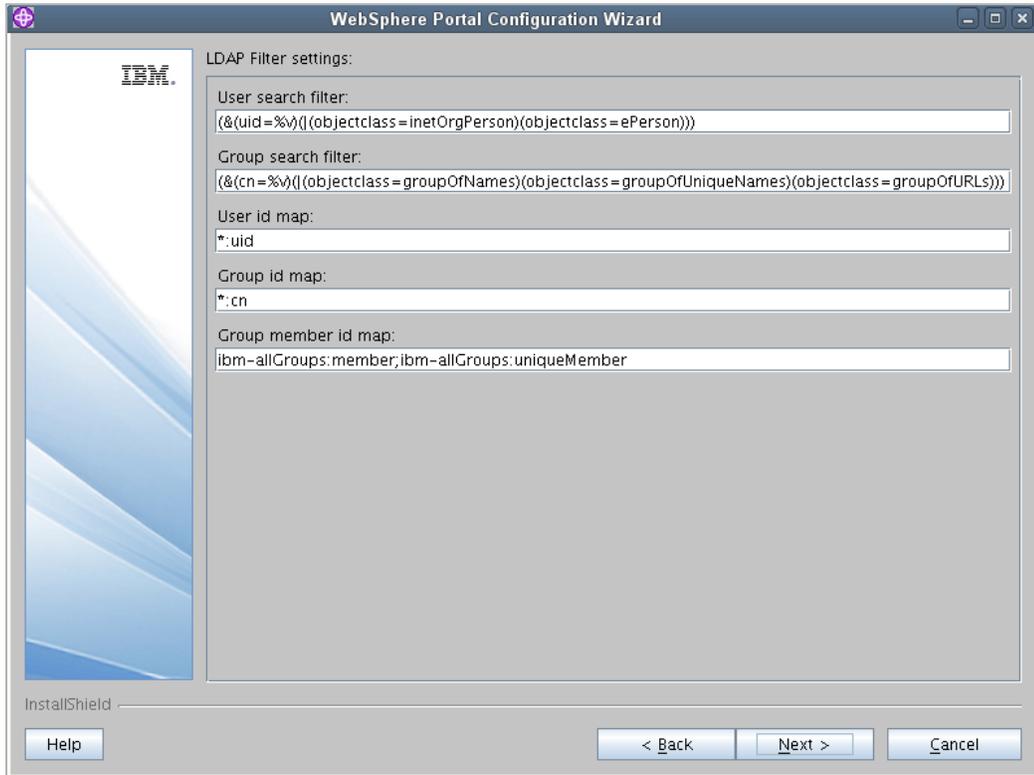
- The default parent for the entity type PersonAccount: `cn=users,dc=test,dc=com`
- The default parent for the entity type Group: `cn=groups,dc=test,dc=com`
- The RDN for the entity type PersonAccount: `uid`
- The RDN for the entity type Group: `cn`

At the bottom of the window, there are three buttons: 'Help', '< Back', and 'Next >', and a 'Cancel' button on the far right. The 'InstallShield' logo is visible in the bottom left corner.

Note

Write down the values of the User and Group parents. These values will be needed when integrating Content Server with LDAP.

13. In this screen, leave the default values and then click **Next**.

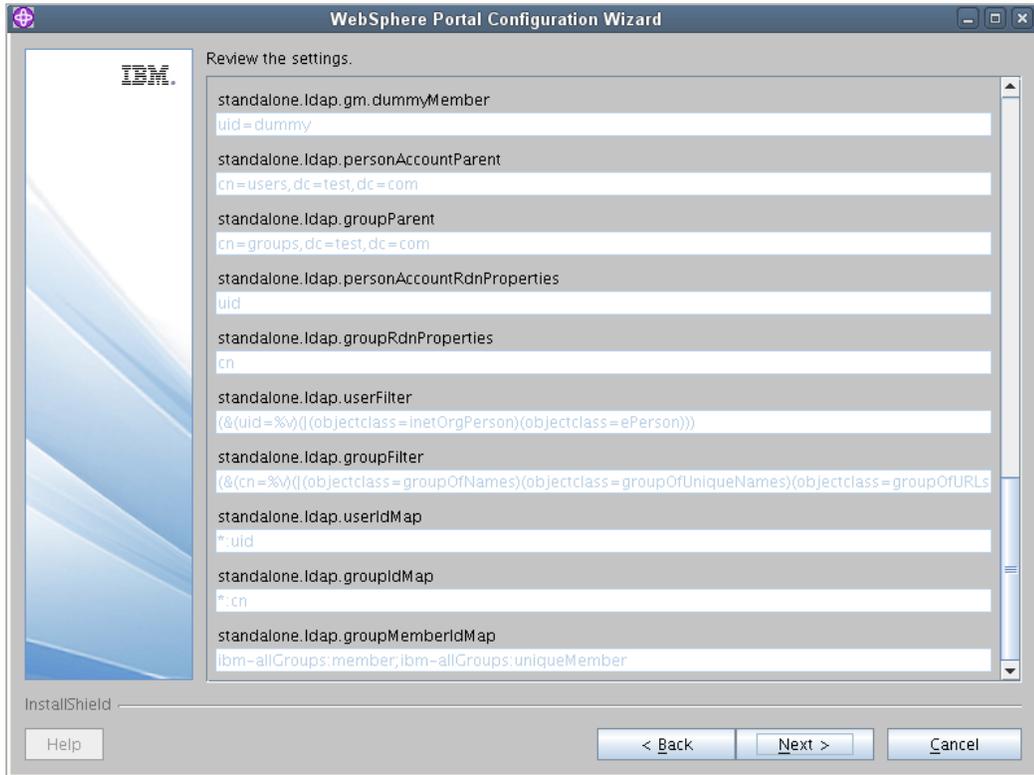


The image shows a screenshot of the "WebSphere Portal Configuration Wizard" window. The window title is "WebSphere Portal Configuration Wizard". On the left side, there is an IBM logo and a blue decorative graphic. The main area is titled "LDAP Filter settings:" and contains five text input fields with the following default values:

- User search filter: `(&(uid=%v)((objectclass=inetOrgPerson)(objectclass=ePerson)))`
- Group search filter: `(&(cn=%v)((objectclass=groupOfNames)(objectclass=groupOfUniqueNames)(objectclass=groupOfURLs)))`
- User id map: `*:uid`
- Group id map: `*:cn`
- Group member id map: `ibm-allGroups:member;ibm-allGroups:uniqueMember`

At the bottom of the window, there is an "InstallShield" label and three buttons: "Help", "< Back", "Next >", and "Cancel".

14. Review the information in the fields and click **Next**.

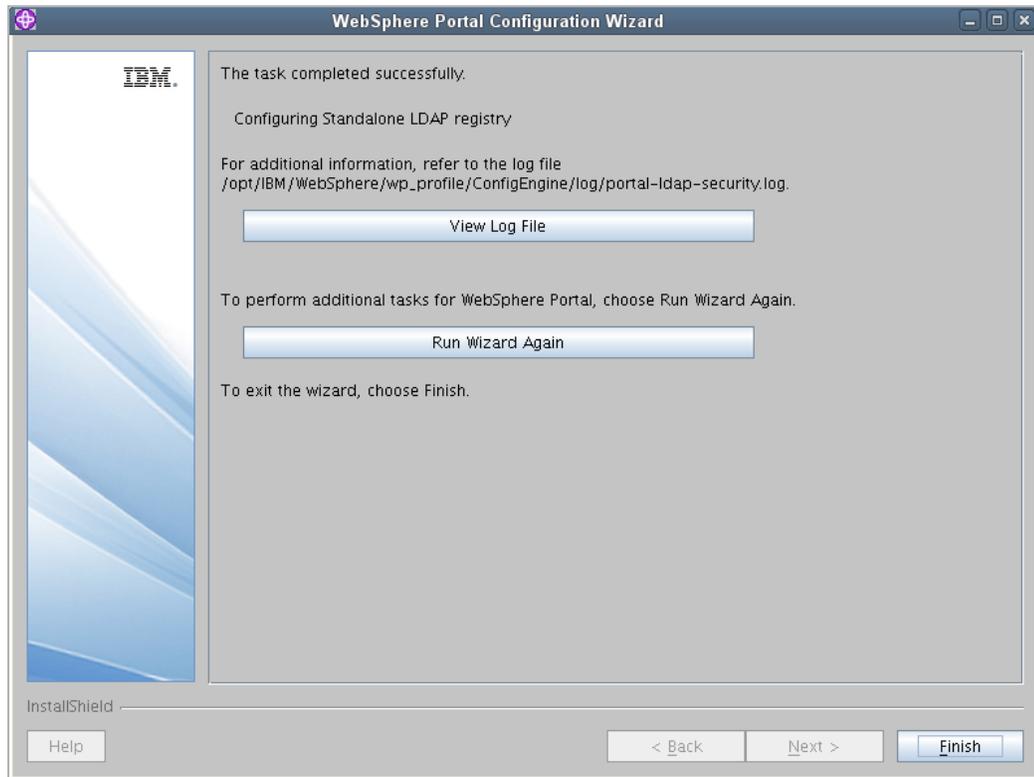


The screenshot shows the 'WebSphere Portal Configuration Wizard' window. The title bar reads 'WebSphere Portal Configuration Wizard'. On the left is the IBM logo. The main area is titled 'Review the settings.' and contains a list of configuration items, each with a text input field:

- standalone.Idap.gm.dummyMember: uid = dummy
- standalone.Idap.personAccountParent: cn = users,dc=test,dc=com
- standalone.Idap.groupParent: cn = groups,dc=test,dc=com
- standalone.Idap.personAccountRdnProperties: uid
- standalone.Idap.groupRdnProperties: cn
- standalone.Idap.userFilter: (&(uid=%v)((objectclass=inetOrgPerson)(objectclass=ePerson)))
- standalone.Idap.groupFilter: (&(cn=%v)((objectclass=groupOfNames)(objectclass=groupOfUniqueNames)(objectclass=groupOfURLs))
- standalone.Idap.userIdMap: *.uid
- standalone.Idap.groupIdMap: *.cn
- standalone.Idap.groupMemberIdMap: ibm-allGroups:member;ibm-allGroups:uniqueMember

At the bottom left is an 'InstallShield' label and a 'Help' button. At the bottom right are three buttons: '< Back', 'Next >', and 'Cancel'.

15. Allow the installation to complete.

16. Click Finish.**17. Continue to the next step to configure database communications.**

Configuring the WebSphere Portal Server Instance for Database Communications

Before installing Content Server, a data source is required. The data source must be created under the Server named `WebSphere_Portal`. This section explains how to configure the WebSphere Portal Server instance you created in the previous section to communicate with the database Content Server will be using.

This section contains the following steps:

- [A. Creating a J2C Authentication](#)
- [B. Creating a JDBC Provider](#)
- [C. Creating a JDBC Data Source](#)

Note

Before completing the steps in the rest of this chapter, start the following WebSphere Portal Server components, in the order shown:

1. Deployment Manager
2. Node Agent
3. Application Server

The list of commands for starting and stopping WebSphere Portal components is available in [“Start/Stop Commands and Default Ports,”](#) on page 18.

A. Creating a J2C Authentication

The J2C authentication contains the login information that the WebSphere Portal Server will use to connect to the Content Server database. A J2C authentication is the first of three components required to set up your WebSphere Portal Server instance to connect to your database.

To create a J2C authentication

1. Log in to the Deployment Manager console:

Note

The default Deployment Manager console port is 9060.

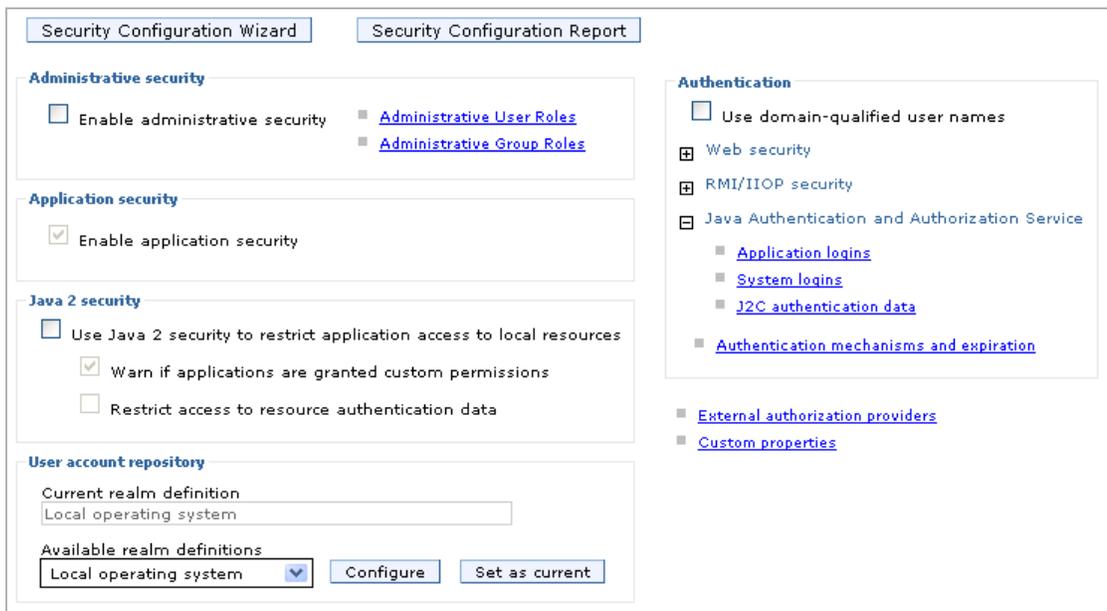
- a. Point your browser to the following URL:
`http://<DM_host>:<DM_console_port>/admin`
- b. Enter your user name and password.
- c. Click **Log in**.

The Deployment Manager console loads.

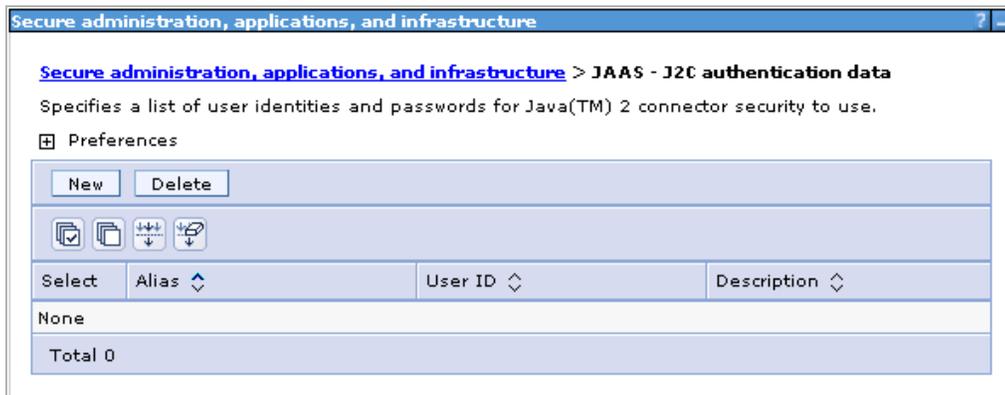
- In the left-hand pane, expand the **Security** node.



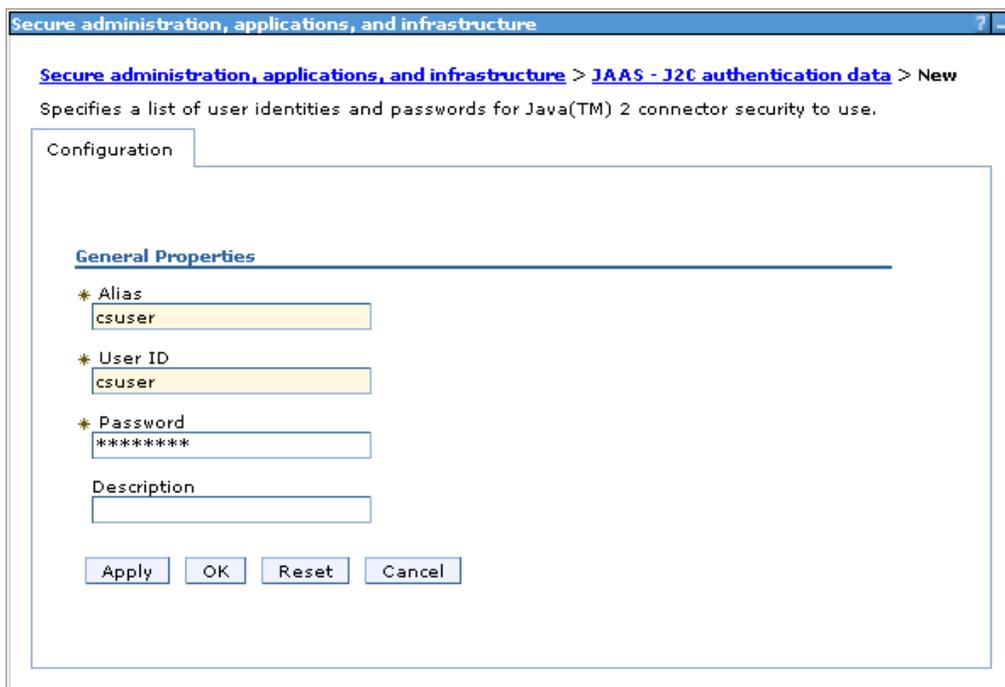
- Under the Security node, select **Secure administration, applications, and infrastructure**.
- In the “Authentication” area in the right-hand pane, expand the **Java Authentication and Authorization Service** node and click **J2C authentication data**.



The console displays the “JAAS – J2C authentication data” screen.

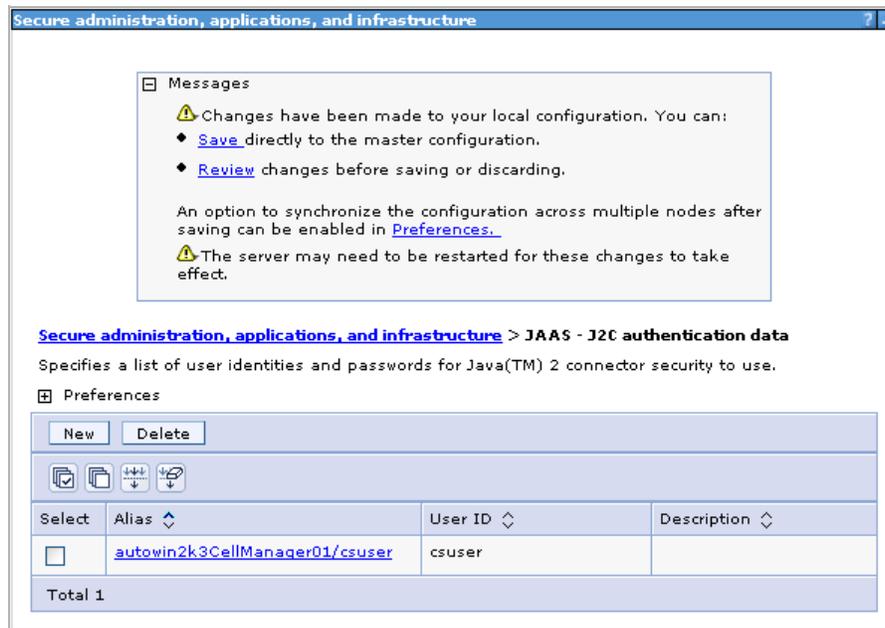


5. In the “JAAS – J2C authentication data” screen, click **New**. The console displays the “Configuration” tab.

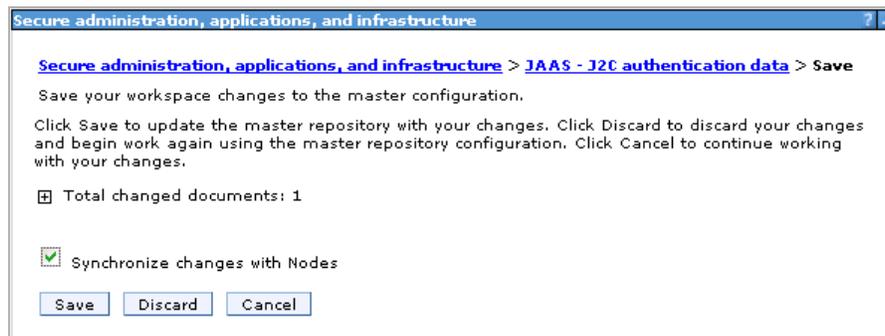


6. In the “Configuration” tab, do the following:
 - a. In the **Alias** field, enter a unique alias for the J2C authentication.
 - b. In the **User ID** and **Password** fields, enter the credentials of the database user account WebSphere Portal Server will use to connect to the Content Server database. (Re-enter the password for verification).

