Content Server

Version: 7.0

Installing Content Server with Resin Application Server

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FatWire SOFTWARE

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Part 4. Content Server

Chapter 1

Introduction

This document provides guidelines for installing Content Server on the Resin 3.0.x application server, 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:

About This Guide

This guide covers the installation, configuration, and maintenance of the Resin 3.0.x application server, as required to support Content Server. This includes configuration of one or more Resin instances, backend databases, and integrating Resin with the Apache Web Server.

This guide also provides instructions for installing Content Server in both vertically clustered and non-clustered environments.

This guide does not cover the following topics, as they fall outside the scope of this guide:

- SSL configuration for simultaneously run instances of Resin
- Sun Web Server installation, as no plugins exist that support this web server
- LDAP integration

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 application deployment is associated with the application server. It is presented in Part II (which covers the application server), even though it is performed, later, when Content Server is installed (Part IV). 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 7).

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.

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 our guide *Configuring Third-Party Software.*

II. Set Up the Application Server

Install and configure Resin application server. For instructions, see Chapter 3, "Installing and Configuring Resin."

Note

In addition to basic installation and configuration steps, Chapter 3 provides instructions for running multiple instances of Resin simultaneously and using the Secure Socket Layer (SSL).

III. (Optional) Set Up the Web Server

If you plan to integrate Resin with the Apache web server, follow instructions in Chapter 4, "Integrating Resin with Apache Web Server."

IV. Install and Configure Content Server

1. Before you run the installer, make sure that:
   - You have created the directory into which you are installing Content Server. The directory name and path cannot contain spaces and the application server must be able to read from and write to that directory.

- For clustered installations, you have created a shared file system directory that all cluster members can read from and write to; the directory name and path cannot contain spaces. Note the following:
  - For delivery systems, the default location of the shared file system directory is the directory containing the directory in which Content Server is installed.
  - For content management and development systems, the default location of the shared file system directory is inside the directory in which Content Server is installed.
- Your system is capable of displaying the CS installer GUI. The installer will not work in text mode.

2. Install and deploy Content Server by running the supplied installer. The installer provides online help at each screen, should you need guidance. For more information, see Chapter 5, "Installing and Configuring Content Server."

   If you are using an Oracle database and will require text attributes greater than 2000 characters, you will have to set the `cc.bigtext` property to `CLOB` after the CS application is deployed half-way through the installation. For instructions, see step 5 in "Running the Installer," on page 30.

3. Complete the Content Server installation by performing the following steps:

   a. If you installed Content Server on Unix, set the permissions for Content Server binaries by following the steps in "Setting File Permissions (Unix Only)," on page 31.

   b. Verify the Content Server installation by logging in as the administrator. For instructions, see "Verifying the Installation," on page 31.

   c. If you want to perform LDAP integration, follow the steps in "Integrating with LDAP (Optional)," on page 36.

   d. If you are creating a vertically clustered system, follow instructions in "Setting Up a Content Server Cluster (Optional)," on page 36.

   e. 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 the databases are given in our guide *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 specifically configured for Content Server. The list of supported databases (as well as other third-party components) is given in the *Supported Platform Document*, accessible from:

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

(Click the Content Server version number, and on the Content Server page, click the **Supported Platform Document** link.)

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. Refer to the correct chapter to create and configure the database of your choice.

Part 2

Application Server

This part contains information about installing and configuring the Resin application server as well as integrating Resin with Apache web server.

This part contains the following chapter:

- Chapter 3, “Installing and Configuring Resin”

Chapter 3

Installing and Configuring Resin

The chapter shows you how to install and configure Resin application server for Content Server, for SSL, and for simultaneously running multiple instances of Resin.

This is not an exhaustive chapter, as its covers the installation of Resin application server only so far as needed to install and run Content Server. For more in-depth information on the installation process, see the documentation on the Caucho website (`http://www.caucho.com`).

This chapter contains the following sections:

Start/Stop Commands

This section lists commands for starting and stopping Resin instances.

- Start Resin:

  $RESIN_HOME/bin/httpd.sh start

- Stop Resin:

  $RESIN_HOME/bin/httpd.sh stop

For Resin 3.0.x only:

JVM options can be passed to Resin on startup using the `-J` switch. For example, to pass the `-Xmx512m` option, you would use the following command:

$RESIN_HOME/bin/httpd.sh -J-Xmx512m start

Installing Resin

Note

- We assume that you are using a UNIX system.
- For this release of Content Server, use version 1.5.*x* of the JDK.

To install the Resin application server

1. Create an installation directory for Resin.
2. Download and install the Java Development Kit from the Sun Microsystems website.
3. Export the Resin home directory path:

   export RESIN_HOME=<path_to_resin_home>

4. Decompress the Resin archive file into the Resin installation directory:

   Example for Resin 3.0.20:

   ```
   gzip -d resin-pro-3.0.20.tar.gz
   tar -xvf resin-pro-3.0.20.tar
   ```

5. Export the Java home directory path. If you're using the Sun JDK, the default location is normally `/opt`. (It can also be the location that you chose in step 2.) You can also use the IBM JDK if you wish; in either case, the JDK version must be 1.5 or greater.

