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Preface

This document explains how to install and configure the Oracle WebCenter Content VCR Adapter. In addition, the guide describes best practices for modeling content in the Oracle WebCenter Content repository and in Site Studio. These best practices help ensure the best exposure of that content through the VCR. Finally, this guide offers several examples that demonstrate techniques for modeling content in WebCenter Content to allow the most reliable mapping of content through the adapter

Audience

This document is intended for portal developers, portal administrators, WebCenter Content administrators, and WebCenter Content architects.

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Related Documents

For more information, see the following documents:

- Oracle Fusion Middleware Content Management Guide for Oracle WebLogic Portal
- Oracle Fusion Middleware Content Management SPI Development Guide for Oracle WebLogic Portal

You can find information on WebCenter Content, including Content Server and Site Studio here: http://download-west.oracle.com/docs/cd/E10316_01/ouc.htm.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Introduction

This chapter includes the following sections:

- [Section 1.1, "What Is the Oracle WebCenter Content VCR Adapter?"](#)
- [Section 1.2, "Adapter Architecture"](#)

1.1 What Is the Oracle WebCenter Content VCR Adapter?

The Oracle WebCenter Content VCR Adapter provides access through the WebLogic Portal Content Management Virtual Content Repository (VCR) to content stored in the Oracle WebCenter Content system. WebCenter Content is a suite of enterprise content management products that include Oracle Content Server and Oracle Site Studio. The adapter allows WebLogic Portal to access WebCenter Content-based content for use in portal applications. For example, you could access content stored in WebCenter Content with WLP features like Content Presenter and content selectors.

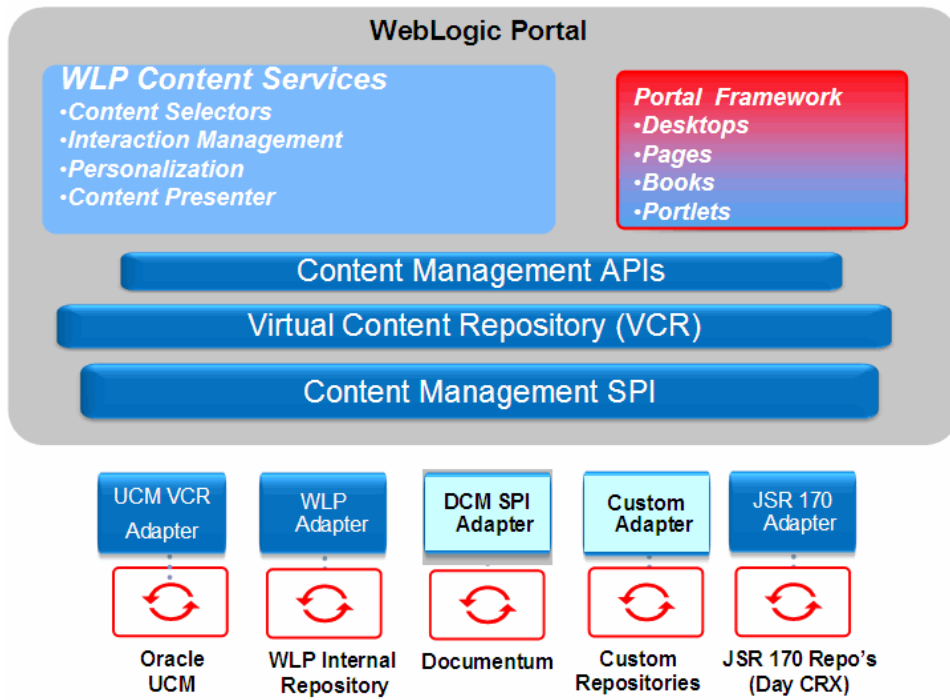
Note: Only Content Server is required to use the adapter. The adapter works whether or not Site Studio is installed on the server. Site Studio is not required; however, extra features are available when Site Studio is installed.

1.2 Adapter Architecture

The Oracle WebCenter Content VCR Adapter serves as a bridge between the WebLogic Portal Content Management VCR and a WebCenter Content repository. The relationships between the various elements are illustrated in [Figure 1-1](#).

Note: Only content in a WebCenter Content repository that is specified as State = Released will be accessible through the adapter. Content that is in any other workflow state, or is scheduled for future release, will not be accessible through the VCR.

Figure 1-1 Architecture of the Oracle WebCenter Content VCR Adapter



Installation and Configuration

This chapter includes the following sections:

- [Section 2.1, "Installing the Oracle WebCenter Content VCR Adapter"](#)
- [Section 2.2, "Configuring the Adapter"](#)
- [Section 2.3, "Configuring Oracle WebCenter Content"](#)
- [Section 2.4, "Security Mapping"](#)
- [Section 2.5, "Verifying the Installation"](#)

2.1 Installing the Oracle WebCenter Content VCR Adapter

The installation process includes these tasks:

- [Section 2.1.1, "Ensure the Oracle WebCenter Content Components are Installed"](#)
- [Section 2.1.2, "Add a Reference to the Oracle WebCenter Content VCR Adapter Shared Library"](#)
- [Section 2.1.3, "Modify Cache Settings"](#)

2.1.1 Ensure the Oracle WebCenter Content Components are Installed

You must have the following Oracle WebCenter Content (formerly called Universal Content Management or UCM) components installed to use the Oracle WebCenter Content VCR Adapter. For details on installing these components, refer to the WebCenter Content installation documentation.

2.1.1.1 Server Required Components for Oracle WebCenter Content 11g

1. Oracle Content Server 11gR1 (11.1.1.5.0) with Oracle Text Search (OracleTextSearch), Full Text Search (DATABASE.FULLTEXT), or Metadata-only Search (DATABASE.METADATA) configured.
2. Folders_g (Folders section)
3. The following components are required if you are using SiteStudio:
 - LinkManager8 (Document Management section)
 - DBSearchContainsOpSupport (Web Content Management section). This component is required if you are using SiteStudio and not using Oracle Text Search.
 - SiteStudio (Web Content Management section)
 - SiteStudioExternalApplications (Web Content Management section)

2.1.1.2 Server Required Components for Oracle WebCenter Content 10g

1. Oracle Content Server 10gR3 (10.1.3.3.3) with Oracle Text Search (OracleTextSearch), Full Text Search (DATABASE.FULLTEXT), or Metadata-only Search (DATABASE.METADATA) configured.
2. Content Server Update Bundle Component Version 10.1.3.5.0 (CS10gR35UpdateBundle - 2011_10_11 (build 100).
3. Folders_g (Included in CS10gR35UpdateBundle; unzip and install the file at component/CS10gR35UpdateBundle/extras/Folders_g.zip).

2.1.1.3 Server Optional Components for Oracle WebCenter Content 10g

1. Site Studio 10gR4 (10.1.4.0.0) component
2. VCR/SPI for Site Studio 10gR4 (component named SiteStudioSPI-Only-10gR4_*.zip)

Note: This component is available on Oracle E-Delivery as one of the components included in part number V16530-01 Oracle Universal Content Management Web Content Management 10gR3 (10.1.3.3.7) for Windows, Linux and Unix. You can also obtain this component at <http://www.oracle.com/technetwork/middleware/webcenter/content/downloads/index-ucm10g-082682.html> under the name VCR/SPI for Site Studio 10gR4.

3. Custom Link Form (ss_docname_link_form.htm) must be checked in. This form is available on OTN.
4. LinkManager8 component (included in CS10gR35UpdateBundle). This component is necessary to resolve SiteStudio document links. For example, this component must be enabled to determine which SiteStudio documents link to a given document.

2.1.1.4 Optional Client Components

- Site Studio Designer (required for creating and changing region definitions)

2.1.2 Add a Reference to the Oracle WebCenter Content VCR Adapter Shared Library

Use Oracle Enterprise Pack for Eclipse (OEPE) to add a library reference from your enterprise application to the Oracle WebCenter Content VCR Adapter library.

1. Start Oracle Enterprise Pack for Eclipse.
2. In the Package Explorer, navigate to the <EAR_PROJECT>/EarContent/META-INF folder of your application.
3. Right-click the file `weblogic-application.xml` and select **Open With > WebLogic Application Descriptor Editor**.
4. In the editor, select **Shared Libraries**.
5. In the Shared Libraries tab, click the **Add shared library references** link.
6. In the Select WebLogic Shared Library dialog, select `oracle-ucm-spi-app-lib`.
7. Click **OK**.

The library appears in the Shared Libraries list of `weblogic-application.xml`.

On your file system, the library is added to the path, `<MW_HOME>/modules/oracle.content.ucm.spi_10.3.4.0.`

8. Save the file `weblogic-application.xml`.

You have successfully added the Oracle WebCenter Content VCR Adapter library to your portal project.

2.1.3 Modify Cache Settings

You can configure or adjust WebCenter Content repository caches in two ways: in the EAR project file `META-INF/p13n-cache-config.xml` or in the Portal Administration Console (under **Configuration & Monitoring > Service Administration**). Cache settings made in the Portal Administration Console take precedence over the file-based settings. You can also flush the caches from the Portal Administration Console.

Notes: If you already have a `p13n-cache-config.xml` file configured for another repository, simply add the WebCenter Content repository cache settings into that file.

[Table 2–1](#) and [Table 2–2](#) describe the available cache settings in `p13n-cache-config.xml`. [Table 2–1](#) describes the VCR caches, which are caches used by the VCR component. These caches are repository specific and can exist for any repository. [Table 2–2](#) describes the SPI caches, which are specific to the Oracle WebCenter Content SPI Adapter component.

Note: Cache settings described in [Table 2–3, "Configuration File Elements"](#) describe the configuration properties for the RIDC security cache, which is used for authorization decisions.

The pattern for the cache entry names is `<elementName>.<repositoryName>`, where `<repositoryName>` is the name of the WebCenter Content repository as specified in the `META-INF/content-config.xml` file. For example, `nodeCache.StellentRepository`.

Note that `<time-to-live>` values are specified in milliseconds.

Table 2–1 VCR-Level Cache Entry Descriptions

Cache Entry Name	Description
<code>nodeCache.<repositoryName></code>	Caches node id to node instance for this repository. Defaults: enabled = true; time-to-live = 120000, max-entries = 200.
<code>nodePathCache.<repositoryName></code>	Caches node path to node id for this repository. Defaults: enabled = true; time-to-live = 120000, max-entries = 200.
<code>typeCache.<repositoryName></code>	Caches type id to type instance for this repository. Defaults: enabled = true; time-to-live = 600000, max-entries = 200.
<code>typeNameCache.<repositoryName></code>	Caches type name to type id for this repository. Defaults: enabled = true; time-to-live = 600000, max-entries = 200.

Table 2–1 (Cont.) VCR-Level Cache Entry Descriptions

Cache Entry Name	Description
binaryCache.<repositoryName>	Defaults: enabled = true; time-to-live = 300000, max-entries = 50. Note: The maximum binary entry size is specified as the repository property binaryCacheMaxEntrySize which has a default value of 102400 bytes (100 kb).
searchCache.<repositoryName>	The VCR search cache is not used to cache WebCenter Content search results; the WebCenter Content server-side search cache is used for this purpose.
nativeAuthCache.<repositoryName>	Authorization cache for this repository when using native security. Defaults: enabled = true; time-to-live = 5000, max-entries = 5000.
repositoryConfigCache.<repositoryName>	Maximum = 20, time-to-live = (-1) (forever), enabled = true
searchFTSPATHCriteriaCache	Maximum = 500, time-to-live = 1 hour
searchExpressionPathCriteriaCache	Maximum = 500, time-to-live = 1 hour

Table 2–2 SPI-Level Cache Entry Descriptions

Cache Entry Name	Description
repo.ucm.typeNameCache.<repositoryName>	Caches WebCenter Content server type metadata by type name. Defaults: enabled = true; time-to-live = 1800000 (30 minutes), max-entries = 5000
repo.ucm.nodePathToUidCache.<repositoryName>	Caches WebCenter Content server node ids by node path. Defaults: enabled = true; time-to-live = 1800000 (30 minutes), max-entries = 5000
repo.ucm.nodeUidCache.<repositoryName>	Caches WebCenter Content server node metadata by node id. Defaults: enabled = true; time-to-live = 1800000 (30 minutes), max-entries = 5000
repo.ucm.securityInfoCache.<repositoryName>	Caches WebCenter Content server node security information. Defaults: enabled = true; time-to-live = 1800000 (30 minutes), max-entries = 5000
repo.ucm.typeNamesCache.<repositoryName>	Caches the list of WebCenter Content type names. Defaults: enabled=true, time-to-live=1800000 (30 minutes), max-entries=5000.
repo.ucm.indexedFieldsCache.<repositoryName>	Caches information about which WebCenter Content fields are indexed. Defaults: enabled=true, time-to-live=1800000 (30 minutes), max-entries=5000.
repo.ucm.securityUserCache.<repositoryName>	Stores the association between a WLP user and the associated WebCenter Content server userID. Defaults: 5000 entries, time-to-live = 30 minutes

Table 2–2 (Cont.) SPI-Level Cache Entry Descriptions

Cache Entry Name	Description
repo.ucm.searchCriteriaCache.<repositoryName>	Caches search criteria so repeated searches perform well. Defaults: enabled=true, time-to-live=3600000 (1 hour), max-entries=500.

