Content Server

Version: 6.3

Installing Content Server with WebSphere Application Server

Document Revision Date: Dec. 1, 2005

FatWire SOFTWARE

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FatWire Technical Support
www.fatwire.com/Support

FatWire Headquarters
FatWire Corporation
330 Old Country Road
Suite 207
Mineola, NY 11501
www.fatwire.com

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Chapter 1

Installation Overview

This document provides guidelines for installing Content Server on the WebSphere Application Server with IIS or Apache, and connecting to the supported database of your choice.

Note

Anyone using this guide is expected to have experience installing and configuring databases, web servers, and application 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 product's documentation.

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

- What This Guide Covers
- Installation Summary
- System Requirements
- Acronyms in This Guide
- Graphics in This Guide

What This Guide Covers

This guide covers the following topics:

- Installation, configuration, and maintenance of WebSphere Application Server, as required to support Content Server in a web or portal environment.
- Installation of Content Server in non-clustered environments (where application servers act independently of each other) and clustered environments (where multiple application servers act concurrently to fulfill requests).

Installation Summary

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 or bypass sample sites and sample content, depending on the system you are setting up and on your business needs.

If you are creating a portal installation, you will perform LDAP integration by using the Content Server installer. For web installations, LDAP integration is optional and must be completed after the Content Server installation is successfully running.

Note

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

System Requirements

System requirements for installing Content Server are given in the following documents, located on your Content Server installation CD:

- *Content Server Supported Platform List*. The list specifies third-party databases and drivers, application servers and web servers, and other software required for installing and running Content Server.
- *Content Server Release Notes*. The notes provide important information about Content Server.

FatWire recommends that you read both of these documents before installing Content Server.

Note

The latest versions of the above-mentioned documents are located at the following URL (password-protected):

`http://e-docs.fatwire.com/CS`

If you need a password, contact FatWire Technical Support. Contact information is available at the following URL:

`http://www.fatwire.com/Support/contact_info.html`

The e-docs website is organized by product and version number. To obtain the correct documents, follow the link for the version of Content Server you are installing.

Acronyms in This Guide

Term	Definition
ND	Network Deployment
SSL	Secure Sockets Layer
WAS	WebSphere Application Server
WAS ND	WebSphere Application Server Network Deployment

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.

Chapter 2

Installing and Configuring Content Server

This chapter provides the steps that you need to complete to install Content Server. It contains the following sections:

- Pre-Installation Steps
- Installing Content Server
- Installing Content Server in a Managed Environment
- Post-Installation Steps

Pre-Installation Steps

The following steps instruct you to install the third-party products that support Content Server.

To install Content Server's supporting software

1. Make sure that you have licensed copies of all the software you will be installing.

   For information about Content Server's supporting software, refer to the latest *Content Server Supported Platform List* and to *Release Notes*. Both are available on the e-docs website (password-protected), at the URL that is given in "System Requirements," on page 6.
2. Install Apache or IIS. For installation instructions, consult the product vendor's documentation and our configuration guide, *Third-Party Software.*
3. Install, create, and configure a database:

   Content Server requires access to a supported database that is specifically configured for Content Server. Before installing any other of Content Server's supporting software, you must complete the following steps:

   a. Install the database management system.

   b. Create a database for Content Server.

   c. Configure the database.

   For instructions on installing the database, refer to the product vendor's documentation. For instructions on creating and configuring the database for Content Server, consult our configuration guide, *Third-Party Software.* Note that database configuration is identical across different application servers. Refer to the correct chapter to set up the database of your choice. The end of each chapter guides you to the next step in the Content Server installation procedure.
4. Install WebSphere 5.1.*x* (referred to as WAS throughout this guide). For an installation example, see Appendix A, "Installing WebSphere Portal Server and Network Deployment Server." For detailed instructions, refer to the product vendor's documentation.

   Note

   Installing WebSphere installs the application server, the portal, and WAS Network Deployment.

5. Do one or all of the following, depending on the type of installation you are creating:
   - If you are installing Content Server as a web application, install the application server. For an installation example, see Appendix A, "Installing WebSphere Portal Server and Network Deployment Server." For detailed instructions, refer to the product vendor's documentation.
   - If you are installing Content Server on a portal, install the portal server and the Network Deployment server. For instructions, see Appendix A, "Installing WebSphere Portal Server and Network Deployment Server."

- If you are installing a cluster, install the Network Deployment server. For instructions, see "Installing WebSphere Network Deployment Server," on page 45.

6. Set up IIS or Apache to connect to WAS.

   This is performed by the WAS installer. However, if the web server is located on a separate machine (suggested), you will need to make the necessary changes manually. If you need instructions, see Appendix B, "Configuring Web Servers and WAS JDBC Providers" (specifically "Configuring Apache" or "Configuring IIS," both on page 48).

7. If you are not using one of the JDBC drivers provided with WebSphere, download the JDBC driver required for your database configuration. If you are using MS SQL Server 2000 as the database, use the WebSphere Embedded ConnectJDBC driver for MS SQL Server.

8. Configure the JDBC provider in WAS. If you need instructions, see "Configuring WAS JDBC Providers," on page 49.

9. If you need to configure international language support for Content Server in WAS, complete the following steps:

   a. Change to the following directory:

      `<WAS install>/AppServer/bin`

   b. Open `startServer.sh` or `startServer.bat` for editing. For example:

      - Windows: **`notepad startServer.bat`**
      - UNIX: **`vi startServer.sh`**

   c. Go to the line `"-Dwas.install.root=%WAS_HOME%"` and on the next line insert: `"-Dfile.encoding=UTF-8"`

      For example, the original lines are as follows:

```
"%JAVA_HOME%\bin\java" %WAS_TRACE% %DEBUG% %CONSOLE_ENCODING%
"%CLIENTSAS%" "-classpath" "%WAS_CLASSPATH%"
"-Dws.ext.dirs=%WAS_EXT_DIRS%" %USER_INSTALL_PROP%
"-Dwas.install.root=%WAS_HOME%"
"-Dibm.websphere.preload.classes=true"
"com.ibm.ws.bootstrap.WSLauncher"
"com.ibm.ws.management.tools.WsServerLauncher" "%CONFIG_ROOT%"
"%WAS_CELL%" "%WAS_NODE%" %*
```

      The edited set of lines should look as follows (the inserted line is in boldface type):

```
"%JAVA_HOME%\bin\java" %WAS_TRACE% %DEBUG% %CONSOLE_ENCODING%
"%CLIENTSAS%" "-classpath" "%WAS_CLASSPATH%"
"-Dws.ext.dirs=%WAS_EXT_DIRS%" %USER_INSTALL_PROP%
"-Dwas.install.root=%WAS_HOME%"
"-Dfile.encoding=UTF-8"
"-Dibm.websphere.preload.classes=true"
"com.ibm.ws.bootstrap.WSLauncher"
"com.ibm.ws.management.tools.WsServerLauncher" "%CONFIG_ROOT%"
"%WAS_CELL%" "%WAS_NODE%" %*
```

   d. Save the file.

10. Install a self-signed certificate if one is required for your installation. If you need instructions, see Appendix C, "Creating and Installing Self-Signed Certificates."
11. If you have not done so, obtain a valid Content Server license file; this file must contain the IP address/names and ports on which you plan to access Content Server.
12. If you are installing a portal, do the following:
    a. Install and configure the Directory Server. For instructions, see Appendix D, "Installing and Configuring the Directory Server for Content Server."
    b. Configure the portal for use with Content Server. For instructions, see "Setting Up the Content Server Portal (Portal Installations Only)," on page 22.
    c. Install LDAP with ND and WebSphere_Portal. For instructions, see Appendix E, "Integrating LDAP with Network Deployment and WebSphere_Portal."
13. You are now ready to install Content Server. Continue with the next section.

Installing Content Server

This procedure shows how to install Content Server. Follow this procedure when you need to install Content Server in a non-clustered environment, or when you need to create a Content Server instance that will serve as the primary member of a cluster installation.

1. If you have not already done so, complete the procedures in "Pre-Installation Steps," on page 10.
2. Extract the Content Server installation files by completing the following steps:
    a. Create a temporary directory. For example:
        - Windows: **`md c:\temp\CS`**
        - UNIX: **`mkdir /tmp/CS`**
    b. Change to the temporary directory you created. For example:
        - Windows: **`cd c:\temp\CS`**
        - UNIX: **`cd /tmp/CS`**
    c. Copy the Content Server archive and license file to the target machine (this is the machine on which you are going to install Content Server). For example:
        - Windows: **`copy ContentServer.zip c:\temp\cs`**
        - UNIX: **`cp ContentServer.tar.gz /tmp/cs`**
    d. Decompress the archive you copied in step c into the temporary directory. For example:
        - Windows, using jar: **`jar –xf ContentServer.zip`**
        - Windows, using WinZip: right-click and select **Winzip > Extract to here**
        - UNIX, using gzip: **`gzip –d ContentServer.tar.gz`**
        - UNIX, using tar: **`tar –xf ContentServer.tar`**

3. Ensure that your path is set to use the correct JRE by opening a command prompt and entering:
   - Windows: **`Set Path =`** `<WAS Install Directory>` **`\java\bin;%Path%`**
   - UNIX: **`export Path =`** `<WAS Install Directory>` **`\java\bin:$PATH`**
4. Change the directory to the location of the Content Server Installer and run:
   - Windows: **`CombinedInstall.bat`**
   - UNIX: **`sh ./CombinedInstall.sh`**
5. The first screen of the installer is displayed. Complete the following steps:
   a. In the "Welcome to Installation" screen, select **Install FatWire Products** and click **Next**.
   b. In the "Installation Directory" screen, browse to the location where you want to install Content Server and click **Next**.

      Note that this location is where the application will be installed, not where WAS will deploy the product.
   c. In the "FatWire License Verification" screen, browse to the location of the Content Server license file and click **Next**.
   d. In the "Select Products to Install" screen, select the products to install: **Content Server v6.3** and **Content Server Applications v6.3**. Click **Next**.
   e. In the "Installation Type" screen, select **Single Server** and click **Next**.
   f. In the "Installation Options" screen, do the following:
      1) Choose the options that are appropriate for your installation. In most situations, particularly on delivery (production) systems, you do not need to select any of the options.
      2) Select **No** for the Property Editor display option. (If you need to modify property values, you can start the Property Editor manually after the installation is complete.) For more information about the Property Editor, see the *Content Server Property Files Reference*.
      3) Click **Next**.
   g. In the "Content Server Configuration" screen, enter the password you wish to use for Content Server (the default is `password`) and click **Next**.
   h. In the "Satellite Server Configuration" screen, enter the password you wish to use for Satellite Server (the default is `password`) and click **Next**.
   i. In the "Shared Folder Root" screen, select a shared folder root. You can use the default for most non-clustered installations. Click **Next**.
   j. In the "Web Server Configuration" screen, enter the name of this server (or IP) and the port you are running on; this host name and port must be in your `FWLicense.xml` file for the installation to complete successfully.

      You can install directly against WAS or against the web server.
   k. In the "Platform Type" screen, select **Application Server Platform** and click **Next**.
   l. In the "Application Server" screen, select **WebSphere 5.1** and click **Next**.

m. On the machine's file system, create a directory structure called `ContentServer.ear\cs.war` under `<WAS Install directory>\InstalledApps\<Your node name>\`

n. In the "WebSphere Deployment Root" screen, do the following:

1) Browse to where you are going to install Content Server.

2) Select the directory created in step m as your installation path.

3) Enter the name of the node you located in step m.

4) Optional: Change the Web Application Path (the context root).

5) Click **Next**.

o. In the "Database Configuration" screen, do the following:

1) Select your database type (such as **MS SQL Server**) from the drop-down list.

2) Select the data source that was created when WAS was set up.

> **Note**
>
> The correct data source must be selected for the installation to work.

3) Click **Next**.

p. In the "Server Installation Options" screen, you can select any or all of the options. Select the options that are appropriate for your installation, and click **Next**.

q. In the "Installation Mode" screen, do one of the following:

- Select **Content Management** if you are installing Content Server on either a development or management (staging) system *and* you wish to install sample sites and their assets on the system. (By selecting **Content Management**, you allow sample sites and assets to be installed later in the installation process.) Click **Next**.
- Do not select **Content Management** if you are installing Content Server on a delivery (production) system, or any system where sample sites and assets are unnecessary. (By deselecting **Content Management**, you prevent sample sites and assets from being installed.) Click **Next**.

r. If you did not select the **Content Management** installation option, skip to step t. Otherwise, continue with the next step.

s. If you selected the **Content Management** installation option and want sample sites and assets to be installed on the Content Server system, do the following:

1) In the “CS-Site Launcher Prototypes” screen, select the site you want to install, then click **Next**.

> **Note**
>
> **FirstSite** provides a collection of standard templates and site components that developers can use to learn best practices and implement their web site projects. FirstSite also exemplifies a site that is designed for replication.

2) In the “Sample Asset Types” screen, select all asset types and click **Next**.
3) In the “Sample Sites” screen, select all sample asset data, elements, users, workflows and site entries, then click **Next**.
4) In the “Transact Connectivity” screen, leave the default number of stores for Transact (default is 2) and click **Next**.

t. In the next screen, leave the checkboxes deselected and click **Next**. (If you need to modify property values, you can start the Property Editor manually after the installation completes.)

u. At this point, you may want to check the previous screens and ensure that everything is correct. Return to the “Install” screen and click **Install** when you are ready to proceed.

v. Wait until the installer prompts you to continue (by displaying the “WebSphere Install Actions” dialog).

6. Log in to the WebSphere Administrative Console, then do the following:

a. In the left-hand tree, select **Applications** > **Install New Application**.

b. In the “Specify EAR/WAR/JAR module” screen, do the following:

1) Browse for the `contentserver.ear` file (located in `<ContentServer root directory>/ominstallinfo/app/`).
2) Select **Next**.

c. In the “Generate Default Bindings and Mappings” screen, click **Next**.

d. In the “Analysis of this Application” screen, click **Continue**.

e. In the “Specify the Various Options” screen, change the application name if desired and click **Next**.

f. In the “Map Virtual Hosts for Web Modules” screen, click **Next**.

g. In the “Map Modules to Application Servers” screen, click **Next**.

h. In the “Summary” screen, click **Finished**.

This will deploy the new application on WAS.

i. Click **Save** to save changes to the master configuration file.

7. In the left-hand tree, select **Applications** > **Enterprise Applications**, then do the following:

a. Locate the application you installed in step 6 of this procedure.

b. Select the checkbox next to this application and click **Start**.

The portion of the CS installation within the WAS Administrative Console is now complete.

8. Test that everything up to this point has completed successfully:
   a. Open a browser and go to the following URLs to perform the HelloCS and pingdb tests:

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

      http://<hostname>:<port>/<context root>/
        ?CatalogManager?ftcmd=pingdb
      ```

   b. If either of these tests fails, you cannot continue with the installation. See "Resolving HelloCS and pingdb Problems," on page 75 for suggestions on how to resolve the issue that may be causing test failure.

      Note that the success of the previous two tests does not guarantee a successful installation; however, no installation can be completed successfully if either of these tests fails.
9. Assuming step 8 completed successfully, click **OK** in the Content Server installer screen to complete the installation.

   At this point, tables are being created in the database. If anything fails between now and the completion of the Content Server installation, you will have a number of unusable tables in the database. You will need to delete these tables, as well as the Content Server files in the file system. If you need instructions, see "Removing All Files and Tables," on page 74.
10. Assuming the Content Server installation is successful, verify the installation and configure Content Server as necessary. For instructions, see "Post-Installation Steps," on page 20.

Installing Content Server in a Managed Environment

If you plan to install Content Server in a managed environment, you will need both a standard version of WebSphere Application Server and WebSphere Application Server Network Deployment (WAS ND). Follow the steps in the rest of this section to set up a managed environment. The steps are:

A. Checking Pre-Installation Requirements

B. Installing Content Server on a Managed Server

C. Setting Up a Cluster

A. Checking Pre-Installation Requirements

Before installing Content Server in a managed environment, make sure the following requirements have been satisfied:

- You have already installed and configured WebSphere Application Server as specified in the previous sections. This means you have installed and configured a single

instance of Content Server to run through WebSphere, and have logged in and confirmed that the instance is operational.

- You are installing a vertical cluster such that WebSphere Application Server and WebSphere Network Deployment are installed on the same machine.

B. Installing Content Server on a Managed Server

1. Install the WebSphere Network Deployment version (and appropriate patches) so that it matches the version of your WAS installation. For instructions, see "Installing WebSphere Network Deployment Server," on page 45.

> **Note**
>
> Often, the WebSphere Network Deployment server will not start properly because, by default, it installs on the same ports as the WebSphere Application Server. It is therefore suggested that you select a set of custom ports for this server during the installation.

2. If you are installing a portal, complete steps a–d, below. Otherwise, skip to step 3.
   a. Install Directory Server. This will require you to install either a version of DB2 that is part of the distributed file, or else a local full version of DB2. This step is completely independent of the other steps, but needs to be completed before step 5. We suggest that you first complete the installation of the Directory Server.
   b. Install WebSphere Portal Server and patch it to the correct version. This is relatively straight forward, but very time consuming. For instructions, see Appendix D, "Installing and Configuring the Directory Server for Content Server."
   c. Install WebSphere Network Deployment, and patch it to the correct version. For instructions, see Appendix A, "Installing WebSphere Portal Server and Network Deployment Server."
   d. Integrate the Portal server with the Network Deployment server by using the `addNode` command. For instructions, continue with steps 3 and 4 in this procedure.
3. Modify WAS Network Deployment server for `addNode` to succeed:
   a. Change the Network Deployment server from allocating `-Xmx256` to allocating `-Xmx512` as follows:
      1) Select **System Administration** > **Deployment Manager** > **Process Definition** > **Java Virtual Machine**
      2) Set Initial Heap Size to 256.
      3) Set Maximum Heap Size to 512.
   b. Check that the files `cmm.jar` and `cmmImpl.jar` do not exist in `<ND root>/lib`.
      - If the files exist in `<ND root>/lib`, copy them to `<App Server root>/lib` and change their permissions to: `655`
      - If the files do not exist in `<ND root>/lib`, continue with the next step.

4. Modify WAS Portal for `addNode` to succeed:

   a. Edit `addNode.sh` by inserting `-Xmx512` as a new line into the `addNode.sh` script, as shown below.

   Original line: `"$JAVA_HOME"/bin/java \`

   New line: **`-Xmx512m \`**

   Original line: `-Xbootclasspath/p:"$WAS_BOOTCLASSPATH" \`

   Note

   Remember that you will also have WebSphere_Portal and server1 running at the same time. Make sure there is enough memory for both to run simultaneously.

   b. Stop the Network Deployment and Portal servers, then restart the Network Deployment server. Locate the port on which Network Deployment is listening for SOAP requests:

   The SOAP port can be found by looking in Network Deployment admin at **Application Servers** > **WebSphere_Portal** > **End Points** > **SOAP Connector Address**.

   c. On the application server that is integrated with the portal (in `<was home>\bin`) run the following command:

   ```
   ./addNode.sh <ip address of dmgr> <soap port of dmgr> \
     -conntype SOAP -includeapps -trace
   ```

   If the operation is successful, the nodes are added to WAS ND.

   d. Log in to Network Deployment admin server and do the following:

   1) If the Enterprise Application `wpsAdminConsole` is present, remove it from Network Deployment and save your changes. Make sure the sync nodes checkbox is selected.