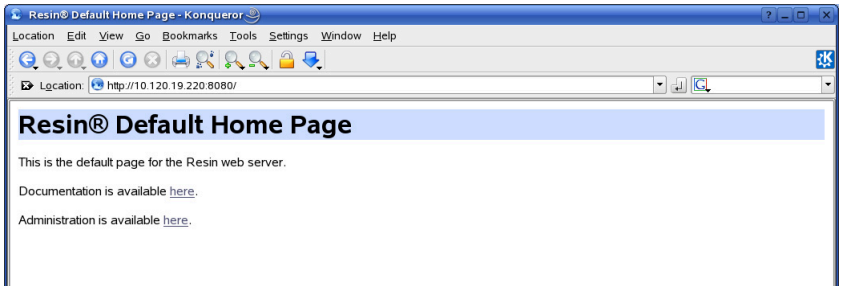
   export JAVA_HOME=/opt/jdk1.5.0_06

6. Start the application server by running the startup command.

   $RESIN_HOME/bin/httpd.sh start

7. Access the following URL in a web browser: **http://<hostname>:8080/**

This brings you to Resin's default homepage.



8. Shut down the application server by running the shutdown command:

   ```
   $RESIN_HOME/bin/httpd.sh stop
   ```

You have successfully installed Resin. Proceed to the next section, "Configuring Resin," on page 18.

Configuring Resin

Configuring Resin requires you to enter operating parameters for your database into `resin.conf` and copying `jar` files for your database type into `$RESIN_HOME/lib`. Optionally, you can also integrate Resin with Apache web server before going on to install Content Server.

To configure Resin

1. In the table below, find the datasource information for the database Content Server will be using. You will insert this information into the `resin.conf` file in the next step.

Database Driver	Parameters	Values
JTDS (third-party driver)	DriverClass	`net.sourceforge.jtds.jdbc.JtdsDataSource`
	Required `.jar` files	`jtds-1.2.jar`

	URL	`jdbc:jtds:sqlserver://<server>:<dbport>/ <dbname>`
		
		Ex.
		`jdbc:jtds:sqlserver://10.120.14.22:1433/ CS70`

DB2	DriverClass	`com.ibm.db2.jcc.DB2Driver`
	Required `.jar` files	`db2jcc.jar, db2cc_license_cu.jar`

	URL	`jdbc:db2://<hostname>:<dbport>/<dbname>`
		
		Ex.
		`jdbc:db2://10.120.16.30:50001/WL814CS`

Oracle Thin Driver	DriverClass	`oracle.jdbc.driver.OracleDriver`
	Required `.jar` files	`ojdbc14.jar`

	URL	`jdbc:oracle:thin:@//<hostname>:1521/ <dbname>`
		
		Ex.
		`jdbc:oracle:thin:@// godzilla.fatwire.com:1521/ LINKSYS`

Note

If you are using an Oracle database and require text attributes greater than 2000 characters, you will have to set `cc.bigtext` to `CLOB`. To support `CLOB`, use Oracle database 9.2.0.6 (or a higher supported version). Also use Oracle 10g drivers. (`CLOB` is not supported for lower database versions and for Oracle drivers 9x [thin, type 4].)

You will set `cc.bigtext` to `CLOB` when you run the Content Server installer (as explained in "Running the Installer," on page 30.)

2. Open `resin.conf` (in `$RESIN_HOME/conf`) and paste in the `XML` code below to a location just below the example given in `resin.conf` (around line 165). Replace the `<url>` and `<driver class>` text fragments with the URL and driver class from step 1 of this procedure (page 18).

```
<database>
   <jndi-name>jdbc/mysql</jndi-name>
   <driver type="org.gjt.mm.mysql.Driver">
      <url>jdbc:oracle:thin:@//<hostname>:1521/<dbname>
        </url>
      <user></user>
      <password></password>
   </driver>
   <prepared-statement-cache-size>8</prepared-statement-
     cache-size>
   <max-connections>20</max-connections>
   <max-idle-time>30s</max-idle-time>
</database>
```

Example of a completed sample for Oracle 10 using the following values:

- Username: `csuser`
- Password: `password`
- Database: `csdb`
- Port: `1521`
- Server: `localhost`
- DataSource name: `sDataSource`

```
<database>
   <jndi-name>jdbc/csDataSource</jndi-name>
   <driver type="oracle.jdbc.driver.OracleDriver">
      <url>jdbc:oracle:thin:@//localhost:1521/csdb</url>
      <user>csuser</user>
      <password>password</password>
   </driver>
   <prepared-statement-cache-size>8</prepared-statement-
     cache-size>
   <max-connections>20</max-connections>
   <max-idle-time>30s</max-idle-time>
</database>
```

3. (Optional) Change the number of database connections from the default of `20` to a value appropriate for your configuration. A good starting point for CS is `75`.
4. If you are using Resin 3.1, do the following (otherwise, skip this step):
   a. Locate the following section:

      ```
      <!--- The JVM arguments -->
      ```

   b. Modify the value of the `Xmx` parameter to meet your system requirements. This parameter sets the maximum amount of memory that the JVM running this instance of Resin can utilize. The minimum recommended value for Content Server is `512m`. For example:

      ```
      <jvm-arg>-Xmx512m</jvm-arg>
      ```

   c. Add the following line to enable international character support in Content Server:

      ```
      <jvm-arg>-Dfile.encoding=UTF-8</jvm-arg>
      ```

5. (Resin 3.0.x only) When starting Resin, make sure you add the following parameters to the startup command using the `-J` switch:
   a. `-Xmx512` – determines the maximum amount of memory the JVM running this instance of Resin can use. The minimum recommended value for Content Server is `512m`.
   b. `-Dfile.encoding=UTF-8` – enables international character support in CS.