Note: To configure the Oracle WebCenter Content SPI RIDC security cache settings described in [Table 2–3](#), you must add the entries as <repository-property> elements in content-config.xml.

[Example 2–1](#) presents a sample META-INF/p13n-cache-config.xml file.

Example 2–1 Sample p13n-cache-config.xml File

```
<?xml version="1.0" encoding="UTF-8"?>
<p13n-cache-config xmlns="http://www.bea.com/ns/p13n/90/p13n-cache-config">
<cache>
  <name>nodeCache.MyUcmRepo</name>
  <enabled>true</enabled>
  <time-to-live>600000</time-to-live>
  <max-entries>5000</max-entries>
</cache>
<cache>
  <name>repo.ucm.nodePathToUidCache.StellentRepository</name>
  <enabled>true</enabled>
  <time-to-live>10000</time-to-live>
  <max-entries>2000</max-entries>
</cache>
</p13n-cache-config>
```

2.2 Configuring the Adapter

After the adapter is added to your WLP project, you are ready to configure it. Configuring means specifying how the adapter will talk to the WebCenter Content repository. For example, the adapter has to know where the WebCenter Content server is running, its port number, an admin account name, and so on.

There are two configuration scenarios to consider. If you primarily work with the IDE in a development environment, you can configure the adapter by editing a configuration file. If you are a portal administrator who uses the WLP Administration Console, you can use the Administration Console to configure the adapter.

2.2.1 Configuring the Adapter in a Development Environment

This section explains how to configure the adapter using a configuration file. Developers working primarily in the IDE commonly use this method.

Note: Because of the way in which WLP uses deployment plans, adapter configurations made in the WLP Administration Console take precedence over configurations made in the content-config.xml file.

1. Open the `content-config.xml` file. This file is located in the `META-INF` directory of your Portal EAR Project.
2. Edit the required elements in the file using [Table 2-3](#) and [Example 2-2](#) as a guide.
3. Save the configuration file.
4. Redeploy the portal application.

[Table 2-3](#) describes the elements in `content-config.xml` that you must configure to successfully use the adapter.

Table 2-3 Configuration File Elements

Element	Description
<code>class-name</code>	(Required) The class name of the adapter, which is <code>com.oracle.content.spi.ucm.RepositoryImpl</code> .
<code>username</code>	(Optional) If you use the global config user security option (see Section 2.4.1, "WLP-Secured Global Config User" or Section 2.4.2, "Natively-Secured Global Config User"), this element specifies the Oracle WebCenter Content Server user name that is used to retrieve data from WebCenter Content, regardless of the WLP user. In other words, all WLP users in an enterprise application will see the data for this WebCenter Content repository instance. Note: If you configure the identity propagation option, do not specify this element (see Section 2.4.3, "Identity Propagation with Native Security").
<code>ContentServerHostname</code>	(Required) The hostname or IP address of the server on which the WebCenter Content repository is running.
<code>ContentServerPort</code>	(Required) The Intradoc port number on which the WebCenter Content repository is listening. This corresponds to the <code>IntradocServerPort</code> setting in the Content Server configuration file, which defaults to port 4444. You can also find this setting by accessing the WebCenter Content server with a browser as an admin, clicking on Administration > Configuration for xxx, then clicking on the Server Configurations link. Configure the Oracle WebCenter Content SPI to use the 'Server Port'.
<code>ContentServerAdminUser</code>	(Required) The user name of a valid administrative user of the WebCenter Content repository. This user must have the admin role.
<code>ContentServerServiceType</code>	(Required) Protocol used to connect with the WebCenter Content Server. Valid options are <code>INTRADOC</code> or <code>INTRADOC_SSL</code> . <code>INTRADOC</code> is the default.
<code>ContentServerSSLKeyStoreFile</code>	Required (and only used) if <code>ContentServerServiceType</code> is <code>INTRADOC_SSL</code> . The absolute path to the client SSL keystore file.
<code>ContentServerSSLKeyStorePassword</code>	SSL keystore password. Required (and only used) if <code>ContentServerServiceType</code> is <code>INTRADOC_SSL</code> . The SSL keystore password.

Table 2–3 (Cont.) Configuration File Elements

Element	Description
ContentServerSSLKeyStoreAlias	Required (and only used) if ContentServerServiceType is INTRADOC_SSL. The SSL keystore alias name.
ContentServerSSLKeyStoreAliasPassword	Required (and only used) if ContentServerServiceType is INTRADOC_SSL. The SSL keystore alias password.
CacheInvalidationInterval	(Optional) Polling interval in minutes for the Oracle WebCenter Content Adapter CacheInvalidator IntervalJob (must be equal to or greater than 2 minutes). This cache automatically invalidates cached content in WLP as content is changed on the WebCenter Content server. If you set it to 0, automatic cache invalidation will be disabled for this repository.
folder_badge_objectClasses	(Required) Specifies a list of Oracle WebCenter Content ObjectClasses that are displayed as folders in the WLP Administration Console. For the Oracle WebCenter Content VCR adapter, set this value to IDC:Folder.
TypeRetrievalShapeUser	(Required) Specifies a WebCenter Content user account that is used to retrieve all types (ObjectClasses) from WebCenter Content. WebCenter Content profiles can take into account the WebCenter Content user when determining which fields are on a profile. WLP uses this setting to ensure that the WebCenter Content type retrieval is identical regardless of the WLP user. This user account does not need any special roles on the WebCenter Content server. Note: If you want to create documents of various security groups, the configured TypeRetrievalShapeUser must have at least read privilege to those security groups. The default value for this element, typeShapeUser, has read privileges for all profiles.
useNativeSecurity	When this element is enabled, the native WebCenter Content security will be used to secure content. When disabled, the VCR federated security (entitlements) will be used to secure content in addition to the native WebCenter Content security. Default is false (disabled). For more information, Section 2.4, "Security Mapping." Note: For best performance, use native security (useNativeSecurity = true).
SecurityCacheSize	Used in the default RIDC security cache configuration size. Add this entry as <repository-property> element in content-config.xml. Default = 500
SecurityUserCacheTtl	Used in the default RIDC security cache configuration. Add this entry as <repository-property> element in content-config.xml. Default=10*60*1000=10 minutes

Table 2–3 (Cont.) Configuration File Elements

Element	Description
SecurityServerCacheTtl	This time to live value is only used if accounts or ACL are used. Add this RIDC security cache entry as <repository-property> element in content-config.xml. Default=10*60*1000=10 minutes
ContentServerConnectionTimeout	(Optional) The maximum time (in msec) to wait when connecting to the WebCenter Content server. Default=30 seconds
ContentServerConnectionPoolSize	(Optional) Optional. The maximum connection pool size. Default=20
ContentServerSocketTimeout	(Optional) The maximum time to wait (in msec) for a WebCenter Content server response. Default=70 seconds.
ForceDeleteFolders	(Optional) only used if the Trash folder is enabled on the Oracle WebCenter Content instance. If set to true, then deleting a folder or document will remove it immediately, bypassing the trash. If set to false, then deleting a folder or document will move it to the trash.

[Example 2–2](#) shows a sample configuration file with the required elements highlighted in bold type.

Example 2–2 Sample Configuration for the Oracle WebCenter Content VCR Adapter

```

<!-- UCM test repository -->
<content-store>
  <name>UCMRepository</name>
    <class-name>com.oracle.content.spi.ucm.RepositoryImpl
    </class-name>
    <username>wlpApp</username>
  <repository-property>
    <description>Hostname on which the UCM Content Server is running
    </description>
    <name>ContentServerHostname</name>
    <value>10.221.19.72</value>
  </repository-property>
  <repository-property>
    <description>Port on which the UCM Content Server is running (on
    host named above)
    </description>
    <name>ContentServerPort</name>
    <value>4444</value>
  </repository-property>
  <repository-property>
    <description>Content Server uname in Admin role, for
    security checks
    </description>
    <name>ContentServerAdminUser</name>
    <value>sysadmin</value>
  </repository-property>
  <repository-property>
    <description>List of folder ObjectClasses</description>
    <name>folder_badge_objectClasses</name>
    <value>IDC:Folder</value>
  </repository-property>

```

```

<repository-property>
  <description>Single user for all type related interactions
  </description>
  <name>TypeRetrievalShapeUser</name>
  <value>typeShapeUser</value>
</repository-property>
<repository-property>
  <name>useNativeSecurity</name>
  <value>>false</value>
</repository-property>
<repository-property>
  <description>Protocol used to connect with the UCM Server.
  Valid options are INTRADOC or INTRADOC_SSL. INTRADOC is the
  default.
  </description>
  <name>ContentServerServiceType</name>
  <value>INTRADOC</value>
</repository-property>
<repository-property>
  <description>Content Server Username in Admin role, used
  for security checks
  </description>
  <name>ContentServerAdminUser</name>
  <value>sysadmin</value>
</repository-property>
<repository-property>
  <description>Polling interval for the
  CacheInvalidator IntervalJob
  (must be equal to or greater than 2 min)
  </description>
  <name>CacheInvalidationInterval</name>
  <value>2</value>
</repository-property>
<repository-property>
  <description>Location on the filesystem of the
  client SSL keystore
  file. Only used when ContentServerServiceType
  is INTRADOC_SSL
  </description>
  <name>ContentServerSSLKeystoreFile</name>
  <value>c:/client_keystore</value>
</repository-property>
<repository-property>
  <description>SSL keystore password. Only used when
  ContentServerServiceType is INTRADOC_SSL
  </description>
  <name>ContentServerSSLKeystorePassword</name>
  <value>idcidc</value>
</repository-property>
<repository-property>
  <description>SSL keystore alias name. Only used when
  ContentServerServiceType is INTRADOC_SSL
  </description>
  <name>ContentServerSSLKeystoreAlias</name>
  <value>SecureClient</value>
</repository-property>
<repository-property>
  <description>SSL keystore alias password. Only used when
  ContentServerServiceType is INTRADOC_SSL
  </description>

```

```

        <name>ContentServerSSLKeystoreAliasPassword</name>
        <value>idcidc</value>
    </repository-property>
    <read-only>true</read-only>
    <binary-cache-max-entry-size>102400</binary-cache-max-entry-size>
    <!-- metadata search -->
    <search-is-enabled>true</search-is-enabled>
    <!-- full text search -->
    <fulltext-search-is-enabled>true</fulltext-search-is-enabled>
    <search-indexing-is-enabled>false</search-indexing-is-enabled>
</content-store>

```

2.2.2 Configuring the Adapter in the Administration Console

Users who typically work on staged or production portals use the WebLogic Portal Administration Console to configure content repositories. This section summarizes the basic configuration steps for this scenario. For more detailed instructions, see "Configuring Additional Repositories" in the Oracle Fusion Middleware Content Management Guide for Oracle WebLogic Portal.