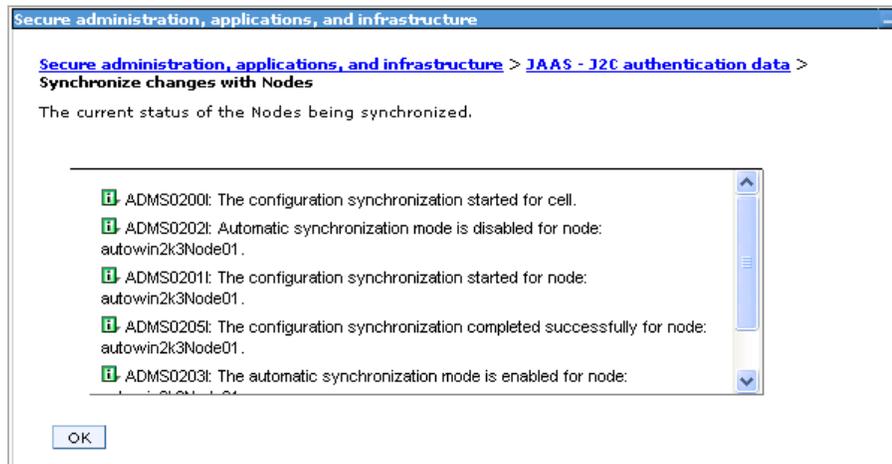
- c. When you have finished, click **OK**. The J2C authentication you created appears in the list in the “JAAS – J2C authentication data” screen.



7. In the “Messages” box, click **Save**.
8. In the “Save” screen, do the following:
 - a. Select the **Synchronize changes with nodes** check box.
 - b. Click **Save**.



9. In the “Synchronize changes with nodes” screen, click **OK**.



10. Restart the application server for the changes to take effect. For a list of start and stop commands, see “[Start/Stop Commands and Default Ports](#),” on page 18.

B. Creating a JDBC Provider

A JDBC provider encapsulates all data sources that use a vendor-specific JDBC driver implementation. A JDBC provider is the second of the three components required to set up your WebSphere Portal Server instance to connect to your database.

To create a JDBC provider

1. If you are using a DB2 or Oracle database, place the following jar files in the `<WAS_home>/universalDriver/lib` directory:

Note

If you are using SQL Server, skip this step.

- For DB2:
 - db2jcc.jar
 - db2jcc_license_cu.jar
 - For Oracle:
 - ojdbc14.jar or ojdbc5.jar
2. Log in to the Deployment Manager console:

Note

The default Deployment Manager console port is 9060.

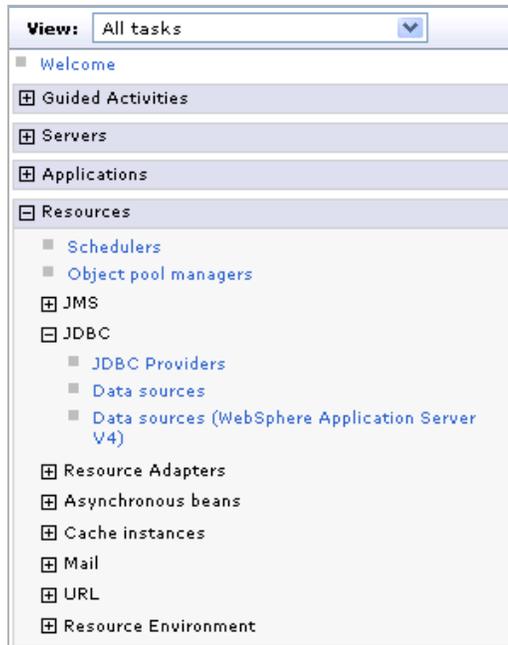
- a. Point your browser to the following URL:


```
http://<DM_host>:<DM_console_port>/admin
```
- b. Enter your user name and password.

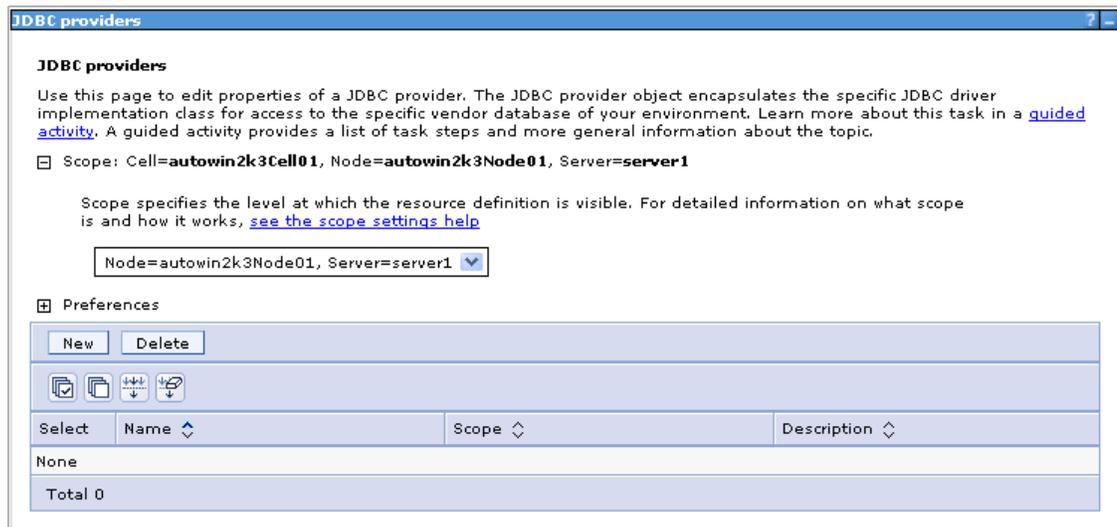
c. Click **Log in**.

The Deployment Manager console loads.

3. In the left-hand pane, expand the **Resources** node.



4. Under the **Resources** node, expand the **JDBC** node and click **JDBC Providers**. The console displays the “JDBC providers” screen.



5. In the “Scope” area of the “JDBC providers” screen, select **Node=<appserv_node>**, **Server=<server_name>** from the drop-down list, and click **New**.

Note

The default name of the first application server node created is <WAS_host>Node01. The default server name is server1.

6. In the “Create a new JDBC provider” screen, do the following:
 - a. In the “Database type” drop-down list, select the database Content Server will be using.
 - b. In the “Provider type” drop-down list, select the provider corresponding to the database you selected in [step a](#), as shown in the following table:

Database Type	Corresponding Provider Type
DB2	Universal JDBC Driver Provider
Oracle	Oracle JDBC Driver
SQL Server	WebSphere embedded ConnectJDBC driver for MS SQL Server.

- c. In the “Implementation type” drop-down list, select **Connection pool data source**.
- d. In the **Name** field, enter a unique name for this JDBC provider.
- e. Click **Next**.

7. In the “Enter database class path information” screen, do one of the following:

- If you selected **DB2** or **Oracle** in [step 6](#), enter the location containing the database-specific jar files you copied in [step 1](#), that is:

<WAS_home>/universalDriver/lib

When you have finished, click **Next**.

- If you selected SQL Server in [step 6](#), click **Next**.

Create a new JDBC Provider

Step 1: Create new JDBC provider
 → Step 2: Enter database class path information
 Step 3: Summary

Enter database class path information

Set the environment variables that represent the JDBC driver class files, which WebSphere(R) Application Server uses to define your JDBC provider. This wizard page displays the file names; you supply only the directory locations of the files. Use complete directory paths when you type the JDBC driver file locations. For example: /home/db2inst1/sqllib/java on Linux(TM). If a value is specified for you, you may click Next to accept the value.

Class path:

```

${DB2UNIVERSAL_JDBC_DRIVER_PATH}/db2jcc.jar
${UNIVERSAL_JDBC_DRIVER_PATH}/db2jcc_license_cu.jar
${DB2UNIVERSAL_JDBC_DRIVER_PATH}/db2jcc_license_cisuz.jar
  
```

Directory location for "db2jcc.jar, db2jcc_license_cisuz.jar" which is saved as WebSphere variable `${DB2UNIVERSAL_JDBC_DRIVER_PATH}`:
 C:\u01\software\Apps\Websphere61\AppServer\universalDriver\lib

Native library path

Directory location which is saved as WebSphere variable `${DB2UNIVERSAL_JDBC_DRIVER_NATIVEPATH}`

Previous Next Cancel

8. In the “Summary” screen, review the settings you have chosen, then click **Finish**.

Create a new JDBC Provider

Step 1: Create new JDBC provider
 Step 2: Enter database class path information
 → Step 3: Summary

Summary

Summary of actions:

Options	Values
Scope	cells:autowin2k3Cell01:nodes:autowin2k3Node01:servers:server1
JDBC provider name	DB2 Universal JDBC Driver Provider
Description	Non-XA DB2 Universal JDBC Driver-compliant Provider. Datasources created under this provider support only 1-phase commit processing except in the case where driver type 2 is used under WAS z/OS. On WAS z/OS, driver type 2 uses RRS and supports 2-phase commit processing
Class path	<code>\${DB2UNIVERSAL_JDBC_DRIVER_PATH}/db2jcc.jar</code> <code>\${UNIVERSAL_JDBC_DRIVER_PATH}/db2jcc_license_cu.jar</code> <code>\${DB2UNIVERSAL_JDBC_DRIVER_PATH}/db2jcc_license_cisuz.jar</code>
<code>\${DB2UNIVERSAL_JDBC_DRIVER_PATH}</code>	C:\u01\software\Apps\Websphere61\AppServer\universalDriver\lib
<code>\${UNIVERSAL_JDBC_DRIVER_PATH}</code>	null
Native path	<code>\${DB2UNIVERSAL_JDBC_DRIVER_NATIVEPATH}</code>
<code>\${DB2UNIVERSAL_JDBC_DRIVER_NATIVEPATH}</code>	
Implementation class name	com.ibm.db2.jcc.DB2ConnectionPoolDataSource

Previous Finish Cancel

9. In the “Message” box, click **Review**.

10. In the “Save” screen, do the following:
 - a. Select the **Synchronize changes with nodes** check box.
 - b. Click **Save**.
11. In the “Synchronize changes with nodes” screen, click **OK**.
The console re-displays the “JDBC Providers” screen. The new JDBC provider appears in the list of providers in the right-hand pane.
12. If you selected DB2 in [step 6](#), do the following:

Note

If you selected **Oracle** or **SQL Server** in [step 6](#), skip the steps below and proceed to the next section.

- a. In the list of JDBC providers in the right-hand pane, select the JDBC provider you created earlier in this section.
- b. In the **Class path** field of the “DB2 Universal JDBC driver provider” screen do the following:

- 1) Delete the path to the `db2jcc_license_cisuz.jar` file.
- 2) Change the variable name for the `db2jcc_license_cu.jar` file:

From: `${UNIVERSAL_JDBC_DRIVER_PATH}`

To: `${DB2UNIVERSAL_JDBC_DRIVER_PATH}`

JDBC providers > DB2 Universal JDBC Driver Provider

Use this page to edit properties of a JDBC provider. The JDBC provider object encapsulates the specific JDBC driver implementation class for access to the specific vendor database of your environment.

Configuration

General Properties	Additional Properties
<p>* Scope</p> <p>cells:autowin2k3Cell01:nodes:autowin2k3Node01:servers:server1</p> <p>* Name</p> <p>DB2 Universal JDBC Driver Provider</p> <p>Description</p> <p>Non-XA DB2 Universal JDBC Driver-compliant Provider. Datasources created under this provider support only 1-phase commit processing except in the case where driver type 2 is used</p> <p>Class path</p> <p><code>\${UNIVERSAL_JDBC_DRIVER_PATH}/db: \${UNIVERSAL_JDBC_DRIVER_PATH}/db:</code></p> <p>Native library path</p> <p><code>\${DB2UNIVERSAL_JDBC_DRIVER_NATIV</code></p> <p>* Implementation class name</p> <p><code>com.ibm.db2.jcc.DB2ConnectionPoolDataSource</code></p>	<ul style="list-style-type: none"> ■ Data sources ■ Data sources (WebSphere Application Server V4)

Apply OK Reset Cancel

- c. Click **OK**.
- d. In the “Messages” box, click **Review**.
- e. In the “Save” screen, do the following:
 - 1) Select the **Synchronize changes with nodes** check box.
 - 2) Click **Save**.
- f. In the “Synchronize changes with nodes” screen, click **OK**.

C. Creating a JDBC Data Source

Note

Before starting this procedure, make sure you have done the following:

1. Created a J2C authentication by following the steps in “[A. Creating a J2C Authentication](#).”
2. Created a JDBC provider by following the steps in “[B. Creating a JDBC Provider](#).”

Once you have created the J2C authentication and the JDBC provider, you must create a data source. The data source is the final component required to set up your WebSphere Portal Server instance to connect to your database.

To create a JDBC data source

1. Log in to the Deployment Manager console:

Note

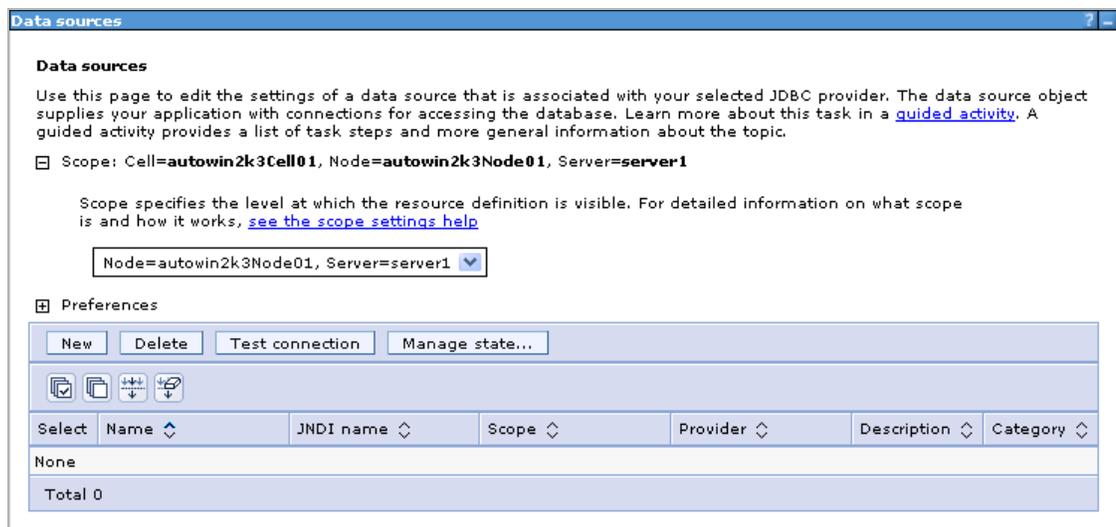
The default Deployment Manager console port is 9060.

- a. Point your browser to the following URL:
`http://<DM_host>:<DM_console_port>/admin`
- b. Enter your user name and password.
- c. Click **Log in**.
The Deployment Manager console opens.

- In the left-hand pane, expand the **Resources** node.



- Under the **Resources** node, expand the **JDBC** node, and click **Data sources**. The console displays the “Data sources” screen.



- In the “Scope” area of the “Data sources” screen, select **Node=<appserv_node>**, **Server=<server_name>** from the drop-down list and click **New**.

Note

The default name of the first application server node created is <WAS_host>Node01.

The default server name is server1.

5. In the “Enter basic data source information” screen, do the following:
 - a. In the **Data source** name field, enter a unique name for this data source.
 - b. In the **JNDI name** field, enter the JNDI name for this data source.
 - c. In the “Component-managed authentication alias” drop-down list, select the J2C authentication you created in [A. Creating a J2C Authentication](#).
 - d. Click **Next**.

The screenshot shows the 'Create a data source' wizard in the WebSphere Administration Console. The title bar reads 'Create a data source'. The main window is divided into two panes. The left pane, titled 'Create a data source', contains a vertical list of steps: 'Step 1: Enter basic data source information' (highlighted with a yellow arrow), 'Step 2: Select JDBC provider', 'Step 3: Enter database specific properties for the data source', and 'Step 4: Summary'. The right pane, titled 'Enter basic data source information', contains the following text: 'Set the basic configuration values of a data source for association with your JDBC provider. A data source supplies the physical connections between the application server and the database.' Below this is a 'Requirement' section: 'Requirement: Use the Data sources (WebSphere(R) Application Server V4) console pages if your applications are based on the Enterprise JavaBeans(TM) (EJB) 1.0 specification or the Java(TM) Servlet 2.2 specification.' There are three input fields: 'Scope' with the value 'cells:autowin2k3Cell01:nodes:autowin2k3Node01:servers:server1', '* Data source name' with the value 'csDataSource', and '* JNDI name' with the value 'csDataSource'. Below these is a section titled 'Component-managed authentication alias and XA recovery authentication alias' with the text: 'Select a component-managed authentication alias. The selected authentication alias will also be set as the XA recovery authentication alias if your JDBC Provider supports XA. If you choose to [create a new J2C authentication alias](#), the wizard will be canceled.' A dropdown menu shows 'autowin2k3CellManager01/csuser'. At the bottom are 'Next' and 'Cancel' buttons.

6. In the “Select JDBC provider” screen, do the following:
 - a. Select the **Select an existing JDBC provider** option.
 - b. In the drop-down list, select the JDBC provider you created in step “[B. Creating a JDBC Provider](#).”
 - c. When you are finished, click **Next**.

The screenshot shows the 'Create a data source' wizard in the WebSphere Administration Console. The title bar reads 'Create a data source'. The main window is divided into two panes. The left pane, titled 'Create a data source', contains a vertical list of steps: 'Step 1: Enter basic data source information', 'Step 2: Select JDBC provider' (highlighted with a yellow arrow), 'Step 3: Enter database specific properties for the data source', and 'Step 4: Summary'. The right pane, titled 'Select JDBC provider', contains the text: 'Specify a JDBC provider to support this data source.' There are two radio button options: 'Create new JDBC provider' (unselected) and 'Select an existing JDBC provider' (selected). Below these is a dropdown menu showing 'DB2 Universal JDBC Driver Provider'. At the bottom are 'Previous', 'Next', and 'Cancel' buttons.

7. In the “Enter database-specific properties for the data source” screen, do one of the following:
 - If you selected a DB2 JDBC provider in [step 6](#), do the following:
 - 1) In the **Database name** field, enter the name of the database Content Server will be using.
 - 2) In the “Driver type” drop-down list, select **4**.
 - 3) In the **Server name** field, enter the host name or IP address of the machine running the Content Server database.
 - 4) In the **Port number** field, enter the port number on which the Content Server database is listening for connections.
 - 5) Select the **Use this data source in container managed persistence (CMP)** check box.
 - 6) Click **Next**.

The screenshot shows a window titled "Create a data source" with a sidebar on the left indicating the current step: "Step 3: Enter database specific properties for the data source". The main area is titled "Enter database specific properties for the data source" and contains the following fields and options:

- Database name:** Text box containing "autodb".
- Driver type:** Drop-down menu showing "4".
- Server name:** Text box containing "www.fatwire.com".
- Port number:** Text box containing "50001".
- Use this data source in container managed persistence (CMP):** A checked checkbox.

At the bottom of the dialog are three buttons: "Previous", "Next", and "Cancel".

- If you selected an Oracle JDBC provider in [step 6](#), do the following:
 - 1) In the URL field, enter the URL of the database Content Server will be using. The URL you enter must be in the following format:

```
jdbc:oracle:thin:@//<db_host>:<db_port>/<db_name>
```

 where:
 - <db_host> is the host name or IP address of the machine running the Content Server database.
 - <db_port> is the port number on which the Content Server database is listening for connections.
 - <db_name> is the name of the Content Server database.
 - 2) In the “Data store helper class name” drop-down list, select **Oracle10g data store helper**.
 - 3) Select the **Use this data source in container managed persistence (CMP)** check box.

4) Click **Next**.

- If you selected a SQL Server provider in [step 6](#), do the following:
 - 1) In the **Database name** field, enter the name of the database Content Server will be using.
 - 2) In the “Driver type” drop-down list, select **4**.
 - 3) In the **Server name** field, enter the host name or IP address of the machine running the Content Server database.
 - 4) In the **Port number** field, enter the port number on which the Content Server database is listening for connections.
 - 5) Select the **Use this data source in container managed persistence (CMP)** check box.
 - 6) Click **Next**.

8. In the “Summary” screen, review the settings you have chosen, then click **Finish**.
9. In the “Messages” box, click **Review**.
10. In the “Save” screen, do the following:
 - a. Select the **Synchronize changes with nodes** check box.

- b. Click **Save**.
11. In the “Synchronize changes with nodes” screen, click **OK**. The console re-displays the “Data sources” screen showing the data source you just created.
 12. In the list of data sources, select the data source you just created.
 13. In the “Additional Properties” area of the “Data source” screen, click **Connection pool properties**.

[Data sources](#) > [csDataSource](#)

Use this page to edit the settings of a data source that is associated with your selected JDBC provider. The data source object supplies your application with connections for accessing the database.

Configuration

General Properties	Additional Properties
<p>* Scope</p> <input type="text" value="cells:autowin2k3Cell01:nodes:autowin2k3Node01:servers:server1"/>	<p><input checked="" type="checkbox"/> Connection pool properties</p>
<p>* Provider</p> <input type="text" value="DB2 Universal JDBC Driver Provider"/>	<p><input type="checkbox"/> WebSphere Application Server data source properties</p>

14. In the “Connection pools” screen, do the following:
 - a. In the **Maximum connections** field, enter 100 (or a value appropriate to your configuration, if known).
 - b. In the **Minimum connections** field, enter 10 (or a value appropriate to your configuration, if known).
 - c. Click **OK**.