   2) Modify Virtualhost entries by adding the ports used by server1 and WebSphere_Portal (as these are not present in Network Deployment), and save your changes. Make sure the sync nodes checkbox is selected.

   Note

   At this point, the original server should no longer be started with `startServer.sh <server name>`, but should be started with the `startNode.sh` command located in the same location.

5. Enable LDAP security and integration with Portal Server, and complete the Portal Server upgrade to version 5.1.0.1. For instructions, see Appendix E, “Integrating LDAP with Network Deployment and WebSphere_Portal.

6. Install Content Server. For instructions, see “Installing Content Server,” on page 12.

7. Verify the installation. For instructions, see step “A. Testing Your Installation (Web Applications and Portals),” on page 20.

8. Configure the portlets. For instructions, see "Setting Up the Content Server Portal (Portal Installations Only)," on page 22.
9. Set up the cluster. For instructions, see the next section, "Setting Up a Cluster."

C. Setting Up a Cluster

1. Create a new cluster by completing the following steps:
   a. Select **Server** > **Clusters**.
   b. Click the **New** button in the right-hand pane.
   c. Enter a name for the cluster.
   d. From the drop-down menu, select the WebSphere_Portal server that you imported in step 4d2 ("Modify Virtualhost entries," directly above the preceding note).
   e. Click **Next**.
   f. In the next screen (which prompts you to create new clustered servers), click **Next**.
   g. Click **Finished**.

      You have now created a cluster with a single server, which will be used as a template for creating all other cluster members.
2. Add a member to the cluster by completing the following steps (this will create a new server instance):
   a. In the left-hand tree, select **Server** > **Clusters**.
   b. In the right-hand pane, click the cluster created in step 1.
   c. Click **Cluster Members**.
   d. Click the **New** button.
      1) Enter a name for the new member.
      2) Click **Next**.
   e. Click **Finished**.
3. Restart the cluster by completing the following steps:
   a. In the left-hand tree, select **Servers** > **Clusters**.
   b. Select the cluster created in step 1 and click **Stop**.
   c. With the cluster created in step 1 still selected, click **Start**.

> **Note**
>
> A new server instance with the Content Server application now exists. Do not try to connect to the new instance at this point (this instance is not yet usable).

4. Repeat all the steps in "Installing Content Server," on page 12. Perform the steps **exactly as you performed them in that procedure**, but with the following exceptions:

a. In the “Installation Directory” screen, select a directory other than the one used in the previous Content Server installation.

b. In the “Installation Type” screen, select **Cluster Member**.

c. In the “Shared Directory Root” screen, select the same location used for the previous installation.

d. In the “Web Server Configuration” screen, use the IP address and port of the server you created in steps 1 and 2 of this procedure.

e. When prompted to restart the WebSphere Content Server application, *do not* restart the application; simply click **Next**.

5. After the installation is complete, stop and restart the Content Server application from the WebSphere Network Deployment Administrative Console.
6. If you wish to add more clusters either vertically or on other machines, repeat steps 2 through 5 in this procedure for each new cluster member.
7. Complete the following steps to update the WebSphere plug-in to work with the newly created cluster:

   a. In the left-hand tree, select **Environment > Update Web Server Plugin** and click **OK**.

   b. Copy the resulting file to any remote web servers.

   c. Restart all affected web servers.

   At this point, a WebSphere cluster has been configured and is available through the URL of the web server that was configured in the “Pre-Installation Steps,” on page 10.

Post-Installation Steps

This section contains instructions for testing your system, configuring your system (installing the optional search engine Verity, setting up the Content Server portal), and configuring Content Server for its business purpose. The sections are:

A. Testing Your Installation (Web Applications and Portals)

B. Configuring Content Server

C. Setting Up Content Server for Its Business Purpose (All Installations)

A. Testing Your Installation (Web Applications and Portals)

In this section, you will test your installation by logging in.

1. Browse to the following URL:

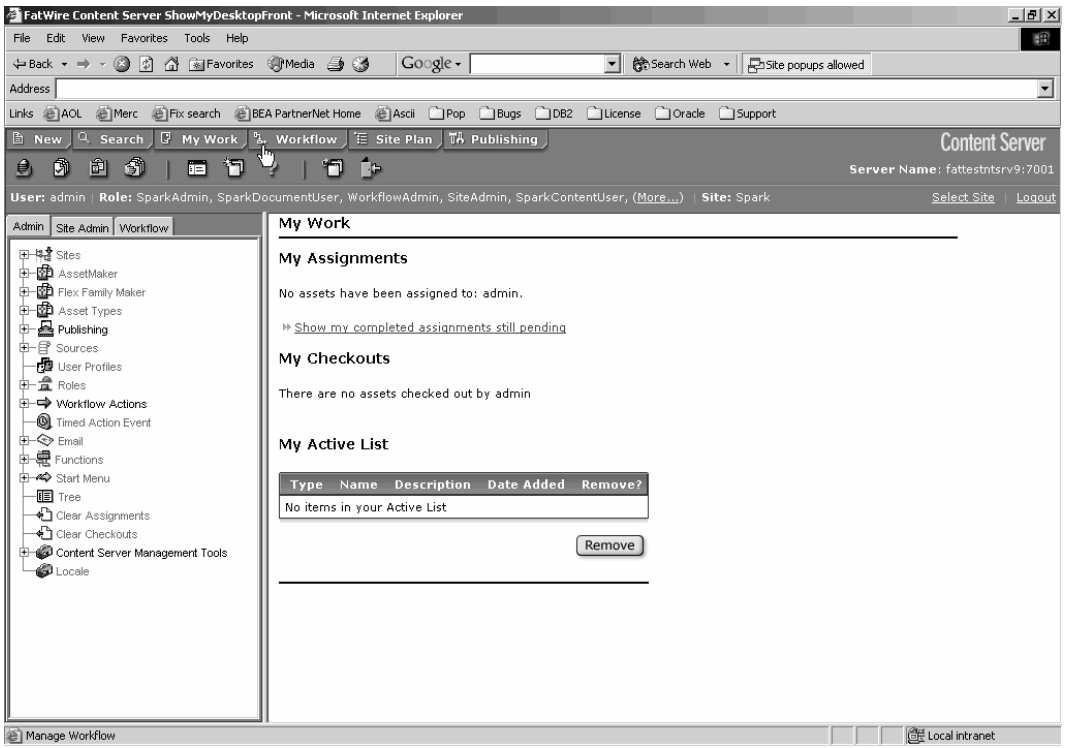
   ```
   http://<hostname>:<port>/<context root>/Xcelerate/
      LoginPage.html
   ```

2. In the login screen, enter the following information:

   Login Name: `fwadmin`

   Password: `xceladmin`

   Content Server's console is displayed and Content Server is now ready for further configuration.



B. Configuring Content Server

1. Configure Content Server, as necessary, by referring to the instructions in the rest of this section:
   - Installing Verity Search Engine (Web Installations and Portals)
   - Integrating with LDAP (Optional. Web Installations Only)
   - Setting Up the Content Server Portal (Portal Installations Only)
2. When you complete the configuration procedures, set up Content Server for its business use, as explained on page 40.

Installing Verity Search Engine (Web Installations and Portals)

1. Copy the `libFTVeritySearch.so` file into the `<WAS Install>/lib` directory.
2. Add the following directories to the existing classpath, to the system path, and to the library path:

   ```
   <content server installation directory>/VerityK2/<_platform>/
      filters

   <content server installation directory>/VerityK2/<_platform>/
      bin
   ```

3. Restart the affected instance.

Integrating with LDAP (Optional. Web Installations Only)

If you installed Content Server as a web application and wish to integrate with LDAP, follow instructions in the *Content Server Administrator's Guide*.

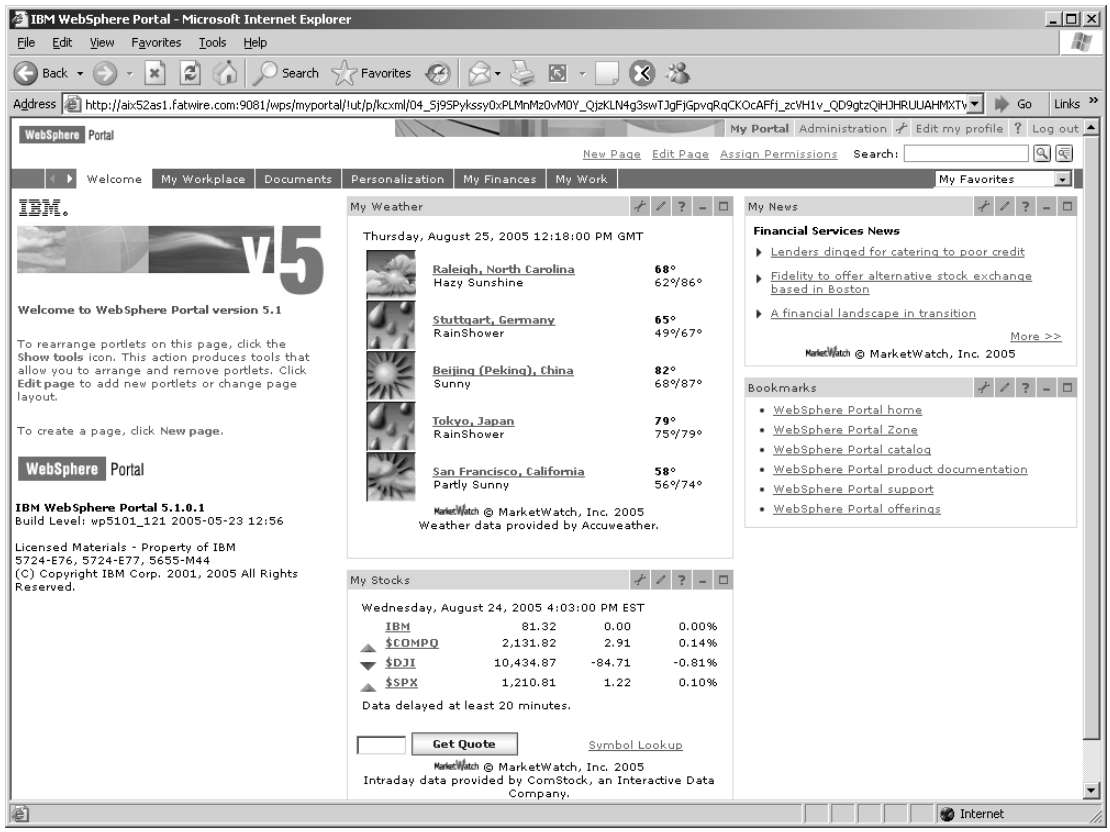
Setting Up the Content Server Portal (Portal Installations Only)

1. Edit the `registerSparkPortlets.xml` file as follows:
   a. After line 15 add a new line of the form `<url>file:/<was install root>/installedApps/<network node name>/ContentServer.ear/cs.war</url>`
   b. On the line `<context-root>/cs</context-root>`, change `/CS` to whatever your context root is.
2. The first time that you log in as `wpsadmin`, you will be prompted to create a new username and password. In this guide, we assume you are using the following:

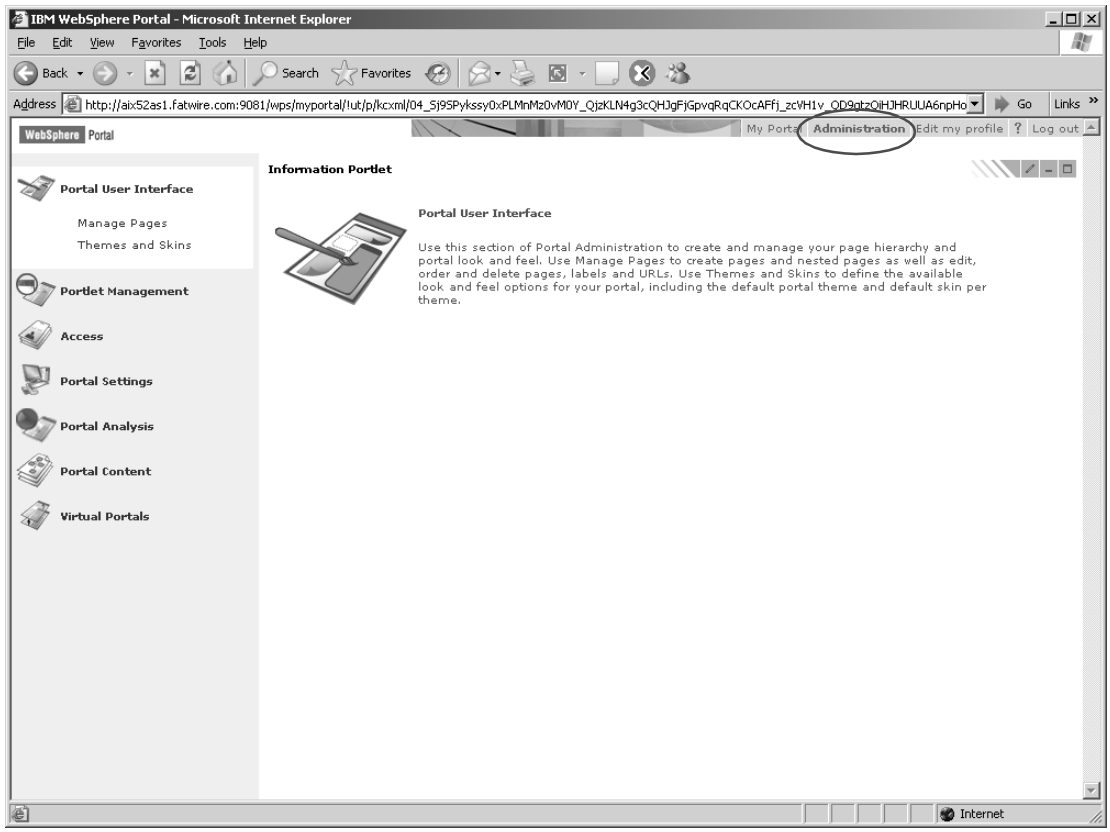
   Username: `csuser`

   Password: `<your_password>`
3. Log out, then log back in with username/password `wpsadmin/wpsadmin`.

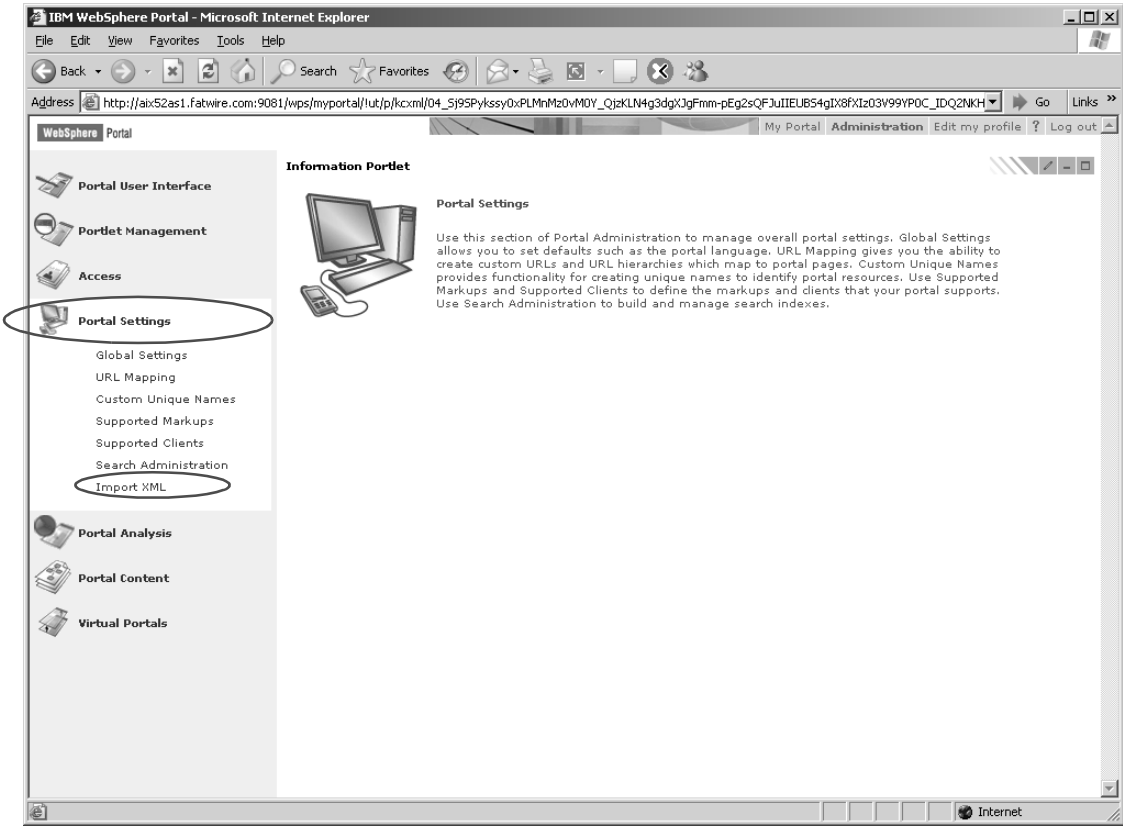
You see the following display:



4. Click on **Administration** (in the top right-hand corner).



5. Import the `registerSparkPortlet.xml` as follows:
   a. From the left-hand menu bar, select **Portal Settings** > **Import XML**.



   b. Locate the file `registerSparkPortlet.xml` (it is located with the files that are used to install Content Server).
   c. Click **Import**.

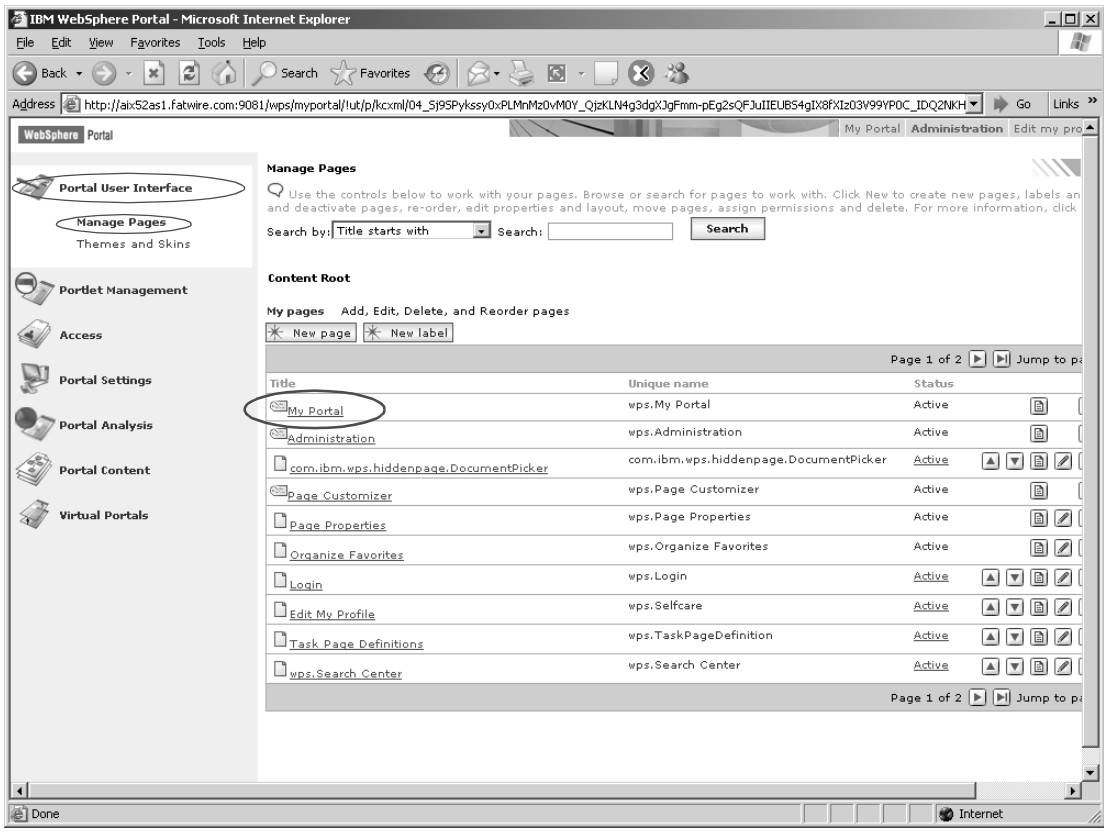
      The file is imported.