Once the WebCenter Content repository is deployed and running it must be connected to WebLogic Portal so that it appears as part of its Virtual Content Repository. To add the WebCenter Content repository:

1. Open the WebLogic Portal Administration Console.
2. Select the Content tab to enter the Content Management page.
3. Select the **Repositories** link to view the repositories. This link is above the tree view on the left.
4. Click **Virtual Content Repository** at the top of the repository tree.
5. In the editor pane to the right, click the **Add Repository Connection** button.
6. Complete the Add Repository Connection dialog with the following information:

Field	Description
Name	A name you choose for the adapter.
Connection Class	(Required) The class name of the adapter, which is com.oracle.content.spi.ucm.RepositoryImpl.
Datasource JNDI name	Not required.
Username	If using the global config user option (all users of the application use the same credentials to connect to WebCenter Content), this field specifies the user name of a valid user of the WebCenter Content repository. If not using the global config user option, leave this field blank. For more information on security, see Section 2.4, "Security Mapping."
Password	Not necessary for the Oracle WebCenter Content VCR Adapter.
Enable Library Services	Set this field to false.

7. Click **Create**. The new repository appears in the repository tree on the left hand side.

Note: If you receive an error after clicking **Create**, click the **Refresh Tree** button. The words “can’t connect” appear next to the new repository name in the Administration Console. To correct the problem, select the new repository and use the Add Property dialog to add the required properties indicated by the error message: ContentServerHostname, ContentServerPort, ContentServerAdminUser.

8. Using the Administration Console, configure the same repository properties listed and described previously in [Table 2-3, "Configuration File Elements"](#).

2.3 Configuring Oracle WebCenter Content

This section explains how to configure WebCenter Content to work with the Oracle WebCenter Content VCR Adapter. Refer to the WebCenter Content documentation for details on performing the configurations described in this section.

2.3.1 Enable Connections on the Intradoc (RIDC) Server Port

The Intradoc server port requires two configurations:

- **IntradocServerPort** – The Oracle WebCenter Content SPI accesses the WebCenter Content Server through the RIDC libraries. By default, the RIDC libraries communicate with the WebCenter Content server over the Intradoc server socket port.
- **SocketHostAddressSecurityFilter** – The security filter setting specifies which client hosts are allowed to contact the WebCenter Content server over the Intradoc server socket port. The security filter must be configured to support, at a minimum, the set of hosts that the Oracle WebCenter Content SPI runs on.

To configure these server port settings:

1. In your WebCenter Content server `config.cfg` file, enable the Intradoc server socket port and the security filter, by adding lines like the following:

```
IntradocServerPort=4444
SocketHostAddressSecurityFilter=10.143.121.150 or *.*.*.*
```

2. Restart the WebCenter Content server.

Note: See the WebCenter Content documentation for more details on these settings.

2.3.2 Define a Profile Trigger Field

By default, a WebCenter Content server does not have a profile trigger field configured. This section explains how to select a profile trigger field if one has not already been selected.

Note: The trigger field is an important setting in the WebCenter Content server. This field is used to customize the Content Server UI for various types of data. Once the trigger field is selected, it is difficult to change the setting, and doing so can affect the Content Server UI. It's important to carefully consider which trigger field to use. See WebCenter Content documentation for more details.

To select a profile trigger field:

1. In a browser, access the content server and log in as an Administrator.
2. Select **Admin Applets** from the **Administration** menu.
3. Open the **Configuration Manager** applet.
4. Select the **Profiles** tab.
5. At the top of the screen, the current Trigger Field is displayed; for example: **Trigger Field: dDocType**.
6. If the Trigger Field is not currently configured, click **Select** and select the desired field.

2.3.3 Optimize the dOriginalName Field

Note: Only perform this task if the Content Server is configured to use the OracleText search engine. You can verify configuration, inspect the `SearchIndexerEngineName` setting in the WebCenter Content `config.cfg` file. If it is set to `OracleTextSearch`, then the OracleText search engine is in use.

In the WebCenter Content server, the `dOriginalName` field stores the filename of a document. By default, the OracleText search engine performs substring matches when searching on filenames, even if the VCR client requests an exact match.

To configure WebCenter Content so exact matches are possible:

1. Select **Text Search Admin** from the **Administration** menu.
2. In the set of non-optimized fields on the left-hand side, in the Special section, select **Original Name** and click the arrow to move it to the right side of the screen.
3. Click **Update**.
4. If necessary, rebuild the search index as follows:
 1. Select **Admin Applets** from the **Administration** menu.
 2. Open the **Repository Manager** applet and select the **Indexer** tab.
 3. In the **Collection Rebuild Cycle** section, click **Start** to begin indexing.

When the State is Finished, the indexing is complete.

2.4 Security Mapping

There are three ways to configure the security and credential mappings between the Oracle WebCenter Content Adapter and the WebCenter Content instance.

- [Section 2.4.1, "WLP-Secured Global Config User"](#)
- [Section 2.4.2, "Natively-Secured Global Config User"](#)
- [Section 2.4.3, "Identity Propagation with Native Security"](#)

Note: The VCR adapter user identity propagation to the Oracle WebCenter Content server will not work properly if the WebCenter Content Server users that are being referenced by WLP exist in an ActiveDirectory and the WebCenter Content Server has been configured to use a non-LDAP based ActiveDirectory. This configuration is not supported.

A local or global user identity store will work, as will an external LDAP-based store (either ActiveDirectory or other LDAP).

Note: For best performance, use native security (`useNativeSecurity = true`).

Note: By default, WebCenter Content allows users that do not exist in the WebCenter Content user store to connect. They are implicitly mapped to the guest role.

For example, if you configure an invalid WebCenter Content username in the adapter configuration, WLP will access WebCenter Content as a user in the guest role.

If not immediately apparent, this will generally become noticeable when you go to create content or edit content via the WLP Adapter, since users in the guest role generally cannot create or edit content in WebCenter Content.

2.4.1 WLP-Secured Global Config User

All users in the application use the same credentials to connect to the WebCenter Content instance. The data is secured through both WebCenter Content (based on the username) and WebLogic Portal. This is the configuration to use if you plan to use WLP Entitlements and/or Delegated Administration on content. Configure this type of security with these settings in the `META-INF/content-config.xml` file in the EAR Project, as described in the following table.

Field	Value
Username	The user name of a valid user of the WebCenter Content repository. The WebCenter Content content this user can access may be further reduced by applying entitlements in WLP. If you plan to use WLP Entitlements or Delegated Administration, select a username with the desired level of access to content. WLP users will have 'at most' the privileges of this WebCenter Content username.
useNativeSecurity	false

2.4.2 Natively-Secured Global Config User

All users in the application use the same credentials to connect to the WebCenter Content instance. Data is secured through WebCenter Content. WLP Content Entitlements will not apply. Configure this type of security with these settings in the `META-INF/content-config.xml` file in the EAR Project:

Field	Value
Username	The user name of a valid user of the WebCenter Content repository. The WebCenter Content content this user can access will be exposed in WLP.
useNativeSecurity	true

2.4.3 Identity Propagation with Native Security

WebLogic Portal and WebCenter Content use the same security store, such as a shared LDAP store. Each WLP user sees in the application what they are permitted to see on the WebCenter Content side. Entitlements (WLP content security) are disabled.

Field	Value
Username	Do not set a value for this field.
useNativeSecurity	true

2.5 Verifying the Installation

To verify the installation, open the WLP Administration Console, go to the Content Management section, and attempt to browse to the WebCenter Content repository and view its contents or types.

Using the Adapter

This chapter includes these sections:

- [Section 3.1, "Content Design Considerations"](#)
- [Section 3.2, "Performing Create, Update, Delete, and Move Operations"](#)
- [Section 3.3, "Creating Required Fields"](#)
- [Section 3.4, "Working with Unfiled Documents"](#)
- [Section 3.5, "Node Property Loading"](#)
- [Section 3.6, "Performing Searches"](#)
- [Section 3.7, "Scoping Content Selectors and Other Queries to a Repository"](#)
- [Section 3.8, "Oracle WebCenter Content Content Modeling Examples"](#)

3.1 Content Design Considerations

The Oracle WebCenter Content VCR Adapter provides the conduit through which the WLP Virtual Content Repository (VCR) accesses content in WebCenter Content. To function properly, the adapter expects content structures that can be mapped to the structures used in the VCR. For example, WebCenter Content uses profiles to manage how metadata is structured and displayed. However, the VCR does not use profiles; therefore, the adapter is required to provide reliable mappings between the two systems.

This section discusses the considerations for modeling content in the WebCenter Content to facilitate exposure in the VCR and includes these sections:

- [Section 3.1.1, "Content Modeling and Mapping Overview"](#)
- [Section 3.1.2, "Best Practices for Modeling Content"](#)
- [Section 3.1.3, "Unsupported Features for the Oracle WebCenter Content VCR Adapter"](#)
- [Section 3.1.4, "Unsupported Oracle WebCenter Content Features"](#)
- [Section 3.1.5, "Unsupported Web Content Management \(WCM\) Features"](#)
- [Section 3.1.6, "Property Field Mappings"](#)

Note: If a WebCenter Content parameter is changed that might affect search, then the WebLogic Portal server must be restarted.

3.1.1 Content Modeling and Mapping Overview

Content modeled in WebCenter Content is modeled using some combination of the following constructs:

- Document – A basic content item construct that includes a full set of metadata fields. Every document contains the same set of fields.
- Content profile – Content profiles allow WebCenter Content administrators to express which metadata fields are associated with a given document. Content profiles created by a system administrator can refine the metadata options available to users during check in and searching, as well as what metadata is displayed on a content information page. See also [Section 3.8.1, "Creating Profile-Based Content Types with the Oracle WebCenter Content Administration Console."](#)
- Site Studio region definitions – An add-on container construct created in Site Studio that allows definition of types (region definitions) composed of properties (content elements), in addition to the standard document fields. For example, a region definition could include a combination of text and graphic elements. See also [Section 3.8.2, "Creating Region-Based Content Types with Oracle Site Studio."](#)

How these constructs map to WLP VCR content types and nodes are described in the following sections.

3.1.1.1 How Documents are Mapped to VCR Content Types

Documents not associated with a content profile map to a content type named IDC:GlobalProfile in the VCR that includes all of the metadata fields. All of the metadata fields you see in WebCenter Content will appear in the VCR type called IDC:GlobalProfile.

To ensure that content profiles are correctly mapped to VCR content types, keep in mind the following mapping behavior:

- Each metadata field in a content profile will correspond to a VCR property definition.
- A single binary property definition named `idcPrimaryFile` will always relate to the checked-in document. This binary property definition will be the primary property definition for the content type.
- Other metadata fields of type Text, Long Text, Memo, Integer, Decimal, and Date will map to VCR property data types of String, Long, Double, and Calendar.

Note: For information on length constraints for the WebCenter Content types Text, Long Text, Memo, Integer, Decimal, and Date, see the Oracle Content Server documentation.

- Text metadata fields using an option list based on the YesNoView or TrueFalseView views will be exposed in WLP as a property of type Boolean.

3.1.1.2 How Content Profiles are Mapped to VCR Content Types

Each content profile in WebCenter Content is exposed in the VCR as a content type. The profile's associated fields (defined by rules) are exposed on the VCR type.

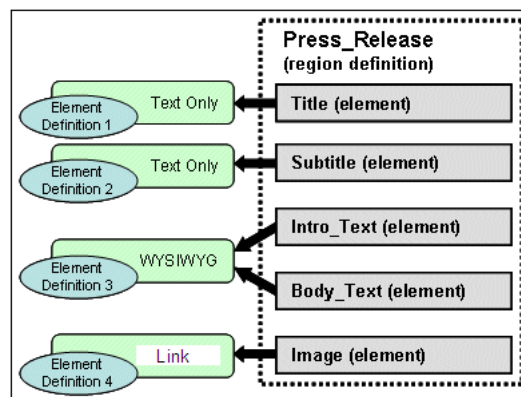
3.1.1.3 How the Combination of Site Studio Region Definitions and Profiles are Mapped to VCR Content Types

Oracle Site Studio is a web development program that offers structured content features. In Site Studio, groups of individual content elements are arranged in region definitions. Each region definition in WebCenter Content is exposed in the VCR as a content type. If the region definition is associated with a profile, then the VCR content type will contain property definitions from both the region definition as well as from the profile.

If the region definition is not associated with a profile, then the VCR content type will contain property definitions from both the region definition as well as the standard document metadata fields (the fields from IDC:GlobalProfile).

Figure 3–1, illustrates a region definition called "Press_Release," which consists of the elements Title, Subtitle, Intro_Text, Body_Text, and Image.