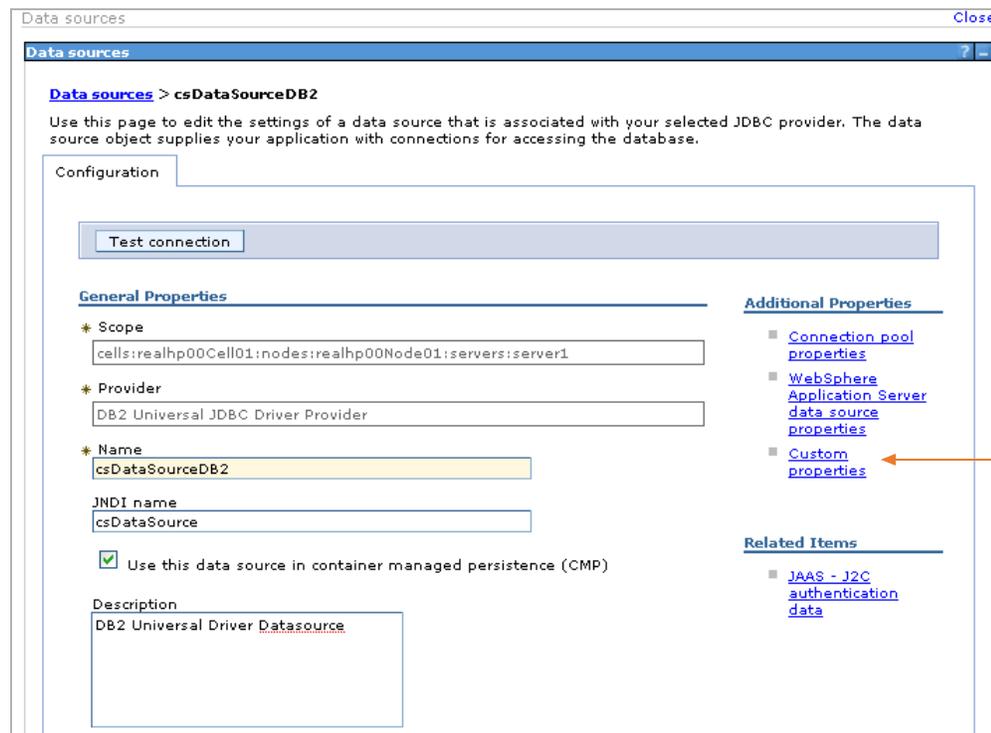
[Data sources](#) > [csDataSource](#) > [Connection pools](#)

Use this page to set properties that impact the timing of connection management tasks, which can affect the performance of your application. Consider the default values carefully; your application requirements might warrant changing these values.

Configuration

General Properties	Additional Properties
<p>Scope</p> <input type="text" value="cells:autowin2k3Cell01:nodes:autowin2k3Node01:servers:server1"/>	<p><input type="checkbox"/> Advanced connection pool properties</p> <p><input type="checkbox"/> Connection pool custom properties</p>
<p>Connection timeout</p> <input type="text" value="180"/> seconds	
<p>Maximum connections</p> <input type="text" value="100"/> connections	
<p>Minimum connections</p> <input type="text" value="10"/> connections	
<p>Reap time</p> <input type="text" value="180"/> seconds	
<p>Unused timeout</p> <input type="text" value="1800"/> seconds	
<p>Aged timeout</p> <input type="text" value="0"/> seconds	
<p>Purge policy</p> <input type="text" value="EntirePool"/>	

15. In the “Messages” box, click **Review**.
16. In the “Save” screen, do the following:
 - a. Select the **Synchronize changes with nodes** check box.
 - b. Click **Save**.
17. In the “Synchronize changes with nodes” screen, click **OK**.
18. For installations running DB2:
 - a. In the list of data sources, select the data source you just created.
 - b. In the “Additional Properties” area of the “Data source” screen, click **Custom properties**.



- c. In the “Custom properties” screen, click on **resultSetHoldability**.

Data sources Close page

Data sources ?

[Data sources](#) > [csDataSourceDB2](#) > **Custom properties**

Use this page to specify custom properties that your enterprise information system (EIS) requires for the resource providers and resource factories that you configure. For example, most database vendors require additional custom properties for data sources that access the database.

Preferences

New Delete

Select	Name	Value	Description	Required
<input type="checkbox"/>	description		The description of this datasource.	false
<input type="checkbox"/>	traceLevel		The DB2 trace level for logging to the logWriter or trace file. Possible trace levels are: TRACE NONE = 0,TRACE CONNECTION CALLS = 1,TRACE STATEMENT CALLS = 2,TRACE RESULT SET CALLS = 4,TRACE DRIVER CONFIGURATION = 16,TRACE CONNECTS = 32,TRACE DRDA FLOWS = 64,TRACE RESULT SET META DATA = 128,TRACE PARAMETER META DATA = 256,TRACE DIAGNOSTICS = 512,TRACE SQL = 1024,TRACE ALL = -1,.	false
<input type="checkbox"/>	traceFile		The trace file to store the trace output. If you specify the trace file, the DB2 Jcc trace will be logged in this trace file. If this property is not specified and the WAS.database.trace group is enabled, then both WebSphere trace and DB2 trace will be logged into the WebSphere trace file.	false
<input type="checkbox"/>	fullyMaterializeLobData	true	This setting controls whether or not LOB locators are used to fetch LOB data. If enabled, LOB data is not streamed, but is fully materialized with locators when the user requests a stream on the LOB column. The default value is true.	false
<input type="checkbox"/>	resultSetHoldability	2	Determine whether ResultSets are closed or kept open when committing a transaction. The possible values are: 1 (HOLD CURSORS OVER COMMIT), 2 (CLOSE CURSORS AT COMMIT).	false
<input type="checkbox"/>	currentPackageSet		This property is used in conjunction with the DB2Binder - collection option which is given when the JDBC/CLI packageset is bound during installation by the DBA.	false
<input type="checkbox"/>	readOnly	false	This property creates a read only connection. By default this value is false.	false
<input type="checkbox"/>	deferPrepares	true	This property provides a performance directive that affects the internal semantics of the input	false

Field help
For field help information, select a field label or list marker when the help cursor appears.

Page help
[More information about this page](#)

- d. In the “Value” field enter **1**, and click **OK**.

The screenshot shows the 'Data sources' configuration page in the WebSphere Portal Administration console. The breadcrumb trail is 'Data sources > csDataSourceDB2 > Custom properties > resultSetHoldability'. The page title is 'Data sources' and there is a 'Close page' link in the top right. Below the breadcrumb trail, there is a help section with the text: 'Use this page to specify custom properties that your enterprise information system (EIS) requires for the resource providers and resource factories that you configure. For example, most database vendors require additional custom properties for data sources that access the database.' The main configuration area is titled 'Configuration' and contains a 'General Properties' section. Under 'General Properties', there is a 'Scope' field with the value 'cells:realhp00Cell01:nodes:realhp00Node01:servers:server1', a 'Required' checkbox (unchecked), a 'Name' field with the value 'resultSetHoldability', a 'Value' field with the value '1' (highlighted by an orange arrow), and a 'Description' field with the text: 'Determine whether ResultSets are closed or kept open when committing a transaction. The possible values are: 1 (HOLD_CURSORS_OVER_COMMIT), 2 (CLOSE_CURSORS_AT_COMMIT)'. Below the description is a 'Type' dropdown menu set to 'java.lang.Integer'. At the bottom of the configuration area are four buttons: 'Apply', 'OK', 'Reset', and 'Cancel'. On the right side of the page, there is a 'Help' section with 'Field help' and 'Page help' links.

- e. In the “Messages” box, click **Review**.
- f. In the “Save” screen, do the following:
- 1) Select the “Synchronize changes with nodes” screen, click **OK**.
 - 2) Click **Save**.
19. In the “Synchronize changes with nodes” screen, click **OK**.
20. Continue to the next step to verify your WebSphere Portal installation.

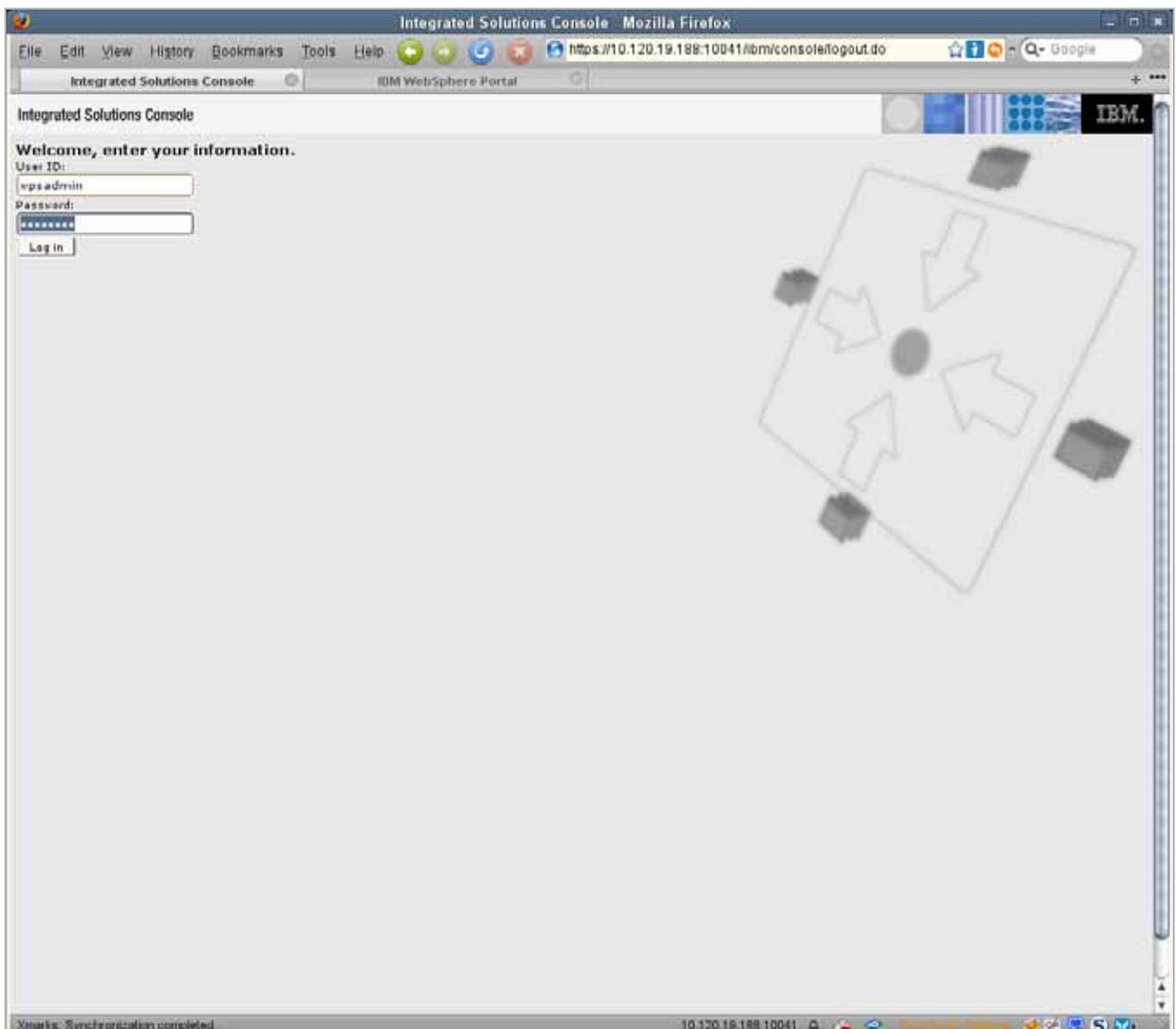
Verifying the WebSphere Portal Installation

WebSphere Portal is now installed and configured so that it authenticates against LDAP. Log in to WebSphere Application Server and WebSphere Portal Server to ensure they are working properly.

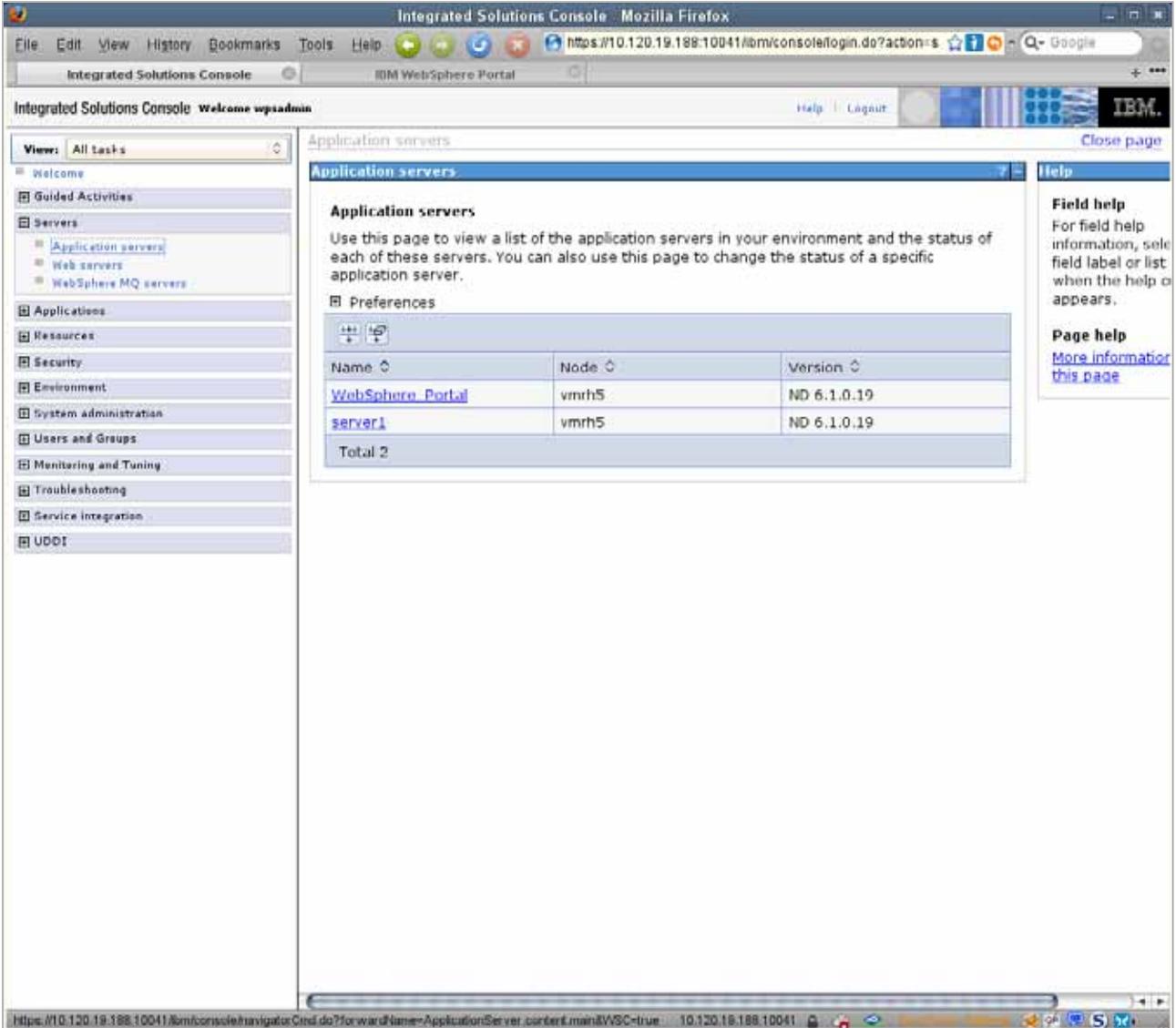
Note

This guide uses the default ports for the WebSphere servers. The default ports are `https 10041` for the application server and `http 10040` for the portal server.

1. Connect to the WebSphere Application Server Console:
`https://<hostname>:10041/ibm/console/logon.jsp`. In the “Login” screen, log in with the **wpsadmin** user ID and password.



2. Expand the left navigation tree under **Servers**, then click **Application Servers**. Two servers should be displayed.

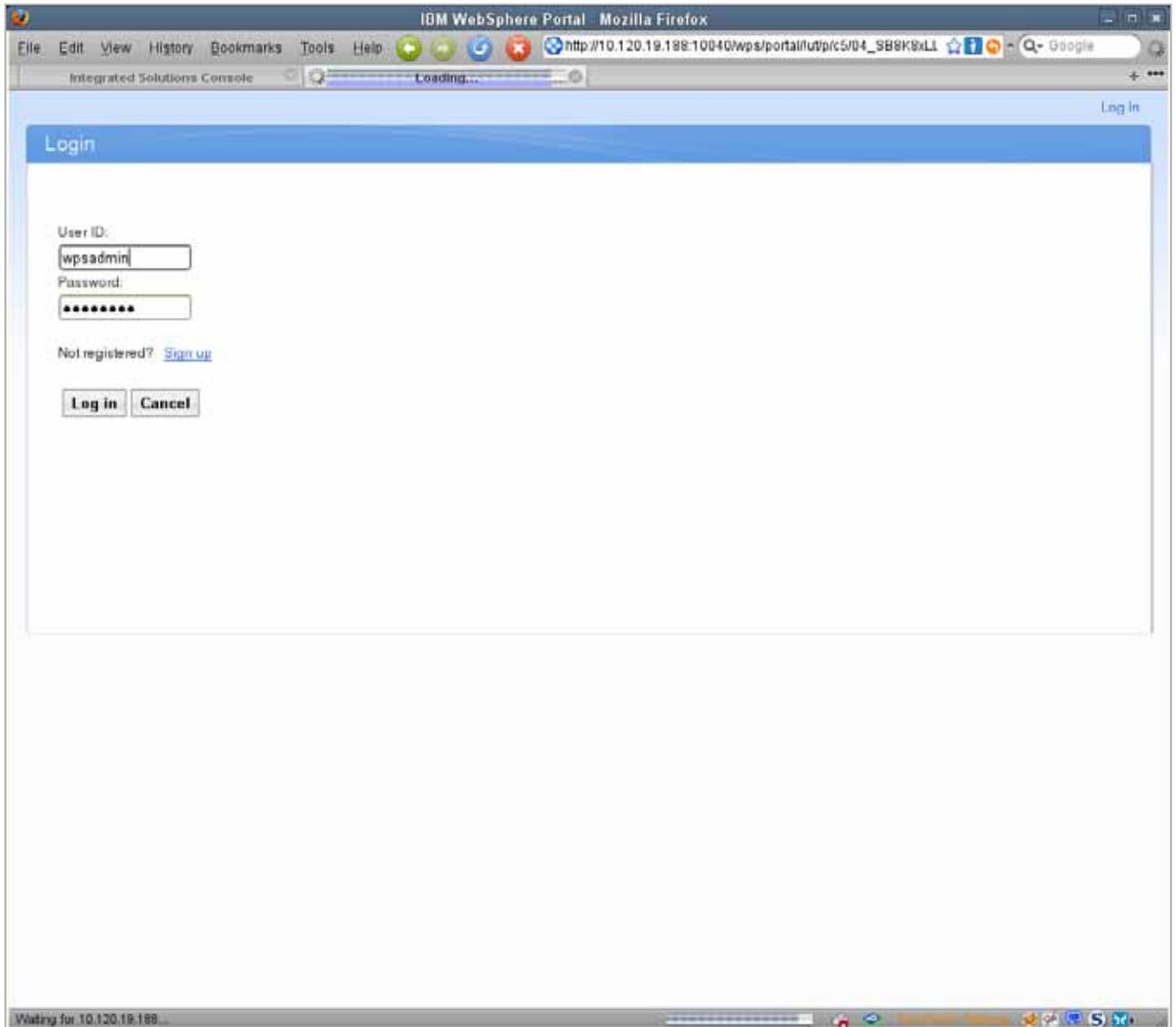


The screenshot shows the IBM Integrated Solutions Console interface in a Mozilla Firefox browser. The left navigation pane is expanded to 'Application servers'. The main content area displays the 'Application servers' page, which includes a table listing the servers in the environment.

Name	Node	Version
WebSphere Portal	vmrh5	ND 6.1.0.19
server1	vmrh5	ND 6.1.0.19
Total 2		

3. Log out of the Admin Interface.

4. Connect to the WebSphere Portal Interface:
`http://<hostname>:10040/wps/portal`. In the “Login” screen, log in with the **wpsadmin** user ID and password.



The following interface is displayed.:



5. Log out of the portal interface.
6. Continue to the next part to install and configure Content Server.

Part 3

Content Server

This part shows you how to install Content Server and configure portlets for the users.

This part contains the following chapters:

- [Chapter 4, “Installing Content Server”](#)
- [Chapter 5, “Configuring Portlets”](#)

Chapter 4

Installing Content Server

Now that you have confirmed that the portal is set up and working properly, you can install Content Server on the WebSphere portal.

This chapter contains the following sections:

- [Installing Content Server on the WebSphere Portal](#)
- [Post-Installation Steps](#)

Installing Content Server on the WebSphere Portal

To install Content Server with Patch 2 on the WebSphere portal

1. Start the Content Server installer.
2. Select **Portal Server Platform**, then select **WebSphere Portal 6.1**.
3. For the installation location, enter: <WAS Portal Home>/wp_profile/installedApps/<node name>/ContentServer.ear/cs.war
4. Continue with the installation. Stop at the midway point, when you see the dialog box that prompts you to deploy.