6. Create the portal pages:

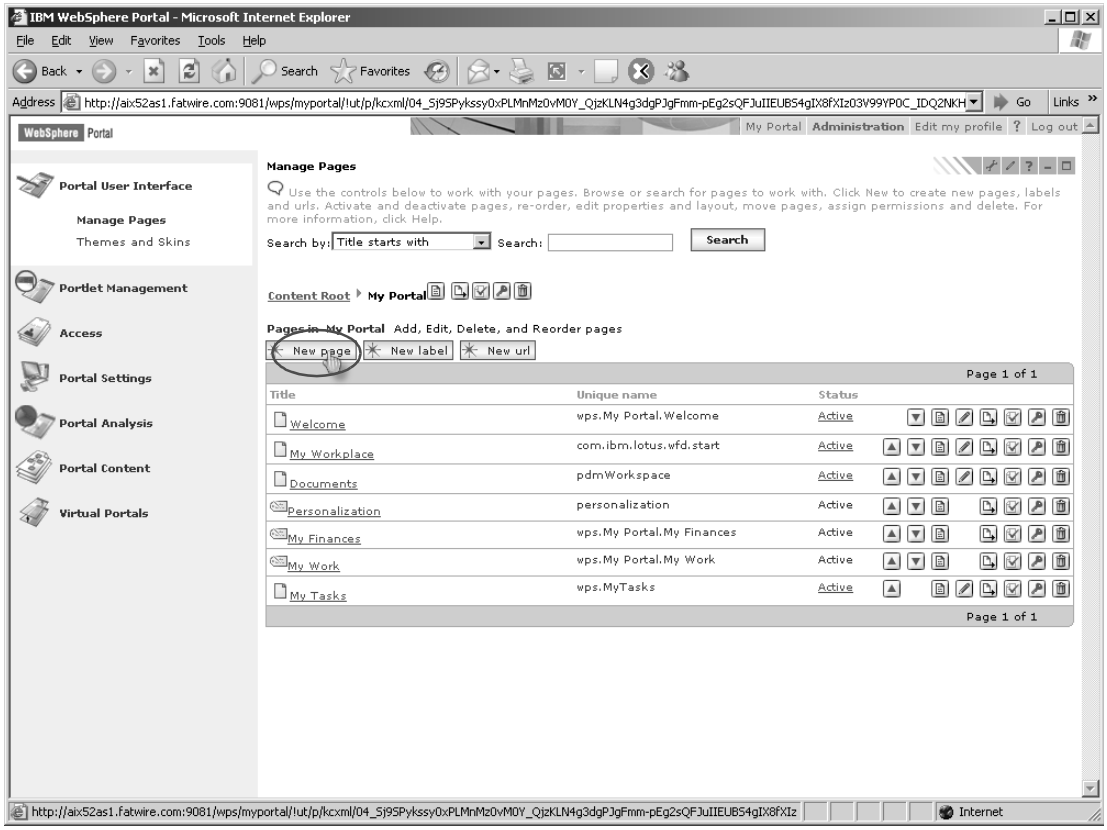
> **Note**
>
> The pages will be used to display the portlets. In this guide, the pages are named “FatWire Content,” “FatWire Documents,” “Admin,” and “Spark Display.” If you need a preview of the finished pages and the portlets they contain, see the figures starting on page 38.

a. From the left-hand menu bar, select **Portal User interface** > **Manage Pages**.

b. In the “Title” column, click **My Portal**.



c. Click **New page**. Specify the name of the page to be **FatWire Content** and the page layout type to be **3 column**. (In a later step, you will arrange the content management portlets to be displayed within the 3 columns on the page). Click **OK**.

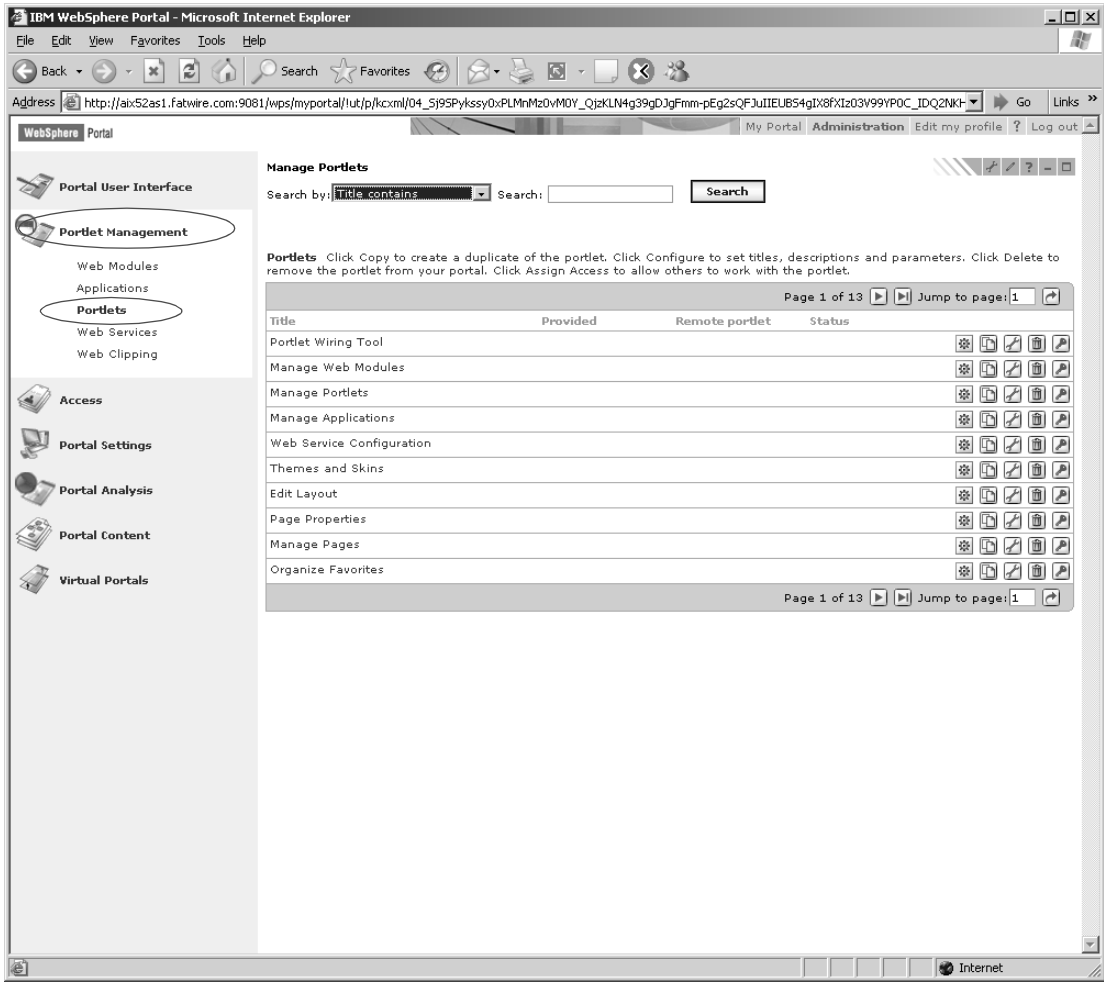


d. Click **New page** again. Specify the name to be **FatWire Documents** and the page layout type to be **3 column**, then click **OK**.

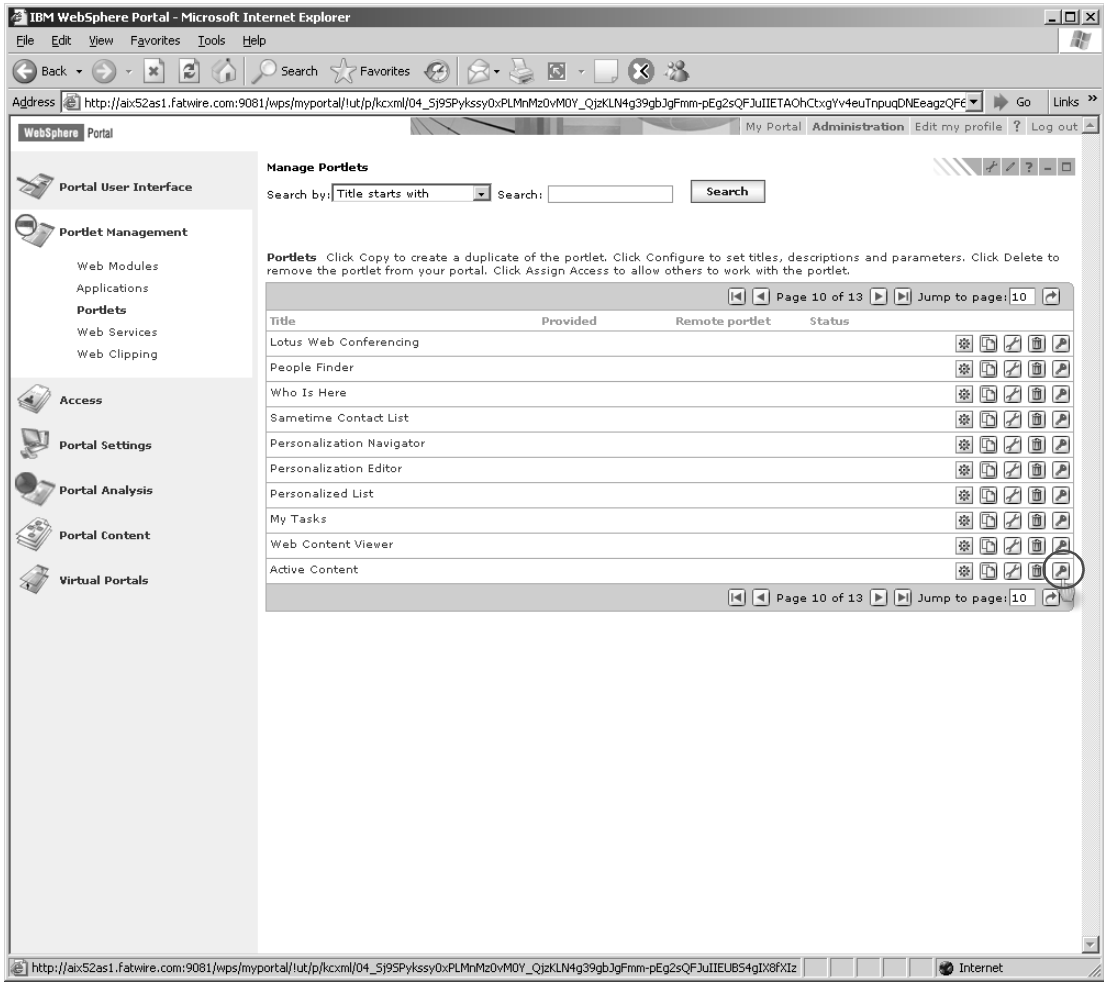
e. Click **New page** again. Specify the name to be **Admin** and the page layout type to be **2 column**, then click **OK**.

f. Click **New page** again. Specify the name to be **Spark Display** and the page layout type to be **2 column**, then click **OK**.

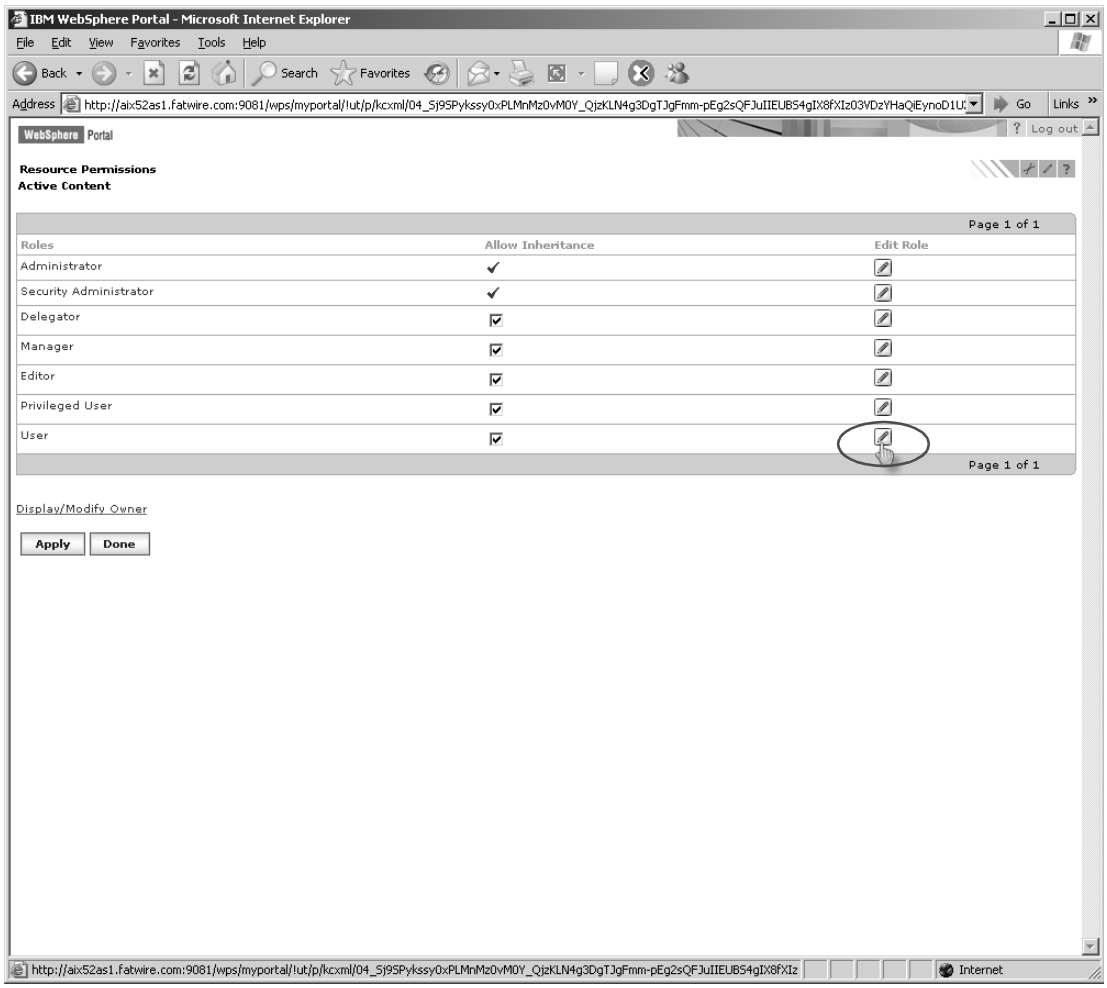
7. Assign permissions to access the portlets as follows:
   a. From the left-hand menu bar, select **Portlet Management** > **Portlets**.



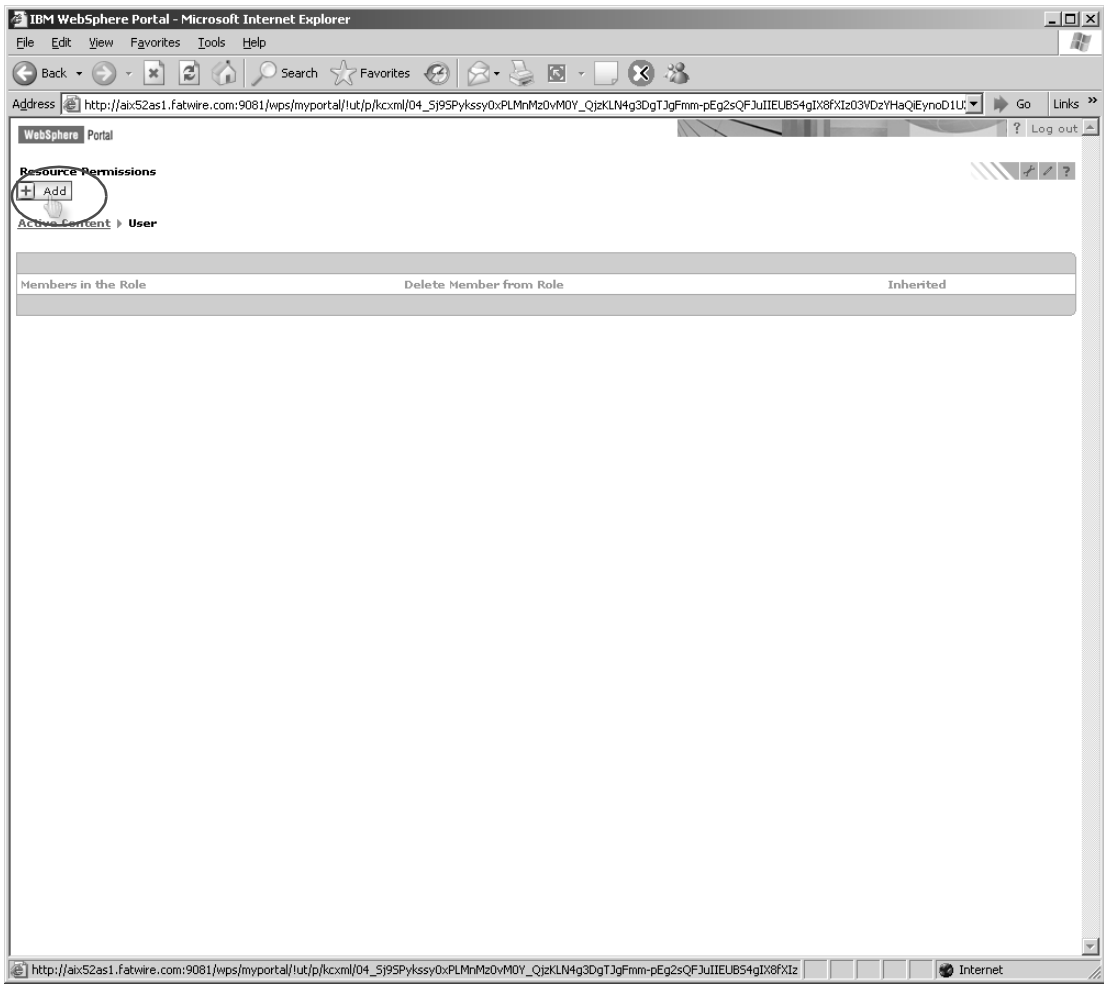
b. Locate the “Active Content” portlet and modify access to the portlet by clicking on the key icon next to the portlet’s name.