Figure 3–1 Elements Assembled into a Region



To ensure that content regions are correctly mapped to VCR content types, keep in mind the following mapping behavior:

- Element definitions map to VCR property definitions. Note that unlike metadata property definitions associated with profiles, property definitions that are defined as part of a region are only searchable by doing a full text search.
- Element definitions map to string, link, or nested data types.
 - Links will be represented when a content custom element form called `SS_DOCNAME_LINK_FORM` is used that restricts the population of the link field to something Content Server understands as a link.
 - Nested data types will be represented when a Site Studio static list is used. A static list is inherently one level deep and may only contain element definitions of type string (plain text or wysiwyg) and link. Static lists are inherently multi-valued.
 - The static list will be represented as an abstract content type by the VCR. The static list itself acts as a definition for an additional content type comprised of the element definitions in the static list.
 - Both plain text and wysiwyg element types are exposed as String values in the VCR.
- Region definitions, by default, receive all of the property definitions exposed by the global profile type. The content type for the region will extend the `IDC:GlobalProfile` content type.

- Region definitions may also be associated with a content profile. In this case the set of element definitions from the region, along with the set of metadata fields from the profile, will be represented as a single type by the VCR. The content type for the region will extend the profile content type.

3.1.2 Best Practices for Modeling Content

The VCR uses content types to describe content metadata. Content types are used to define the metadata that you can associate with content. When content contributors add content to a WLP VCR, they can associate the content with a content type. In the same way, when WebCenter Content content is surfaced in the VCR, the Oracle WebCenter Content VCR Adapter must provide some degree of mapping to ensure that the content types are structured correctly. This section describes best practices for modeling data in a WLP Repository or other repository to facilitate migration to the Oracle WebCenter Content Adapter, and to understand the mapping behavior of the Oracle WebCenter Content Adapter.

[Table 3–1](#) describes the WebCenter Content modeling considerations for VCR content types. For more information on VCR content types, see the *Oracle Fusion Middleware Content Management Guide for Oracle WebLogic Portal*.

Table 3–1 Content Type Modeling Considerations

VCR Content Types	WebCenter Content Modeling Consideration	Recommendation
Multiple Binaries	You can have only one binary property per content type.	Use at most one binary per content type. Or use a region-based set of elements that use the custom link type to associate multiple binaries documents with a content type.
Multi-valued Property Definitions	When using profiles, there is limited support for multi-valued properties; only string and SiteStudio static list data types are supported. The data in the WebCenter Content is persisted as a single comma-separated value.	Use only multi-valued string property definitions, and avoid using comma values for these properties.
Type Inheritance	Site Studio static list types are exposed as abstract nested types, as are the set of document binary renditions (in a property named <code>idcRenditions</code>).	Understand how region definitions map to content types using type inheritance.
Relationship between Profile Trigger Value and ObjectClass	Each profile in WebCenter Content must have a unique trigger value. It is not supported to have multiple profiles with the same trigger value.	Ensure each profile in WebCenter Content has a unique trigger value.
Nested Types	Nested types are not supported outside of the single-level nesting support described by the "static list" feature of region definitions.	Understand how region definition static lists and document renditions are exposed as nested types.
Property Definition Names	When using profiles, the maximum length of a metadata field is 29 characters in the WebCenter Content, with no embedded spaces.	Limit property definition names to at most 29 characters with no embedded spaces.

Table 3–1 (Cont.) Content Type Modeling Considerations

VCR Content Types	WebCenter Content Modeling Consideration	Recommendation
Primary Property Definition	In WebCenter Content there is no notion of a "primary" property definition. The Oracle WebCenter Content VCR Adapter will represent the single binary property of a profile-based document as a primary property definition named <code>idcPrimaryFile</code> . Regions will not expose a primary property definition.	Understand how primary properties are represented by the Oracle WebCenter Content VCR Adapter.
Type Metadata	Content types in WebCenter Content do not include the following metadata properties: <code>createdBy</code> , <code>modifiedBy</code> , <code>createdDate</code> , <code>modifiedDate</code> . There is no way to determine who created/modified a type and when it was last created/modified. By contrast, Documents and Folders do support these properties; it is possible to determine who created/modified a doc/folder and when this was done.	Avoid use of these fields on the <code>ObjectClass</code> object in application development.
Property Definitions	The WebCenter Content recommends a maximum of 500 custom property definitions for use across all types.	Do not exceed the maximum number of total property definitions in the WebCenter Content system.

Table 3–2 describes the WebCenter Content modeling considerations for VCR content nodes. In the VCR, the repository is usually represented as a hierarchical collection of nodes. Nodes primarily include folders and content items.

Table 3–2 Content Node Modeling Considerations

VCR Content Nodes	WebCenter Content Modeling Considerations	Recommendations
Folders	In WebCenter Content, there is a single folder type, named <code>IDC:Folder</code> , that can contain child content, but this type cannot contain folder-specific metadata. The metadata stored on folders is intended to work as default values for the content stored in those folders.	Be aware that folder metadata in WebCenter Content refers to child document defaults, rather than folder-specific metadata.
Node Hierarchy	Only folders may have child nodes.	Be aware that nodes cannot be created beneath document nodes.
Node Metadata	The <code>modifiedBy</code> and <code>modifiedDate</code> metadata on nodes have a different meaning than what is exposed by the WLP repository. For WebCenter Content documents, these field values are the same as the <code>createdBy/createdDate</code> field values. The values reflect the most recent document checkin user and timestamp. These values do not change for metadata-only updates.	Be aware of this difference in how this data is updated.
String Values	The WebCenter Content tools support strings up to 2000 characters in length. The WLP repository supports 4000 character string values.	Keep string values under 2000 characters, or update the WebCenter Content schema to support a wider value.
Child Node Ordering	Child node ordering is not supported in WebCenter Content.	Do not rely on a given order for child nodes. Alternatively, callers could sort responses from the API or issue queries with sort criteria specified to sort results on a per-call basis.
Integer Values	Integer values default to a zero (0) instead of a null value. The WLP repository stores unset integer values as null.	Do not depend on the presence of a property value for an integer property to detect if that value has been set.

Table 3–3 lists several considerations specific to the search integration.

Table 3–3 Search Considerations and Recommendations

Consideration	Recommendation
If the search is not scoped to documents (<code>cm_isContent = true</code>) or folders (<code>cm_isHierarchy = true</code>), both documents and folders will be searched. Different considerations apply to each, especially around use of <code>cm_path</code> .	When possible, scope the search appropriately by adding <code>cm_isContent=true</code> or <code>cm_isHierarchy=true</code> . This scope also improves performance.
WebCenter Content provides limited support for querying on null or non-null values.	Be aware of the differences in search behavior and do not write search expressions that depend on unsupported criteria.
Recursive search for folders is not supported by WebCenter Content, but is supported for documents if configured on the WebCenter Content server as described to the right.	Scope the search to only include documents (add a clause like ' <code>cm_isContent = true</code> '). Set the search path on the Search object. Configure the <code>folders_g CollectiveSearchRecursiveContent</code> and related settings like <code>CollectionMaxBranch</code> in the WebCenter Content <code>config.cfg</code> file.
The <code>cm_value</code> (search across all properties) criteria is not supported.	Do not use <code>cm_value</code> in search criteria; it will throw an Exception.
The <code>likeignorecase</code> operator is not supported.	The <code>likeignorecase</code> operator behaves as the <code>like</code> operator.
Multivalued property operators perform substring matches. This is true for 'containsany' and 'containsall'. In WebCenter Content, a field with an option list stores values in a comma-delimited manner. For example, if you have values "A", "B", and "C", these will be represented as "A, B, C". Using a 'containsany' search for 'A, B' will find this item.	Be aware of the differences in search behavior and consider changing the WebCenter Content option list delimiter character in the Configuration Manager applet to reduce the potential for finding extra matches.
When searching folders (<code>cm_isHierarchy=true</code>), at most one value can be specified per criteria. Each criteria is logically ANDed with the others to make a more selective query. There is no support for OR or NOT when searching folders.	There is no support for OR and NOT in WebCenter Content folder search.
WebCenter Content supports searching for folders and documents, but this is done in two separate service calls. Some properties that exist on a document (for example, <code>cm_binarySize</code>) will not exist on folders, so if the search query criteria does not limit the search to documents only, an <code>InvalidPropertyException</code> will be thrown. Fields can be configured as searchable in the Oracle WebCenter Content Configuration Manager applet.	Add the content type to your search query if you know the property will be only on a document. Example: <code>cm_objectClass != IDC:Folder</code> or <code>cm_isContent = true</code>
Not all properties are searchable, and if the search encounters a property that is not searchable, it will throw an <code>InvalidPropertyException</code> .	Understand which properties are searchable for a given content type by examining the Oracle WebCenter Content Configuration Manager information fields section, or by reviewing the ObjectClass definition. Example URLs: <code>http://myContentServer/idc/idcplg?IdcService=VCR_GET_CONTENT_TYPE&vcrContentType=IDC:Folder&IsSoap=1</code> then look for the <code>isSearchable</code> field setting.
Not all ObjectClasses are searchable. An attempt to search for a non-searchable ObjectClass will throw an exception. For example, the <code>IDC:FileReference</code> ObjectClass is not searchable.	Be aware that not all ObjectClasses are searchable.

Table 3–3 (Cont.) Search Considerations and Recommendations

Consideration	Recommendation
Only String multi-valued properties can be searched.	Don't specify search for multi-valued property types other than String.
<code>cm_typePath</code> is not a supported search attribute.	Don't use <code>cm_typePath</code> in search criteria.
The <code>not</code> operator cannot be used for LONG properties.	Try to restructure the query using supported syntax.
Sorting on non-indexed fields results in an exception. Searching on a non-indexed field throws an exception, with the embedded exception code of, for example, "DRG-10837: section dStatus does not exist".	Understand which fields have been indexed before using them as sort criteria Example: URL: <code>http://myContentServer/idc/idcplg?IdcService=GET_ADVANCED_SEARCH_OPTIONS&IsSoap=1</code> , look for "IsSortable"
Null cannot be used to specify a date in date ranges.	Restructure your query using a date range with two valid dates, or use the <code>before</code> or <code>after</code> construction. Example: See Javadoc for <code>com.bea.content.expression.IMetadataQueryParameter</code>
Wildcard <code>*</code> as repository name in search paths, when specified as a FTS metadata path criteria, will not work for WebCenter Content unless the wildcard is at the end of the path specification. For example: a <code>cm_path</code> like this: <code>/MyRepository/Foo/*</code>	Specify path parameter on Search object directly. Example: <code>search.setSearchPath(" /*/MyFolders/mystuff")</code>
Empty values are not allowed in a search query.	Don't use a criteria such as <code>cm_nodeName != ''</code> .
<code>Notequals</code> operator is not supported for non-String properties	Be aware of the differences in search behavior and do not write search expressions that depend on unsupported criteria.
<code>IMetadataQueryParameter buildEquals(String userPropertyField, String[] criteria)</code> is not supported.	Be aware of the differences in search behavior and do not write search expressions that depend on unsupported criteria.
Multiple search paths on the same WebCenter Content repository are not supported.	Be aware of the differences in search behavior and do not write search expressions that depend on unsupported criteria.
When searching for folders, recursive search (folder tree search) is not supported, with the exception of searching the entire repository. This is due to WebCenter Content limitations. It is not possible, for example, to perform a search of the form, " <code>cm_isHierarchy=true && cm_path like '/MyUCMRepo/foo/bar/*'</code> ".	To search the entire repository (all folders), leave out the <code>cm_path</code> criteria. To search the immediate children of a folder, use the <code>cm_parent_uid</code> criteria; for example " <code>cm_isHierarchy=true && cm_parent_uid='xxx'</code> " will find the folders immediately beneath the specified parent folder.
When searching for documents, recursive search (folder tree search) is supported if WebCenter Content is configured properly. Also see the Javadoc for <code>com.bea.content.expression.Search</code> regarding the use of search paths.; for example, " <code>cm_isContent=true && cm_path like '/MyUCMRepo/foo/bar/'</code> "	Configure the content server folders_g CollectionSearchRecursiveContent and related settings like CollectionMaxBranch in the WebCenter Content config.cfg file. These are described in WebCenter Content documentation. To perform a document search scoped to a folder tree, either set the search path, or add a <code>cm_path</code> criteria. Also be sure to add a criteria which limits the search to only documents. For example, you could use " <code>cm_isContent = true && cm_path like '/MyUCMRepo/foo/bar/*'</code> "
Only one of <code>cm_path</code> and the Search object's <code>searchPath</code> can be set.	
If neither is set, then all documents in the repository will be searched (both filed and unfiled).	