To deploy, do the following:

5. Modify the cs.war file for use on WebSphere Portal 6.1.
 - a. Change to: <CS HOME>/ominstallinfo/app/
 - b. Make a new directory called 1.
 - c. Rename cs.war to cs_org.war.
 - d. Change to directory 1.
 - e. Uncompress cs.war into directory 1.


```
# jar -xvf ../cs.war
```
 - f. Edit the file WEB-INF/classes/commons-logging.properties:
 - 1) Locate and remove the line `priority=1`.
 - 2) Create a new line at the very beginning of the file that states `priority=1`.
 - 3) Save the changes.
6. Edit the file WEB-INF/classes/ibm-web-ext.xmi:
 - a. Go the </webappext:WebAppExtension> tag:


```
<webappext:WebAppExtension xmi:version="2.0"
  xmlns:xmi="http://www.omg.org/XMI"
  xmlns:webappext="webappext.xmi"
  xmlns:webapplication="webapplication.xmi"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmi:id="WebAppExtension_2" reloadInterval="5"
  reloadingEnabled="true" defaultErrorPage="error.jsp"
  additionalClassPath="" fileServingEnabled="true"
  directoryBrowsingEnabled="true"
  serveServletsByClassnameEnabled="false">
  <webApp href="WEB-INF/web.xml#WebApp_ID"/>
</webappext:WebAppExtension>
```
 - b. Add the following lines before the tag:


```
<jspAttributes xmi:id="JSPAttribute_1237644990616"
  name="jdkSourceLevel" value="15"/>
<jspAttributes xmi:id="JSPAttribute_1237644990617"
  name="disableJspRuntimeCompilation" value="false"/>
<jspAttributes xmi:id="JSPAttribute_1237644990618"
  name="reloadEnabled" value="true"/>
```

```
<jspAttributes xmi:id="JSPAttribute_1237644990619"
  name="reloadInterval" value = "10"/>
```

The new file now looks like this:

```
<webappext:WebAppExtension xmi:version="2.0"
  xmlns:xmi="http://www.omg.org/XMI"
  xmlns:webappext="webappext.xmi"
  xmlns:webapplication="webapplication.xmi"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmi:id="WebAppExtension_2" reloadInterval="5"
  reloadingEnabled="true" defaultErrorPage="error.jsp"
  additionalClassPath="" fileServingEnabled="true"
  directoryBrowsingEnabled="true"
  serveServletsByClassnameEnabled="false">
<webApp href="WEB-INF/web.xml#WebApp_ID"/>
<jspAttributes xmi:id="JSPAttribute_1237644990616"
  name="jdkSourceLevel" value = "15"/>
<jspAttributes xmi:id="JSPAttribute_1237644990617"
  name="disableJspRuntimeCompilation" value="false"/>
<jspAttributes xmi:id="JSPAttribute_1237644990618"
  name="reloadEnabled" value= "true"/>
<jspAttributes xmi:id="JSPAttribute_1237644990619"
  name="reloadInterval" value = "10"/>
</webappext:WebAppExtension>
```

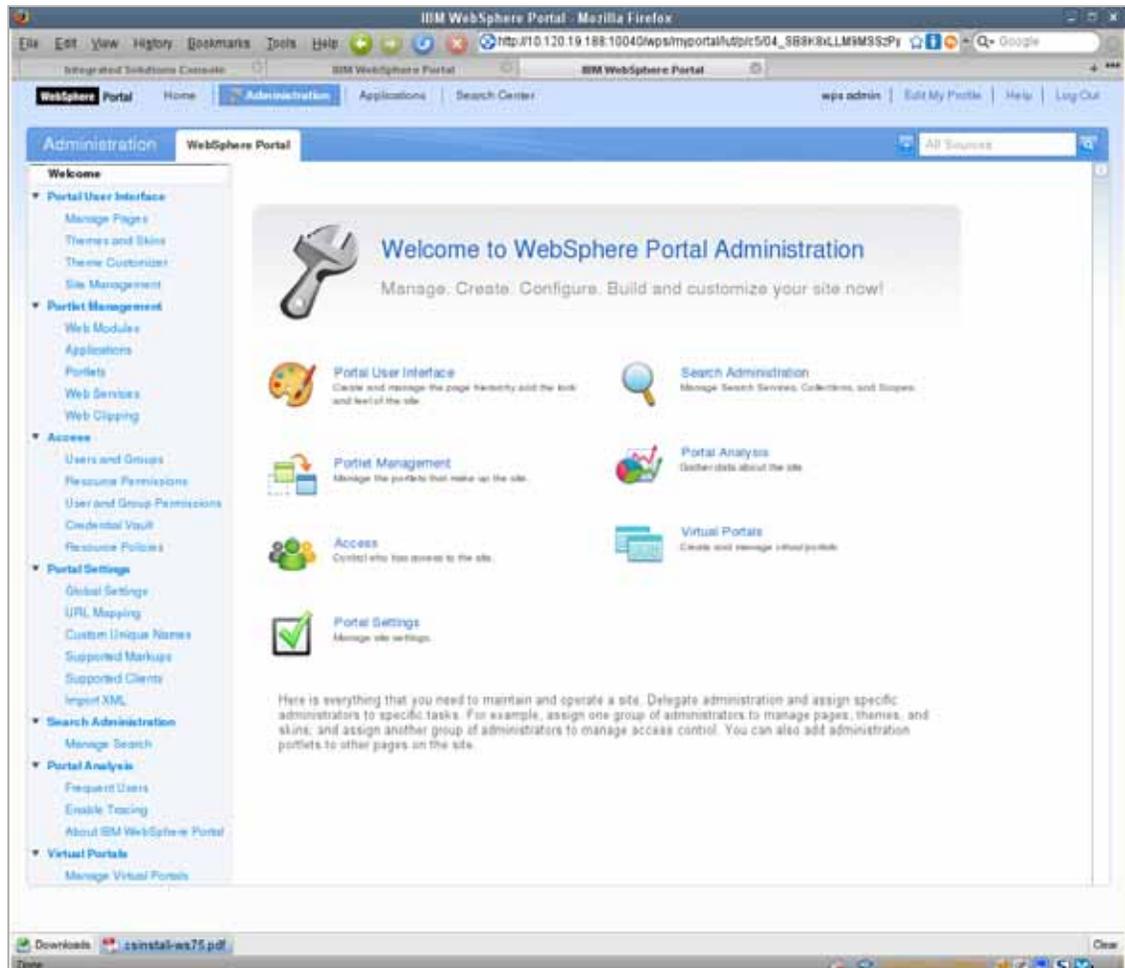
- c. Save the changes.
7. Compress the changes into a new `cs.war` file:
 - a. Change to: `<CS_HOME>/ominstallinfo/app/1`
 - b. Run the following command:


```
# jar -cvf ../cs.war *
```
8. Copy the `cs.war` file (located in `<CS_HOME>/ominstallinfo/app/1`) to your local file system (from which you are starting the browser).

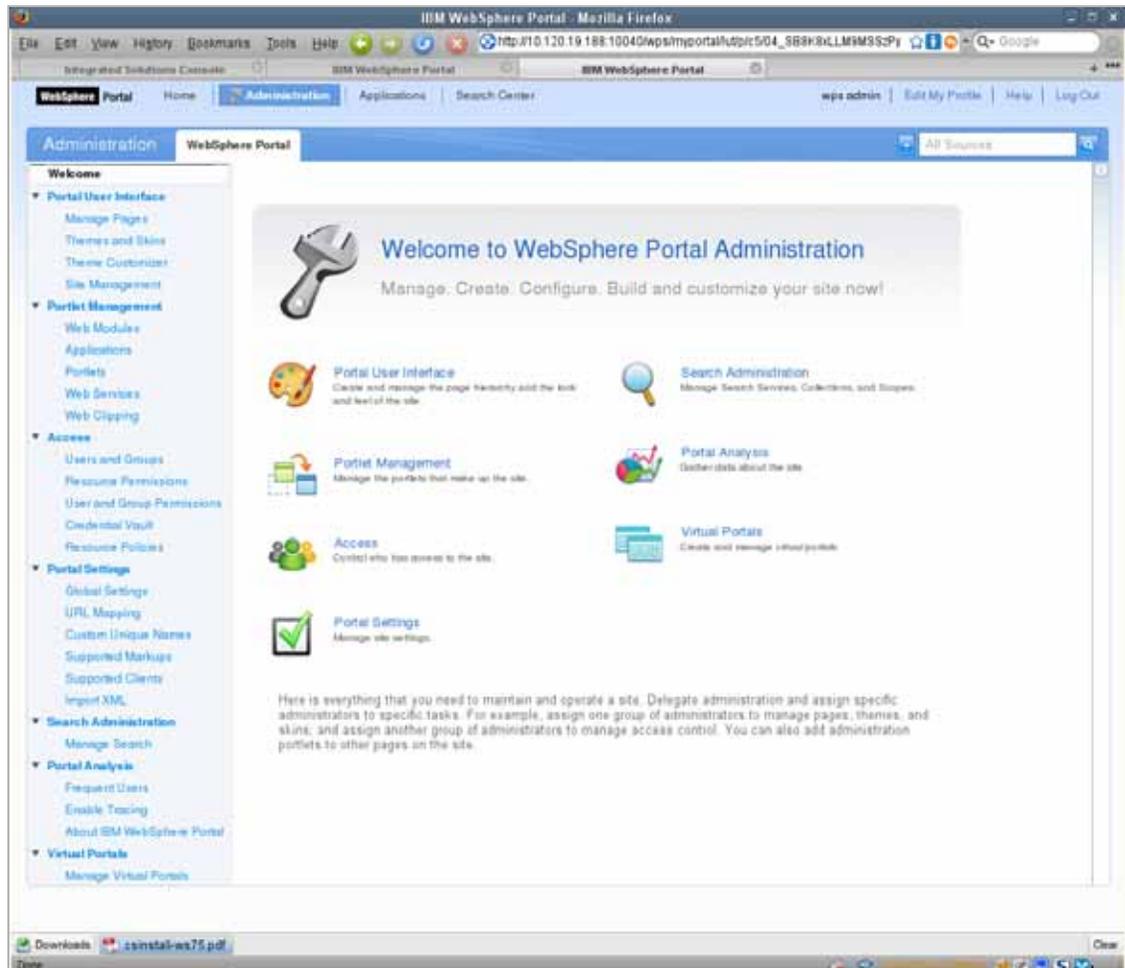
Complete the installation:

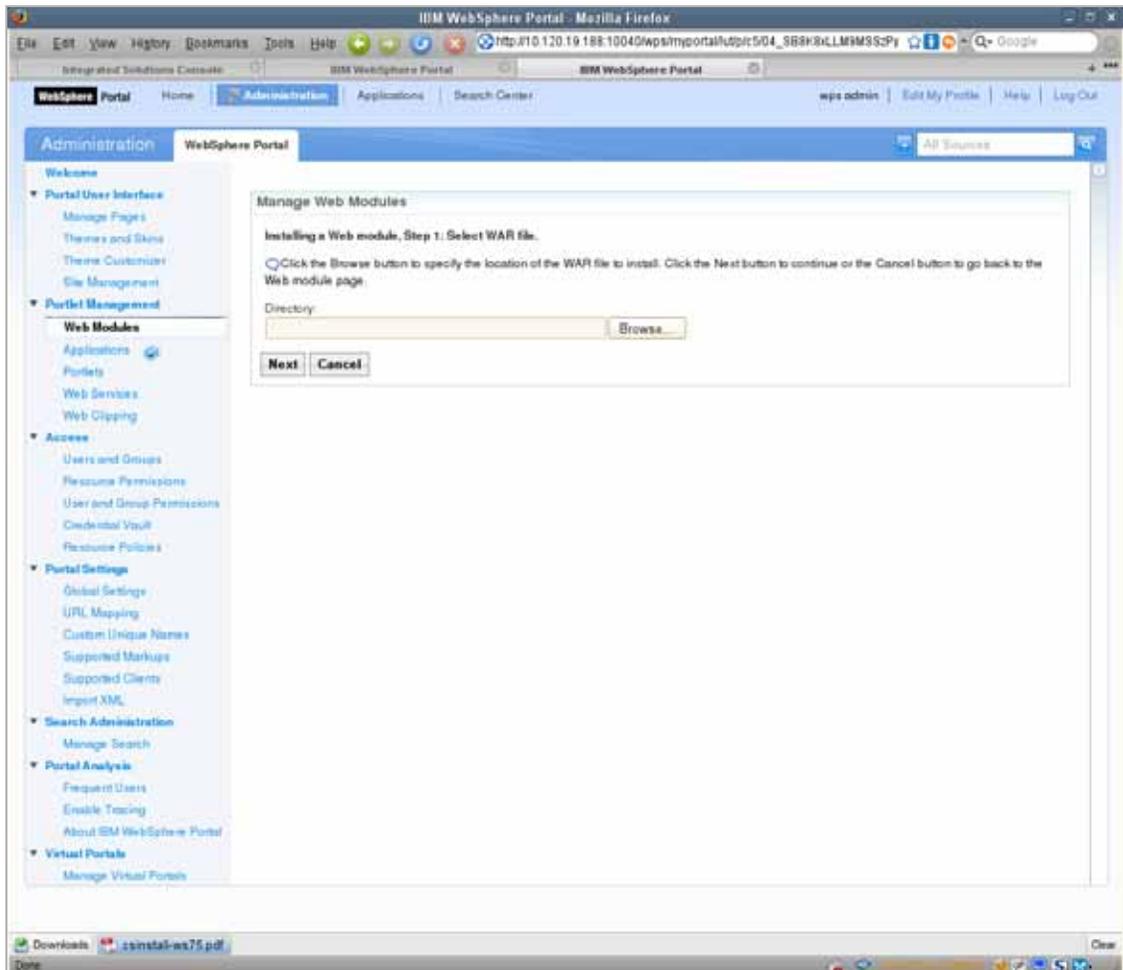
9. Log in to the portal: `http://<hostname>:10040/wps/portal`

10. On the top menu bar, click **Administration**.



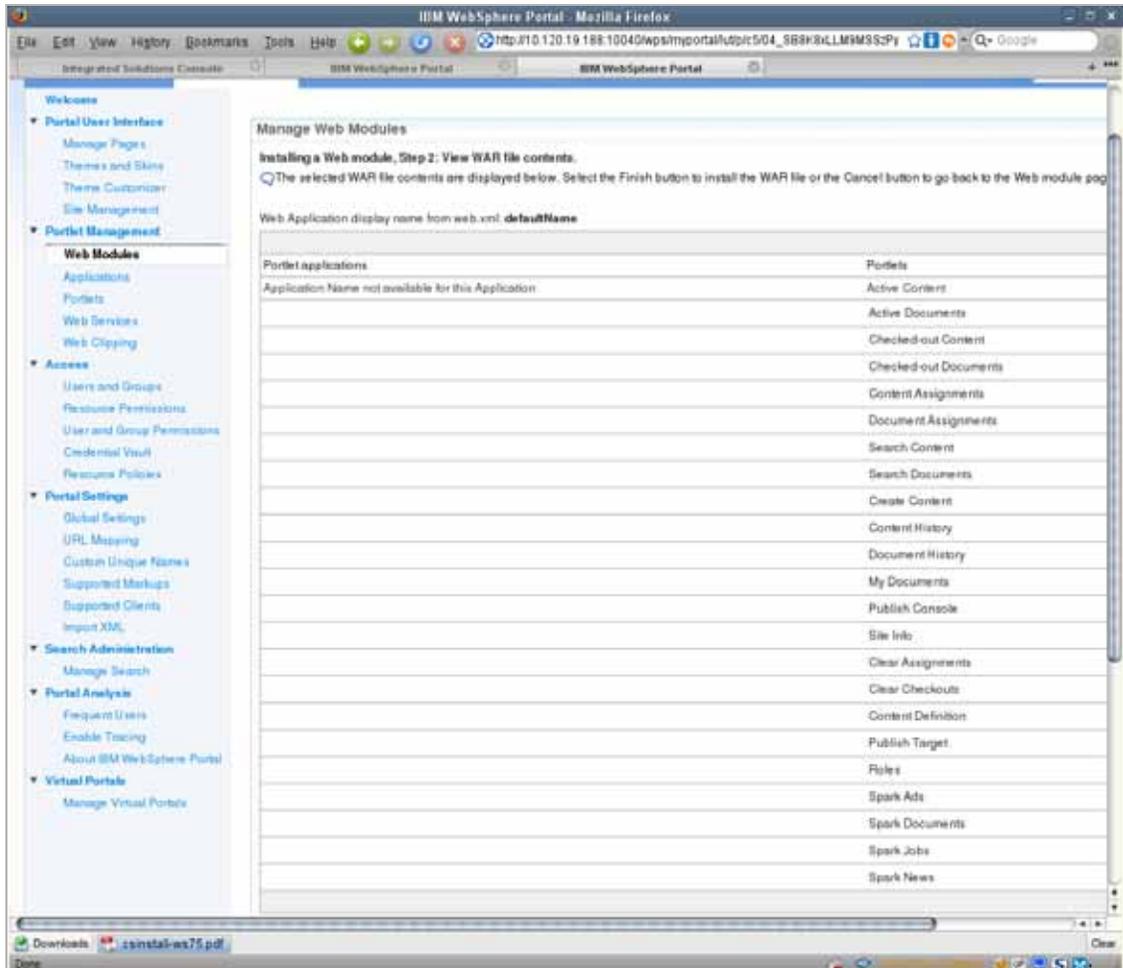
11. In the left navigation tree, click **Web Modules**, located under **Portlet Manager**.



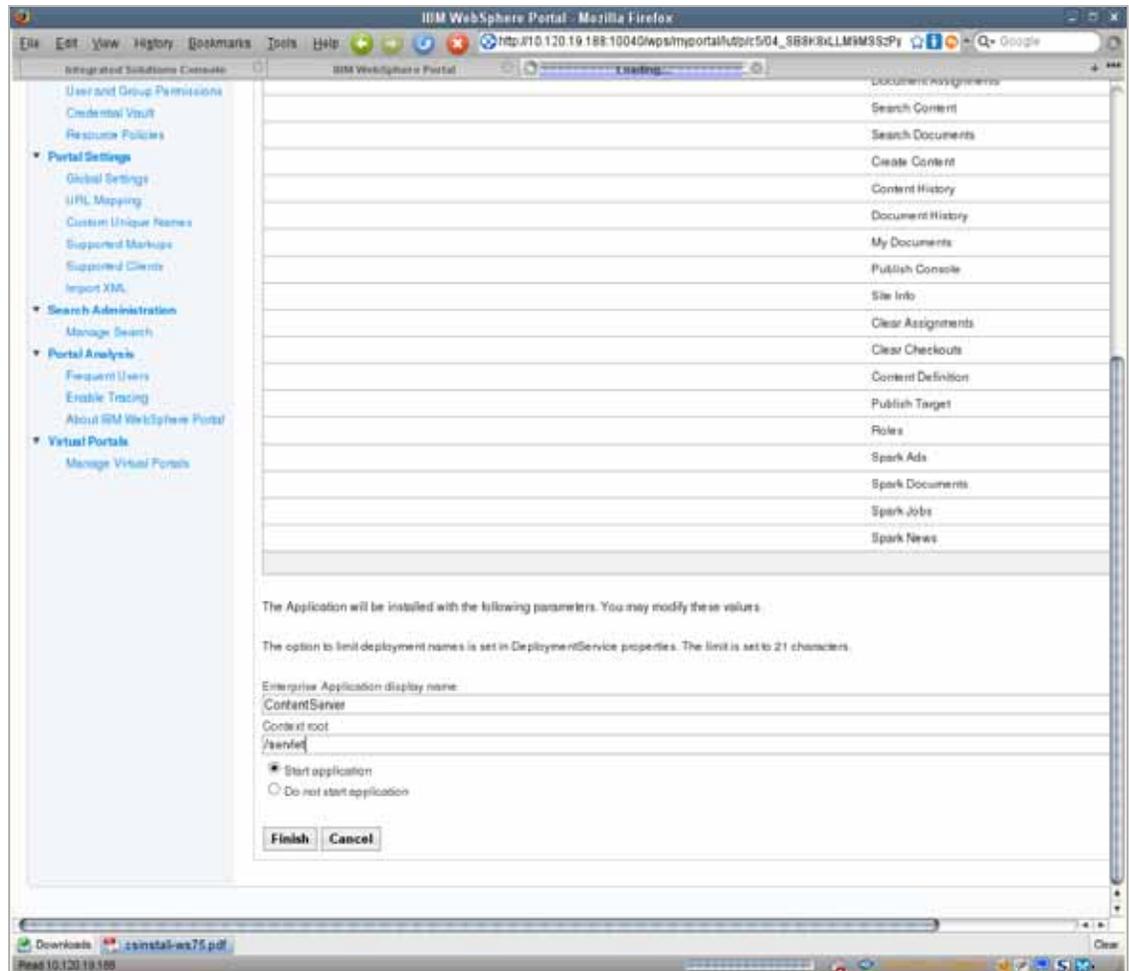
12. Click the Install option.