   The complete command would look like this:

   ```
   $RESIN_HOME/bin/httpd.sh -J-Dfile.encoding=UTF-8 -J-Xmx512m
      start
   ```

6. Copy the required `jar` files for your chosen database type to the `$RESIN_HOME/lib` directory.
7. If you wish to integrate Resin with Apache web server, go to Chapter 4, "Integrating Resin with Apache Web Server" for instructions. Otherwise, configuration of the Resin application server is complete and you are ready to install Content Server. Go to Chapter 5, "Installing and Configuring Content Server."

Part 3

Web Server

This part shows you how to install and configure the Apache Web Server.

This part contains the following chapter:

- Chapter 4, “Integrating Resin with Apache Web Server”

Chapter 4

Integrating Resin with Apache Web Server

The chapter shows you how to install and configure the Apache web server for integration with Resin application server.

This chapter contains the following sections:

Step I. Install the Apache Web Server 2.0.*x*

1. Make sure the Resin instance that you will be using with Apache runs on the default ports, as only these ports are recognized.
2. Install Apache 2.0.*x*.
3. Set the variable `$APACHE2_HOME` to the directory in which Apache was installed.
4. Go to the `$RESIN_HOME` directory and configure and compile the `mod_caucho.so` file:

   ```
   ./configure --with-apxs=$APACHE2_HOME/bin/apxs
   make
   make install
   ```

   The last command automatically places the `mod_caucho.so` file into your `$APACHE2_HOME/modules` directory.

Step II. Configure mod_caucho for Apache

1. Edit the `resin.conf` located in `$RESIN_HOME/conf/` by making the following changes in the `<cluster>` section:
   - Change the host address to the IP address on which the `srun` service will listen.
   - Change the port to a unique number if you plan on vertical clustering.

   The default `<cluster>` section is shown below for reference:

   ```
   <cluster>
   <srun server-id="" host="127.0.0.1" port="6802"/>
   </cluster>
   ```

2. Edit `$APACHE2_HOME/conf/httpd.conf` by modifying the information for mod_caucho (which was added to Apache automatically by the **`make install`** command in step 4 under "Step I. Install the Apache Web Server 2.0.x"):
   a. At the end of the `httpd.conf` file, locate the following lines and change the port and host in the `ResinConfigServer` line (shown in bold type) to match the values you entered in step 1.

   ```
   #
   # mod_caucho Resin Configuration
   #
   LoadModule caucho_module /opt/httpd2/modules/mod_caucho.so

   ResinConfigServer localhost 6802
   CauchoConfigCacheDirectory /tmp
   CauchoStatus yes
   ```

   b. Add the following new group of lines to the end of the file:

   ```
   <Location /caucho-status>
     SetHandler caucho-status
   </Location>
   ```

   These lines are for testing the plugin and can be removed after you have confirmed that the plugin is working.

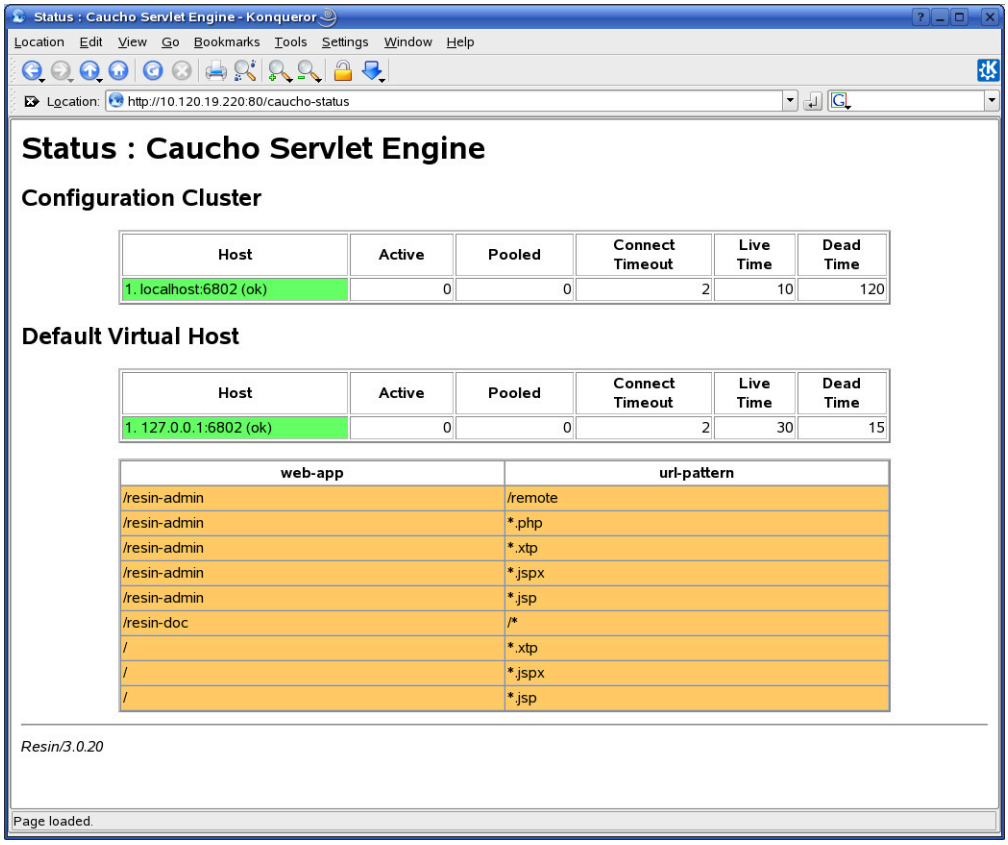
3. Start Resin:

   ```
   $RESIN_HOME/bin/httpd.sh start
   ```

4. Start Apache:

   ```
   $APACHE2_HOME/bin/apachectl start
   ```

5. Point your browser to `http://<hostname>/caucho-status` and verify that the Resin information is displayed in the "Status" screen.



6. If this is a production environment, comment out the three lines that you added in step 2b and restart Apache.

7. You are now ready to install Content Server. Go to Chapter 5, "Installing and Configuring Content Server" for instructions.

Part 4

Content Server

This part shows you how to install Content Server. It contains the following chapter:

- Chapter 5, “Installing and Configuring Content Server”

Chapter 5

Installing and Configuring Content Server

This chapter guides you through the installation of Content Server on the Resin application server.

This chapter contains the following sections:

Installing Content Server

After completing Steps I – IV.1 in the "Installation Quick Reference," on page 7, you install Content Server using the provided installer. The installation process consists of two stages.

In the first stage, the installer gathers necessary configuration information, installs the file structure, and deploys the CS application. At the end of the first stage, the installer displays an "Installation Actions" window describing the steps you must perform before proceeding to the second stage of the installation.

If you are using an Oracle database and require text attributes greater than 2000 characters, you must set the `cc.bigtext` property to `CLOB` after the CS application is deployed. (For instructions, see step 5 in the next section.)

If the first stage fails, the installer allows you to go back and modify your configuration options (except the database type), and retry the installation.

Note

If you need to change the type of database you have specified during the installation, you must delete the installed CS file structure and restart the installation.

In the second stage, the installer populates the database with the tables and data required for Content Server to function. If the second stage fails, the file structure and database tables must be deleted and the installation restarted from the beginning.

Running the Installer

To install Content Server

1. Make sure you have completed Steps I – IV.1 in the "Installation Quick Reference," on page 7.
2. Extract the Content Server installer archive into a temporary directory.
3. Change to the temporary directory containing the installer files.
4. Execute the installer script:
   - On Windows: **`csInstall.bat`**
   - On Unix: **`csInstall.sh`**

   The installer provides online help at each screen. Read the online help for detailed explanations of the options that are presented in each screen. If you encounter problems during the installation process, consult the online help for possible causes and solutions.
5. If you are using an Oracle database and require text attributes greater than 2000 characters, you must set the `cc.bigtext` property to `CLOB`. When the installer displays the "Installation Actions" pop-up window, complete step 1 displayed in the window, then do the following:
   a. Open the Property Editor by clicking the **Property Editor** button.
   b. In the Property Editor, open the `futuretense.ini` file.
   c. Click the **Database** tab.

d. Locate the `cc.bigtext` property and set its value to `CLOB`.

e. Save your changes and close the Property Editor.

f. Continue on to step 3 displayed in the "Installation Actions" window.

6. When the installation completes successfully, 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. Setting File Permissions (Unix Only)

If you installed Content Server on Unix, you must grant the "executable" permission to all files in the `<cs_install_dir>/bin` directory. To do so, perform the following steps:

1. Change to the `<cs_install_dir>/bin` directory.

2. Run the following command: **`chmod +x *`**

3. Restart Resin.

B. Verifying the Installation

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

Logging in to the Advanced Interface

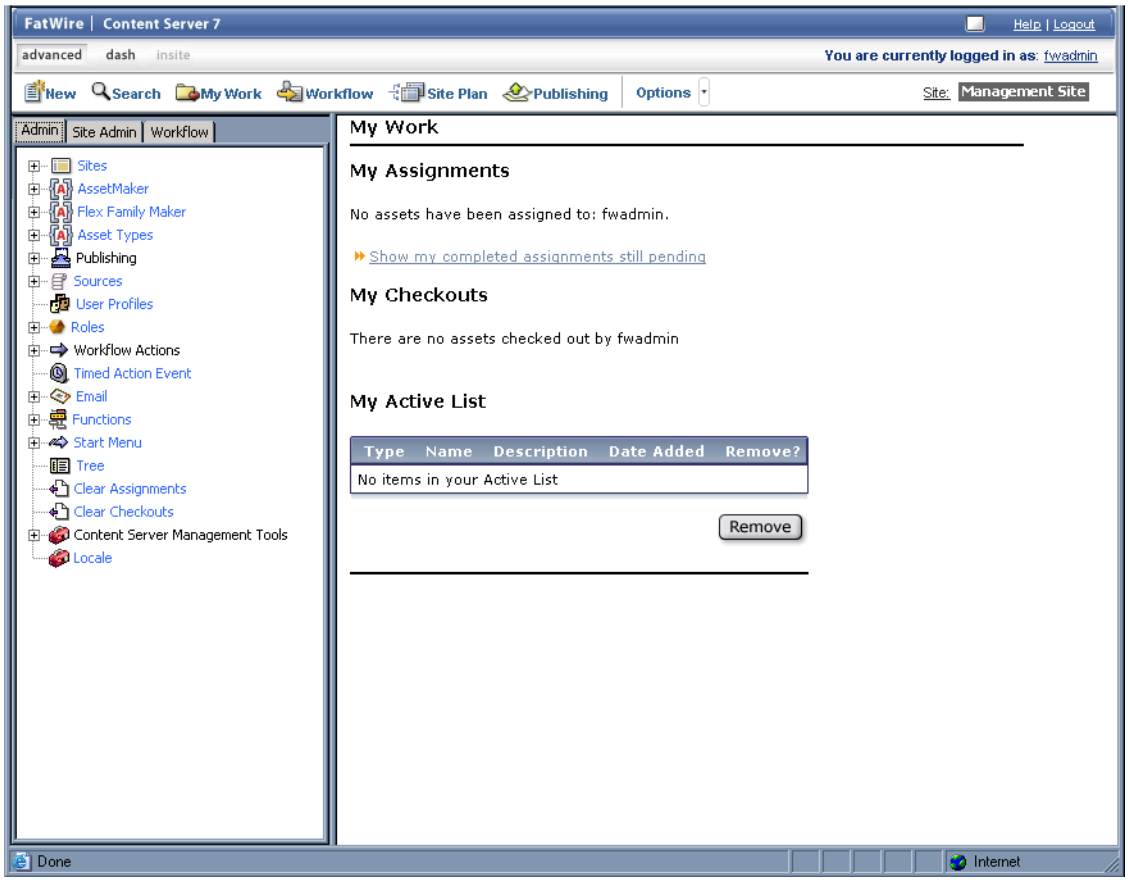
1. Point your browser to the following URL:

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

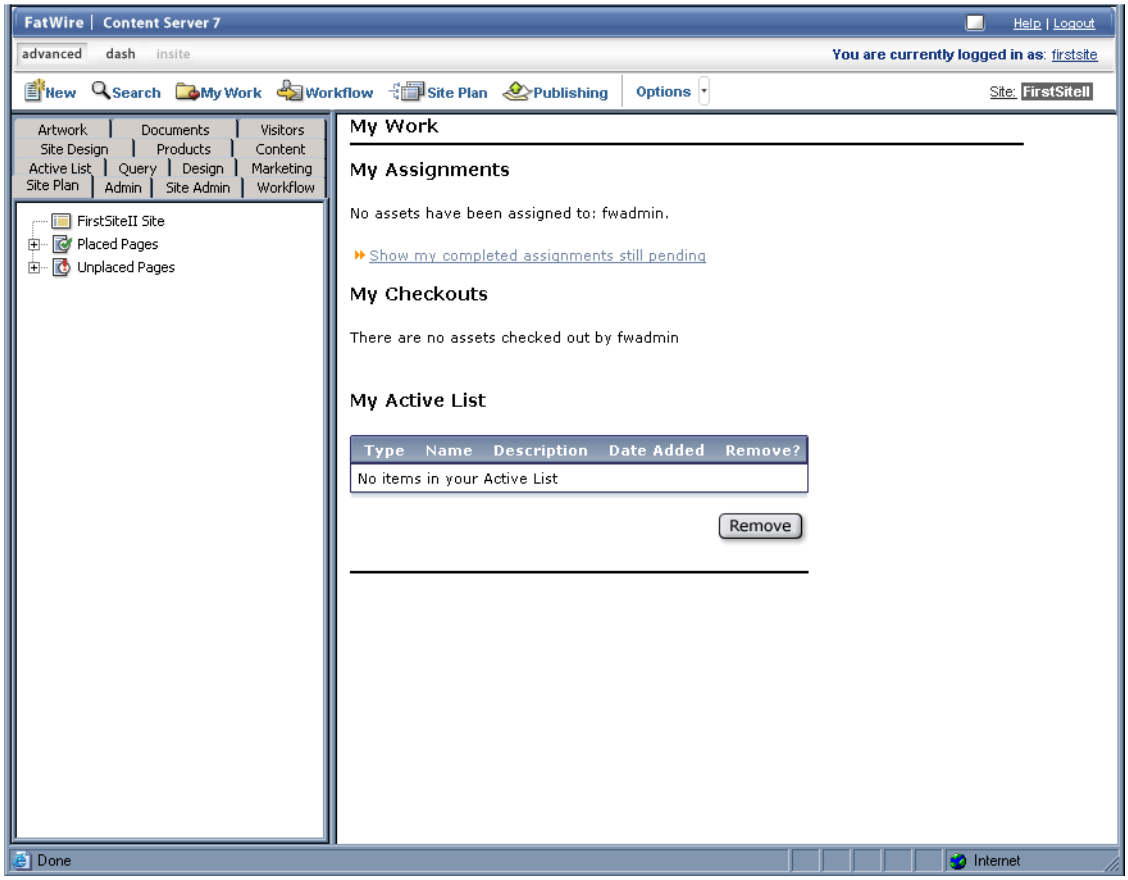
Content Server displays the Advanced interface login form.