Table 3–3 (Cont.) Search Considerations and Recommendations

Consideration	Recommendation
When searching for documents and using the LIKE operator, wildcards (*, ?) are only supported in the last path element.	Be aware of the differences in search behavior and do not write search expressions that depend upon unsupported criteria.
When searching documents (cm_isContent=true), it is not possible to limit the search to more than just a single content type; for example, this is not supported: "cm_isContent=true && (cm_objectClass == 'IDC:MyProfile' cm_objectClass == 'IDC:AnotherProfile')". Because it has multiple explicit content types. This also is not supported: "cm_objectClass = 'IDC:GlobalProfile' cm_path like '/StellentRepository/*'" because part of the query is limited to an explicit content type and the other part of the query does not limit the content type.	When using cm_objectClass, if you need to limit the search to more than just a single content type, issue multiple queries to achieve the same behavior. If you want to search across all types, remove the cm_objectClass criteria.
For best search performance, scope the search to a single repository.	Either set the search path on the Search object with <code>search.setSearchPath("/MyUCMRepo")</code> , or scope the query to the repository by adding a cm_path clause like this to the query: <code>cm_path like '/MyUCMRepo/*'</code>
WebCenter Content search doesn't support OR when cm_objectClass is specified in a query; other parameters can be ANDed with this criteria, but OR is not supported. For example, it is not supported to do this: <code>' cm_objectClass = 'IDC:GlobalProfile' myField='bar'</code>	If this functionality is necessary, issue multiple queries to achieve the same behavior.
cm_objectClass criteria only supports ==, !=, and like. Use of != is restricted to the case of excluding folders (which behaves the same as adding cm_isHierarchy=true).	Be aware of the valid operators when using cm_objectClass criteria.
There are several restrictions on cm_path operators. The IN operator cannot be used in conjunction with folder search, or with document recursive search, though it can be used with document direct search.	Use a document direct search path instead; for example, <code>cm_isContent=true && cp_path IN ('/MyUCMRepo/foo', '/MyUCMRepo/bar')</code>
Use of OR operator in conjunction with document recursive search requires recursive search path to specified on Search object.	When searching documents, in order to use the OR operator in conjunction with document recursive search, specify the search path directly on the Search object. Also be sure to scope the search to only documents (by adding <code>cm_isContent=true</code>)
Queries may be case-sensitive depending on the selected WebCenter Content search engine.	Be aware that some WebCenter Content search engines are case-sensitive. OracleTextSearch is case-insensitive. <code>Database.FullText</code> metadata searches are case-sensitive.

3.1.3 Unsupported Features for the Oracle WebCenter Content VCR Adapter

Table 3–4 lists the content management features that will not be supported by the Oracle WebCenter Content VCR Adapter.

Table 3–4 Unsupported Features in Oracle WebCenter Content VCR Adapter

Feature	Consideration	Recommendation
Versioning	The adapter does not support versioning. The latest released document version is available via the SPI.	Do not rely on versioning or access to anything other than the latest released item when using the adapter.
Type Management	The adapter does not include type write capabilities.	Model content types using the WebCenter Content User Interface.
Search	You cannot specify multiple object class criteria in a search expression, such as an expression like: <pre>(cm_objectClass == foo && prop1 == value) (cm_objectClass == bar && prop2 == value2)</pre> The adapter cannot execute this type of search.	It is possible, however, to return multiple nodes representing different content types in a single result set when searching in other ways, such as a prop=value expression.

3.1.4 Unsupported Oracle WebCenter Content Features

[Table 3–5](#) lists WebCenter Content features that are not supported by the adapter. These features will not be exposed in the VCR.

Table 3–5 Considerations for Exposing WebCenter Content Content

Feature	Considerations
Renditions	Only the Web-Layout rendition is supported the Oracle WebCenter Content VCR Adapter. No other rendition types are supported.
Folios	Oracle WebCenter Content Folio meta-document will not be exposed by the VCR.
HCSF Files	HCSF files (Hypertext Content Server Forms) will not be exposed by the VCR.
Dynamic Converter	Dynamic converter will not be exposed by the VCR.
Shortcuts	Shortcuts are not exposed through the Oracle WebCenter Content VCR Adapter.

3.1.5 Unsupported Web Content Management (WCM) Features

[Table 3–6](#) lists WCM (Site Studio) features that are not supported by the adapter. These features will not be exposed in the VCR.

Table 3–6 Considerations for Exposing WCM Content

Feature	Consideration	Recommendation
Embedded Images in WYSIWIG Element Definitions	Embedded images are not supported in a WYSIWIG Element Definition that is part of a Region based Content Type. Any content that is created of this type will not be rendered by the Oracle WebCenter Content VCR adapter. The adapter will return a partial string URI to the image.	Constrain the Use of a WYSIWIG Element definition to HTML text only and use a separate element definition with Link(s) to reference images.

Table 3–6 (Cont.) Considerations for Exposing WCM Content

Feature	Consideration	Recommendation
Element Definitions of type Image, Dynamic Lists are not supported.	The Oracle WebCenter Content VCR Adapter upon reading a region-based content type definition that contains one of these element definitions will not know how to interpret the WCM content. What the adapter may return in some cases is a string interpretation of the content.	Do not use these types of Element Definitions as part of a Oracle WebCenter Content VCR region-based content type definition.
Element Definitions of type Custom have limited support. Custom element values will be represented as strings through the Oracle WebCenter Content VCR Adapter. The custom form called <code>SS_DOCNAME_LINK_FORM</code> is supported by the Oracle WebCenter Content VCR Adapter as an add-on to support Element definitions that contain link element types.	The Oracle WebCenter Content VCR adapter upon reading a region-based content type definition that contains custom element definitions will only know how to represent the WCM content as a string value.	Only use custom element forms for string and link values.

3.1.6 Property Field Mappings

This section explains how the VCR system property fields map to WebCenter Content content fields when searches are performed. During a search operation that is performed using the WLP search API, the standard VCR system properties listed in [Table 3–7](#) are automatically converted to corresponding WebCenter Content fields by the WebCenter Content/VCR Adapter. For example, searches performed through Content Presenter or content selectors perform these conversions automatically.

Note: If you are performing a search, the best practice is to use the system properties as they appear in the WebLogic Portal user interface, such as in the user interface for Content Presenter or content selectors. For example, if you need the binary size, use `VaultFileSize` (the internal name) rather than `cm_binarySize`. This practice ensures that even if the system field mapping changes over time, the search behavior remains the same.

[Table 3–7](#) shows how these mappings are made internally by the WebCenter Content/VCR Adapter. Note that WebCenter Content has two names for every field. One is an internal name, which you can see in WebCenter Content when adding a field to a rule, and the other is the field name that appears in the user interface. In [Table 3–7](#), the internal name (for example, `dDocName`) is listed first, and the UI name (for example, Content ID) is listed below it in parentheses, where applicable.

Caution: The mappings in [Table 3–7](#) are WebCenter Content/VCR Adapter-specific and are subject to change.

Table 3–7 Property Field Mappings

WLP VCR System Property	WebCenter Content Field (When the Object is Document)	WebCenter Content Property (When the Object is Folder)
cm_nodeName	dOriginalName (document native filename)	dCollectionName (Virtual Folder Name)
cm_uid	dDocName (Content ID)	IDC:Folder/{dCollectionID}
cm_path	No direct translation. Handled internally based on Folder and document name.	No direct translation. Handled internally.
cm_createdBy	dDocAuthor (Author)	dCollectionCreator (Creator)
cm_createdDate	dCreateDate	dCreateDate (Created)
cm_modifiedBy	dDocAuthor (Author)	dCollectionModifier
cm_modifiedDate	dCreateDate	dLastModifiedDate
cm_objectClass	No direct translation. Handled internally based on the profile (if any) and/or SiteStudio Region Definition (if any).	No direct translation. Folders are mapped to IDC:Folder ObjectClass
cm_contentType	dFormat (from document native file)	N/A
cm_binaryName	dOriginalName (document native filename)	N/A
cm_binarySize	VaultFileSize (document native file size)	N/A
cm_isHierarchy	True if the object is a folder; false if object is a document.	N/A
cm_isContent	True if the object is a document; false if object is a folder.	N/A

3.2 Performing Create, Update, Delete, and Move Operations

This section discusses creating, updating, deleting, and moving content and content nodes. Typically, you create and edit content in the Content Management part of the WebLogic Portal Administration Console.

This section includes these topics:

- [Section 3.2.1, "Considerations for Creating and Editing Content"](#)
- [Section 3.2.2, "Considerations for Creating and Editing Folders"](#)
- [Section 3.2.3, "Configuring the Trash Folder"](#)

3.2.1 Considerations for Creating and Editing Content

For creating and editing content, profile-based content, as well as IDC:GlobalProfile and IDC:Folder, is supported. Editing or creating of Oracle Site Studio based content (region definition types) is not supported.

If a content property is not editable in Content Server, it is also not editable through the Oracle WebCenter Content SPI Adapter. For example, the `dDocName` property is not editable in either Content Server or the WLP Administration Console once a document has been created.

Note that when you create a document, it is not available through the Oracle WebCenter Content SPI Adapter until it is in released state. The Oracle WebCenter Content SPI Adapter only exposes documents in released state. After the document is in release state, it is only exposed after it is indexed. When you create a folder, it is available immediately.

Note: The WLP Administration Console cannot always detect when a WebCenter Content property is not editable; therefore, in the Administration Console, those properties may appear to be editable even though they are not. An attempt to edit the property will result in an error.

When creating or updating a document node, note that the ObjectClass type specified by the client (the Content Management part of the WebLogic Portal Administration Console) is not used by Content Server. The Content Server's profile configuration determines which ObjectClass is returned for a given document.

When creating or updating a document node with a binary value, note the following rules:

- The node name must match the filename of the binary file. For example, if the binary filename is `future.doc`, your node must be named `future.doc`.
- The server determines the Content Type of a binary value based on the binary filename. You can configure this filename/type mapping with the Content Server Configuration Manager applet using the File Formats menu option.

3.2.2 Considerations for Creating and Editing Folders

This section describes considerations when working with folders.

Note: Creating nodes at the root level is not supported. As a workaround, see the WebCenter Content documentation for information on creating system folders.

To create folders, you generally must configure security properly so that you are connecting as a WebCenter Content user with the appropriate privileges. If you do not have these privileges, you might see an error message of this form:

```
com.bea.content.RepositoryException:  
oracle.stellent.ridc.protocol.ServiceException: Unable to create virtual folder.  
Unable to create virtual folder
```

For more information on specifying the WebCenter Content user, see [Section 2.4, "Security Mapping."](#)

Note that when you create a folder, it is available immediately. When you create a document, it is not available through the Oracle WebCenter Content SPI Adapter until it is in released state. The Oracle WebCenter Content SPI Adapter only exposes documents in released state and only after the document is indexed.

3.2.3 Configuring the Trash Folder

The WebCenter Content `folders_g` component can be configured to expose "trash" folder. If the trash folder is disabled on the WebCenter Content server, then an object you delete from the repository is removed immediately. If the trash folder is enabled on the WebCenter Content server, the adapter considers the `ForceDeleteFolders` `<repository-config>` setting in `content-config.xml`. If this setting is true, a deleted object is deleted immediately from the WebCenter Content server. If false (the default), the deleted object is moved to the trash folder.

3.3 Creating Required Fields

If you create a content type (a WebCenter Content profile), note that creating required fields for one profile makes those fields required for all profiles. For example, if you create a profile called `BookType` and create a required field called `ISBN`, the `ISBN` field is now required for all other profiles. One option is to make the field required, and define a default value in the rule for profiles which do not need this field. Another option is to make the field optional (not required), and for each profile, make the field required or optional through the profile rule configuration.