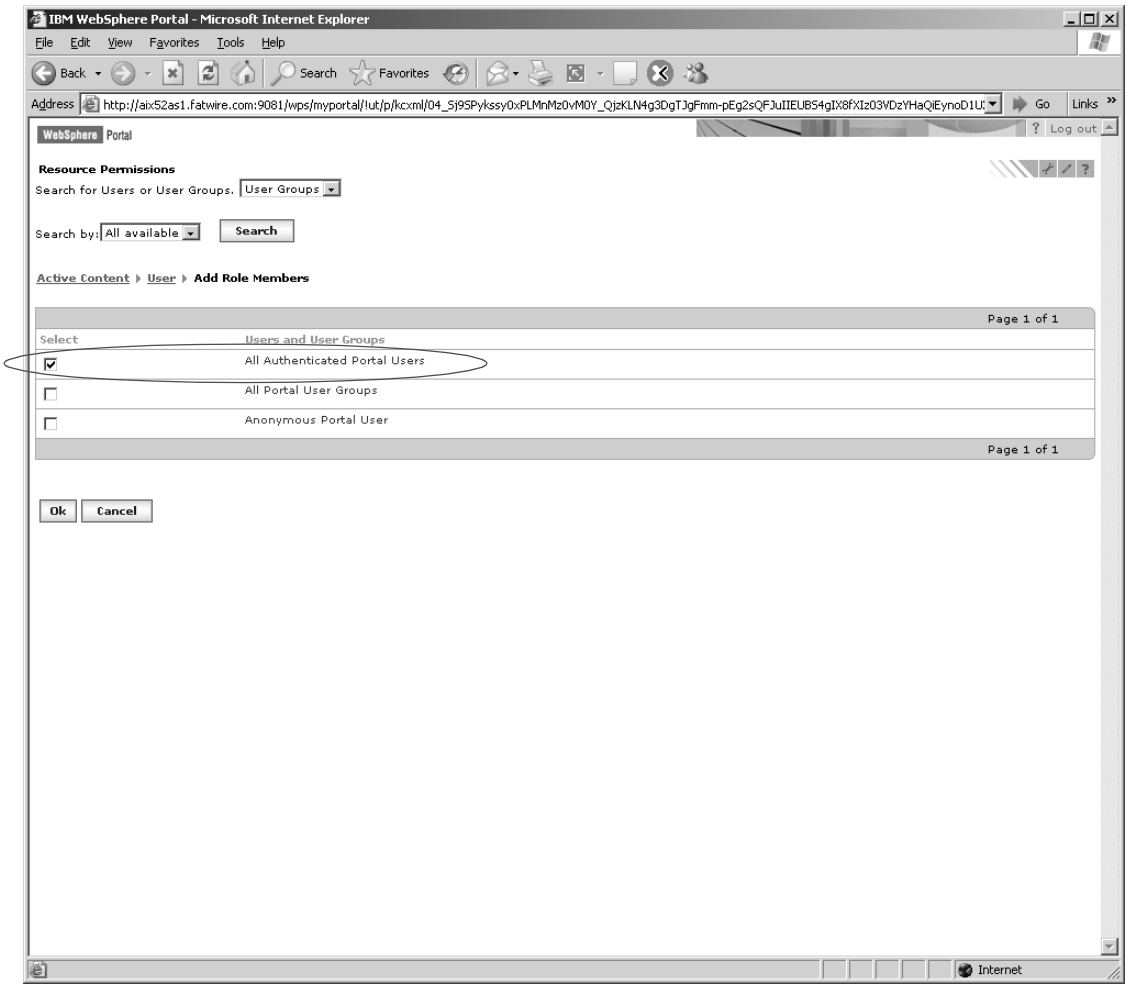
c. Click the **Edit** button in the "User" row.



d. Click the **Add** button.



e. Select the checkbox **All Authenticated Portal Users** and click **OK**.

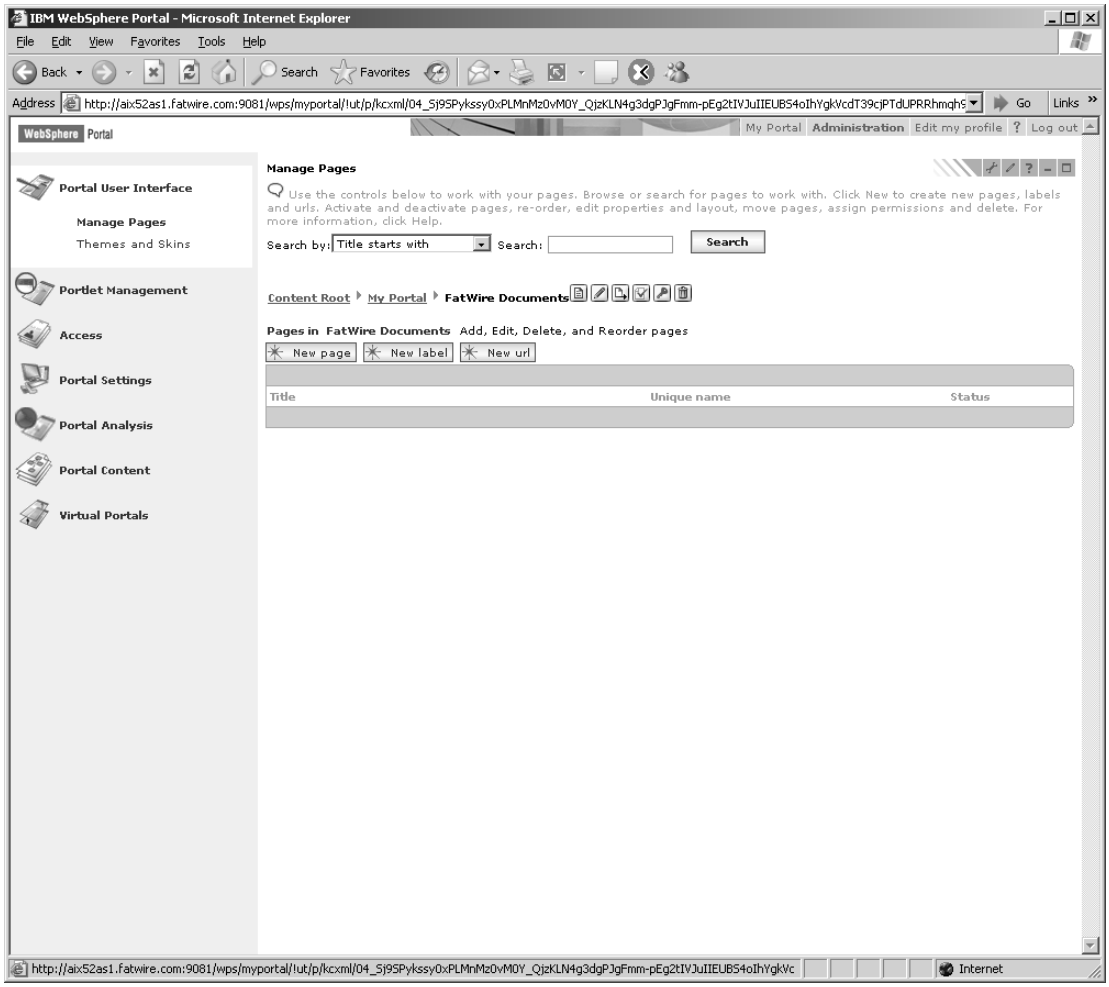


8. Repeat step 7 on page 28 for each of the following portlets:

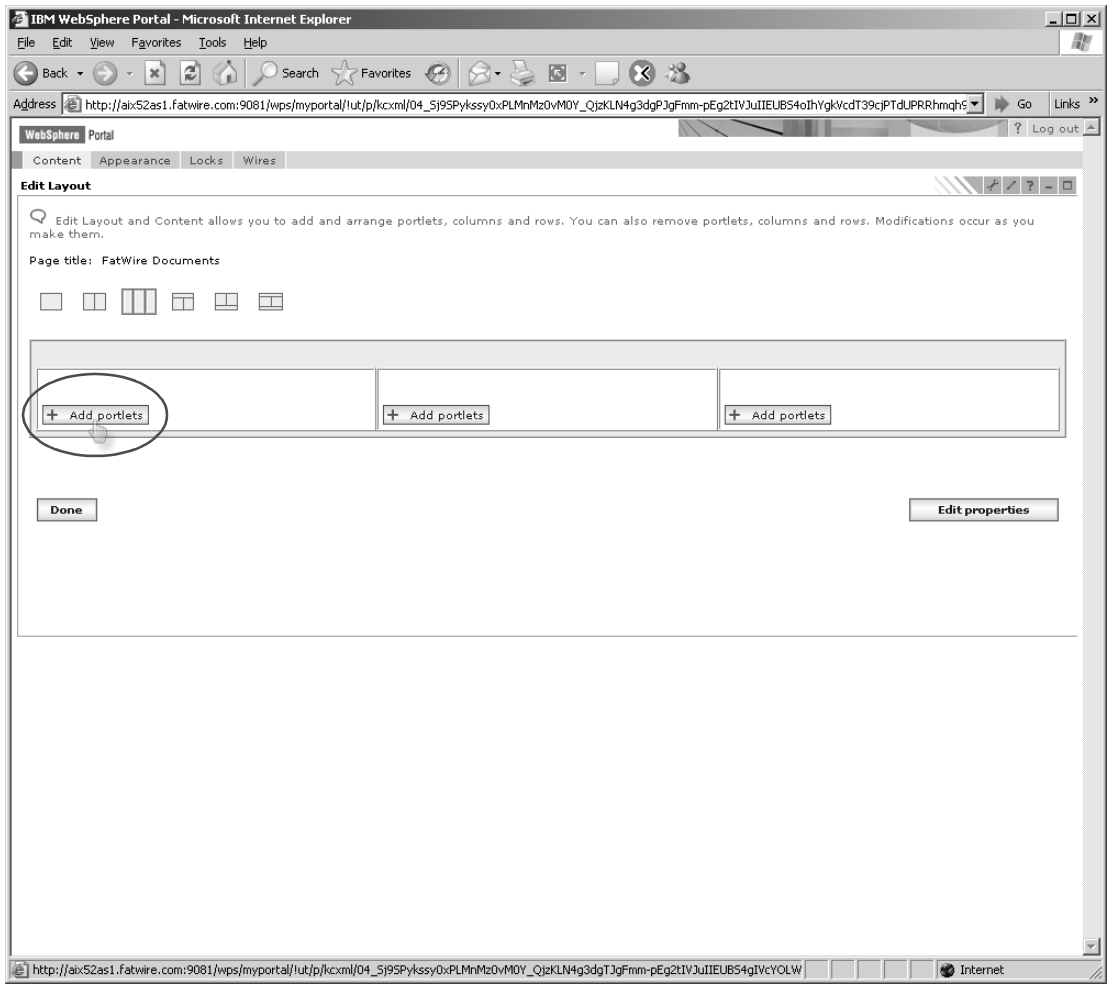
Active Documents	Create Content	Search Documents
Checked Out Content	Document Assignments	Site Info
Checked Out Documents	Document History	SparkAd
ClearAssignments	My Documents	SparkDocuments
ClearCheckouts	Publish Console	SparkJobs
Content Assignments	PublishTarget	SparkNews
Content History	RolesAdmin	
ContentDefinition	Search Content	

9. Add portlets to one of the pages that was created in steps 7 and 8. Do the following:

a. Select the page to which you want to add portlets and click the edit icon.



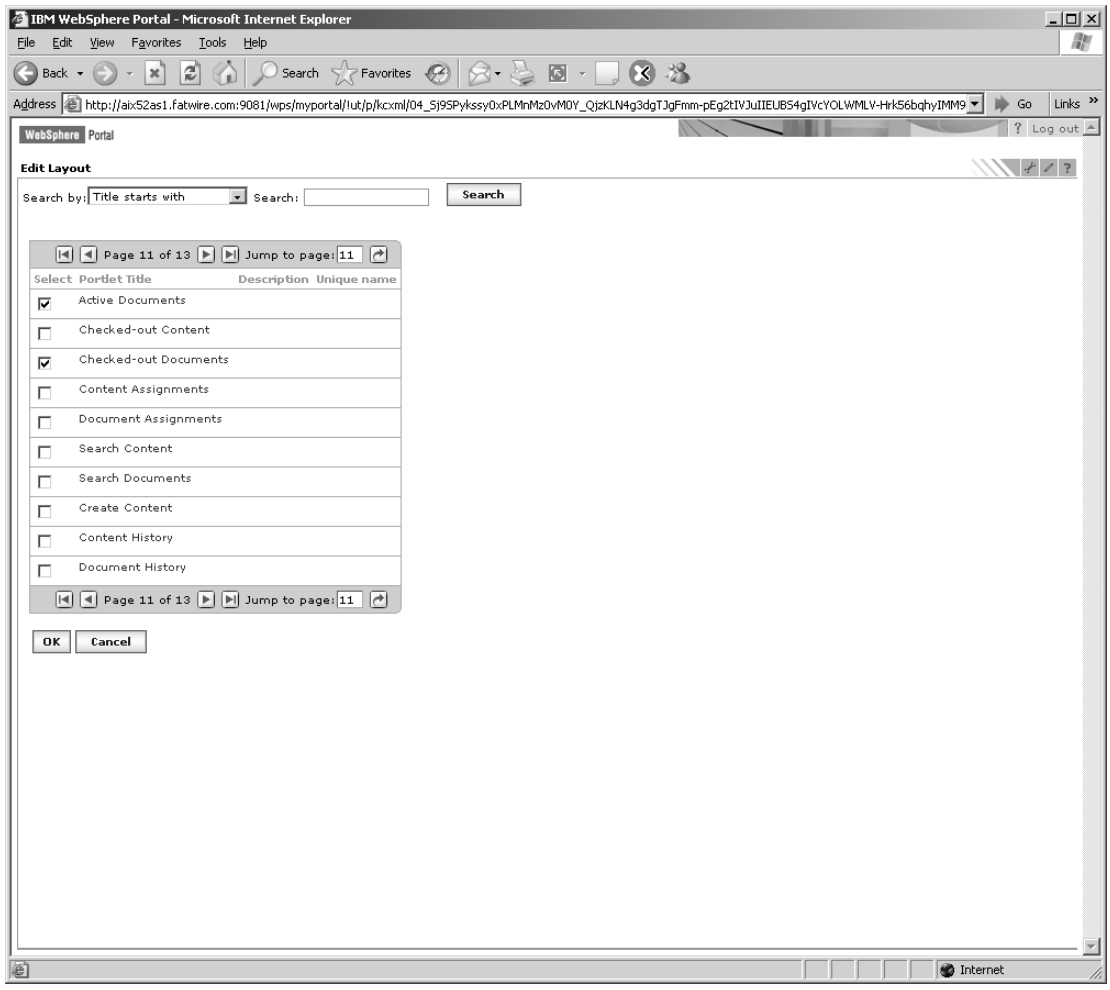
b. Click the **Add portlets** button in the left-most column.



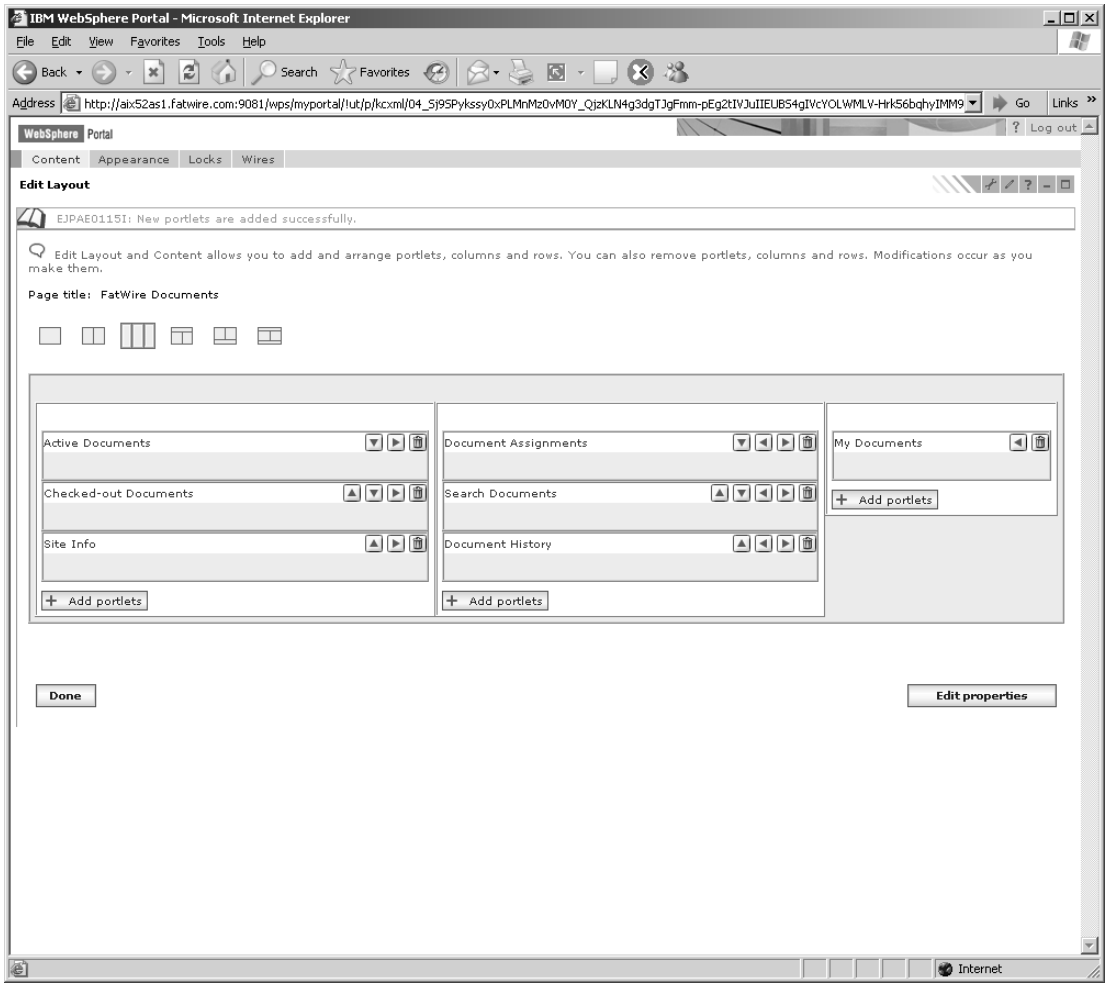
c. Select the portlets you wish to add to the left-most column (they may span multiple pages) then click **OK**.

Note

If you need guidelines for determining which portlets to place on the page, refer to the figures starting on page 38.



d. Repeat steps 9a–9c for each remaining column of the page. Once all columns are set up, click **Done**.