2. Enter the following credentials:
   - User name: **fwadmin**
   - Password: **xceladmin**
3. Click **Login**.

   Depending on whether you installed sample sites, 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.



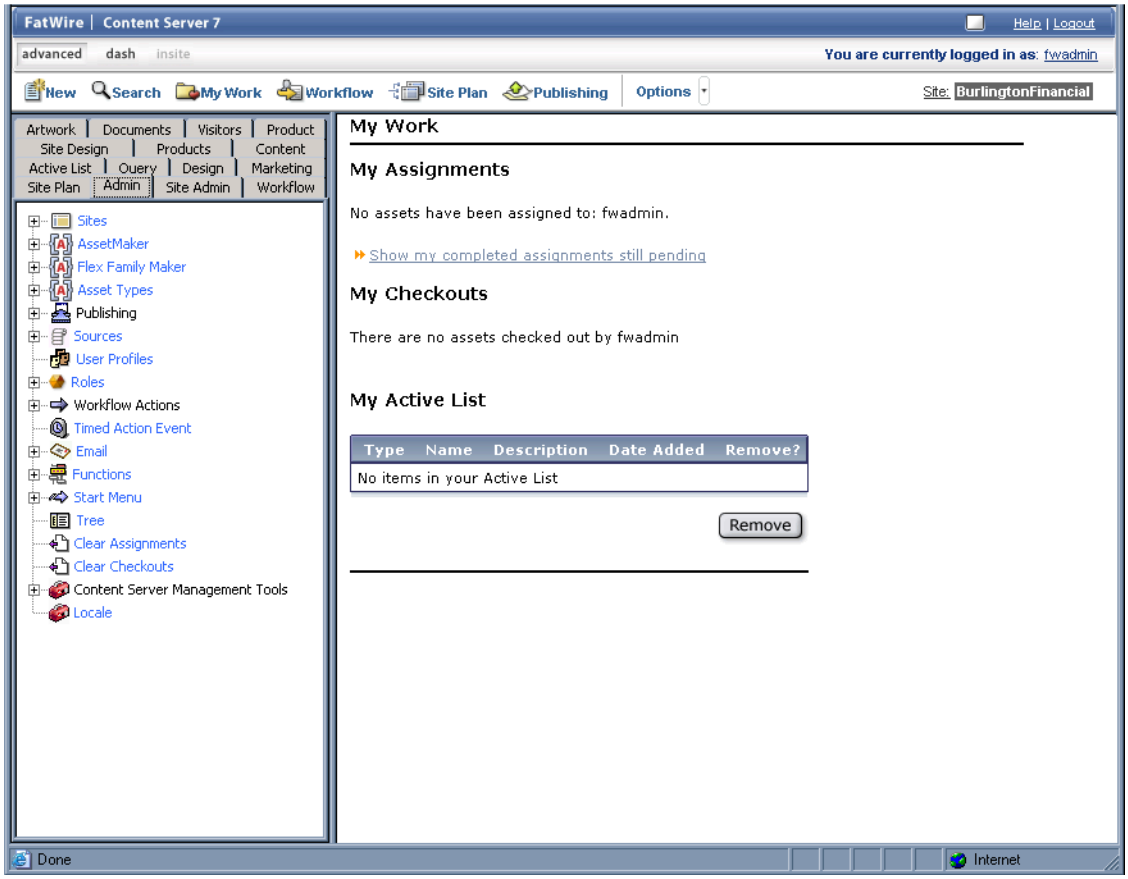
- If you installed more than one sample site, Content Server displays the "Select Site" screen. In such case, select the sample site you wish to log in to.

You have logged in as fwadmin
Select a site that you want to work on:

Site	Description	Assigned Role
BurlingtonFinancial	Burlington Financial	GeneralAdmin, ArtworkEditor, Approver, ContentEditor, WorkflowAdmin, Analyst, Pricer, Marketer, SiteAdmin, Checker, MarketingAuthor, MarketingEditor, Author, Editor, ContentAuthor, Expert, ProductAuthor, ProductEditor, DocumentAuthor, DocumentEditor, Designer, ArtworkAuthor
FirstSiteII	FirstSite Mark II	ArtworkEditor, GeneralAdmin, Approver, ContentEditor, WorkflowAdmin, Analyst, Pricer, Marketer, SiteAdmin, Checker, MarketingAuthor, MarketingEditor, Author, Editor, ContentAuthor, Expert, ProductAuthor, ProductEditor, DocumentAuthor, ArtworkAuthor, Designer, DocumentEditor
GE Lighting	GE Lighting	Designer, SiteAdmin, WorkflowAdmin, GeneralAdmin

[Log in again]

When you select a site, you are logged in to that site.