3.4 Working with Unfiled Documents

WebCenter Content includes the concept of an unfiled document. An unfiled document is a document that does not reside in a hierarchical document structure. Typically, the way to locate unfiled documents is to search for them. In a WebLogic Portal WebCenter Content Repository, unfiled documents are exposed as children beneath the root path of the repository: `/repositoryname`. In the WLP client, you can identify an unfiled document by looking at its `xCollectionID` property. You can also search using this property to find only unfiled documents. If this property is 0, the document is unfiled. If it is a nonzero number, the document is filed. The Oracle WebCenter Content SPI supports reading and updating unfiled documents. The Oracle WebCenter Content SPI does not support creating unfiled documents.

3.5 Node Property Loading

For performance reasons, certain node properties exposed through the Oracle WebCenter Content Adapter are not loaded until they are requested. This section lists the node properties that are fully loaded and properties that are not. Access to fully loaded properties will be faster, so they are a good choice for content templates and other tabular structures.

As a template developer, you can optimize performance of your template if you are aware when different property values are loaded. For example, a typical list template will render faster if you refer only to properties that are immediately loaded when the node is first retrieved and avoid properties that are loaded later when needed.

A secondary consideration is dependent on how the node is retrieved: through search versus fetched by ID or as children of a parent. A property that may be loaded immediately on node retrieval for searches (such as "Results of a Query") may be loaded later for other retrieval methods (such as "Contents Under a Folder"). [Table 3-8](#)

shows whether or not node properties are loaded immediately upon retrieval, by retrieval mechanism.

Note: Any custom properties added by a profile rule are always immediately loaded on node retrieval.

Table 3–8 Loading of Node Properties by Node Retrieval Mechanism

OCS Global Profile Properties	GET BY PARENT ID ("Contents Under a Folder")	SEARCH ("Results of a Query")	GET BY UUID ("Single Content Item" and "List of Items")
VaultFileSize	N	Y	Y
dCheckoutUser	Y	N	Y
dCreateDate	Y	Y	Y
dDocAccount	Y	Y	Y
dDocAuthor	Y	Y	Y
dDocName	Y	Y	Y
dDocTitle	Y	Y	Y
dDocType	Y	Y	Y
dFormat	Y	Y	Y
dID	Y	Y	Y
dInDate	Y	Y	Y
dIsCheckedOut	Y	N	Y
dOutDate	Y	Y	Y
dReleaseDate	Y	N	Y
dReleaseState	Y	N	Y
dRevClassID	Y	N	Y
dRevLabel	Y	Y	Y
dRevRank	Y	N	Y
dRevisionID	Y	Y	Y
dSecurityGroup	Y	Y	Y
dStatus	Y	N	Y
dWebExtension	Y	Y	Y
dWorkflowState	N	N	Y
idcPrimaryFile	Y	Y	Y
idcRenditions	N	N	Y
xCollectionID	Y	Y	Y
xComments	Y	Y	Y
xForceFolderSecurity	Y	Y	Y

Table 3–8 (Cont.) Loading of Node Properties by Node Retrieval Mechanism

OCS Global Profile Properties	GET BY PARENT ID ("Contents Under a Folder")	SEARCH ("Results of a Query")	GET BY UUID ("Single Content Item" and "List of Items")
xHidden	Y	Y	Y
xInhibitUpdate	Y	Y	Y
xReadOnly	Y	Y	Y

3.6 Performing Searches

When performing searches, note the following:

- Restrict the search path to one repository at a time. This best practice boosts search performance, especially with the Oracle WebCenter Content Adapter. To do this, either add a clause like this to your query: "&& cm_path like '/UCMRepo/*'", or set the search path directly on the Search object, by calling `Search.setSearchPath("/MyUCMRepo")`;
- If you conduct a search which finds more than 200 documents or folders, it is possible under some circumstances to receive duplicate or missing items, if content matching the query is being added or removed while the query is executing.
- Only content in the released state is returned through the Oracle WebCenter Content Adapter. When documents are created, they may not be queryable until they have been indexed.

3.7 Scoping Content Selectors and Other Queries to a Repository

In order to scope expression-based searches to a repository (for performance as well as query validity reasons), you can restrict the search path to the appropriate repository. Use the following steps to do this:

1. Construct your search with the OR operator as usual in WLP.
2. Edit the Content Selector in the Advanced tab of the Administration Console as follows:
 1. Group the OR criteria with parentheses ().
 2. AND that criteria with `cm_path` to limit the scope of the search. For example:

```
((toProperty('WLP Repository/image', 'description') == 'image') ||
dDocAuthor = 'sysadmin) && cm_path like '/WLP_Repository/*'
```

3.8 Oracle WebCenter Content Content Modeling Examples

This section presents several basic examples that demonstrate techniques for modeling content in WebCenter Content. These techniques are known produce content models that work well with the Oracle WebCenter Content VCR adapter.

The examples include:

- [Section 3.8.1, "Creating Profile-Based Content Types with the Oracle WebCenter Content Administration Console"](#)
- [Section 3.8.2, "Creating Region-Based Content Types with Oracle Site Studio"](#)

- [Section 3.8.3, "Creating a New Contributor Data File Based On a Region Definition"](#)

Tip: If you want to try running the examples, be sure the Oracle WebCenter Content VCR Adapter is installed, as explained in [Section 2.1, "Installing the Oracle WebCenter Content VCR Adapter."](#) Both the Oracle WebLogic Portal server and Oracle Content Server must be running.

3.8.1 Creating Profile-Based Content Types with the Oracle WebCenter Content Administration Console

This example illustrates how to create a content type and associate a profile with it. The procedure involves creating a content type, adding metadata fields to the type, creating a rule, and creating a profile. The content type created using this technique will be surfaced as a VCR Content Type in WebLogic Portal. See also [Section 3.1.2, "Best Practices for Modeling Content."](#)

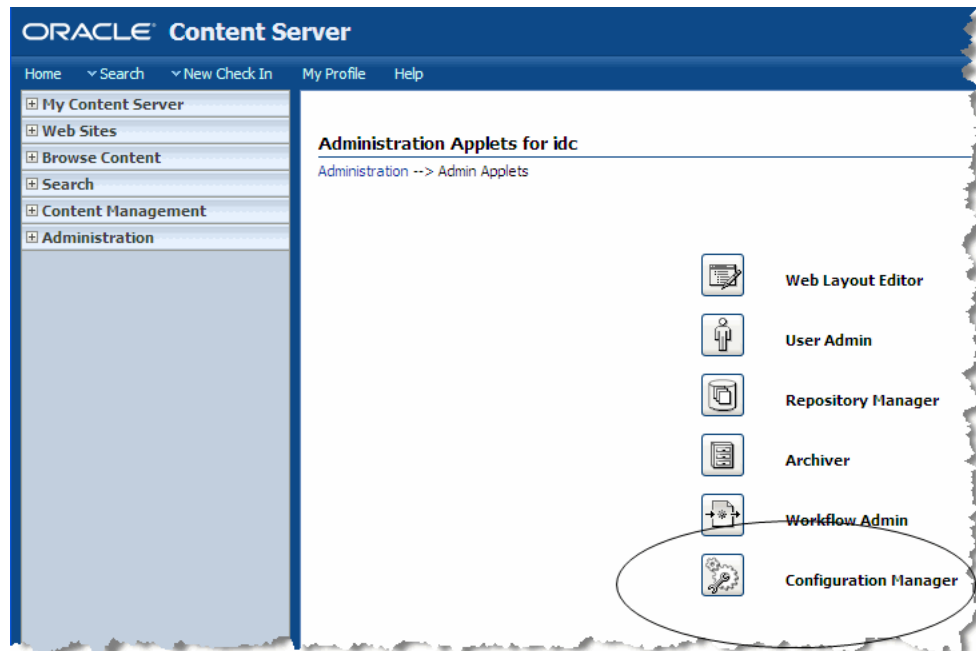
Note: If you do iterative development where you have already started your WLP server and then you change or add to your WebCenter Content definitions, you will either need to restart your WLP server or flush the P13N caches for the definition changes to take effect. For information on flushing the caches, see [Section 2.1.3, "Modify Cache Settings."](#)

Tasks described in this section include:

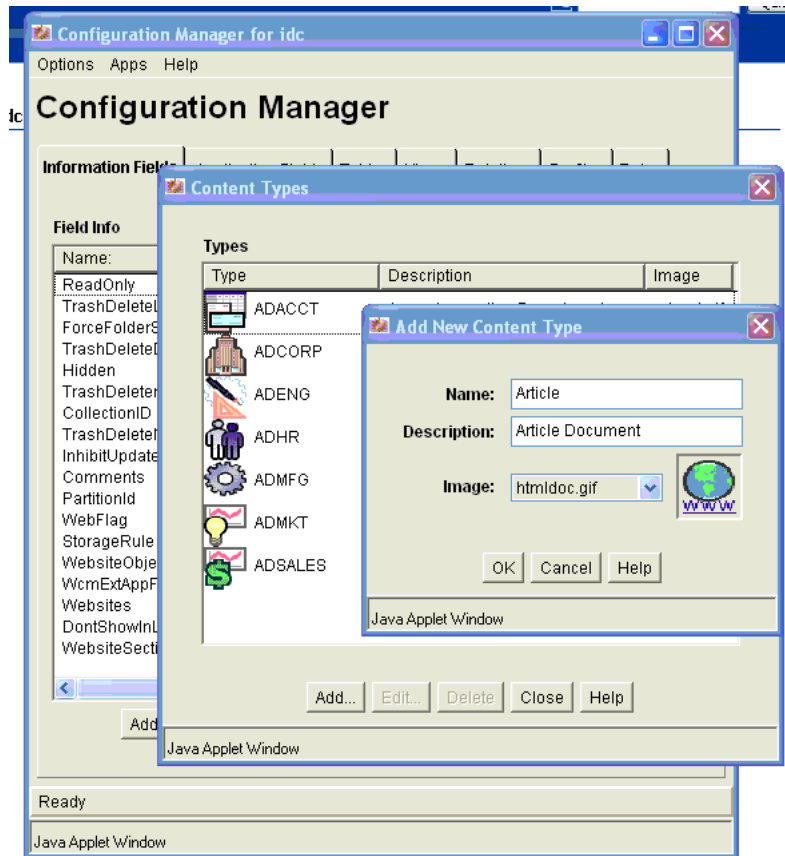
- [Section 3.8.1.1, "Creating a New Content Type"](#)
- [Section 3.8.1.2, "Creating Information Fields"](#)
- [Section 3.8.1.3, "Creating a Rule"](#)
- [Section 3.8.1.4, "Creating a Profile"](#)

3.8.1.1 Creating a New Content Type

1. Start Oracle Content Server and log in to the user interface.
2. From the Administration tray, select **Admin Applets**.
3. In the Administration page, select **Configuration Manager**, as shown in [Figure 3–2](#). The Configuration Manager window appears.

Figure 3–2 Administration Page

4. In the Configuration Manager dialog, Select **Options > Content Types**.
5. In the Content Types dialog, select **Add**. The Add New Content Type dialog appears, as shown in [Figure 3–3](#).

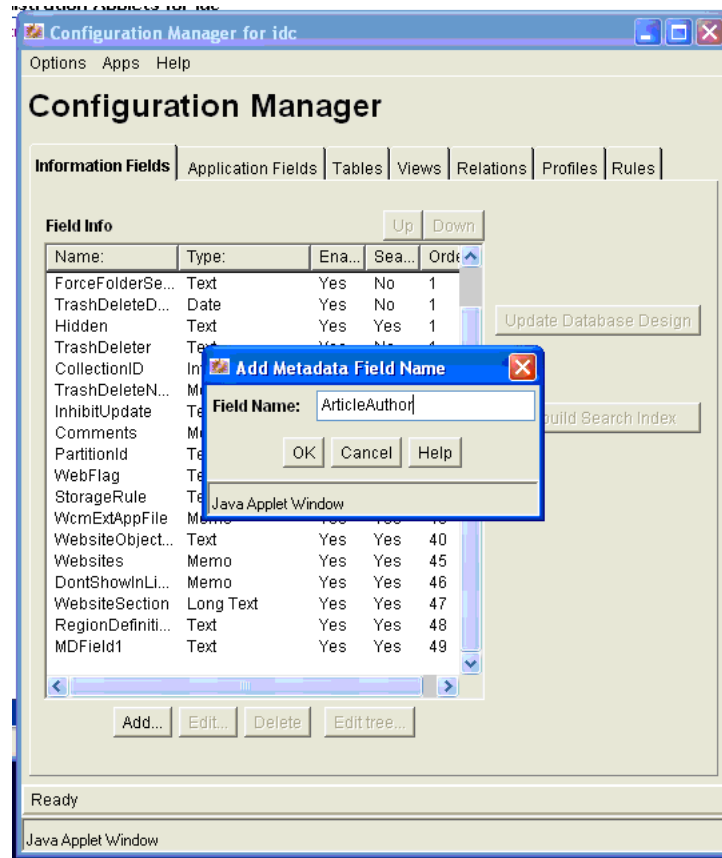
Figure 3–3 Add New Content Type Dialog

6. Enter a Name and Description for the new content type, and click **OK**. The new type is added to the list of types in the Content Types dialog.