10. Repeat step 9 for each remaining page (added in step 6 on page 26).

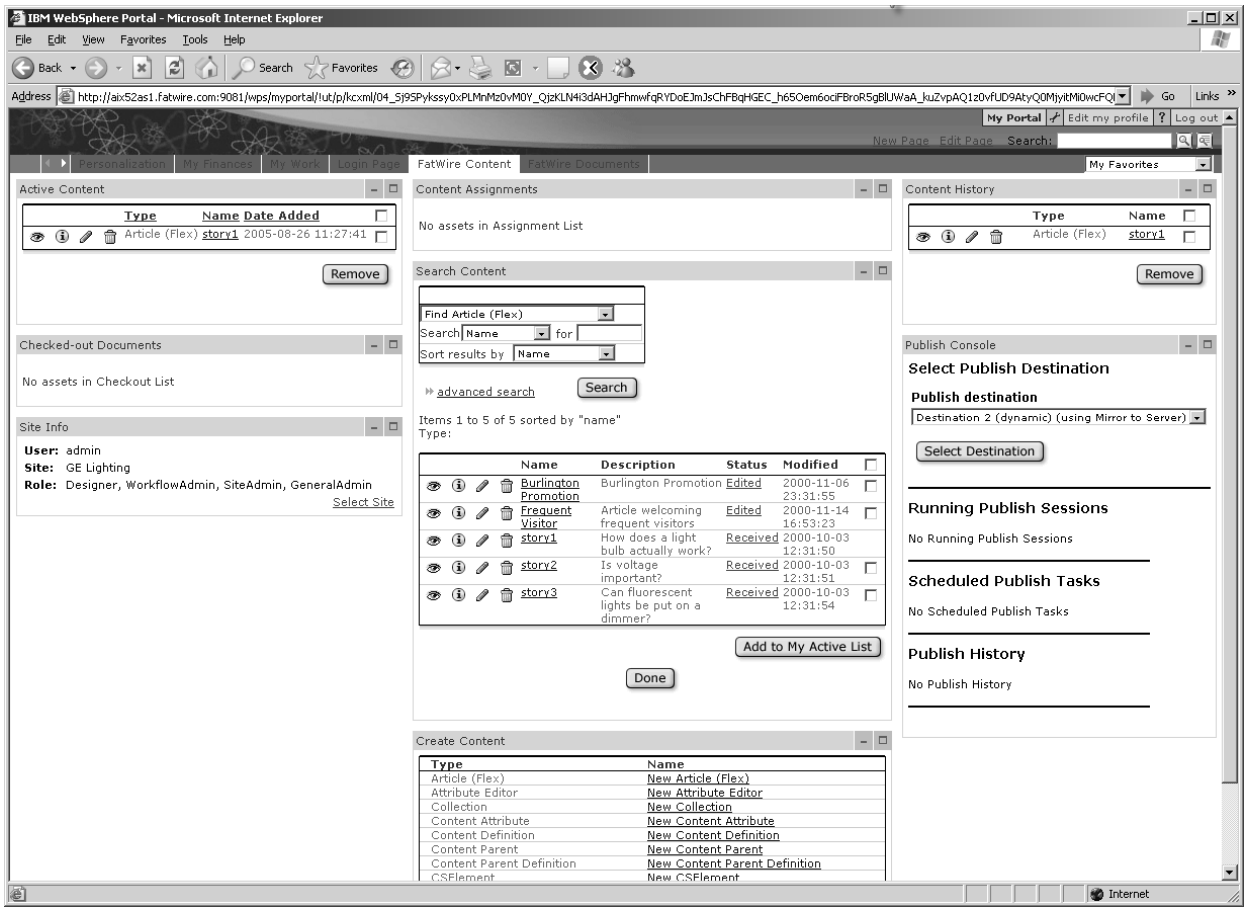
11. Verify that the pages you created display the correct portlets:

a. Log out of the portal and log back in as **admin** or another valid Content Server user.

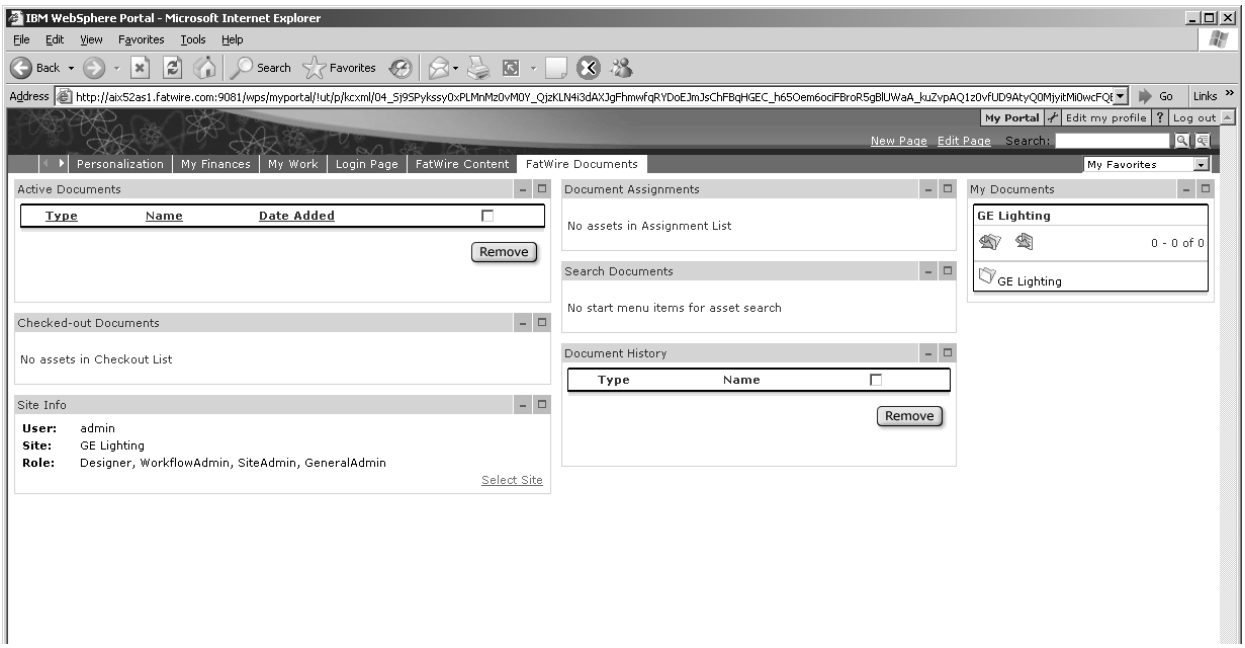
b. Click on the titles of the pages that you created in step 6.

The pages should look similar to those shown below.

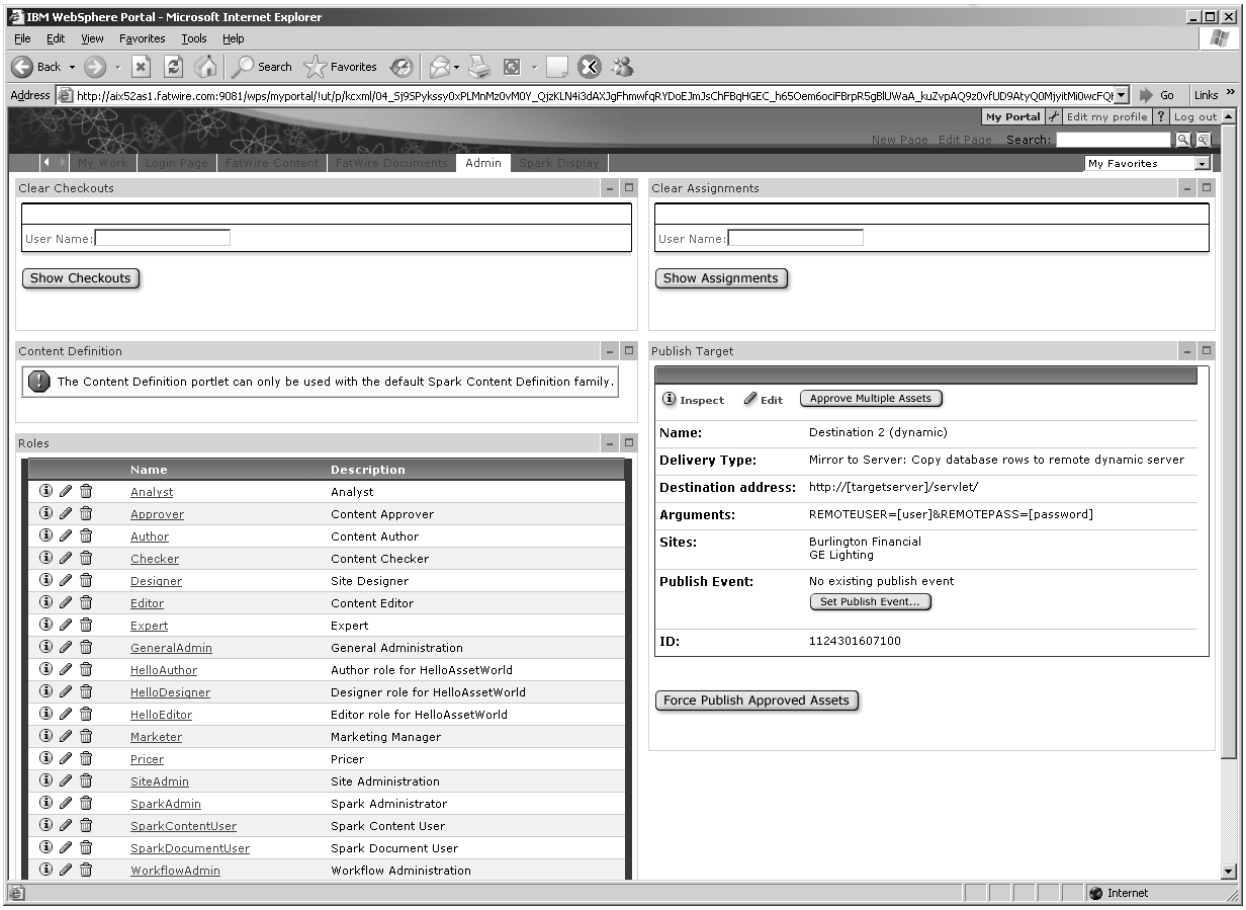
- "FatWire Content" page



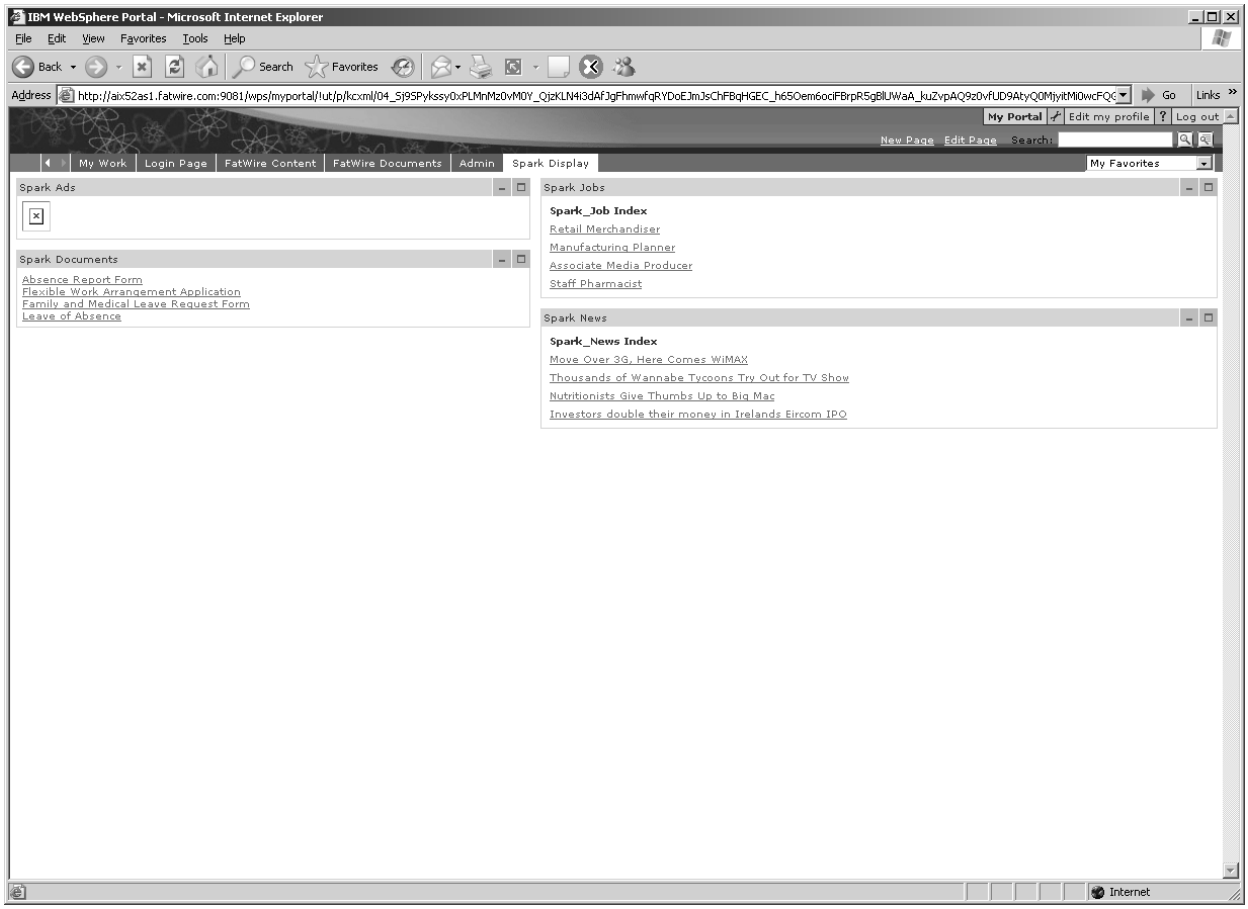
- "FatWire Documents" page



- "Admin" page



- "Spark Sample" page



C. Setting Up Content Server for Its Business Purpose (All Installations)

For instructions on configuring Content Server for business use, refer to the *Content Server Administrator's Guide* and the *Developer's Guide*. The 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.

Appendixes

The appendices provide you with information about installing and configuring Content Server's supporting software.

This part contains the following appendixes:

- Appendix A, "Installing WebSphere Portal Server and Network Deployment Server"
- Appendix B, "Configuring Web Servers and WAS JDBC Providers"
- Appendix C, "Creating and Installing Self-Signed Certificates"
- Appendix D, "Installing and Configuring the Directory Server for Content Server"
- Appendix E, "Integrating LDAP with Network Deployment and WebSphere_Portal"
- Appendix F, "Debugging Procedures"

Appendix A

Installing WebSphere Portal Server and Network Deployment Server

This appendix contains the following sections:

- Installing WebSphere Portal Server
- Installing WebSphere Network Deployment Server

Installing WebSphere Portal Server

This section provides an example of how to install the WebSphere Portal on AIX.

Install the following packages in the order shown:

> **Note**
>
> The packages will differ from the ones below according to your operating system.

1. `C82UQML.taz`: Portal Installation
   a. 1-6 and 1-5 BISF
      1) 1-6: `C814LML.taz: BISF`
      2) 1-5: `C814KML.taz: BISF`
   b. 1-17: `C814XML.taz: BISF FP1`
   c. `C8152ML.zip:` Portal CD2
   d. `C8153ML.zip:` Portal CD3
2. `was511_cf3_aix.zip`: Cumulative Patch 3 for WAS
3. `WASeFixes.zip`: Post Cumulative Patch 3 for WAS
4. `PortalUpdateInstaller.zip`, `WP_PTF_5101.zip`
   a. Unzip `PortalUpdateInstaller.zip`.
   b. Create a directory `update/fixpacks/` and unzip `WP_PTF_5101.zip` into this directory.
   c. Run the following command:

```
./updatePortal.sh  -fixpack \
   -installDir "<was PortalServer root>" \
   -fixpackDir "<install root dir>/D/update/fixpacks" \
   -install -fixpackID WP_PTF_5101
```

5. `was511_cf5_aix.zip`
6. `wbisf511_cf2_aix.zip`
7. `PK01733_5115.jar`: Post Cumulative Patch 5 for `WAS.txt`

   Run the same installer as in step 6. When prompted for the location of the patch directory, point to the directory containing the `jar` file in step 7.

Installing WebSphere Network Deployment Server

This section provides an example of how to install the WebSphere Network Deployment Server on AIX.

> **Note**
>
> Packages required for the installation depend on the operating system.

Install the following files **in the order shown**:

1. `C85GJML.taz`: Network Deployment Installer
2. BISF installers
   a. `C814KML.taz`
   b. `C814LML.taz`
3. `C811VML.taz`:
4. `C814XML.taz`:
5. `was511_nd_cf5_aix.zip` Network Deployment Cumulative Patch 5
6. `wbisf511_cf2_aix.zip`: BISF Cumulative Patch 2
7. `PK01733_5115.jar`: post Network Deployment Cumulative Patch 5.txt

Appendix B

Configuring Web Servers and WAS JDBC Providers

This appendix contains the following sections:

- Configuring Apache
- Configuring IIS
- Configuring WAS JDBC Providers

Note

Information in this appendix is meant only to supplement the information provided by the vendors and should not be used as the primary source for conducting the installation of these third-party products.

Configuring Apache

This section assumes that you have an operational installation of Apache. Complete the following steps to configure this Apache installation to forward requests to the WebSphere Application Server:

1. If the web server is not located on the same machine as WAS, copy the following files from the WAS server to the web server:
   - Windows: `Mod_was_ap20_http.dll`
     `plugin-cfg.xml`
   - UNIX: `Mod_was_ap20_http.so`
     `plugin-cfg.xml`
2. Edit the `httpd.conf` file used by your current installation of Apache by adding the following lines to the main server section:
   - UNIX

     ```
     LoadModule was_ap20_module /<path to>/mod_was_ap20_http.so
     WebSpherePluginConfig /<path to>/plugin-cfg.xml
     ```

   - Windows

     ```
     LoadModule was_ap20_module /<path to>/mod_was_ap20_http.dll
     WebSpherePluginConfig /<path to>/plugin-cfg.xml
     ```
3. Restart Apache.

Configuring IIS

This section assumes that you have an operational installation of IIS. Complete the following steps to configure this IIS installation to forward requests to the WebSphere Application Server:

1. If the web server is not located on the same machine as WAS, then copy the `iisWASPlugin.dll` and `plugin-cfg.xml` files from the WAS server to the web server.
2. Add the Internet Services Application Programming Interface (ISAPI) filter into the IIS configuration by completing the following steps:
   a. Open IIS Manager.
   b. Right-click the server instance that will redirect traffic to WAS.
   c. Select **Properties** in the pop-up menu, then complete the following steps in the "Properties" dialog:
      1) Select **ISAPI Filters** > **Add** to open the "Filter Properties" window.
      2) In the "Filter Name" field, type `iisWASPlugin`.
      3) In the "Executable" field, click **Browse** to select the location of the `iisWASPlugin_http.dll` file.
      4) Click **OK** to close each dialog box.