13. Select the copy of `cs.war` you moved to your local file system, then click **Next**.

The following summary screen is displayed:



- a. Fill in the following fields:
 - **Enterprise Application display name** – Replace the default name PA_defaultName with the name **Content Server**.
 - **Context root** – Replace the default /wps/PA_defaultName with the context root given in the installer (/servlet is the default).
- b. Click **Finish**.



14. Upon completion, the application will be installed and started. Go back to the Content Server installer and click **Test**. Once the test is completed successfully, click **OK**.

Note

If you wish to uninstall the application, do so through the Portal Admin interface and not through the WebSphere Admin interface.

15. When the installation completes, restart the application from the WebSphere Admin interface, in order for the changes to take effect:

- a. Log in to the Deployment Manager console:

Note

The default Deployment Manager console port is 9060.

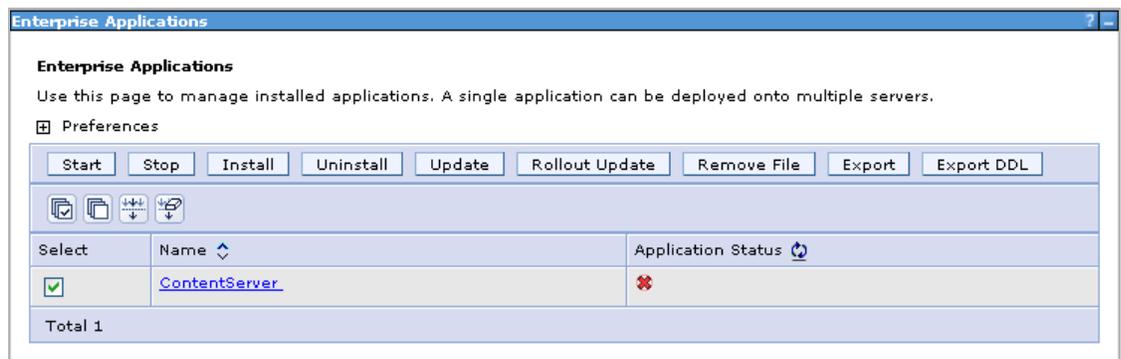
- 1) Point your browser to the following URL:
`http://<DM_host>:<DM_console_port>/admin`
- 2) Enter your user name and password.
- 3) Click **Log in**.

The Deployment Manager console loads.

- b. In the left-hand pane, expand the **Applications** node.



- c. Under the Applications node, click **Enterprise Applications**.
- d. In the “Enterprise Applications” screen, select the check box next to the CS application you want to restart.



- e. Click **Stop**, then click **OK**.
 - f. Click **Start**, then click **OK**.
16. Install patch 2.
17. Perform the post-installation steps in the next section as required for your installation.

Post-Installation Steps

When the Content Server installation completes successfully, perform the following steps:

- A. [Verifying the Installation](#)
- B. [Integrating Content Server with LDAP](#)

A. Verifying the Installation

Verify the installation by logging in to Content Server as the administrator.

Logging in to the Advanced Interface

1. Point your browser to the following URL:

```
http://<hostname>:<port>/<context>/Xcelerate?LoginPage.html
```

Content Server displays the Advanced interface login form.

2. Enter the following credentials:

- User name: **fwadmin**
- Password: **xceladmin**

3. Click **Login**.

One of the following happens:

- If you did not install any sample sites, you are logged in to the built-in Content Server management site. Only system administration functionality is available.
- If you installed one sample site, you are logged in to that site.
- If you installed more than one sample site, Content Server displays the “Select Site” screen. In such cases, select the sample site you wish to log in to.
- If the screen continues to refresh, it means the `jsproot` was set incorrectly.
 - a) From the WebSphere Admin interface, stop the application.
 - b) Fix the `jsproot` in `futuretense.ini` and restart the application.

Logging in to the Dash Interface

1. Point your browser to the following URL:

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

Content Server displays the Dash interface login page.

2. Enter the following credentials:

- User name: **fwadmin**
- Password: **xceladmin**

3. Click **Login**.

One of the following happens:

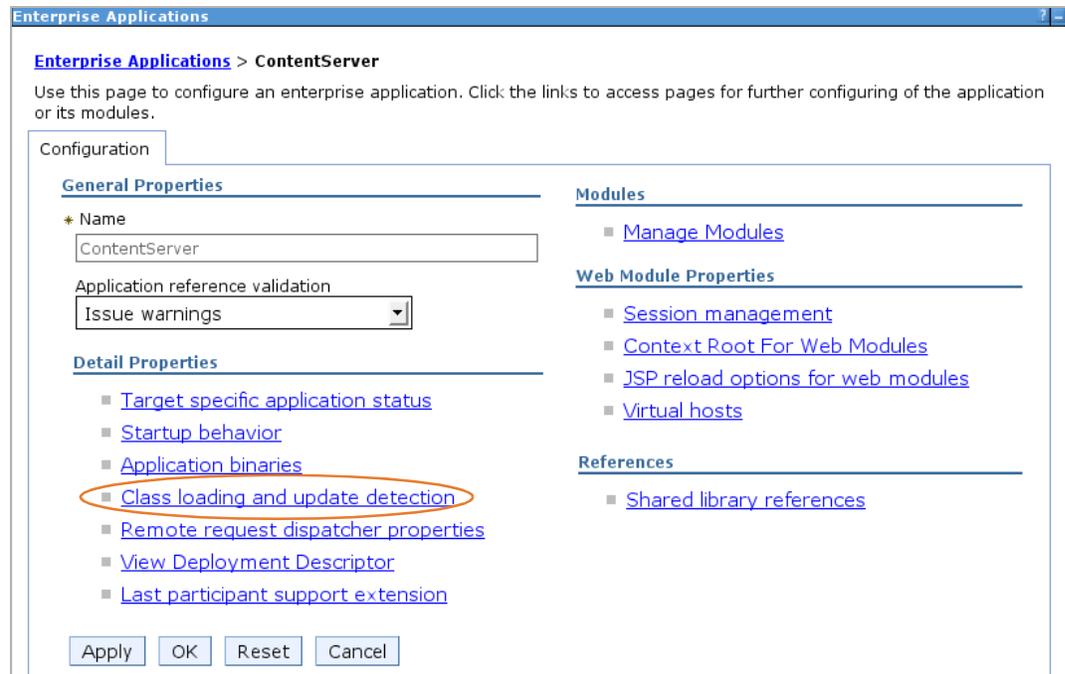
- If you did not install any sample sites, Content Server displays a message notifying you of that fact. You will not be able to log in to the Dash interface until at least one site exists on your system.

- If you installed more than one sample site, Content Server displays the “Select Site” screen. Select the sample site you wish to log in to.
- If the Dash interface does not load, then the class loading is set improperly.

To set the class loading:

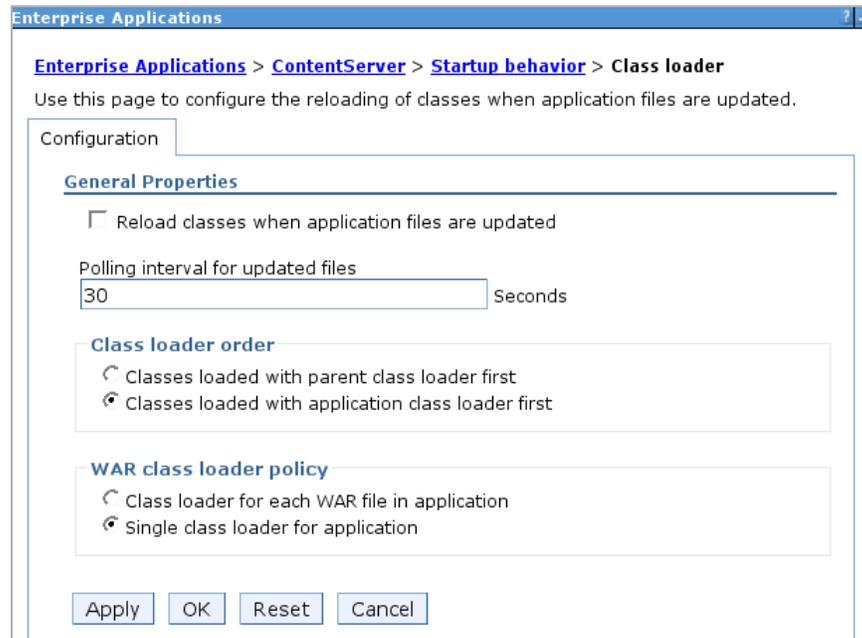
Open the WebSphere Admin interface and do the following:

- 1) Click **Class loading and update detection**.



- 2) In the screen that appears, do the following:
 - a) In the **Polling interval for updated files** field, enter 30.
 - b) In the “Class load order” section, select **Classes loaded with application class loader first**.
 - c) In the “WAR class loader policy” section, select **Single class loader for application**.

d) Click **OK**.



B. Integrating Content Server with LDAP

In this guide, we assume you are working with the Tivoli Directory Server. If you are using an LDAP other than Tivoli Directory Server, the default values used by Content Server will not be compatible, resulting in issues for getting single sign-on to work.

1. Start the Content Server LDAP integrator:

```
# ./configureLDAP.sh
```

2. In the drop down list, select **Tivoli**.

3. In the “LDAP Parameters” screen, do the following:

a. For the **Username** field, enter `cn=root`.

b. For the **JNDI password** field, enter the password you entered when setting up Tivoli.

c. People and Group parents are correct, but the DN needs to be updated

4. Once the installation completes, import the LDIF file created by the Content Server LDAP integrator (use lbe or another LDAP browser to import the file).

The path to the LDIF file is: `<CS_HOME>/ldap/tivolildap.ldif`

Note

Upon file import, three of the entries will fail (because they are duplicate entries). You can safely ignore the failure.

5. Change the passwords of the following users: **fwadmin**, **ContentServer** and **defaultreader** in order for the passwords to be encrypted correctly.

For each user do the following:

- a. Click the user name under the **cs=users** tree.
 - b. On the right side, double-click the **userpassword** entry.
 - c. In the dialog, click **Set**.
 - d. Enter the password and click **Save as**.
 - e. (Optional) To verify your password, click **Verify** and re-enter the password.
Once your password has been successfully verified, the message “password verified” is displayed.
 - f. Click **Apply**.
6. Confirm that the integration is successful by logging in to the Content Server administrator interface and the WebSphere portal interface, using the **fwadmin** user account.

Next Step

Go to [Chapter 5](#) to configure the Content Server portlets.

Chapter 5

Configuring Portlets

This chapter contains instructions for configuring pages, tabs, and portlets for your Content Server installation.

This chapter contains the following sections:

- [Configuring Content Server Portlets in WebSphere Portal](#)
- [Setting Up Content Server for Its Business Purpose](#)

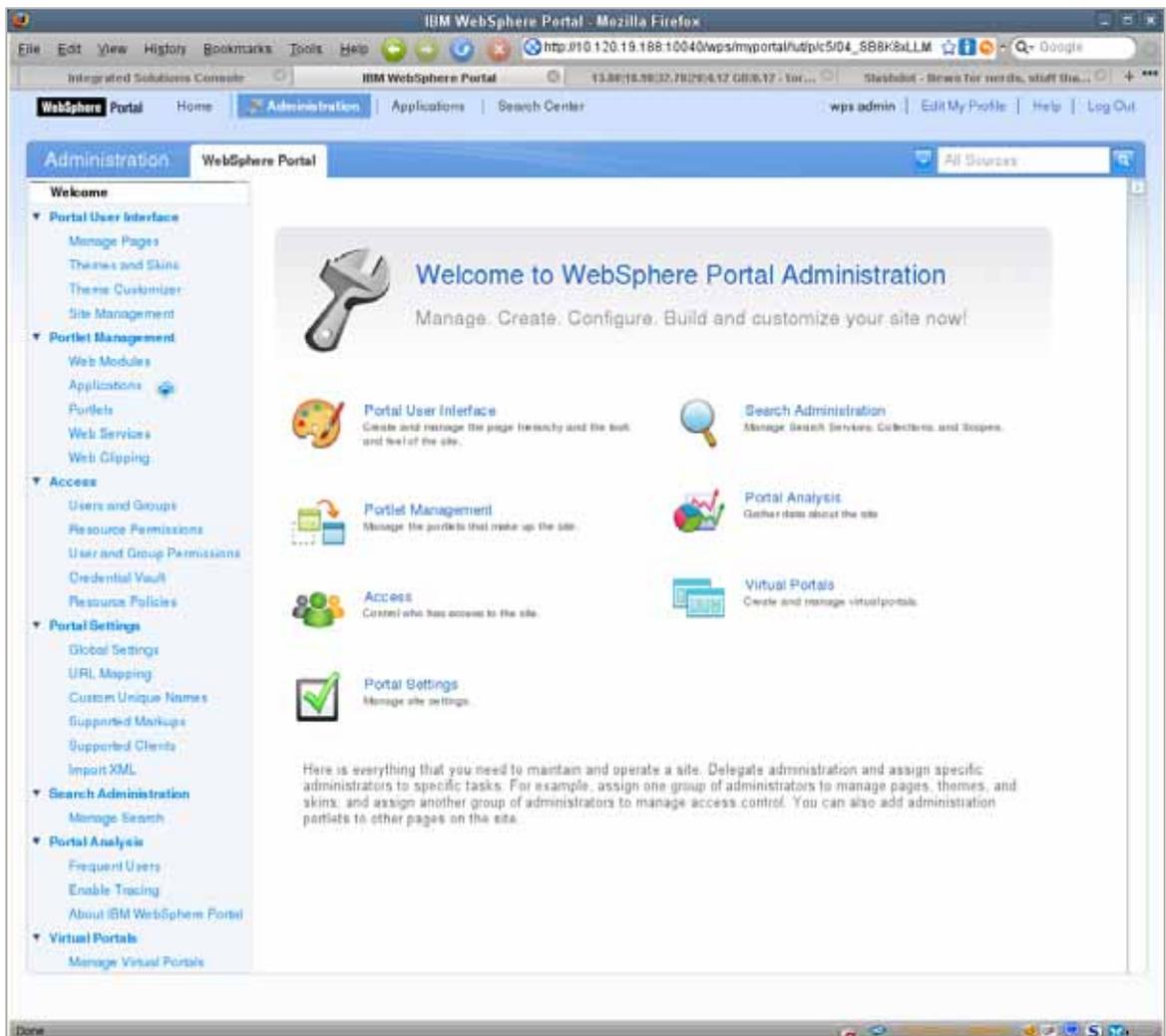
Configuring Content Server Portlets in WebSphere Portal

To configure Content Server portlets in the WebSphere Portal, follow the steps listed below:

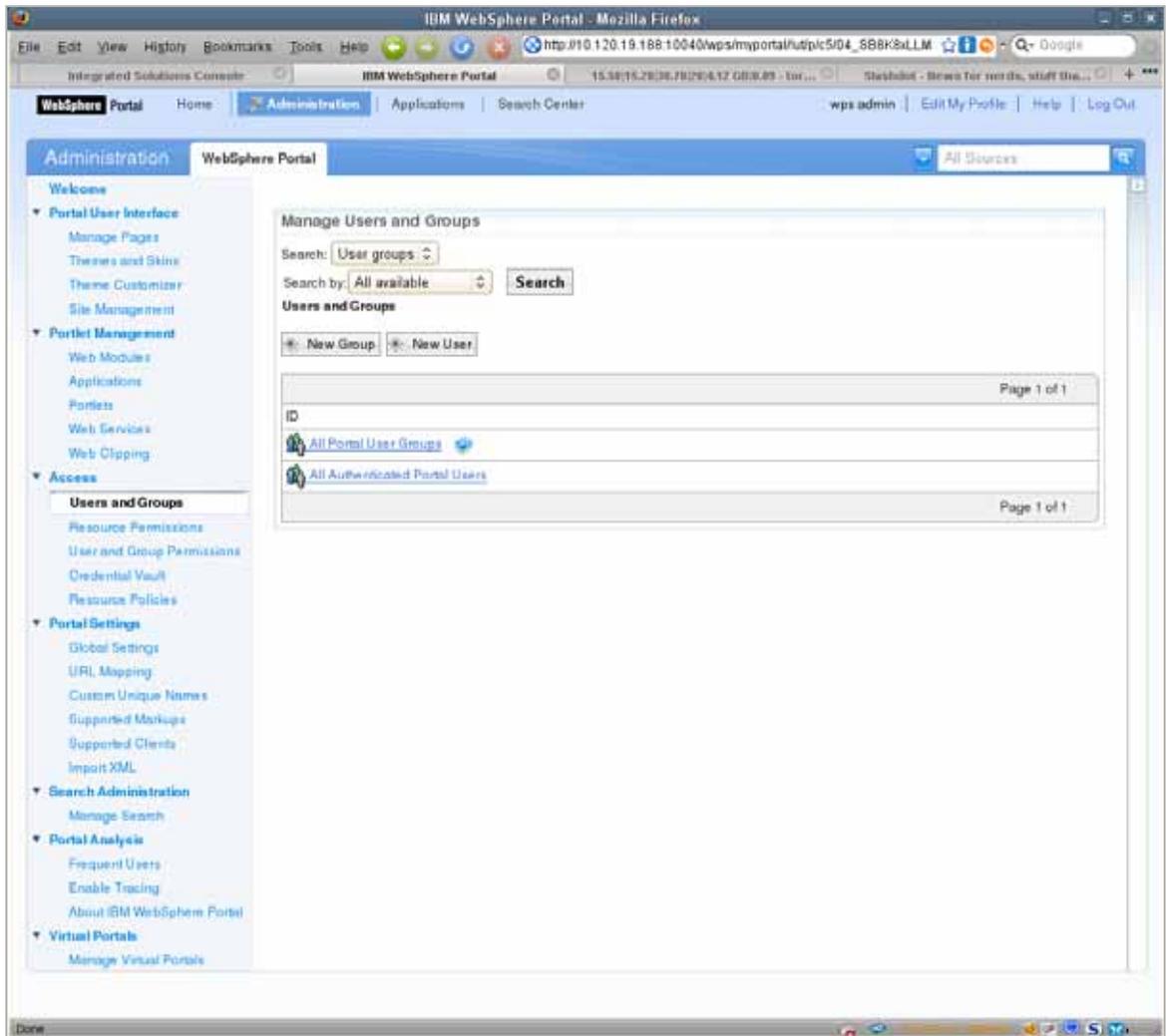
- [Adding Content Server Users to the wpsadmin Group](#)
- [Configuring Portlets](#)
- [Adding New Pages](#)
- [Adding Portlets to Pages](#)

Adding Content Server Users to the wpsadmin Group

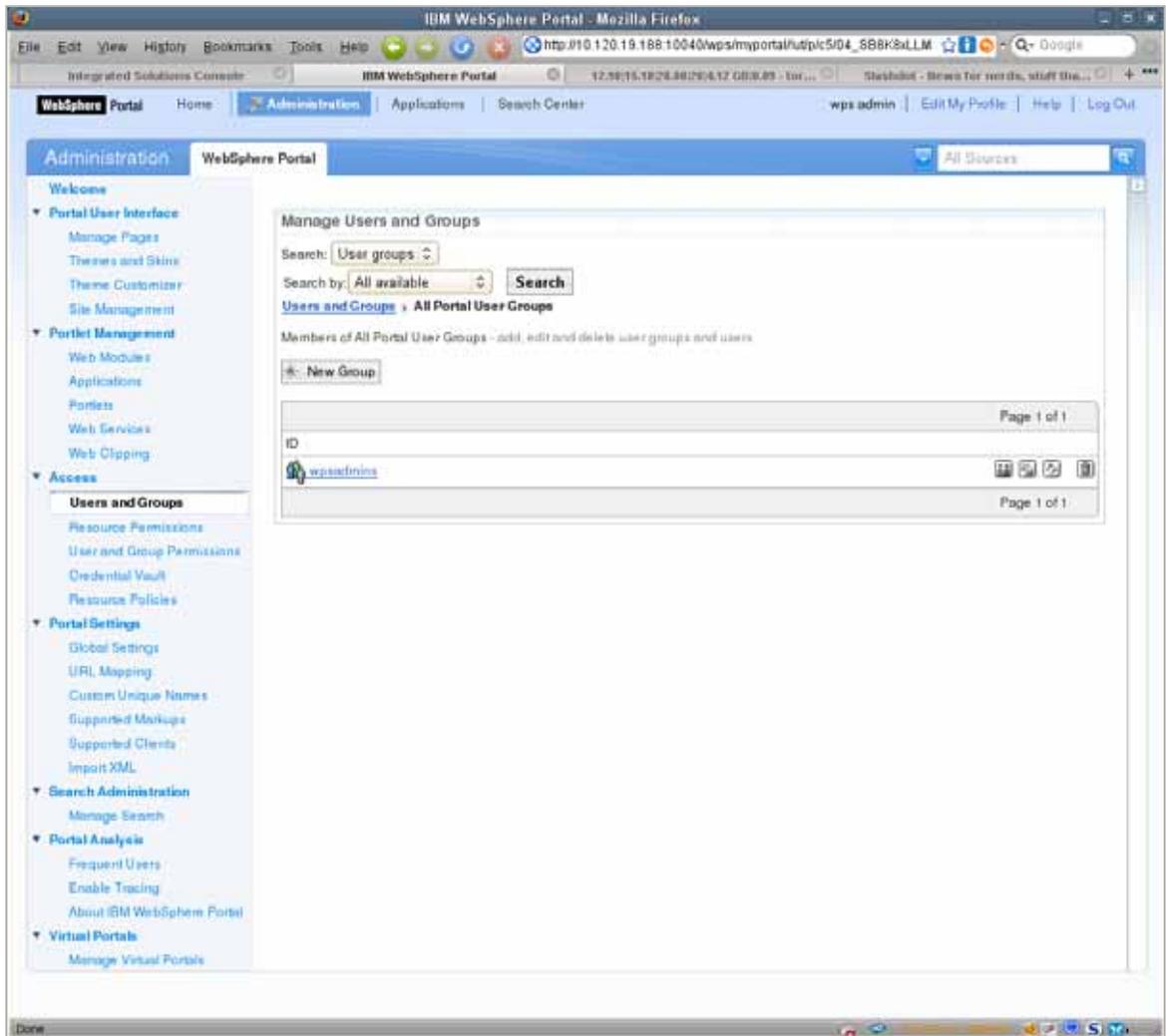
1. Log in to the WebSphere Portal interface with the **wpsadmin** user name.
2. In the top menu, click **Administration**.