3.8.1.2 Creating Information Fields

This section explains how to create the Information Field(s) (metadata fields) that will be associated with your new VCR Content Type (as content properties).

1. Open the Configuration Manager dialog as explained in [Section 3.8.1.1, "Creating a New Content Type."](#)
2. In the Configuration Manager dialog, be sure the Information Fields tab is selected.
3. Click **Add**.
4. In the Add Metadata Field Name dialog ([Figure 3–4](#)), enter a Field Name and click **OK**.

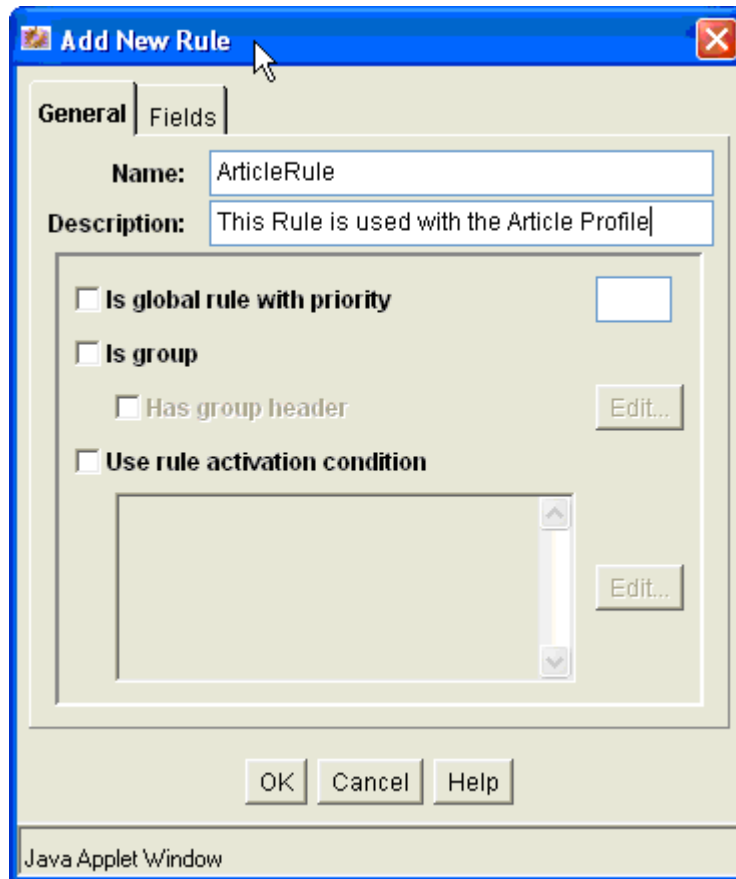
Figure 3–4 Add Metadata Field Name Dialog

5. In the next Add Metadata Field dialog, specify the desired field type. Click **OK**. The new field is added to the Field Info list.
6. Click **Update Database Design**.

3.8.1.3 Creating a Rule

This section explains how to create a Rule that will be used with the Profile that defines the Content Type.

1. Open the Configuration Manager dialog as explained in [Section 3.8.1.1, "Creating a New Content Type."](#)
2. In the Configuration Manager dialog, select the Rules tab.
3. Click **Add**.
4. In the Add New Rule dialog, enter the name of the rule, as shown in [Figure 3–5](#).

Figure 3–5 Add New Rule Dialog

5. Select the Fields tab.
6. In the Fields tab, click **Add**.
7. In the Add Rule Field dialog (Figure 3–6), select an Information Field from the Field Name dropdown list. For example, select the Information Field you created in Section 3.8.1.2, "Creating Information Fields." This field will be associated with the Content type that you are creating.

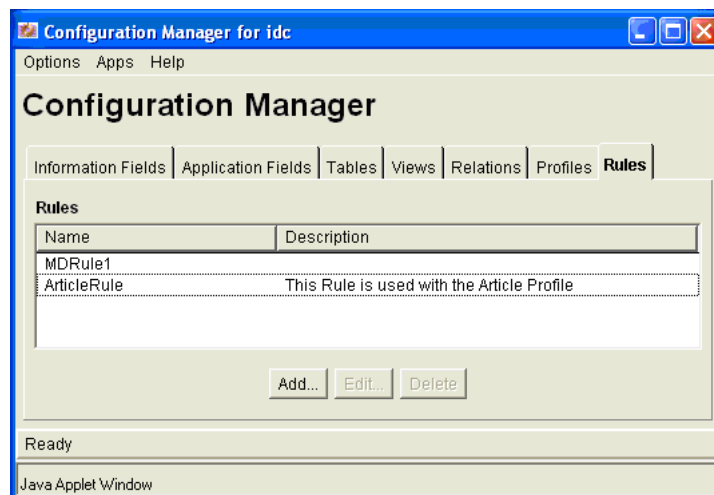
Figure 3–6 Add Rule Field Dialog

8. Click **OK**.
9. In the Add Rule Field dialog, do not change the defaults. Click **OK**.
10. Repeat steps 5 – 9 to add any additional property fields you want associated with this content type. Any required fields should generally be listed in your rule, in

order to support document creation. When your done all of these property fields will appear in the dialog.

11. Click **OK** in the Add New Rule dialog. The new rule appears in the Rules list under the Rules tab of the Configuration Manager dialog, as shown in [Figure 3–7](#).

Figure 3–7 New Rule in the Configuration Manager



3.8.1.4 Creating a Profile

This section explains how to create the profile that will define the Content Type you created in [Section 3.8.1.1, "Creating a New Content Type."](#)

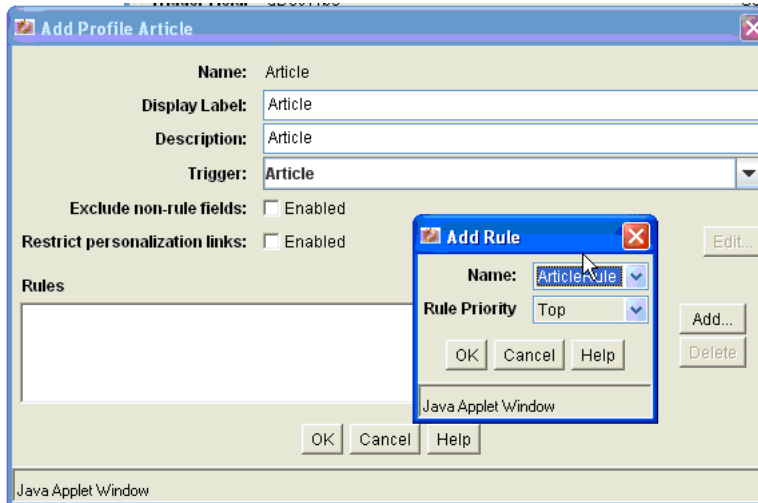
1. Open the Configuration Manager dialog as explained in [Section 3.8.1.1, "Creating a New Content Type."](#)
2. In the Configuration Manager dialog, select the Profiles tab.
3. Click **Select**.
4. In the Edit Trigger Field dialog, select **Type** from the dropdown menu and click **OK**. Note that in the Configuration Manager, the Trigger Field is now set to `dDocType`. This specifies how documents are associated with WebCenter Content profiles, in this case through the Type (`dDocType`) field value.

Note: The use of `dDocType` is not required. You can use any other option list metadata field. For details on creating content profiles and using triggers, see "Content Profile Triggers" in *Managing Repository Content*.

5. In the Profiles tab, select **Add**. The Add Profile dialog appears.
6. In the Add Profile dialog, enter a name and click **OK**.
7. In the next Add Profile dialog, enter a label and a description. From the Trigger dropdown menu, Select the Content Type that you created in [Section 3.8.1.1, "Creating a New Content Type."](#) See [Figure 3–8](#).
8. Ensure each profile has a unique trigger value. Sharing the same trigger value across multiple profiles is not supported.
9. Check **Exclude non-rule fields**.

10. In the Rules part of the dialog, click **Add**.
11. In the Add Rule dialog, select the Rule you created in [Section 3.8.1.3, "Creating a Rule."](#) See [Figure 3–8](#).

Figure 3–8 Add Profile Dialog



12. Click **OK** in the Add Rule dialog, and click **OK** in the Add Profile dialog.
13. Close the Configuration Manager dialog.
14. Use the Oracle WebCenter Content Management Contribution functions to add content using this new content type.
15. Log on to the WebLogic Portal Administration Console to see this Content Type and any content you create that is associated with this type. Depending on how your Oracle WebCenter Content Adapter Type caches are configured, you need to flush the caches or restart the server before the updated type is visible in WLP.

3.8.2 Creating Region-Based Content Types with Oracle Site Studio

This example illustrates how to create a Site Studio region definition (which will be mapped to a WLP content type) as well as a contributor data file based on the region definition. In the WLP VCR, the data file will surface as a content node with associated metadata fields. The metadata fields are those associated with the WebCenter Content region definition, plus additional metadata that comes from the WebCenter Content metadata fields pulled in by a profile. See also [Section 3.1.2, "Best Practices for Modeling Content."](#)

Note: If you do iterative development where you have already started your WLP server and then you change or add to your WebCenter Content definitions, you will either need to restart your WLP server or flush the P13N caches for the definition changes to take effect. For information on flushing the caches, see [Section 2.1.3, "Modify Cache Settings."](#)

3.8.2.1 Prerequisites

This section explains how to use Oracle Site Studio and the Oracle WebCenter Content Administration console to create content using region definitions. The goal of this

procedure is to create region-based content in WebCenter Content and have that content and its properties appear in the WebLogic Portal VCR. The Site Studio region elements will be expressed as property fields in the VCR.

For background information on Site Studio, see [Section 3.1.2, "Best Practices for Modeling Content."](#)

Note: The example shown here will use the Article profile definition used in the previous example, [Section 3.8.1, "Creating Profile-Based Content Types with the Oracle WebCenter Content Administration Console."](#)

3.8.2.2 Overview of Steps

The basic steps described in this section are:

1. Create your element definitions. This example demonstrates how to create one element definition for each of the four supported types:
 - WYSIWYG Element
 - Plain Text Element
 - Static List Element
 - Link Element Type (via a custom element using the supplied custom element form)

Note: Image and Dynamic lists are not supported by the Oracle WebCenter Content VCR Adapter.

2. Create a Region definition.
3. Add the element definitions to the Region definition.
4. Create a Contributor Data file based on the Region definition.
5. Edit the Contributor Data file.
6. View the Content in the WLP VCR.

3.8.2.3 Creating the Element Definitions

This section explains how to create four element definitions: WYSIWYG, plain text, static list, and link.

1. Start Oracle Site Studio.
2. In the Site Assets dropdown menu in the Site Studio window, select **Element Definitions**, as shown in [Figure 3–9](#).

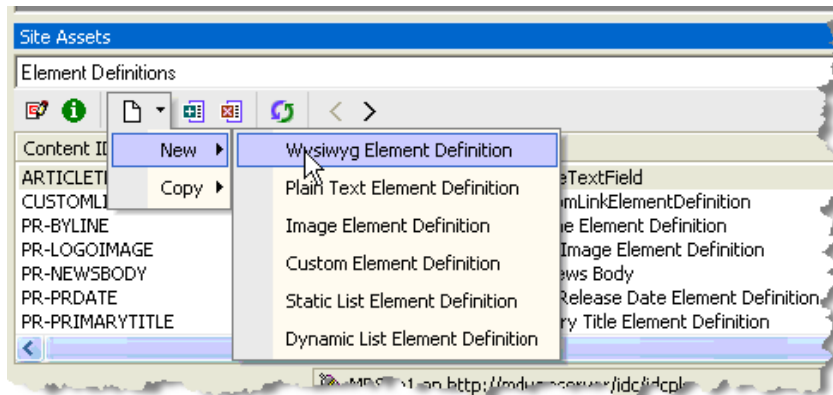
Figure 3–9 Site Assets Menu



3.8.2.3.1 Create the WYSIWYG Element Follow these steps to create a WYSIWYG element:

1. Select the **Page** icon and select **New > WYSIWYG Element Definition**, as shown in [Figure 3–10](#). The Content Server Dialog appears.