3. In the Registry Editor, open:

   HKEY_LOCAL_MACHINE > SOFTWARE > IBM > WebSphere Application Server > 5.1.0.0

4. Set the value of the `Plugin Config` variable to the location of the configuration file `plugin-cfg.xml`. If the `Plugin Config` variable does not exist, complete the following steps:
   a. Right-click the background.
   b. Select **New >String Value** in the pop-up menu.
   c. Enter `Plugin Config` as the value for "Name," and enter the path to the file `plugin-cfg.xml` as the value for "Data."
5. Restart the IIS installation.

Configuring WAS JDBC Providers

1. Log in to the WebSphere Administrative Console.
2. In the left-hand tree, select **Resources > JDBC Providers**.
3. In the right-hand panel, click **New**, then do the following:
   a. Select the correct driver and click **OK**.

      If you are using MS SQL Server 2000 as the database server, select **WebSphere Embedded ConnectJDBC Driver for MS SQL Server**.
   b. In the "Configuration" screen:
      1) Enter a name (such as `csJDBC`).
      2) Enter a description (optional).
      3) Select **OK**.
4. In the left-hand tree, select **Security > JAAS Configuration > J2C Authentication Data**.
5. In the right-hand panel, click **New**, then do the following:
   a. Add an alias of your choice and enter your database user name and password in the fields provided.
   b. Click **OK**.
6. Select the newly created JDBC Provider from the list on the right. Under "Additional Properties," select **DataSources**, then click **New** and do the following:
   a. Add a name (such as `csData`).
   b. Add a JNDI name (such as `csDataSource`).
   c. In the **Component-Managed Authentication Alias** drop-down list, select the alias you created in step 5 of this procedure.
   d. Select **OK.**
7. Select the data source you created in step 6 of this procedure. Under "Additional Properties," select **Custom Properties** and do the following:

   a. Fill in the following fields: “databaseName,” “ServerName,” and “PortNumber” with the values that are correct for your database.
   b. Change “PreTestSQLString” to the following value:

      `SELECT count(*) from TABLE dbproperties`.
   c. Click **OK**.
8. Go to the top of the right-hand panel and click **Save**.
9. Click **Save** again.
10. Go to the left-hand tree and select the JDBC Provider created in step 3 of this procedure.
   a. Select **Data Sources** from the bottom of the resulting page.
   b. Check the box next to the data source created in step 6 of this procedure and select **test connection**. If it passes then you have a connection to the database; if not review the above steps and the WAS product documentation.

Appendix C

Creating and Installing Self-Signed Certificates

This appendix provides instructions for creating and installing self-signed certificates for WebSphere 5.1.*x*.

This appendix contains the following sections:

- Creating a Self-Signed Certificate
- Installing a Self-Signed Certificate

Creating a Self-Signed Certificate

Complete the following steps to create a self-signed certificate. If you already have a valid self-signed certificate, proceed to "Installing a Self-Signed Certificate," on page 53.

1. Run the IBM Key Management application:
   - Windows: `ikeyman.bat`
   - UNIX: `keyman.sh`
2. In the top menu bar, select **Key Database File** > **New**.
   a. Leave **JKS** selected as the default database type.
   b. Enter a unique name for the new key database.
   c. Browse to select the location in which to store the new database.
   d. Click **OK**.
   e. When prompted, enter a password (make a note of this password).
   f. Click **OK**.
3. In the **Key Database Content** section, go to the **Signer Certificates** drop-down menu and select **Personal Certificates**.
4. In the bottom, right corner, click **New Self-Signed**.
5. In the "Create a New Self-Signed Certificate" window, do the following:
   a. Enter a name for the key in the "Key Label" field.
   b. Leave the **Version** and **Key Size** options selected.
   c. In the "Common Name" field, enter the name of the WebSphere application server.
   d. Complete the remaining options as appropriate.
   e. Click **OK**.
6. Click the name of the certificate that you created in step 5, then click the **Extract Certificate** button (located in the bottom, right corner) and do the following:
   a. Leave **Data Type** selected.
   b. Name the certificate.
   c. Browse to select the location in which to save the certificate.
   d. Click **OK**.
7. In the **Key Database Content** section, go to the **Personal Certificates** drop-down menu and select **Signer Certificates**.
8. Click the **Add** button (located on the right side of the console), then do the following:
   a. Select the file you saved in step 6 and click **OK**.
   b. Enter a unique name for this certificate.
   c. Click **OK**.
9. Select **Key Database File** > **Exit**.

Installing a Self-Signed Certificate

Complete the following steps to install a self-signed certificate. If you need instructions for creating a self-signed certificate, see "Creating a Self-Signed Certificate," on page 52.

1. Log in to the WAS Administrative Console.
2. In the left-hand tree, select **Security** > **SSL**.
3. In the **SSL Configuration Repertoires** section (located in the right-hand side of the WAS Administrative Console), complete the following steps:
   a. Select **New**.
   b. Enter an alias.
   c. In the "Key File" and "Trust File" fields, enter the location and the password for the certificate's key database file. If you are using a certificate that you created, use the location and the password for the key database file you created in step 2 of "Creating a Self-Signed Certificate."
   d. Click **OK**.
   e. Save the changes, as prompted.
4. In the left-hand tree, select **Security > Authentication Protocol > CSIv2 Outbound Transport**, then complete the following steps:
   a. In the "SSL Settings" field, select the alias that you created in step 3.
   b. Click **OK**.
   c. Save the changes, as prompted.
5. For each server that will use this certificate, complete the following steps:
   a. In the WAS Administrative Console, select **Configuration > Web Container > HTTP Transports**.
   b. For each host where "SSL Enabled" is true, select the host, and in the field next to "SSL," select the alias created in step 3 of this procedure.
   c. Save all changes.
6. Restart all affected servers.
7. Because the certificate is self-signed, you will need to import it into the browser (or Internet Explorer in the case of Windows) before SSL-enabled components will function correctly.

Appendix D

Installing and Configuring the Directory Server for Content Server

This appendix contains the following sections:

- Installing the Directory Server
- Configuring the Directory Server

Installing the Directory Server

Installation of the Directory Server is completed as part of the portal installation process. However, if you need to have the Directory Server on a separate machine, you will need to install it independently. For installation instructions, see the product documentation.

Configuring the Directory Server

Below is an example of how to configure a Directory Server. The example is for DB2 on AIX.

1. Set up the AIX environment for DB2:
   a. Ensure AIX aio extensions are installed:

      ```
      lslpp -l bos.rte.aio
      ```

   b. Set up aio to be available:

      ```
      smit chgaio
      ```

   c. Reboot the server.
2. Download and install one the following Tivoli Directory Server 5.2 onto your platform (one of the following; the installation requires about 1GB of disk space):
   - AIX: `C57KVML.tar`
   - LINUX: `C57KZML.tar`
   - Windows: `C57KTML.zip`

   To install the Tivoli Directory Server, run:

   ```
   ./setupIBM
   ```

   Note

   On UNIX, Tivoli Directory Server installs into: `/usr/ldap, /usr/opt/db2..., /usr/opt/ibm`

3. Create a new user (this guide assume the username to be `wportusr`). Create a home directory with read/write permissions. On UNIX platforms change the ownership of this user's home directory to have write permission for `other`. Run the following command:

   ```
   chmod o+x <user home directory>
   ```

4. Create a location for the DB2 portal database `/u01/software/Others/WASPortalDB`. In this case, make sure the database is owned by the user that was created in step 3.

5. Create a new DB2 instance by changing to `/usr/opt/db.../instance/` and running **`./db2icrt -u wportusr wportusr`** (where **`wportusr`** is the username created in step 3).

> **Note**
>
> If creation of a new DB2 instance fails with the message: "`Failed to add local loop back to database`", there is most likely an issue with DB2 on AIX—it is using the 64-bit version of the software and not the 32-bit version. The following commands will correct this error:
>
> ```
> cd <db2 directory> ;
> mv adm64 adm64.old ;
> mv adsm64 adsm64.old ;
> mv bin64 bin64.old ;
> mv dasfcn64 dasfcn64.old ;
> mv function64 function64.old ;
> mv include64 include64.old ;
> mv security64 security64.old
>
> ln -s adm adm64 ;
> ln -s adsm adsm64 ;
> ln -s bin bin64 ;
> ln -s dasfcn dasfcn64 ;
> ln -s function function64 ;
> ln -s include include64 ;
> ln -s security security64
> ```

6. Start the new DB2 instance by logging in as `wportusr` and running source:

   ```
   ./sqllib/db2profile ;
   ./sqllib/adm/db2start
   ```

7. After the installation is complete, it will start the "Tivoli Directory Server Configuration Tool." Exit this instance of the tool, change to the home directory of the user created in step 3 above, and restart it by executing `ldapxcfg` (on UNIX systems, this is located in `/usr/ldap/bin/`). Complete the following steps:
   a. In the "Set the Administrator DN/Password" screen, set a password and click **OK**.
   b. Click on **Configure database**, then **Create a new database**, and then **Next**.
   c. Enter the userid and password for the user created in step 3 above and click **Next**.
   d. Enter a name for the new database: `<CSPORTAL>` in this case and click **Next**.
   e. Accept the default of `UTF-8` and click **Next**.
   f. Enter the location at which to create the database (see step 4 in this procedure). Click **Next**.
   g. Click **Finished** and wait for the task to complete.
8. Add a suffix that matches your DNS name suffix. To do so, add a new entry `dc=<domain>,dc=<dns extension>`, then click **Add** followed by **OK**.

9. Import the `.ldif` data file as follows:
   a. Locate the `portalusers.ldif` file, in `contentserver\portal\ibm`.
   b. Edit the file by replacing `<dc=fatwire,dc=com>` with the values entered in step 8.
   c. Import the file using "IBM Tivoli Directory Server Configuration Tool":
      1) Select **Import LDIF file** from the left-hand tree.
      2) Click **Browser** and select the file you just modified.
      3) Click **Import**.
10. Close "IBM Tivoli Directory Server Configuration Tool."
11. Start the LDAP admin server (IBM Directory Server):

```
/usr/ldap/bin/ibmdiradm -f /usr/ldap/etc/ibmslapd.conf
```

> **Note**
>
> If you need to stop the LDAP admin server (IBM Directory Server), run the following command, making sure to include `cn=` in the username:
>
> ```
> /usr/ldap/bin/ibmdirctl \
>  -D <step_7a_username_including cn=> \
>  -w <step_7a_password> admstop
> ```

12. Start the actual LDAP server on the supplied port (include `cn=` in the username):

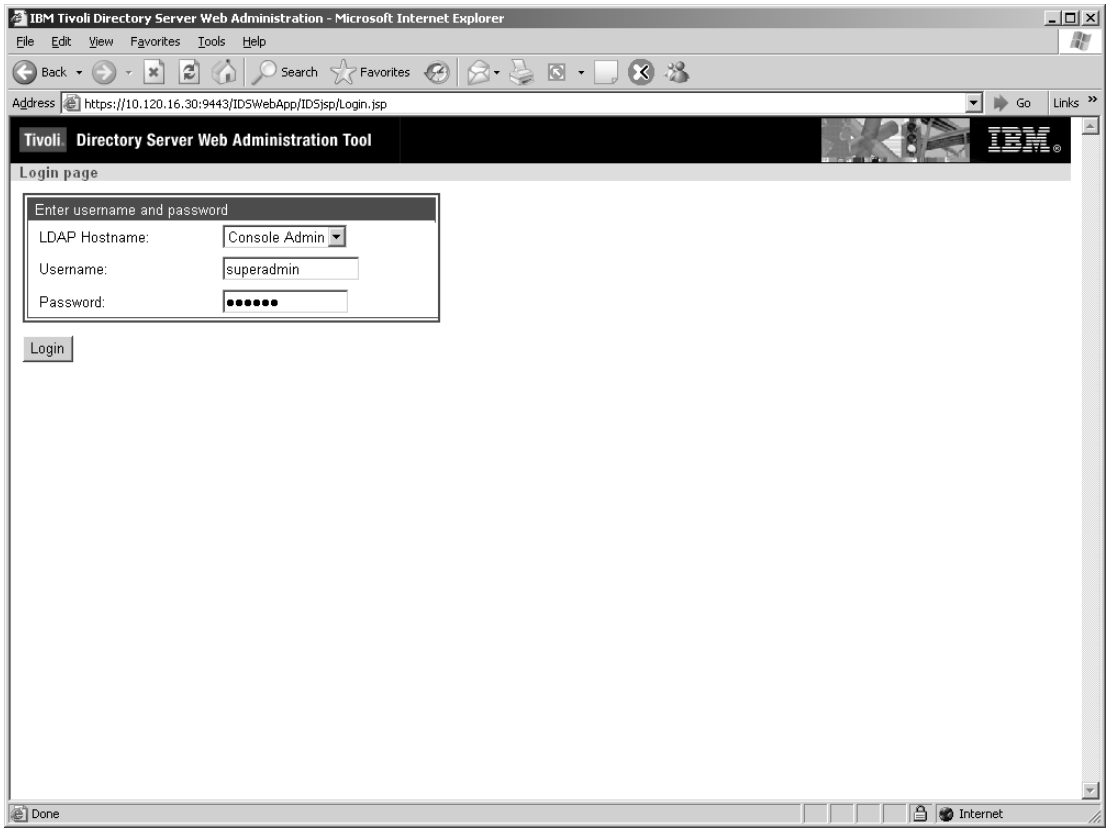
```
ibmdirctl -D <step_7a_username> -w <step_7a_password>
 start|stop|restart|status
```

13. Start the LDAP web administration tool:

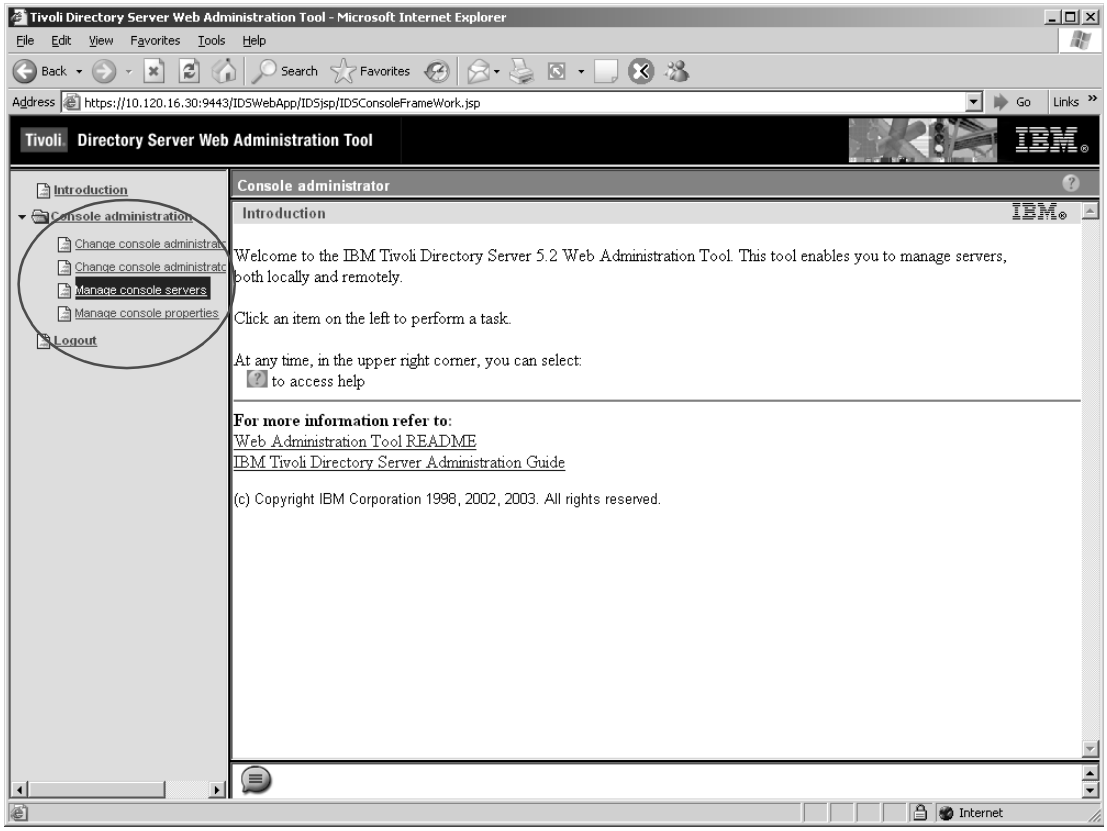
```
/usr/ldap/appsrv/bin/startServer.sh server1
```

a. Test that you can log in to the following server:
`http://<hostname>:9780/IsDSWebApp/IDSjsp/Login.jsp`

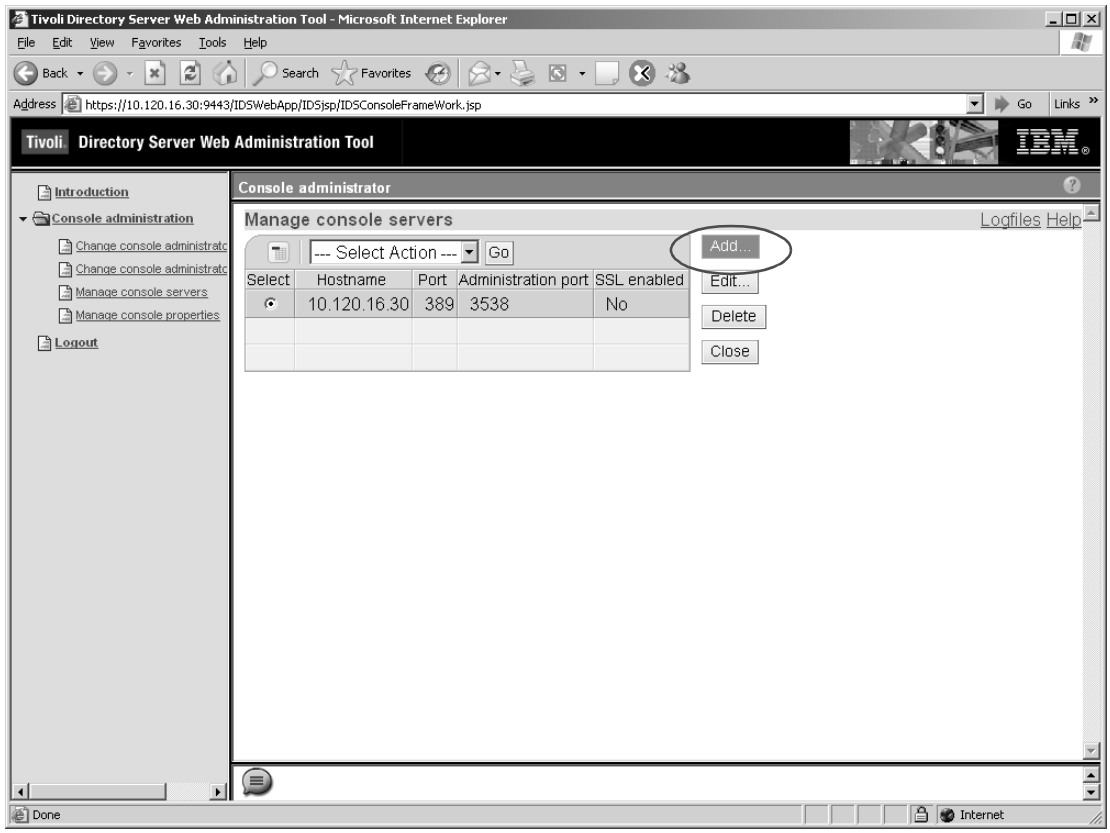
- Username: `superadmin`
- Password: `secret`