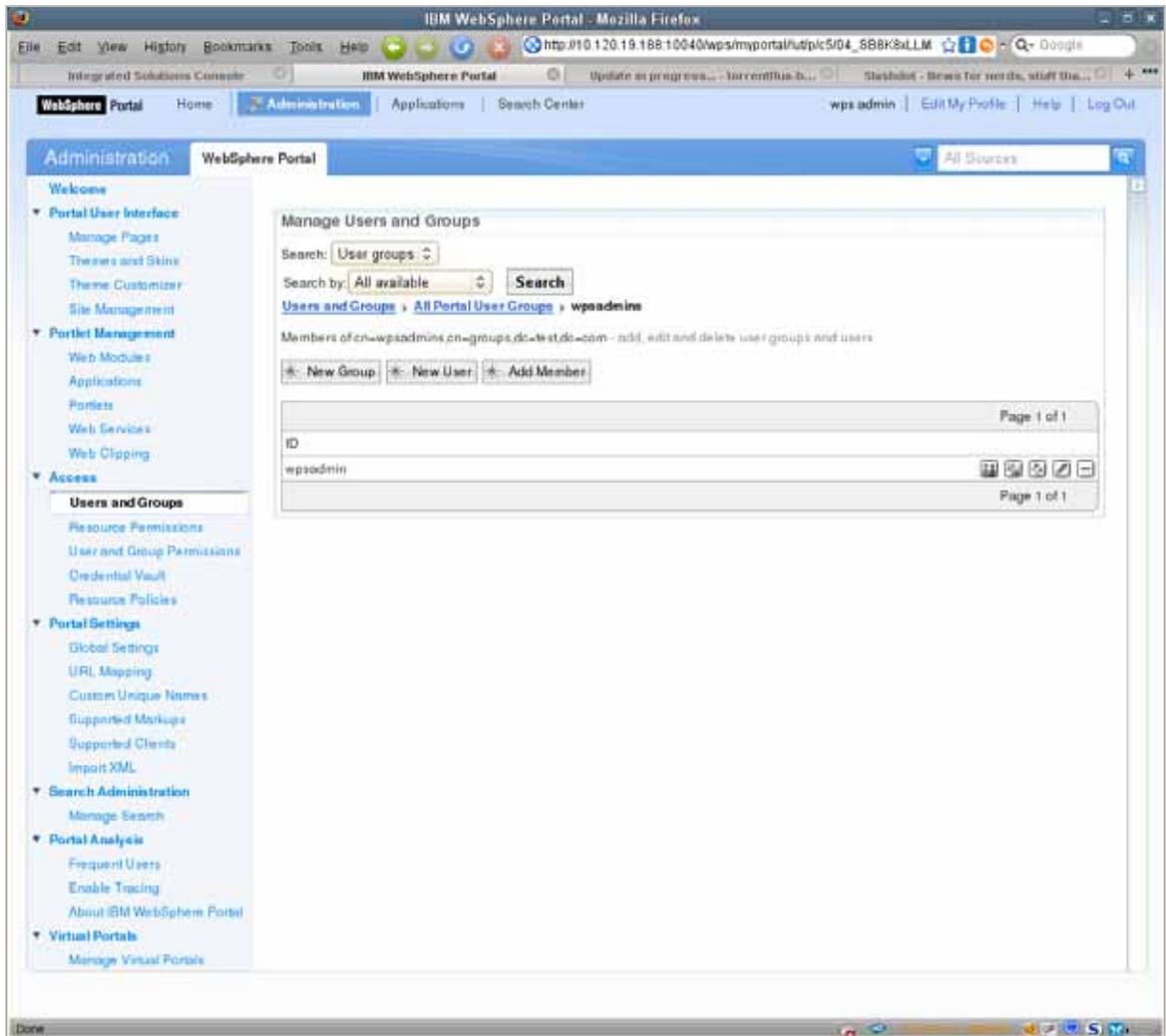
3. In the left navigation tree, select **Users and Groups**, located under **Access**.



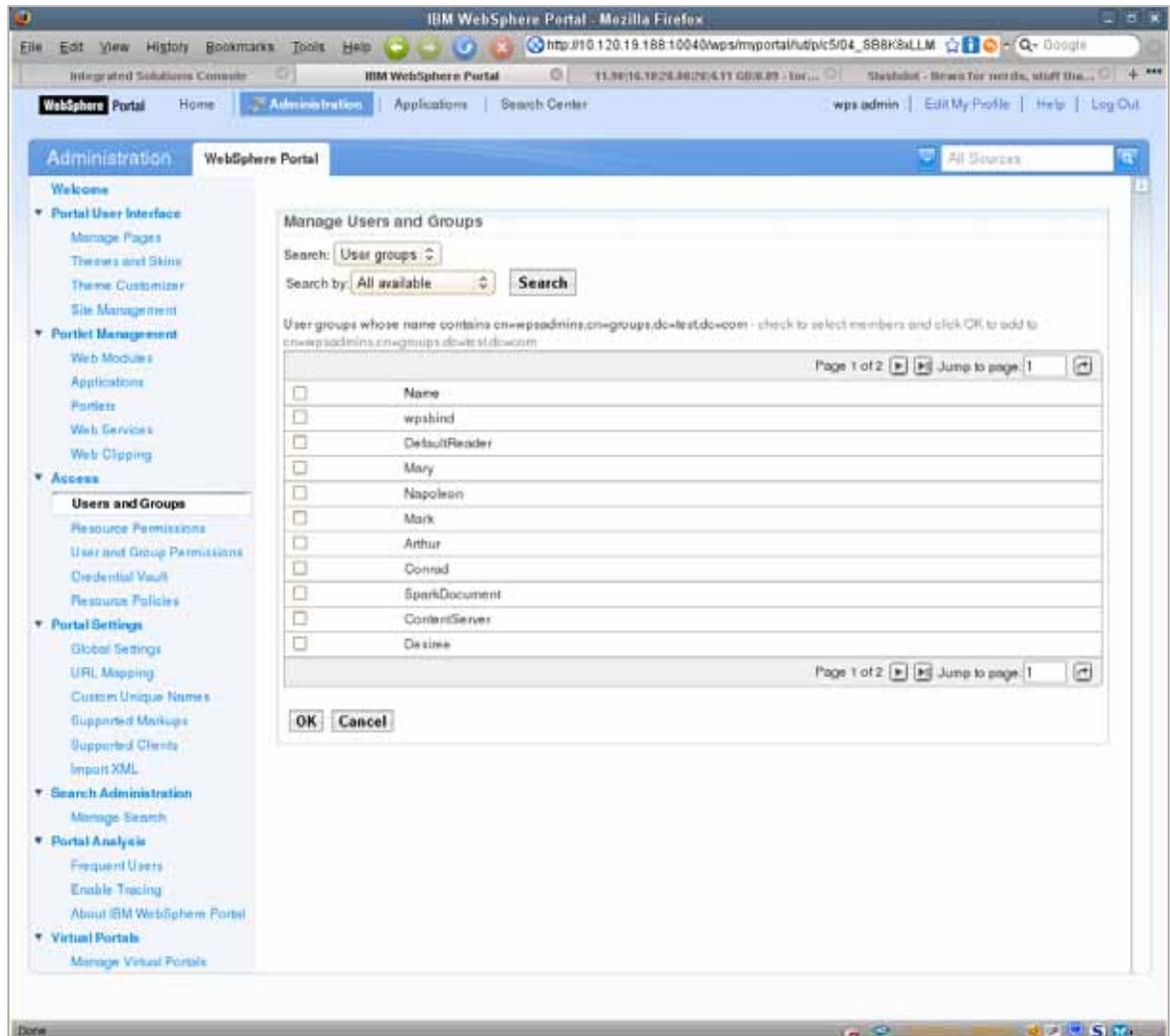
4. Click the **All Portal User Groups** option.



5. Click the user name **wpsadmin**.



6. Click the **Add Member** option.



7. Select **fwadmin**, then click **OK**.
8. Repeat [steps 6](#) and [7](#) for each new user that you wish to add.

Configuring Portlets

In the WebSphere portal server, there exists a hierarchy of **pages** and **channels**. A **page** is a parent object and can contain many channels (child objects).

A **tab** in the portal interface is an instance of a page and the portlets it contains are channels. To display the portlets on your site, you must first create the appropriate tabs, and then populate them with the appropriate portlets.

The table below shows which portlets belong to which tabs. Use this information when naming your tabs and populating them with portlets.

Table 1: Object Names

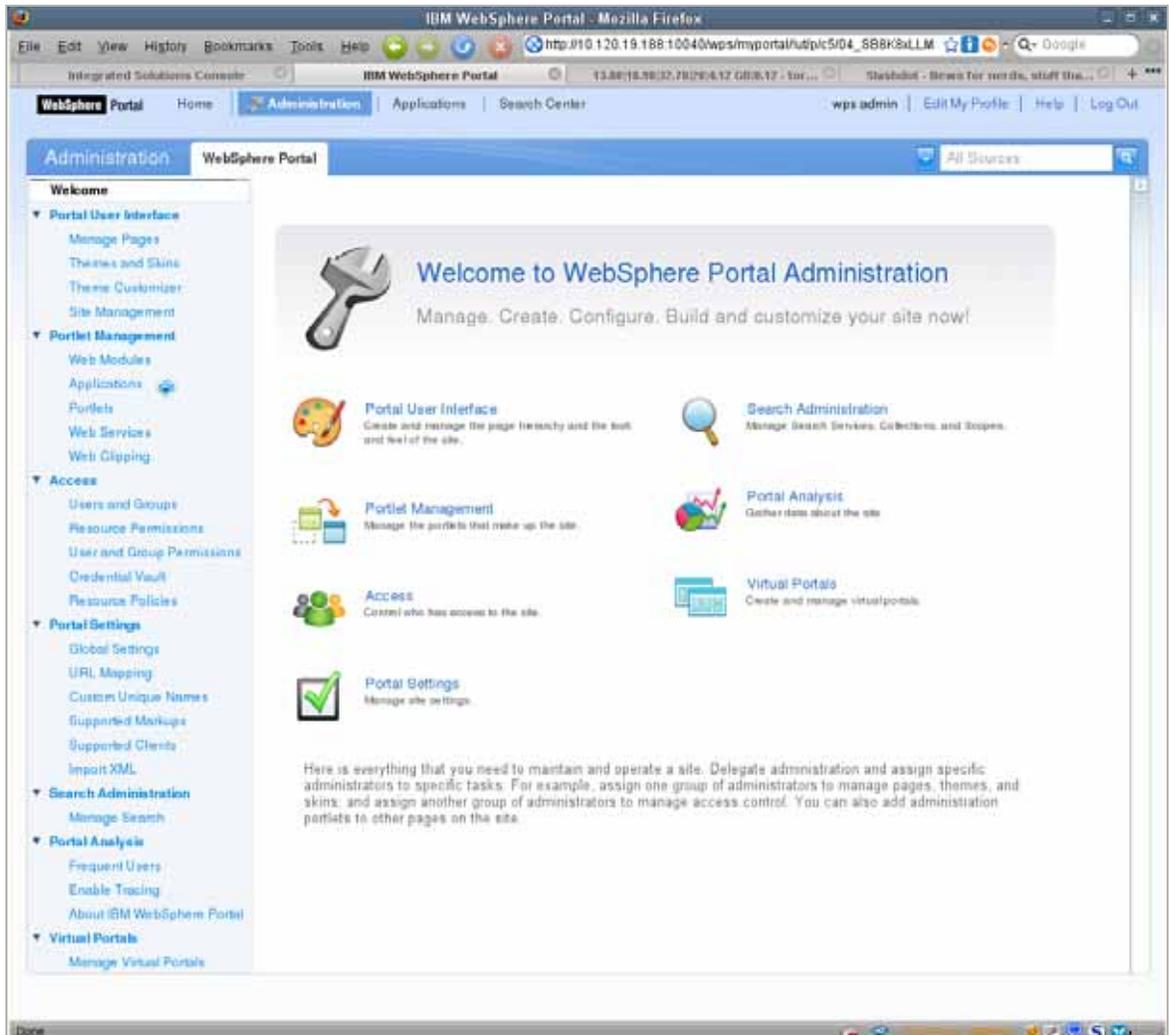
Page Name	Tab Name	Portlet Name ^a
FatWire_Content	FatWire Content	Active Content, Checked Out Content, Content Assignments, Search Content, Create Content, Content History, Publish Console
FatWire_Documents	FatWire Documents	Active Documents, Checked Out Documents, Document Assignments, Search Documents, Document History, My Documents
FatWire_Admin	Admin	RolesAdmin, ClearCheckouts, ContentDefinition, Clear Assignments, Publish Target
Spark_Display	Spark Display	SparkAd, Spark Documents, SparkJobs, SparkNews

- a. These are portlet names as they are displayed in the portal interface. The portlet object names you need to select from the drop-down list when creating portlet channels are the same, except they have a **cs.** prefix and contain no spaces.

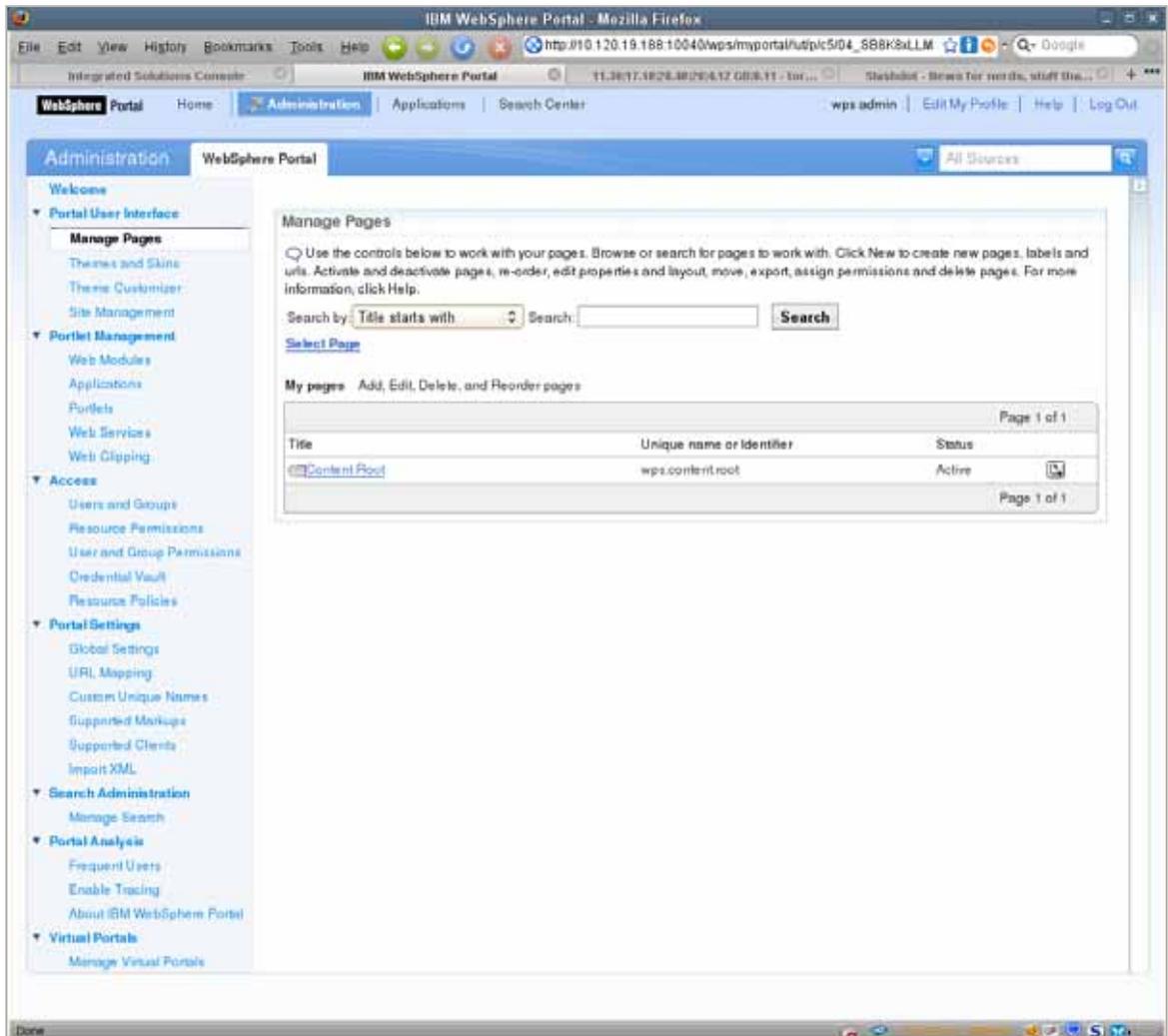
When creating portlet channels, type the portlet channel names exactly as the portlet names shown above, but without the spaces.

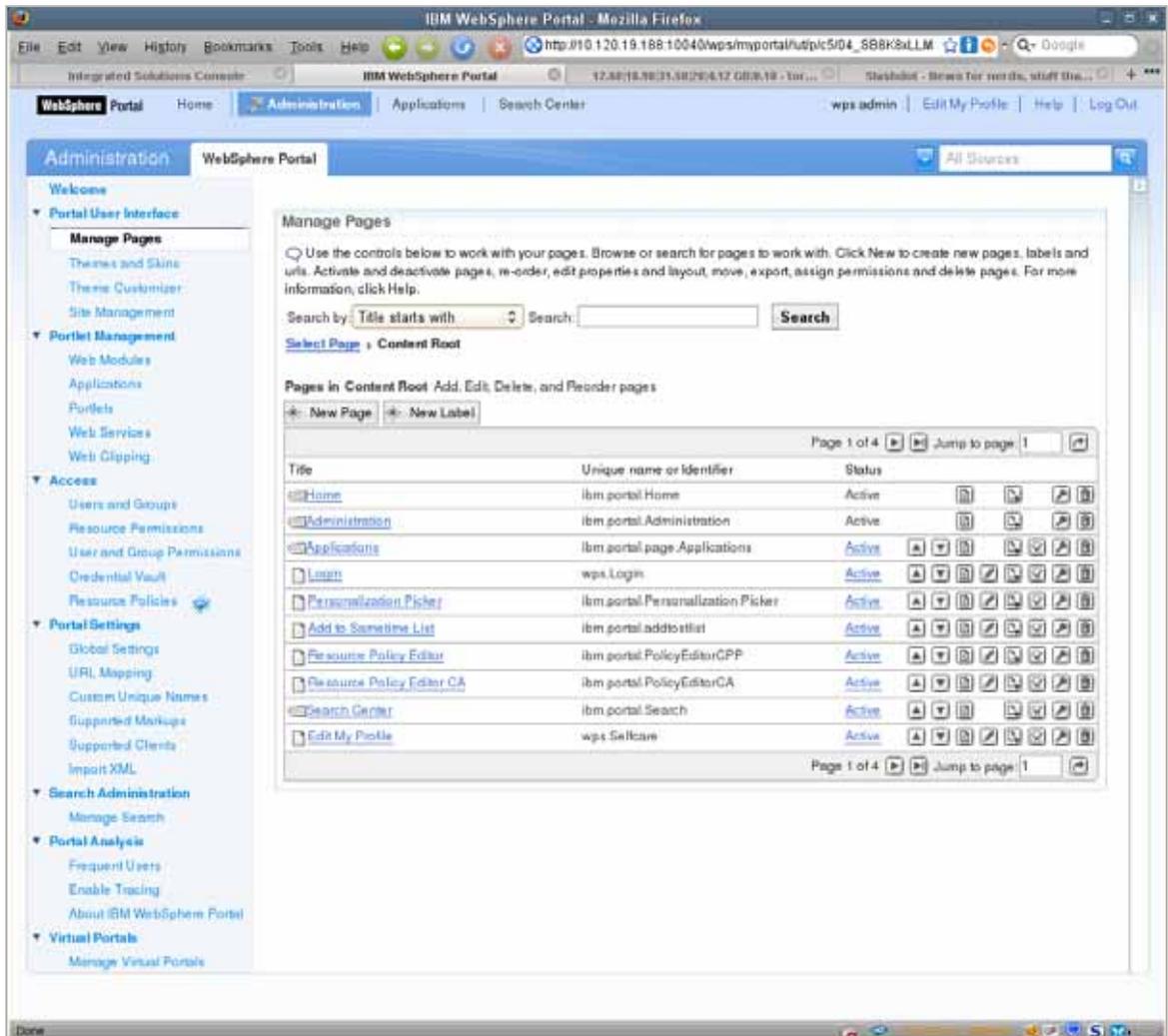
Adding New Pages

1. Log in to the WebSphere Portal interface with the user name **wpsadmin**.
2. In the top menu, click the **Administration** option.