Logging in to the Dashboard Interface

1. Point your browser to the following URL:

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

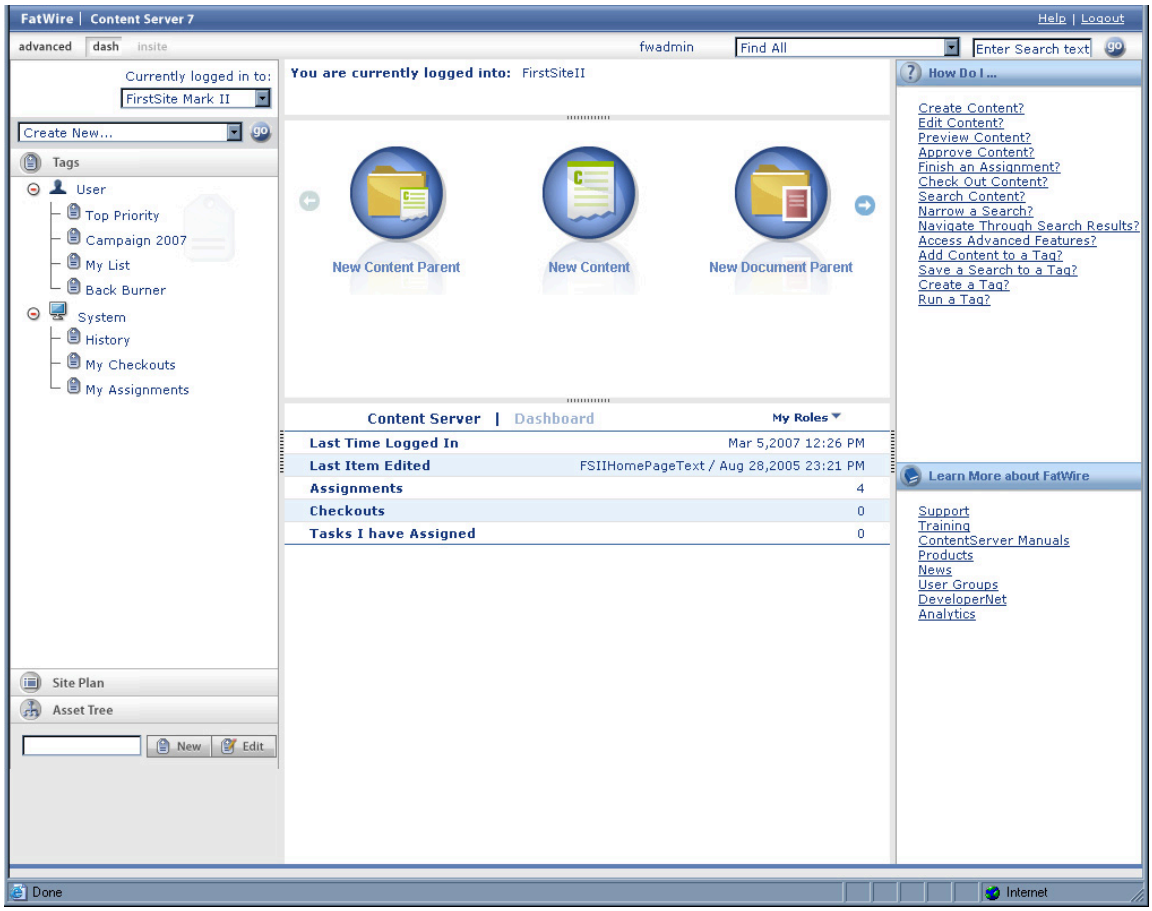
   Content Server displays the Dashboard interface login page.

2. Enter the following credentials:
   - User name: **fwadmin**
   - Password: **xceladmin**

3. Click **Login**.

   Depending on whether you installed sample sites, 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 Dashboard interface until at least one site exists on your system.
   - If you installed one sample site, you are logged in to that site.