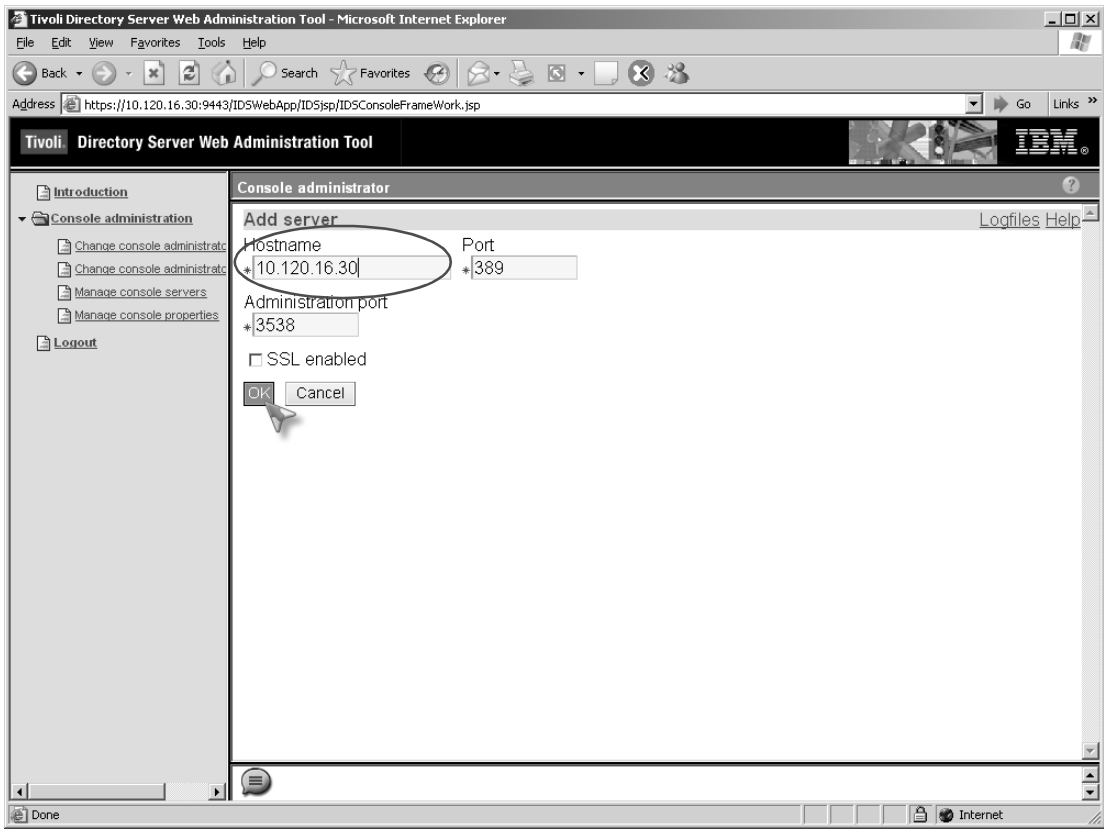
b. Expand **Console administration** on the left-hand tree and select **Manage console servers**.



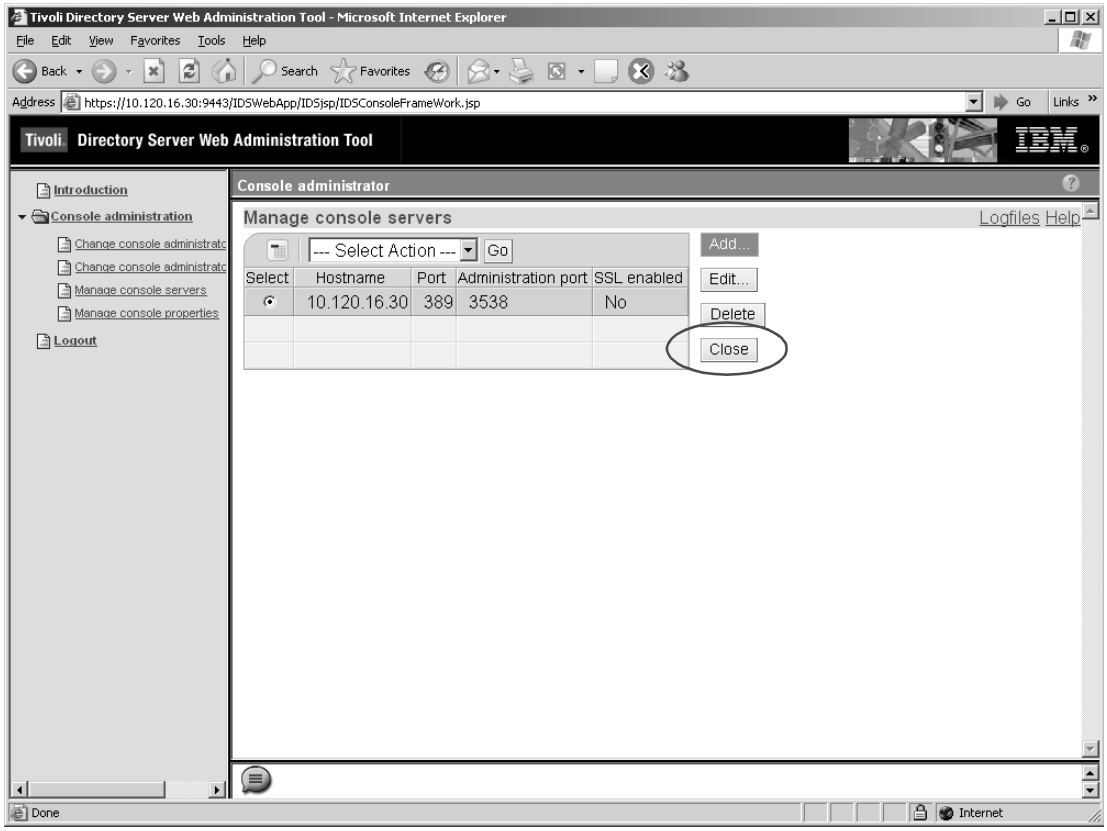
c. Click **Add**.


Tivoli Directory Server Web Administration Tool - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address https://10.120.16.30:9443/IDSWebApp/IDSjsp/IDSConsoleFrameWork.jsp
Tivoli Directory Server Web Administration Tool
IBM
Introduction
Console administration
Change console administrato
Change console administrato
Manage console servers
Manage console properties
Logout
Console administrator
Manage console servers
Logfiles Help
--- Select Action ---
Go
Add...
Edit...
Delete
Close
Select
Hostname
Port
Administration port
SSL enabled
10.120.16.30
389
3538
No
Done
Internet

d. Enter the host name for the LDAP server and click **OK**.

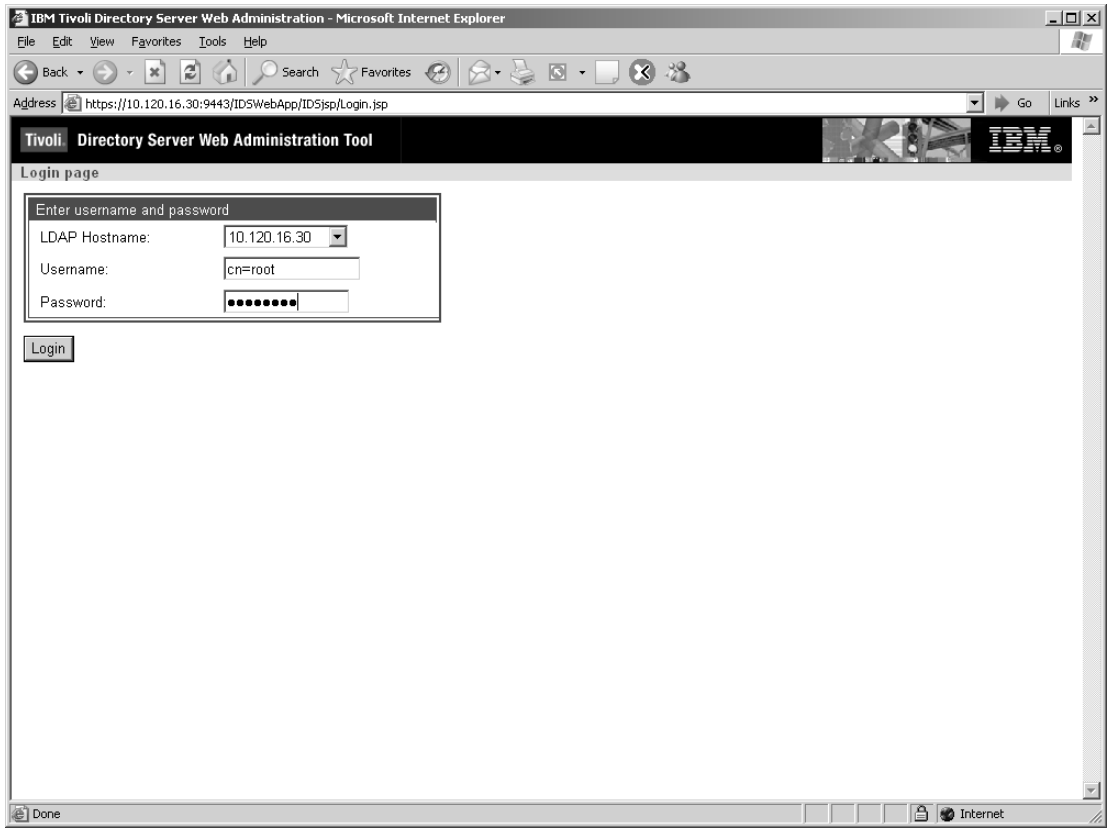


e. Click on **Close**.

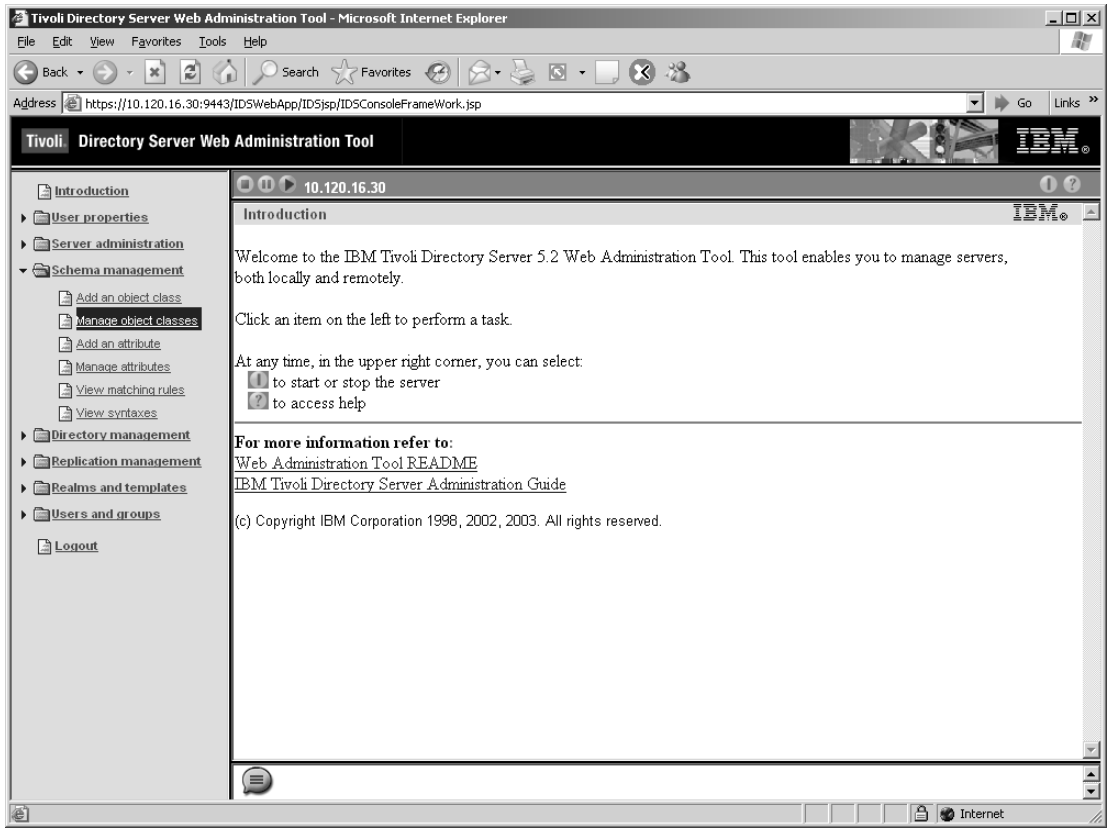


f. Log out of the site.

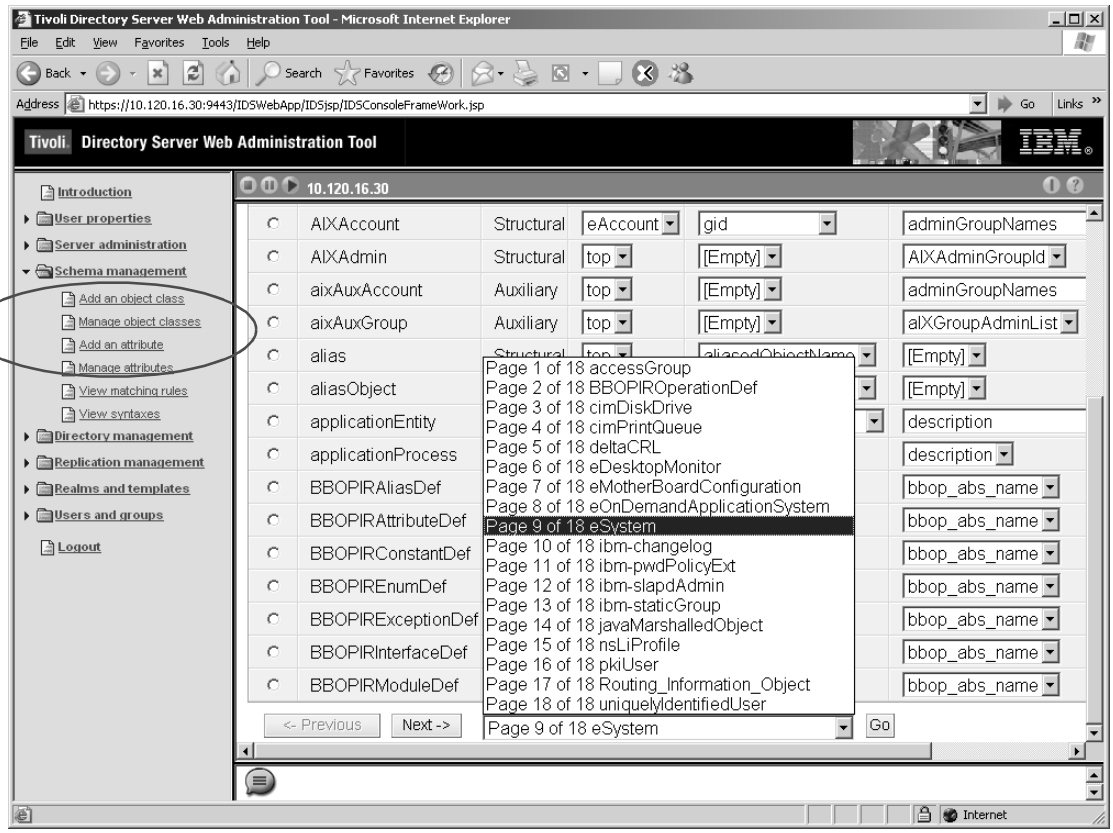
g. Log back in using the username and password from step 7 on page 57. Click in the "LDAP Hostname" field and select the server you just added above.



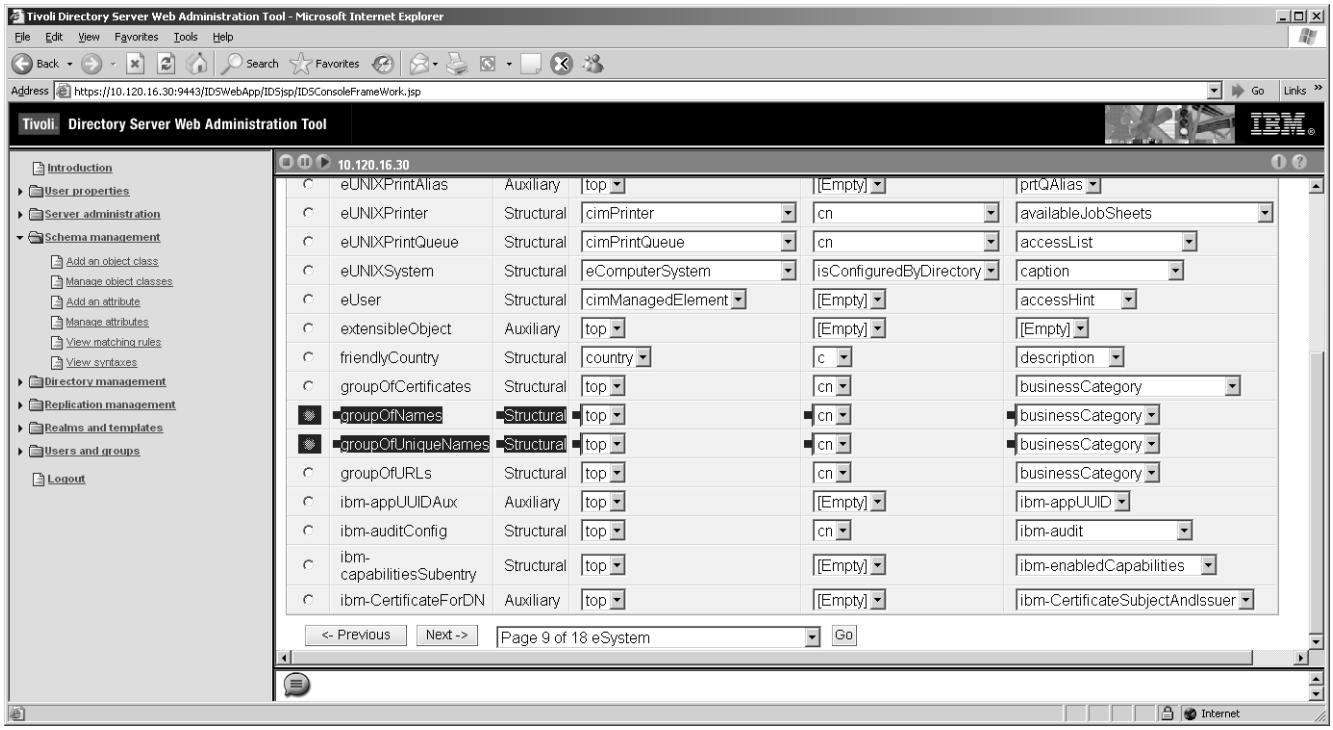
h. From the left-hand tree, expand **Schema management** and click **Manage object classes**.