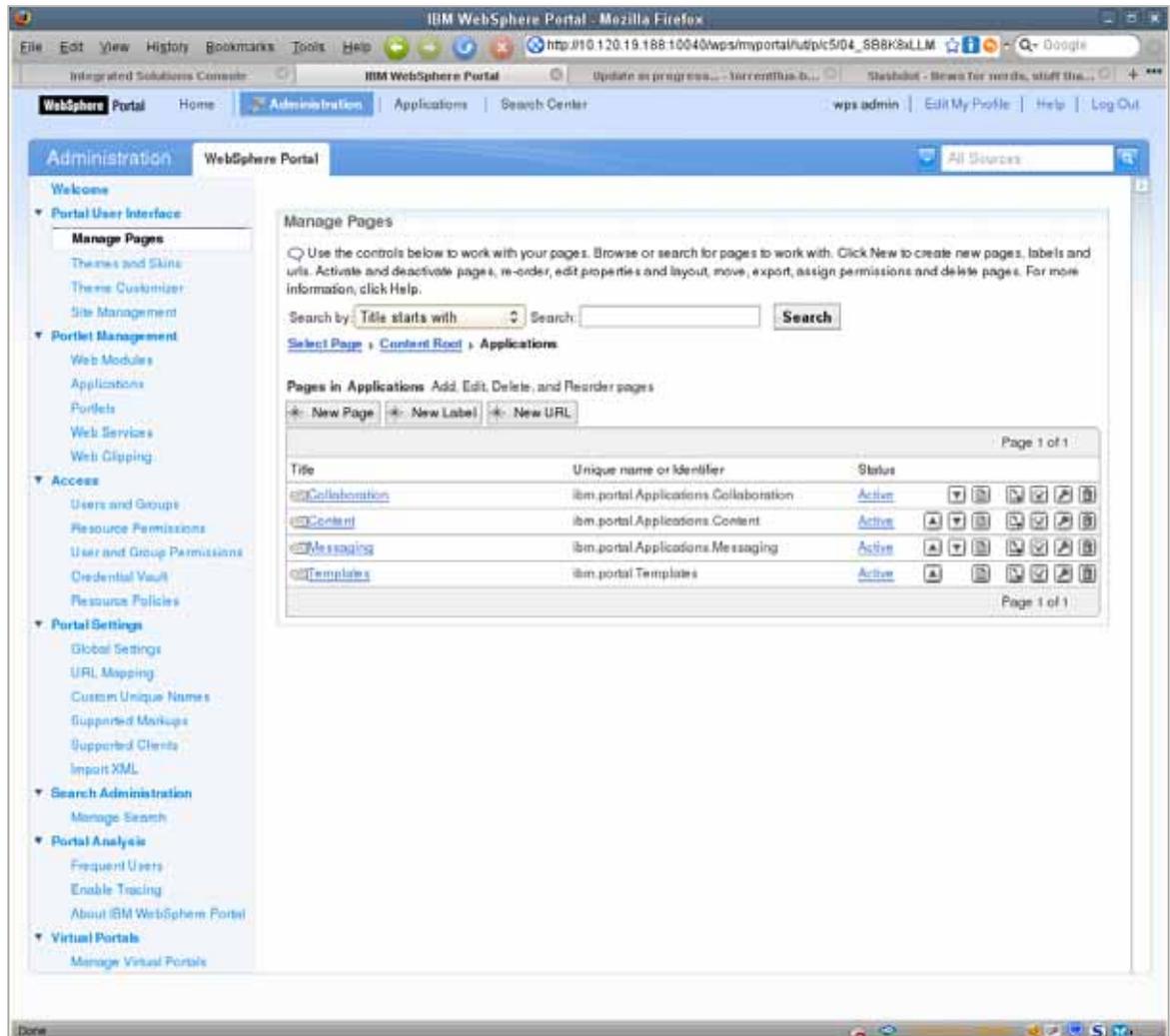


3. In the left navigation tree click **Manage Pages**, located under **Portal User Interface**.



4. Click the Content Root option.

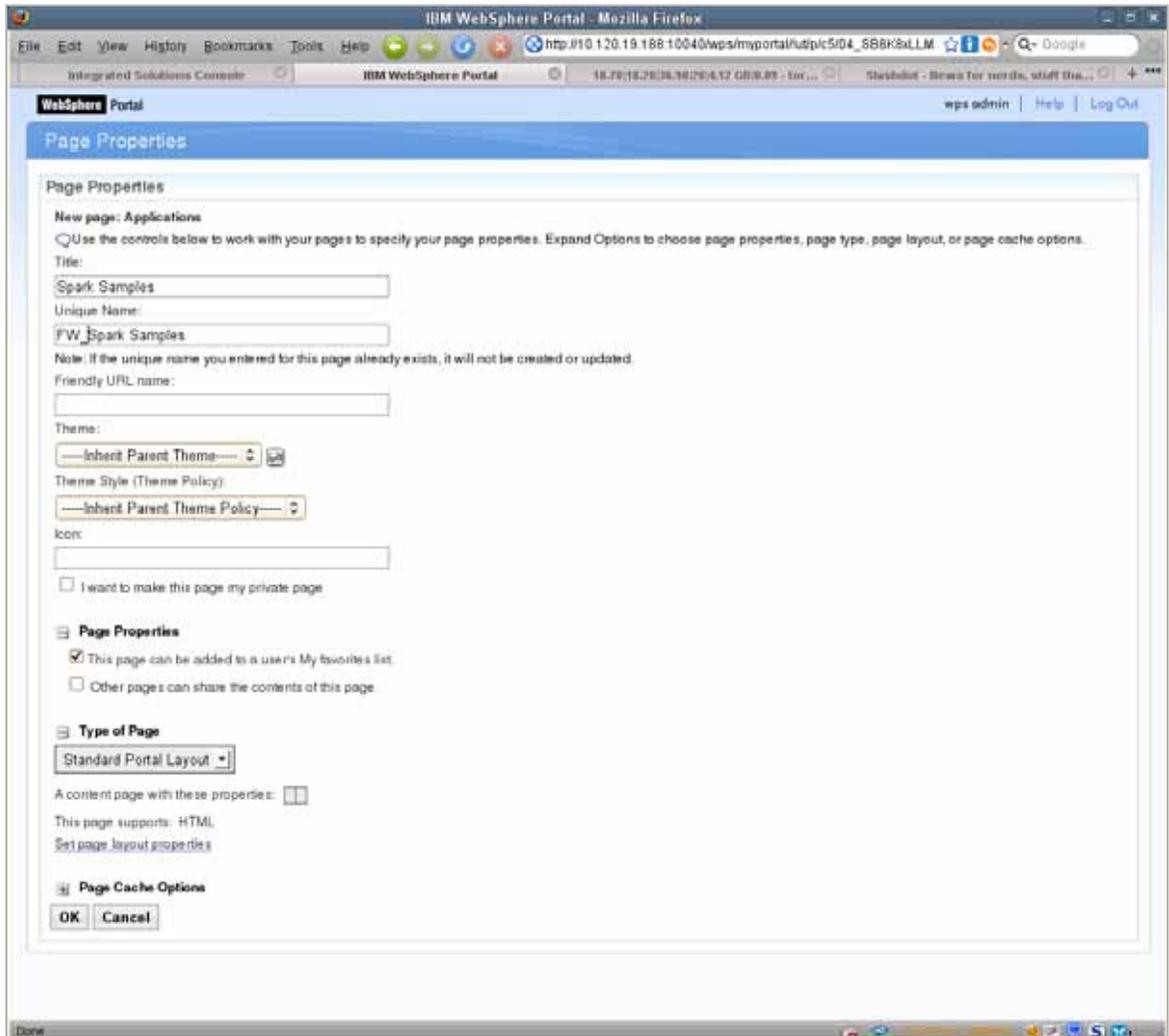
5. Click the **Applications** option.



6. Click the **New Page** option.

7. In the **Page Properties** screen, fill in the following fields:
- **Title** – Enter a page name (from [Table 1, on page 93](#)).
 - **Unique Name** – Enter a unique name (FW_<Title> is recommended).

Click **OK**.



The screenshot shows the 'Page Properties' configuration window in the IBM WebSphere Portal. The window title is 'IBM WebSphere Portal - Mozilla Firefox'. The browser address bar shows 'http://10.120.19.188:10040/wps/myportal/us/plc5/04_688KStLLM'. The page title is 'Page Properties'. The 'New page: Applications' section contains the following fields and options:

- Title:** Spark Samples
- Unique Name:** FW_Spark Samples
- Note:** If the unique name you entered for this page already exists, it will not be created or updated.
- Friendly URL name:** (empty field)
- Theme:** Inherit Parent Theme
- Theme Style (Theme Policy):** Inherit Parent Theme Policy
- Icon:** (empty field)
- I want to make this page my private page

The **Page Properties** section is expanded and contains:

- This page can be added to a user's My favorites list.
- Other pages can share the contents of this page.

The **Type of Page** section is expanded and contains:

- Standard Portal Layout** (dropdown menu)
- A content page with these properties: []
- This page supports: HTML
- [Set page layout properties](#)

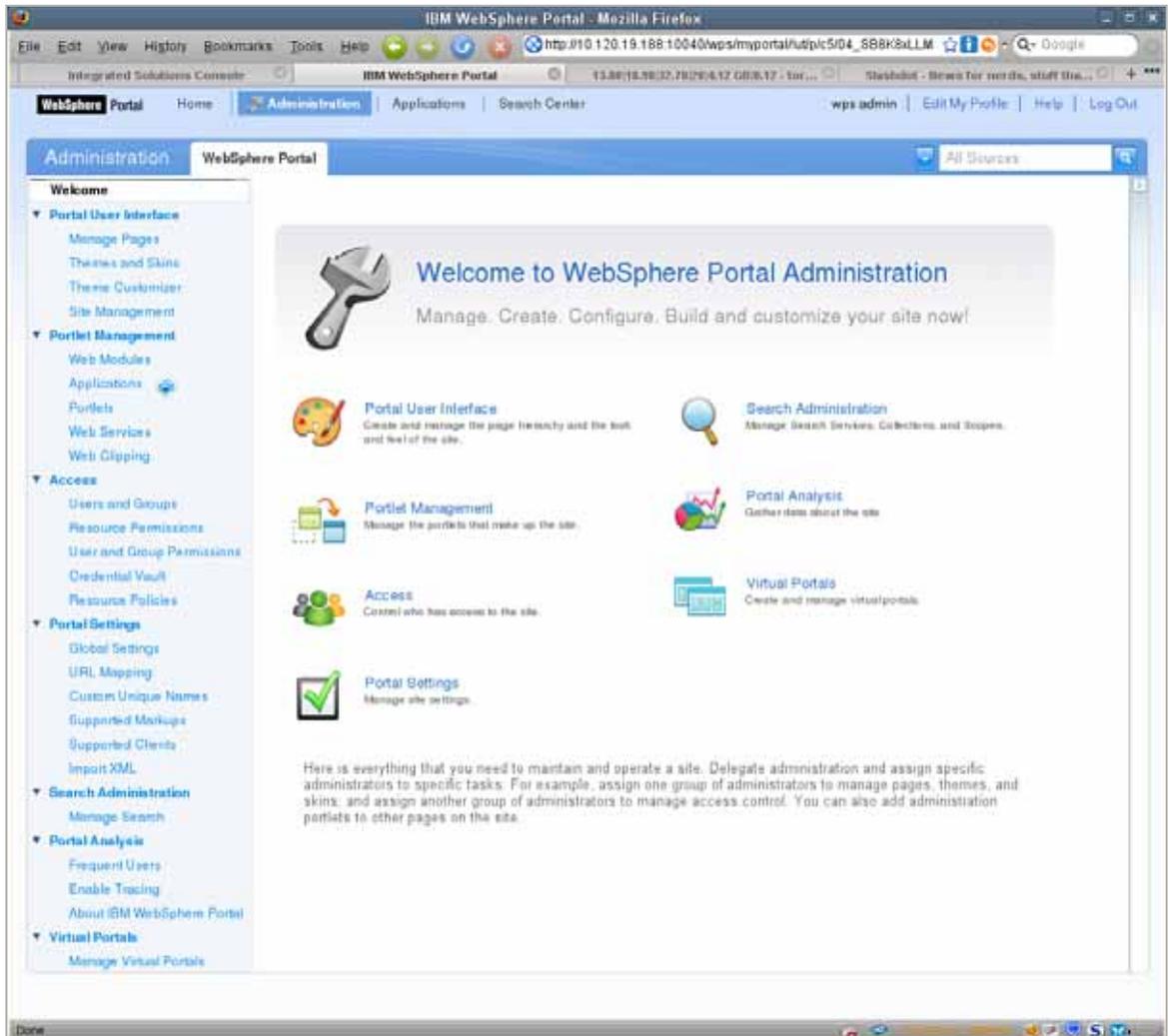
The **Page Cache Options** section is expanded and contains:

- OK** and **Cancel** buttons

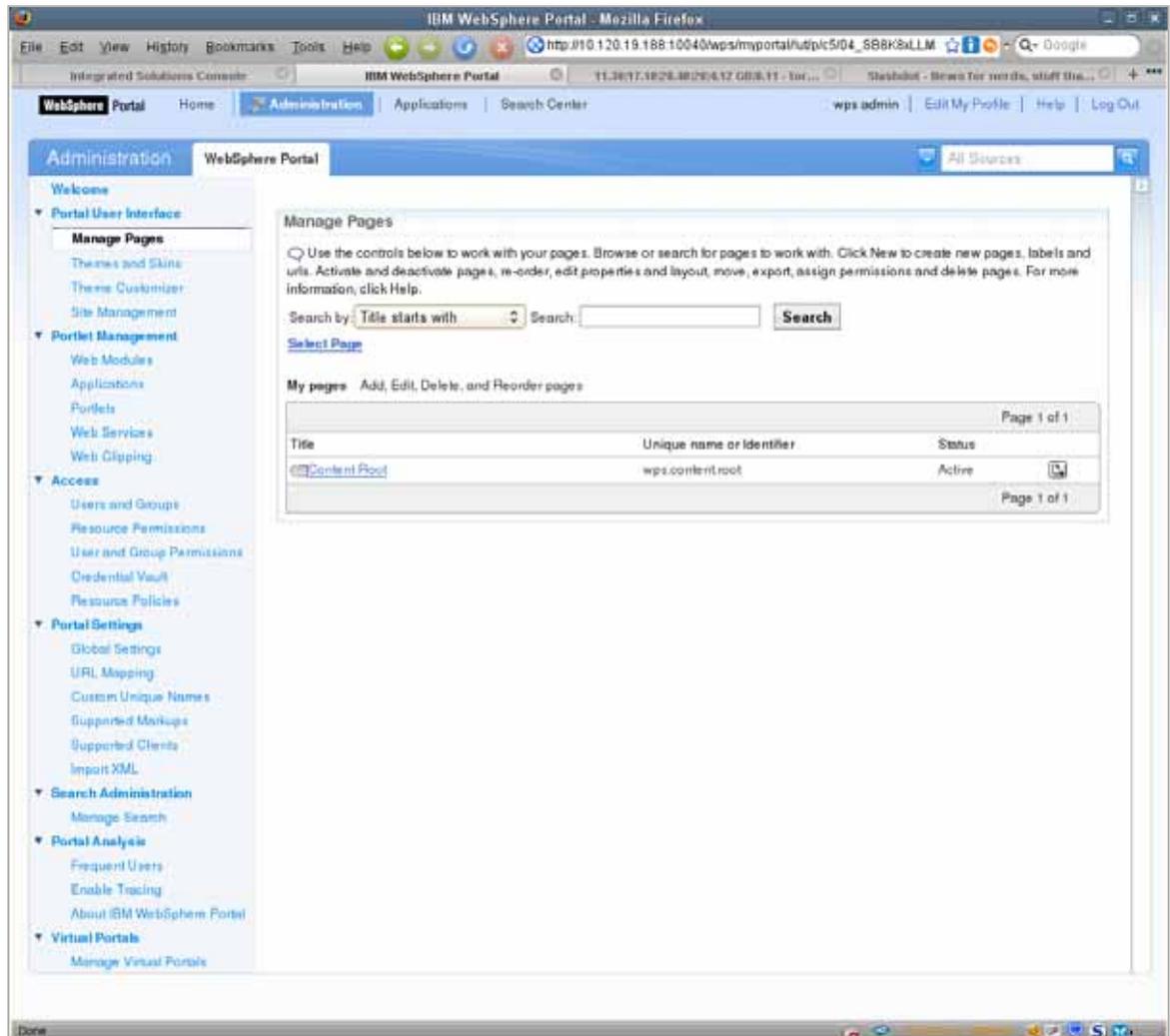
8. Repeat [step 7](#) for each page you wish to create.

Adding Portlets to Pages

1. Log in to the WebSphere portal interface with the **wpsadmin** user name.
2. In the top menu, click the **Administration** option.



3. In the left hand tree, under **Portal User Interface**, click **Manage Pages**.



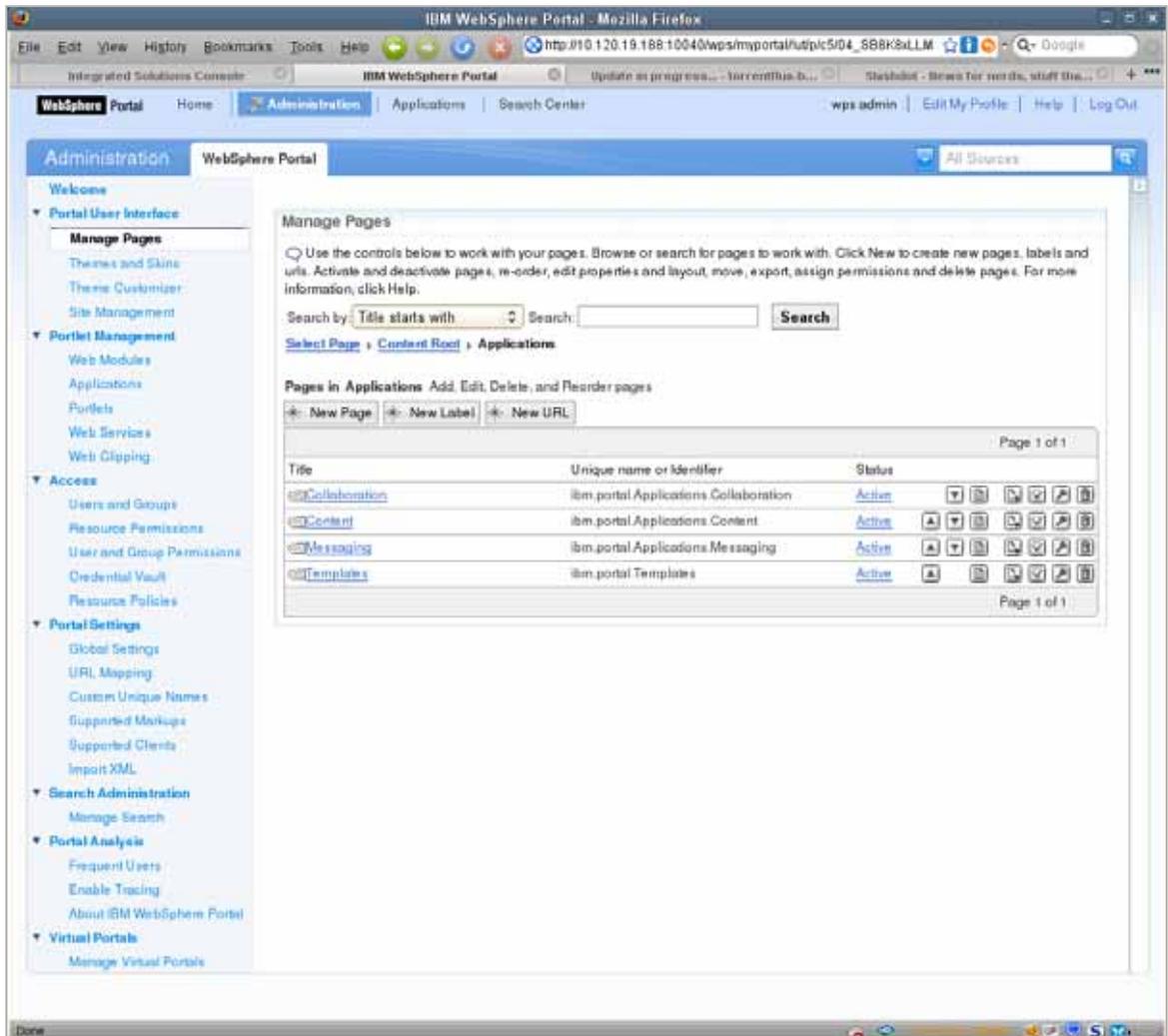
4. Click the **Content Root** option.