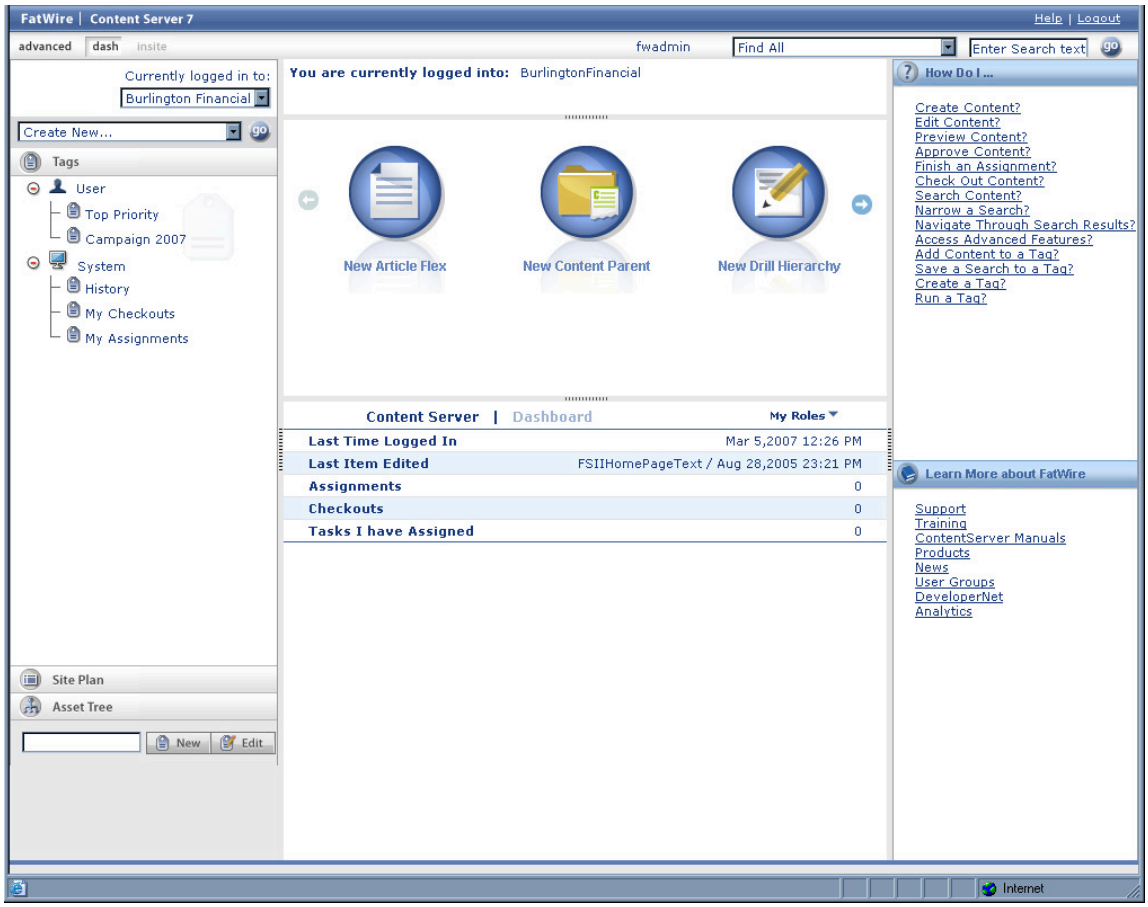
   - If you installed more than one sample site, Content Server displays the "Select Site" screen. In such case, select the sample site you wish to log in to.

You are currently logged in as 'fwadmin'
Select a site that you want to work on:

Select	Name	Description	Roles
◉	BurlingtonFinancial	Burlington Financial	ArtworkEditor, GeneralAdmin, Approver, ContentEditor, WorkflowAdmin, Analyst, Pricer, Marketer, SiteAdmin, Checker, MarketingAuthor, MarketingEditor, Author, Editor, ContentAuthor, Expert, ProductAuthor, ProductEditor, DocumentAuthor, DocumentEditor, Designer, ArtworkAuthor
○	GE Lighting	GE Lighting	Designer, SiteAdmin, WorkflowAdmin, GeneralAdmin
○	FirstSiteII	FirstSite Mark II	ArtworkEditor, GeneralAdmin, Approver, ContentEditor, WorkflowAdmin, Analyst, Pricer, Marketer, SiteAdmin, Checker, MarketingAuthor, MarketingEditor, Author, Editor, ContentAuthor, Expert, ProductAuthor, ProductEditor, DocumentAuthor, ArtworkAuthor, Designer, DocumentEditor

Select Site

When you select a site, you are logged in to that site.



Content Server is now ready for configuration. Follow the steps in the rest of this chapter.

C. Integrating with LDAP (Optional)

If you wish to perform LDAP integration, you must do the following:

1. Set up a supported LDAP server of your choice. For instructions, see *Configuring Third-Party Software*.
2. Run the LDAP integration program included on the Content Server CD.

For more information, see the *LDAP Integration Guide*.

D. Setting Up a Content Server Cluster (Optional)

If you plan to install Content Server in a vertical cluster, follow the steps below. Before you proceed, make sure of the following:

- You are installing a vertical cluster (multiple Resin instances on the same machine).
- You have created a shared file system directory that all cluster members can read from and write to. The directory name and path cannot contain spaces.
- You have created a `sync` directory inside the shared file system directory.

To install Content Server in a vertical cluster

For each cluster member, do the following:

1. Install Resin into a uniquely named directory by following the steps in "Installing Resin," on page 16."

> **Note**
>
> Each Resin instance in a vertical cluster must reside in a separate directory.

2. Add the path to the directory in which you installed Resin to the `RESIN_HOME` system variable.
3. Change the port number in `resin.conf` to a number unique to that instance of Resin.

> **Note**
>
> Each Resin instance in a vertical cluster must run on a separate port number.

4. Configure Resin by following the steps in "Configuring Resin," on page 18.
5. Install Content Server by running the Content Server installer and doing the following:
   a. In the "Clustering" screen, do one of the following:
      - For the primary cluster member, select **Single Server**.
      - For each secondary cluster member, select **Cluster Member**.
   b. In the "Content Server Application Deployment" screen, browse to the directory in which you installed Resin in step 1.

   For more information, see the online help included with the installer.
6. Edit the `<cs_install_dir>/futuretense.ini` file by making the following changes:
   a. Set `ft.sync` to a value that is the same for all cluster members.
   b. Set `ft.usedisksync` to the path of the `<cs_shared_dir>/sync` directory.
7. Restart Resin for the changes to take effect.

E. 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*. 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.