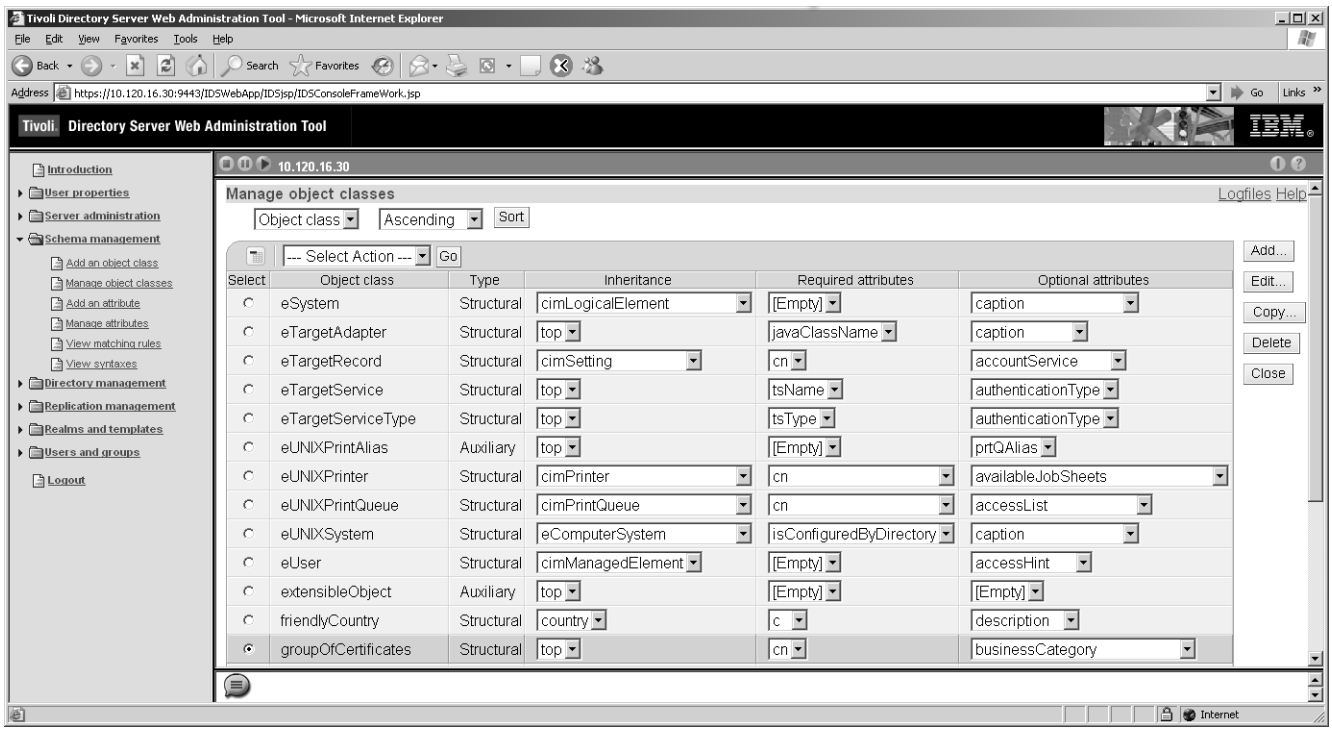
i. Select **Page 9** from the pull-down menu at the bottom of the page and click **Go**.



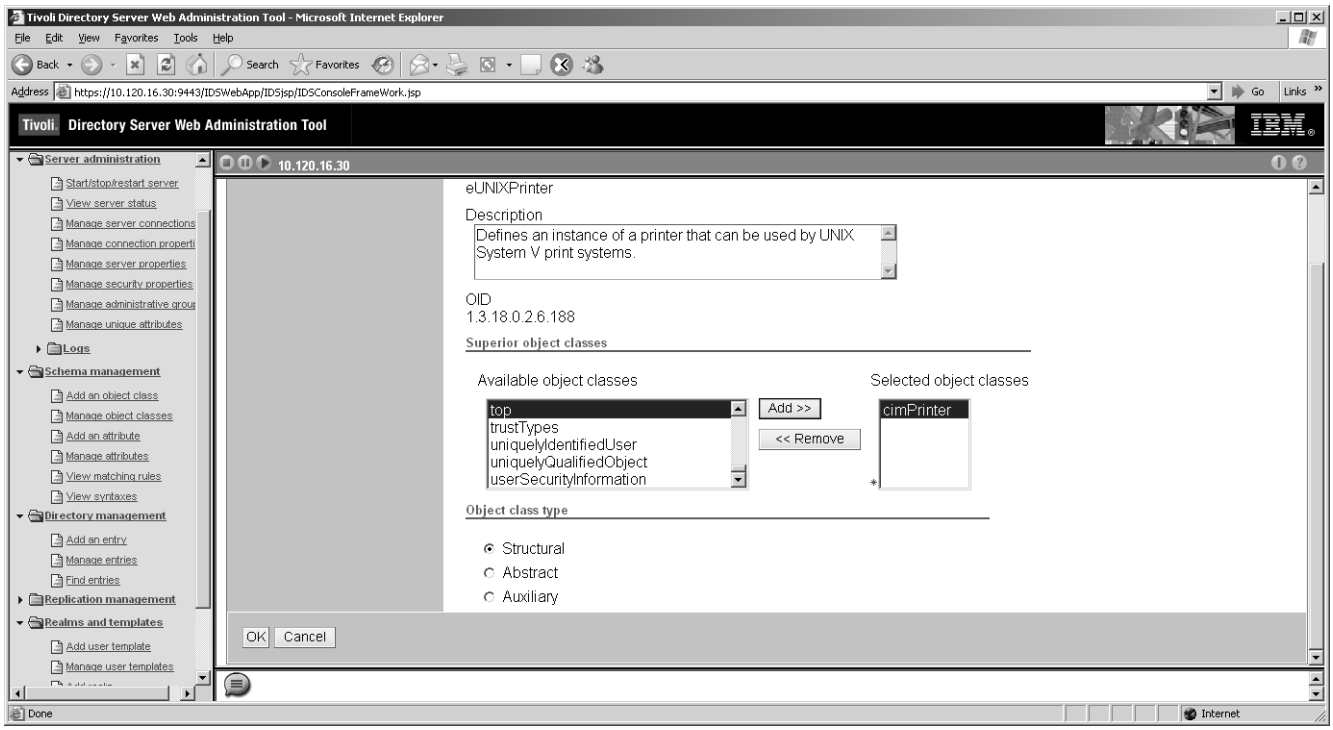
j. For `groupOfNames` and `groupOfUniqueNames` complete the steps below (ending with step j4 on page 68):



1) Select `groupOfNames` (or `groupOfUniqueNames`) and click **Edit**.



2) Remove the item `Member` (or `uniquemember`) by selecting the item from the list on the right-hand side and clicking **Remove**. Click **OK**.



3) Repeat steps j1 and j2 (starting on page page 67) for the remaining group.

4) Once the offending items have been removed for both `groupOfNames` and `groupOfUniqueNames` click on **Close**.

k. Log out of the site.

l. Stop the server:
`/usr/ldap/appsrv/bin/stopServer.sh server1`

14. Install WebSphere Portal Server.

Appendix E

Integrating LDAP with Network Deployment and WebSphere_Portal

This appendix contains the following sections:

- LDAP Integration Procedures
- wpconfig.properties

LDAP Integration Procedures

1. Stop all running servers:
   - Network Deployment server named “dmgr”
   - WAS WebSphere_Portal
   - server1
   - NodeAgent
2. Restart the Network Deployment server (dmgr) and NodeAgent.
3. Stop and restart the LDAP servers. For instructions, see steps 11 and 12 on page 58.
4. Edit `wpconfig.properties` (in `<portal install root>/config`) by entering new values for the properties, as shown in Table E-1, on page 71.
5. Validate that the LDAP server is properly configured. Change to the directory `<portal install root>/config`:

   ```
   ./WPSconfig.sh validate-ldap \
     -DWasPassword=wpsbind \
     -DPortalAdminPwd=wpsadmin \
     -DLTPAPassword=<password entered in step 3 on page 56> \
     -DLDAPAdminPwd=<password entered in step 3 on page 56> \
     -DWmmSystemIdPassword=wmmsystemid
   ```

   If this step fails, review all the changes. Otherwise, continue with the next step.
6. Enable security for the LDAP server:

   ```
   ./WPSconfig.sh enable-security-ldap \
     -DWasPassword=wpsbind \
     -DPortalAdminPwd=wpsadmin \
     -DDbPassword=<password entered in step 3 on page 56> \
     -DLTPAPassword=<password entered in step 3 on page 56> \
     -DLDAPAdminPwd=<password entered in step 3 on page 56> \
     -DWmmSystemIdPassword=wmmsystemid
   ```

   This step will not complete successfully and will need to be run a number of times. Solutions to the failures will differ form machine to machine, but some common solutions are given below:
   - The first failure is likely to be the inability to copy one of the many files (likely `wmmLDAPAttributes.xml`). This appears to be a script issue and can be resolved by manually copying the file from `<portal install root>/wmm/backup/wmmDBAttributes.xml_<date and time>` to the ND machine `<nd install root>/config/wmm`.
   - The second failure is likely to be the WebSphere_Portal server not being able to restart. This is because of changes to the security settings. Shut down ND, WebSphere_Portal, server1, and NodeAgent, and restart all of them (note that WebSphere ND will now require a login and password: `wpsbind/wpsbind`).
7. Shut down ND, WebSphere_Portal, server1 and NodeAgent and restart all of them (note that WebSphere ND will now require a login and password: `wpsbind/wpsbind`).
8. Run post 5.1.0.1 Portal upgrade script:

   ```
   ./WPSconfig.sh CONFIG-WP-PTF-5101 -DPortalAdminPwd=wpsadmin \
     -DWasPassword=wpsbind
   ```

9. Shut down ND, WebSphere_Portal, server1 and NodeAgent and restart all of them (note that WebSphere ND will now require a login and password: `wpsbind/wpsbind`).

   It is now possible to install CS on the WebSphere_Portal server.

10. Connect to the portal `http://<hostname>:<port>/wps/portal/`. Click on **login** in the upper right-hand corner and enter: `wpsadmin/wpsadmin`

wpconfig.properties

Table E-1 lists properties for which you must provide new values. The properties are located in `wpconfig.properties` file.

Table E-1: Properties in `wpconfig.properties`

Property	Original Value	New value
WasUserid	ReplaceWithYourWASUserId	uid=wpsbind, cn=users, dc=<dns step 8 on page 57>, dc=<dns extension step 8 on page 57>
WasPassword	ReplaceWithYourWASUserPwd	wpsbind
WpsHostName		<host name of Portal server>
WpsHostPort	9080	9180 (or the port on which WAS Portal is running)
WpsAdminConsolePort		9190 (or the port on which the admin server is running)
PortalAdminId	uid=portaladminid, o=default organization	uid=wpsadmin, cn=users, dc=<dns step 8 on page 57>, dc=<dns extension step 8 on page 57>
PortalAdminPwd	none	wpsadmin
PortalAdminGroupId	cn=wpsadmins, o=default organization	cn=wpsadmins,cn=groups, dc=<dns step 8 on page 57>, dc=<dns extension step 8 on page 57>
WpsContentAdministrators	cn=wpsContentAdministrators, o=default organization	cn=wpsContentAdministrators, cn=groups, dc=<dns step 8 on page 57>, dc=<dns extension step 8 on page 57>
WpsDocReviewer	cn=wpsDocReviewer, o=default organization	cn=wpsDocReviewer, cn=groups, dc=<dns step 8 on page 57>, dc=<dns extension step 8 on page 57>
WpsDbName	wpsdb	<name entered in step 7 on page 57>

Table E-1: Properties in `wpconfig.properties` *(continued)*

Property	Original Value	New value
DbUser	db2admin	wportusr
DbPassword	ReplaceWithYourDbAdminPwd	<password for user created in step 7 on page 57>
LTPAPassword	none	<password for user created in step 7 on page 57>
SSODomainName	none	<dnsame name>.<dns name extension>; <dnsame name>.<dns name extension>
LDAPHostName	yourldapserver.com	<fully qualified hostname for this server>
LDAPPort	389	389 (nonssl), 636 (SSL)
LDAPAdminPwd	none	Password for user given for LDAPAdminUId
LDAPBindID	uid=wpsbind, cn=users, dc=yourco, dc=com	uid=wpsbind, cn=users, dc=<dns step 8 on page 57>, dc=<dns extension step 8 on page 57>
LDAPBindPassword	none	wpsbind
WmmSystemId	none	uid=wmmsystemid, cn=users, dc=<dns step 8 on page 57>, dc=<dns extension step 8 on page 57>
WmmSystemIdPassword	none	wmmsystemid
LDAPSuffix	dc=yourco,dc=com	dc=<dns step 8 on page 57>, dc=<dns extension step 8 on page 57>
LDAPsslEnabled	FALSE	false (nonssl), true (SSL)
SSORequiresSSL	FALSE	false (nonssl), true (SSL)
CellName	<cell name given during installation>	This will be incorrect as integration with ND has changed it. Look up the correct name of the ND cell and enter it here.
NodeName	<node name given during installation>	This should not need to be changed after integration with ND, but should be verified.

Appendix F

Debugging Procedures

This appendix provides debugging procedures that are applicable should you encounter a problem during the Content Server installation.

This appendix contains the following sections:

- Connecting to WebSphere Application Server
- Resolving Content Server Installation Problems

Connecting to WebSphere Application Server

If you are unable to connect to WAS from a web server on another machine or you are running on a non-standard port (not `80` or `443`), complete the following steps:

1. Log in to the WAS Administrative Console.
2. In the left-hand tree, select **Environment** > **Virtual Hosts**.

   In the list there are two groups by default:

   - **admin_host** (the administrative console running on `9090`)
   - **default_host** (the default host created by the installation and running on `9080`)
3. Select **default_host** and under **Additional Properties** select **Host Aliases**.
4. By default there are three entries, one for each of the following ports: `80`, `443` and `9080`, all associated to * (all hosts).

   If you wish to change this so that your system does not accept direct connections to port `9080`, remove the entry for `9080`.

   If you are running on a port other than 80 or 443, add an entry line for the hosts (and their ports) from which you will be connecting.
5. Save the changes.

Resolving Content Server Installation Problems

If a Content Server installation does not complete successfully, procedures in this section can help you resolve the problem. The following procedures are provided:

- Removing All Files and Tables
- Resolving HelloCS and pingdb Problems
- Turning on Debugging

The first procedure provides steps that you **must** follow if a Content Server installation does not complete successfully. The second and third procedures provide optional steps that may help you identify installation problems.

Removing All Files and Tables

If a Content Server installation does not complete successfully, you **must** perform the following steps before you reinstall.

1. Remove the deployment in WAS, then confirm manually that the directories were deleted. Restart WAS.
2. Delete all the files in the following locations:

   - `<cs install directory>`
   - `<cs shared directory>`
3. Delete all the tables created by Content Server in the database, as the Content Server installer cannot update existing tables.

Resolving HelloCS and pingdb Problems

If either the HelloCS test or the pingdb test failed when you performed step 8 of "Installing Content Server," the following sections may be helpful to you. They provide suggestions on how to resolve the problem that may be causing test failure.

HelloCS Test

- If the HelloCS test fails (HelloCS page is not displayed) and you are deploying through a web server, complete the following steps:
  1. Connect directly to WAS instead of deploying through the web server.
  2. Repeat the HelloCS test by going to the following URL:

     http://<hostname>:<port>/<context root>/HelloCS
  3. If the HelloCS test is then successful with a direct connection to WAS, the web server is not configured correctly. Check the configuration of the web server; if you need help, consult the web server documentation or your web server provider.
  4. If the HelloCS test is not successful, continue reading.
- If the HelloCS test fails with a direct connection to WAS, then the Content Server application may not be deployed correctly. Complete the following steps:
  1. Redeploy the Content Server application by doing the following:
     a. Log in to the WAS Administrative Console.
     b. Uninstall the Content Server application in the console.
     c. Save the changes.
     d. Redeploy the Content Server application (step 6 in "Installing Content Server").
     e. Start the Content Server application (step 7 in "Installing Content Server").
  2. Repeat the HelloCS test.
  3. If the test fails, restart WAS.
  4. Run the "First Steps" demo provided with WAS.
  5. Do one of the following:
     - If the **Verify** option in the "First Steps" demo passes, continue to the next step.
     - If the **Verify** option fails, then WAS is not configured properly. Check the WAS configuration; if you need help, consult the WAS documentation or your WAS provider.
  6. Restart WAS, then repeat the HelloCS test. If the HelloCS test is displayed correctly, you have resolved the installation problem.

pingdb Test

The pingdb test fails under the following conditions:

- If the Content Server license file does not contain the necessary information for your configuration. When you perform the pingdb test and receive a message that the license file is invalid, contact FatWire Support for assistance in obtaining a new license.

- If the JDBC data source is not properly configured.

  Complete the following steps to investigate possible problems related to the JDBC data source:

  1. In the WAS Administrative Console, browse to the correct JDBC data source and use the **Test** option to verify that the data source works.
  2. If the data source is not working, check the configuration of the data source (if you need instructions, see "Configuring WAS JDBC Providers," on page 49).

     If the data source is working, repeat the pingdb test by going to the following URL:

     ```
     http://<hostname>:<port>/<context root>/
       CatalogManager?ftcmd=pingdb
     ```
  3. If the pingdb test still fails, confirm that the data source that you configured in Content Server matches the data source configured in WAS.
  4. If the data sources do not match, complete the following steps:
     a. Close the installer.
     b. Restart the installer (step 4 in "Installing Content Server").
     c. Complete the remaining steps in "Installing Content Server."

Turning on Debugging

If a Content Server installation does not complete successfully, you may want to turn on debugging when you reinstall Content Server. Doing so might help identify problems during the installation. Note, however, that turning on debugging might significantly increase the time it takes to install Content Server.; so, turn on debugging only if you need to identify an installation problem.

Note

Turning on debugging is helpful only after the Content Server application is deployed.

To turn on debugging

1. Deploy, but do not start, the Content Server application in the WAS Administrative Console (step 6 in "Installing Content Server").
2. Browse to the installation location:

   ```
   <WAS Install directory>\InstalledApps\<Node name>\
     ContentServer.ear\cs.war\WEB-INF\classes\
   ```
3. Edit the file named `commons-logging.properties` by replacing every occurrence of `INFO` with `DEBUG` (using capital letters).

   See the *Content Server Property Files Reference* if you need more information about editing property files.
4. In the WAS Administrative Console, do the following:
   a. Navigate to the Enterprise Applications selection (just as you would to start the application).

b. Select the Content Server application and change the values of the following properties as shown below.

- **Classloader Mode:** Parent Last
- **WAR Classloader Policy:** Application

c. Save the changes and continue the installation.

5. Navigate to the `<cs install directory>`. You will see a large file named `futuretense.txt`, which contains detailed debugging information.

If you need more information about `futuretense.txt`, see the *Content Server Property Files Reference*

Note

After the installation is complete, turn off debugging (by reversing the changes made in step 3) to avoid potential adverse effects on performance.