The screenshot shows the IBM WebSphere Portal Administration console. The left sidebar contains a navigation menu with categories like Portal User Interface, Portal Management, Access, Portal Settings, Search Administration, Portal Analysis, and Virtual Portals. The main content area is titled 'Manage Pages' and shows a search bar and a table of pages in the 'Content Root'.

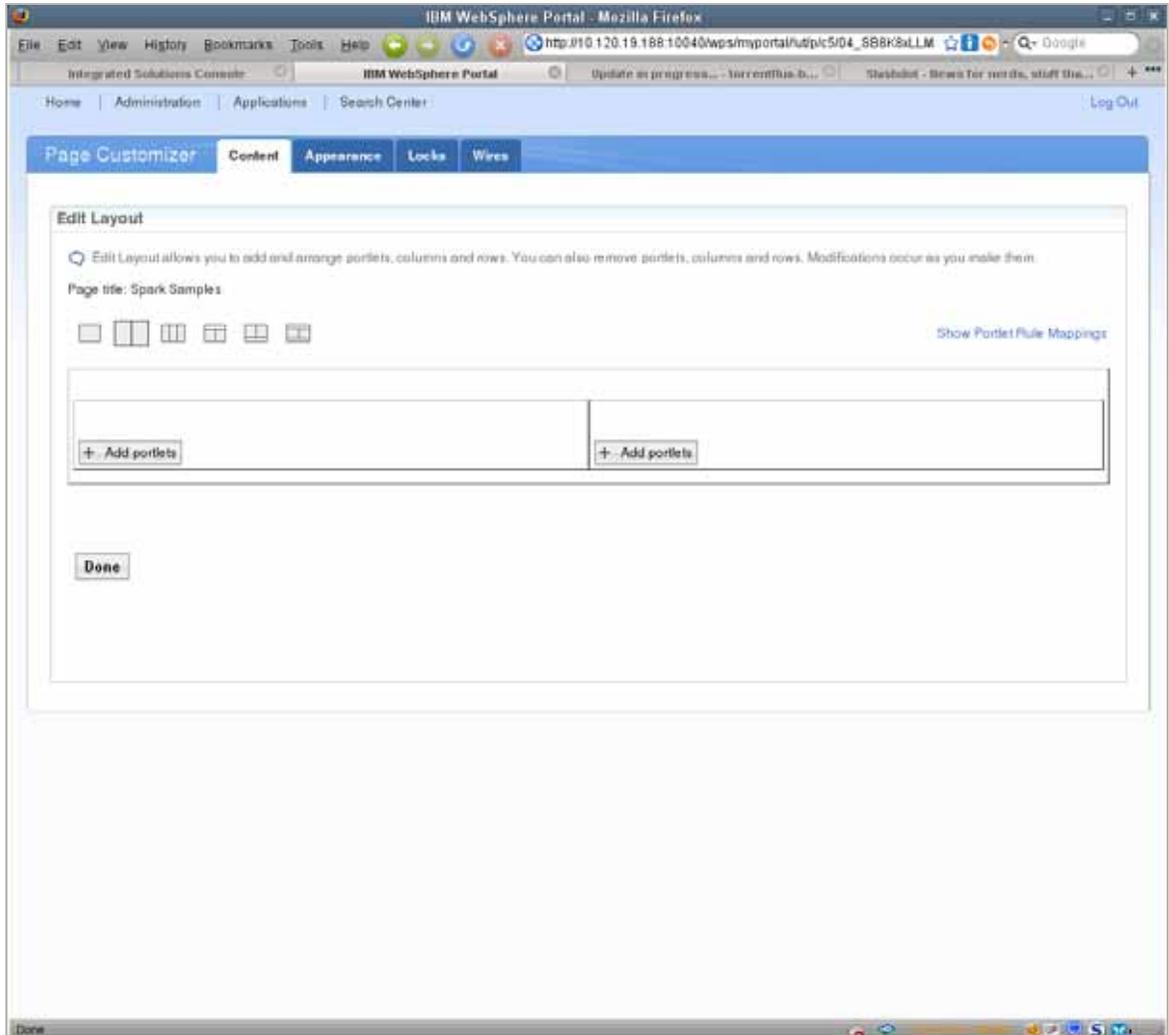
Pages in Content Root Add, Edit, Delete, and Reorder pages

Title	Unique name or Identifier	Status							
Home	ibm.portal.Home	Active							
Administration	ibm.portal.Administration	Active							
Applications	ibm.portal.page.Applications	Active							
Login	wps.Login	Active							
Personalization Picker	ibm.portal.Personalization.Picker	Active							
Add to Sometimes List	ibm.portal.addToSometimesList	Active							
Resource Policy Editor	ibm.portal.PolicyEditorGPP	Active							
Resource Policy Editor CA	ibm.portal.PolicyEditorCA	Active							
Search Center	ibm.portal.Search	Active							
Edit My Profile	wps.Selfcare	Active							

5. Click the **Applications** option.

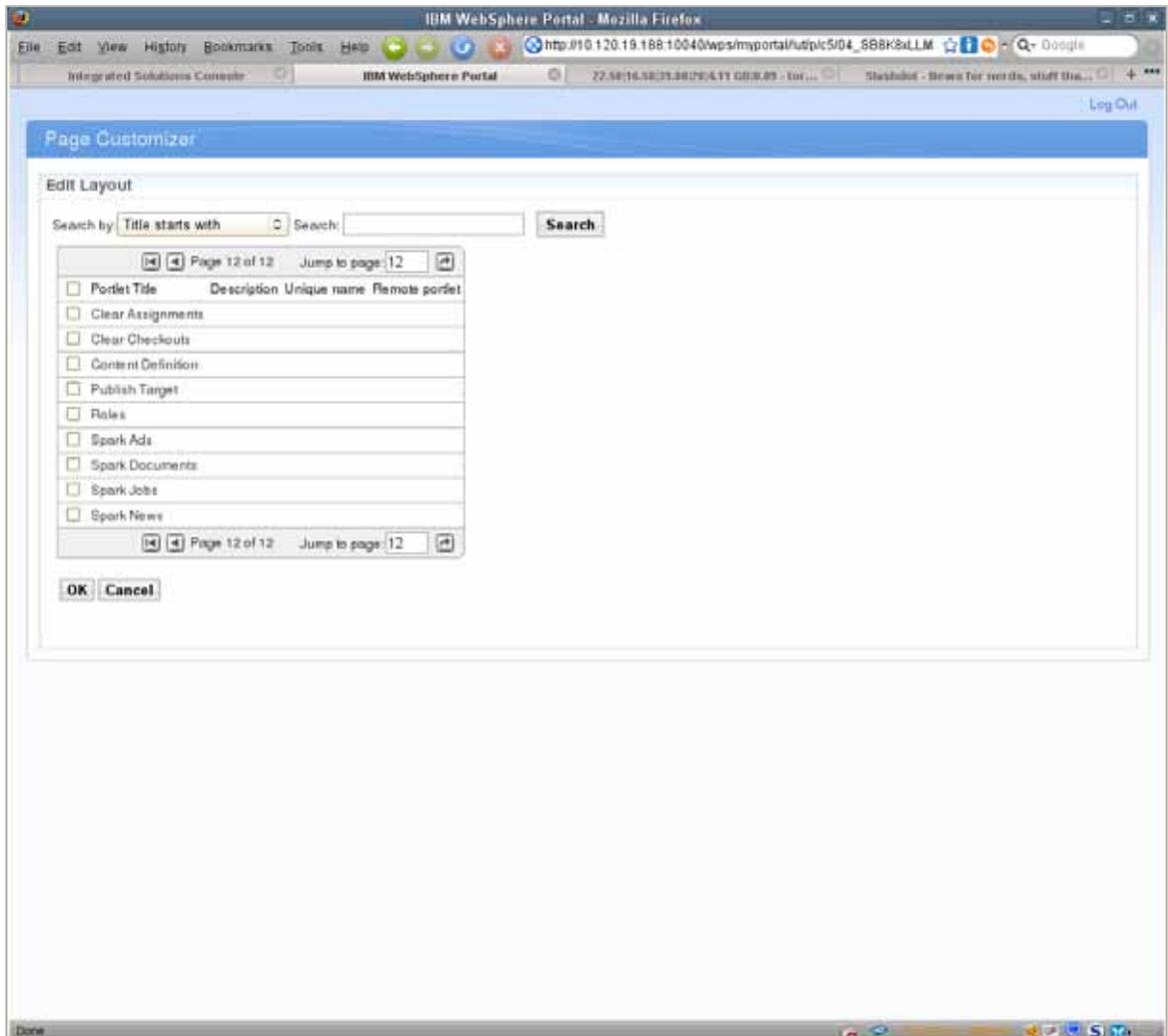


6. Locate the page you wish to modify and click the pencil icon to edit the page layout, (in this example we use the page `Spark Samples`).

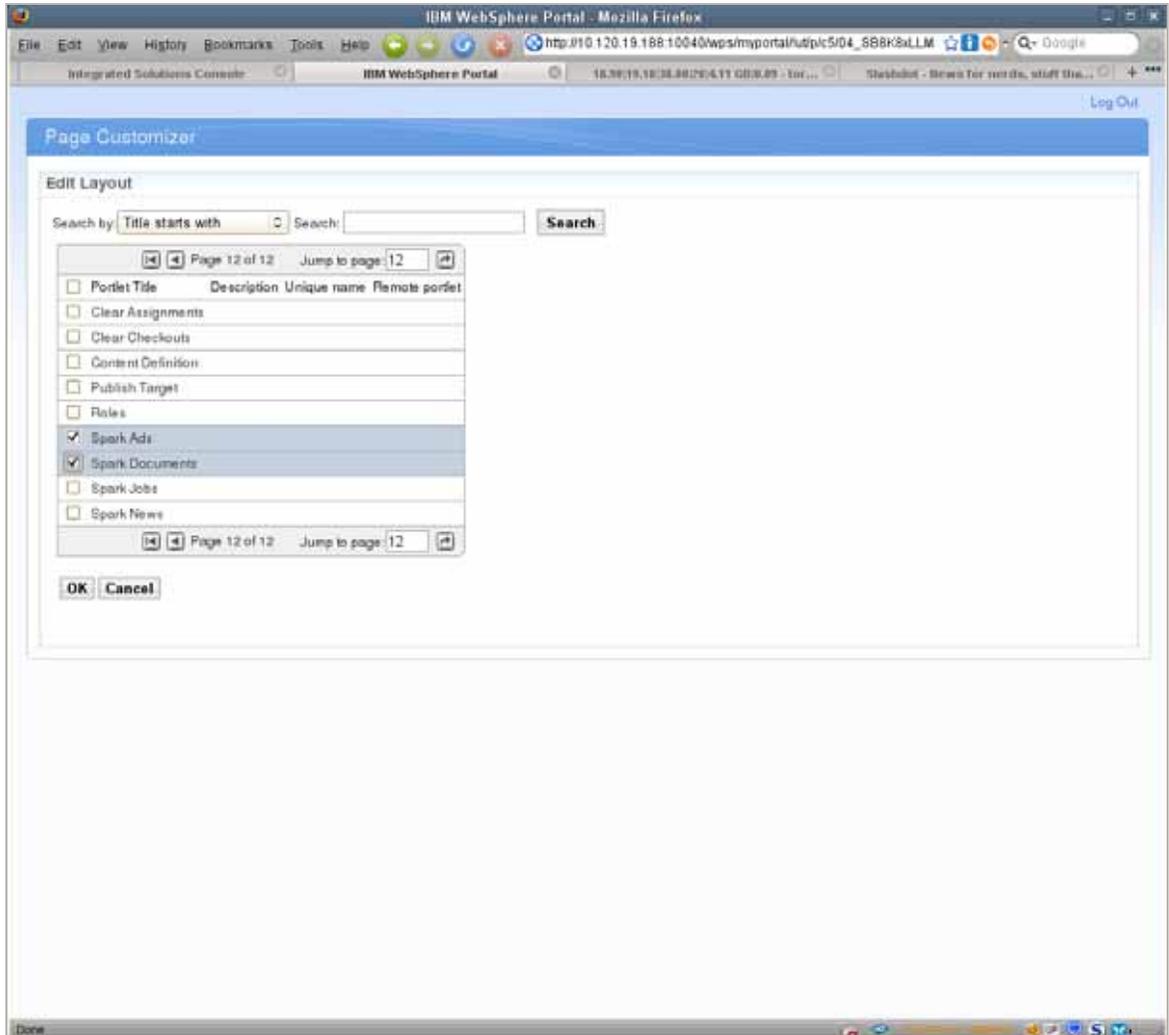


7. From the top row, select a page layout for the page you are modifying ("Spark Samples" page in this example).

8. In the bottom row, click the + **Add portlets** option.



9. Select the check boxes next to the portlets you wish to add from the list, then click **OK**.

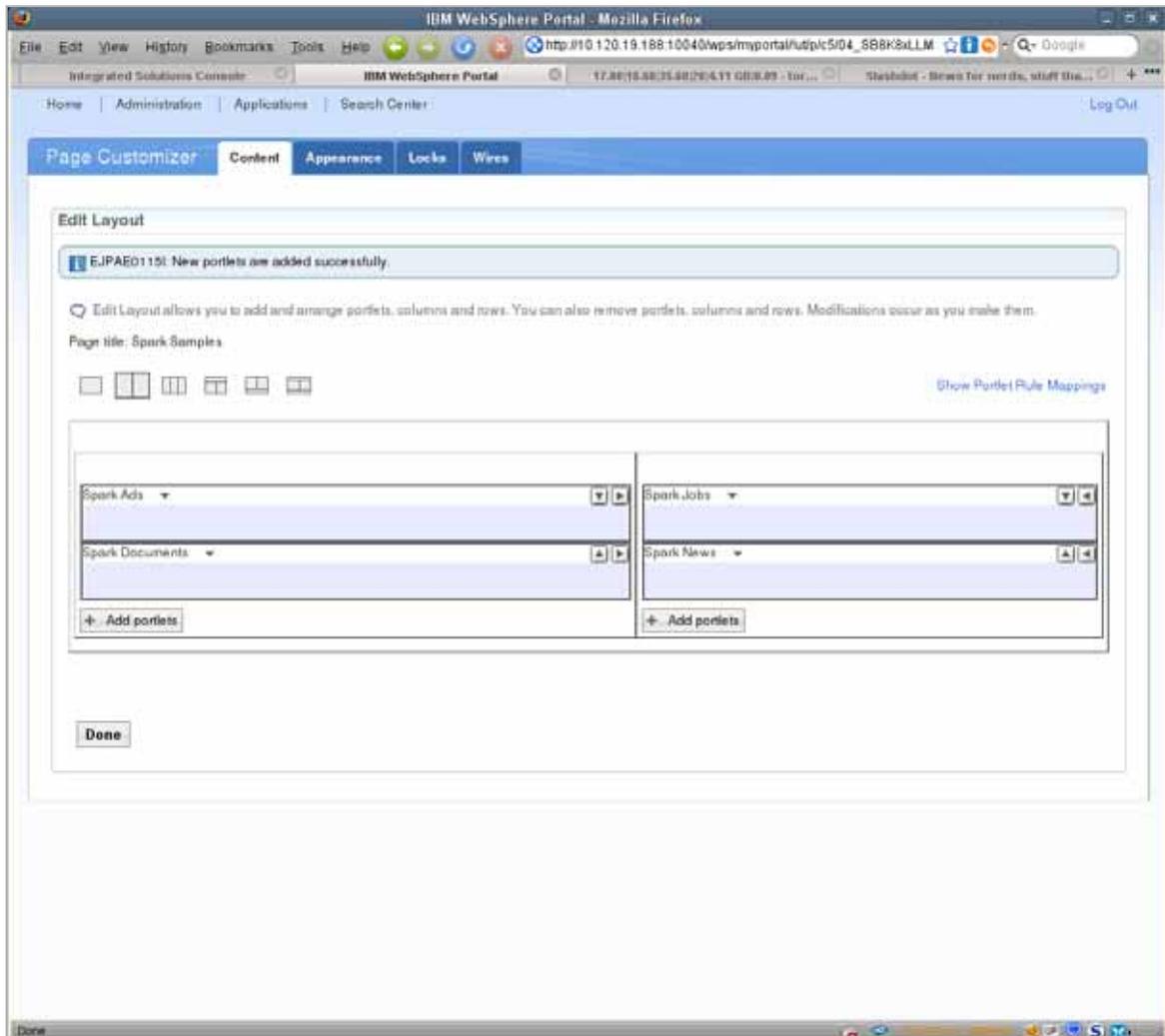


Note

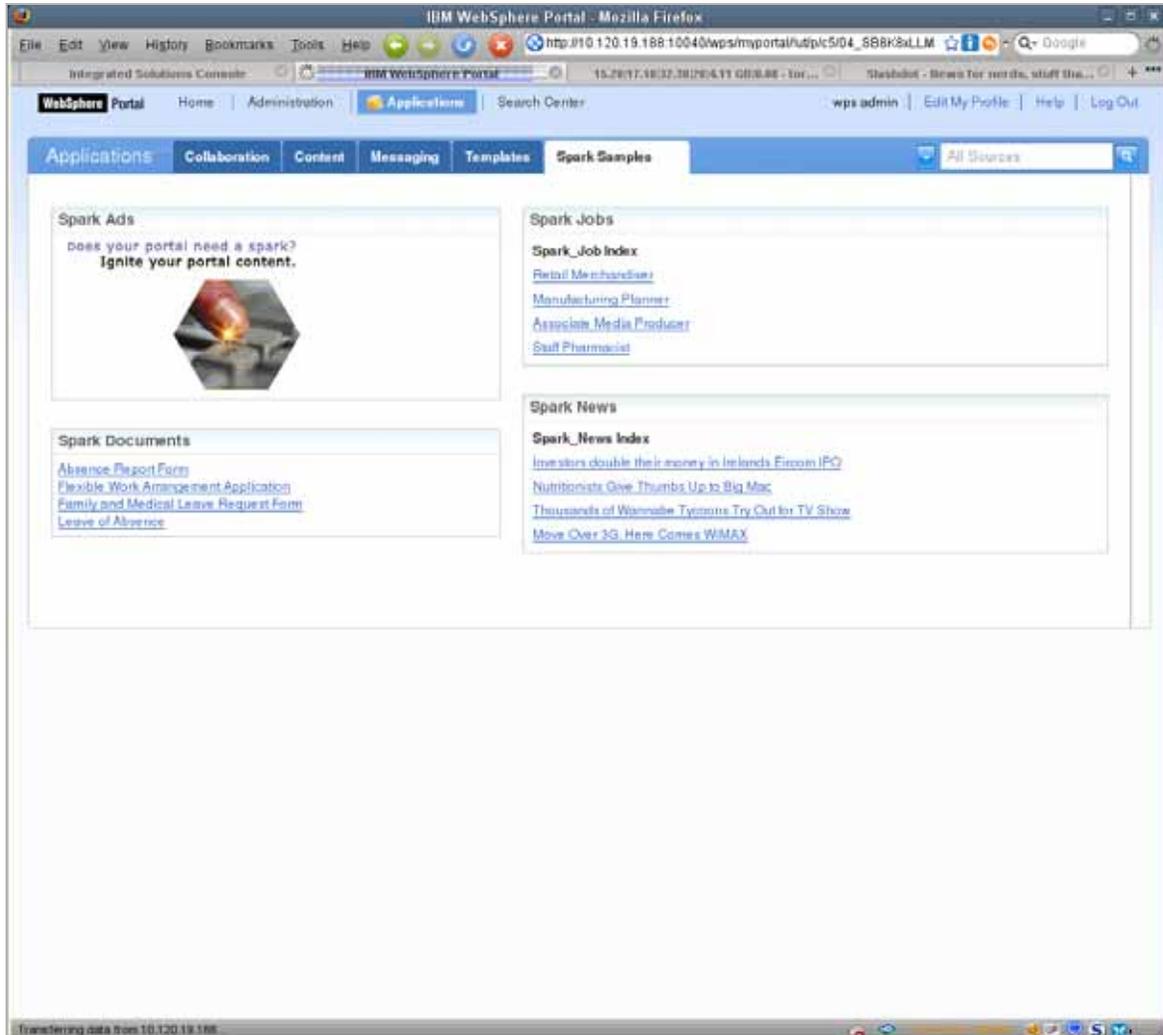
Content Server Portlets are located at the end of the “Portlets” list.

10. Repeat [step 9](#) for each column on the page.
11. Click **Done**.

The following shows the completed “Spark Sample” page:



The following shows how the page will be rendered to the end user when you navigate to that page:



Setting Up Content Server for Its Business Purpose

Once you have completed your Content Server installation, you are ready to configure it for business use. For instructions, see the *Content Server Administrator's Guide* and the *Content Server Developer's Guide*. These guides explain how to create and enable a content management environment including the data model, content management sites, site users, publishing functions, and client interfaces.