Figure 3–10 Selecting Wysiwyg Element Definition



2. In the Content Server dialog enter a Content ID and a Title, as shown in [Figure 3–11](#).

Optionally, associate this Element Definition to the Content Type that it will be used with. In this example, the Article content type is used.

Figure 3–11 Assign Info Form for WYSIWYG Content Element

The screenshot shows the 'Content Server Dialog' window with the 'Assign Info Form' tab selected. The form contains the following fields:

- * Content ID: AR-WYSIWYG
- * Type: Article - Article Document (dropdown menu)
- * Title: WYSIWYG Element Def For Article Type
- * Author: sysadmin (text input) and sysadmin (dropdown menu)
- * Security Group: Public (dropdown menu)
- Read Only: FALSE (dropdown menu)
- Trash Delete Location: (text input) with a 'Browse...' button
- Comments: (text area)

3. Click **Assign Info** at the bottom of the dialog.

3.8.2.3.2 Create the Plain Text Element Follow these steps to create a plain text element

1. Select the **Page** icon and select **New > Plain Text Element Definition**.
2. In the Content Server Dialog enter a Content ID and a Title, as shown in [Figure 3–12](#).

Optionally, associate this Element Definition to the Content Type that it will be used with. In this example, the Article content type is used.

Figure 3–12 Assign Info Form for Plain Text Content Element

The screenshot shows the 'Content Server Dialog' window with the 'Assign Info Form' tab selected. The form contains the following fields:

- * Content ID: AR-PlainText
- * Type: Article - Article Document (dropdown menu)
- * Title: Plain Text Element Definition for Article Type
- * Author: sysadmin (text input) and sysadmin (dropdown menu)
- * Security Group: Public (dropdown menu)
- Read Only: FALSE (dropdown menu)
- Trash Delete Location: (text input) with a 'Browse...' button
- Comments: (text area)

3. Click **Assign Info** at the bottom of the dialog.

3.8.2.3.3 Create the Static List Element

1. Click the **Page** icon and select **New > Static List Element Definition**.
2. In the Content Server dialog enter a Content ID and a Title, as shown in [Figure 3-13](#)

Optionally, associate this Element Definition to the Content Type that it will be used with. In this example, the Article content type is used.

Figure 3-13 Assign Info Form for Static List Content Element

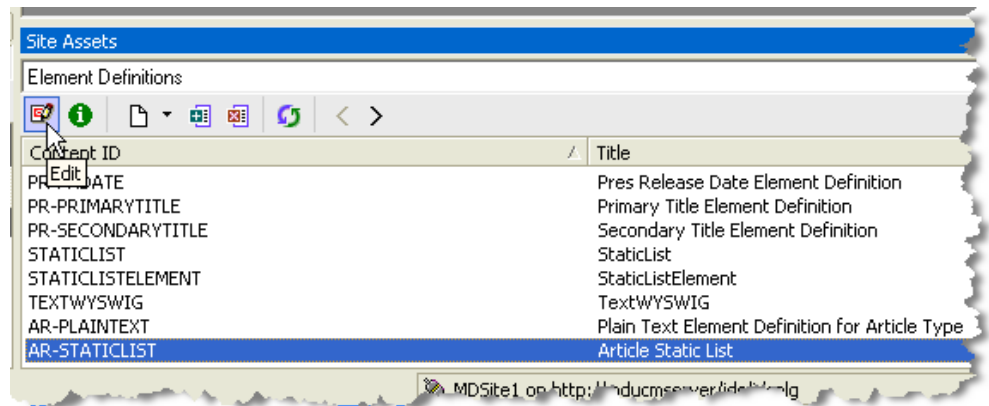
The screenshot shows the 'Content Server Dialog' window with the 'Assign Info Form' for a 'Static List Content Element'. The form contains the following fields and values:

- * Content ID: AR-StaticList
- * Type: Article - Article Document (dropdown)
- * Title: Article Static List
- * Author: sysadmin (text input) and sysadmin (dropdown)
- * Security Group: Public (dropdown)
- Read Only: FALSE (dropdown)
- Trash Delete Location: (text input) with a 'Browse...' button
- Comments: (text area)

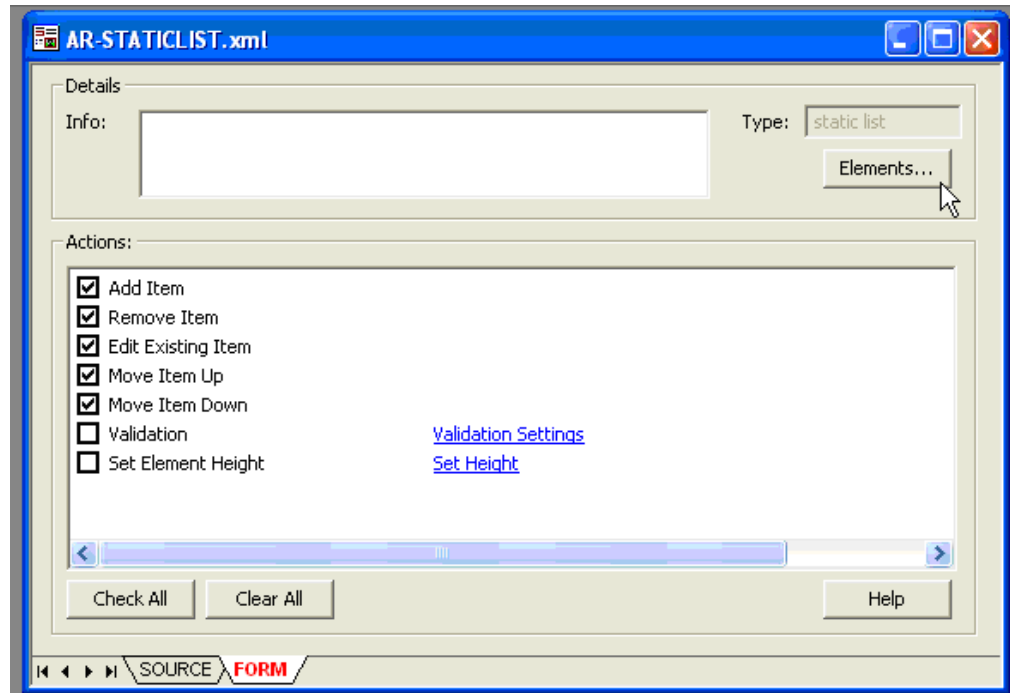
3. Click **Assign Info** at the bottom of the dialog.

Note: In the following steps, you further define the sub-elements that will comprise the static list. Keep in mind that when adding elements to the static list you can only add elements that the adapter supports (WYSIWYG, Plain Text, and the Link (custom) element type). Embedding a static list within a static list is not supported. In the example in this section, a static list consisting of two plain text fields is created.

4. Select the static list element definition you just created from the list of elements and select the **Edit** icon, as shown in [Figure 3-14](#). The Elements dialog appears.

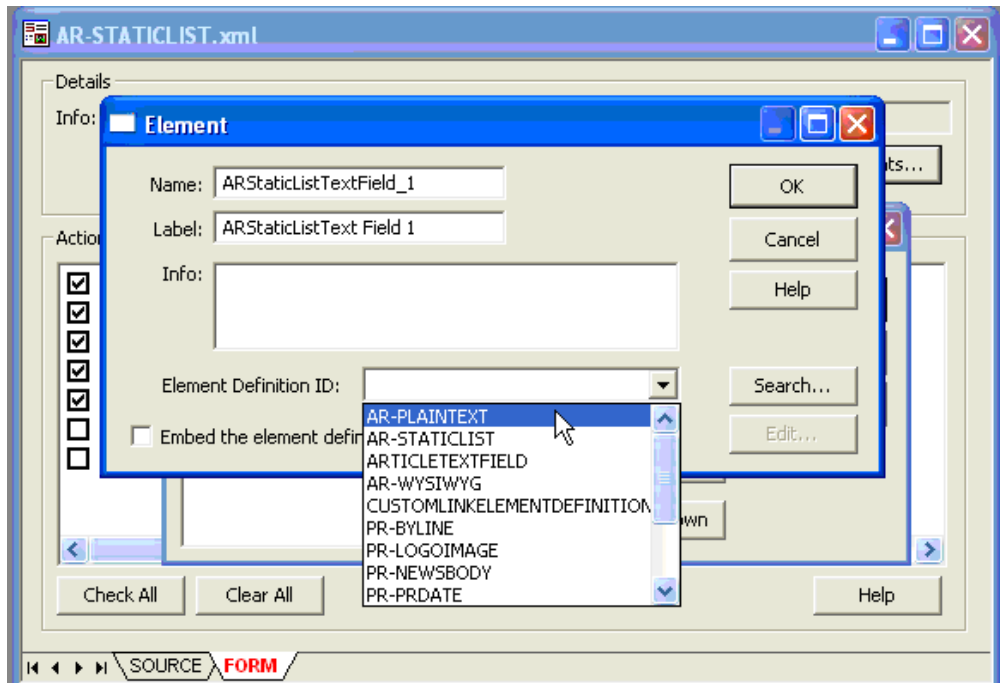
Figure 3–14 Selecting the Static List and Clicking the Edit Icon

- In the Element Edit dialog, select **Elements**, as shown in Figure 3–15. The Elements dialog appears.

Figure 3–15 Selecting the Elements Button in the Dialog

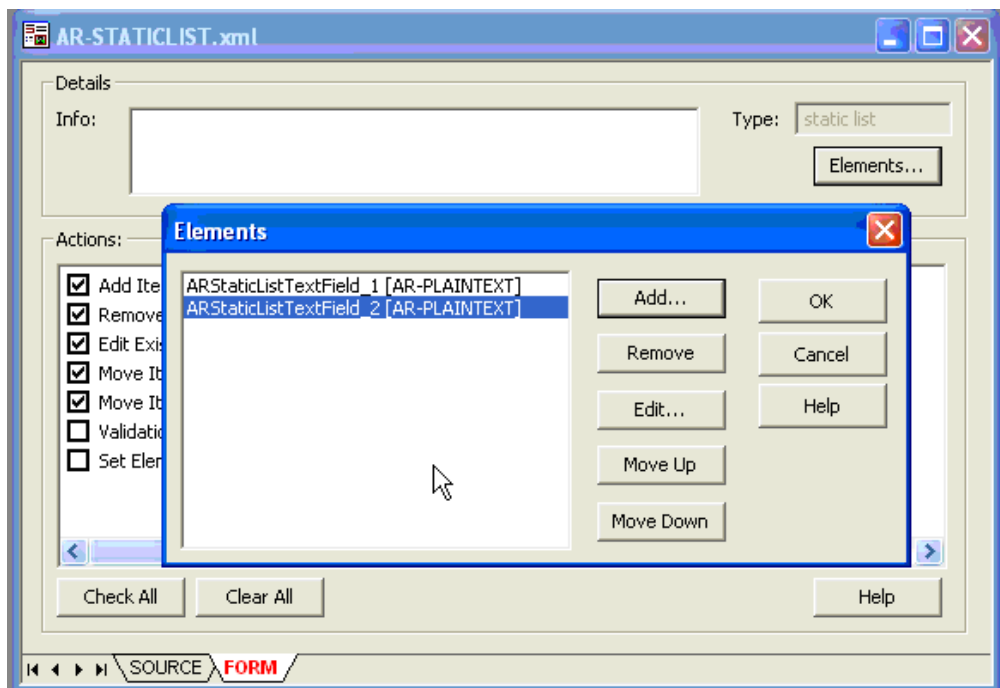
- In the Elements dialog, select **Add**. The Element dialog appears.
- In the Element dialog, enter the Name and Label for this entry and select the Element Definition to be used for this entry in the list, as shown in Figure 3–16. In this example, the previously created Plain Text element is used. Click **OK**.

Figure 3–16 *Completing the Element Dialog*



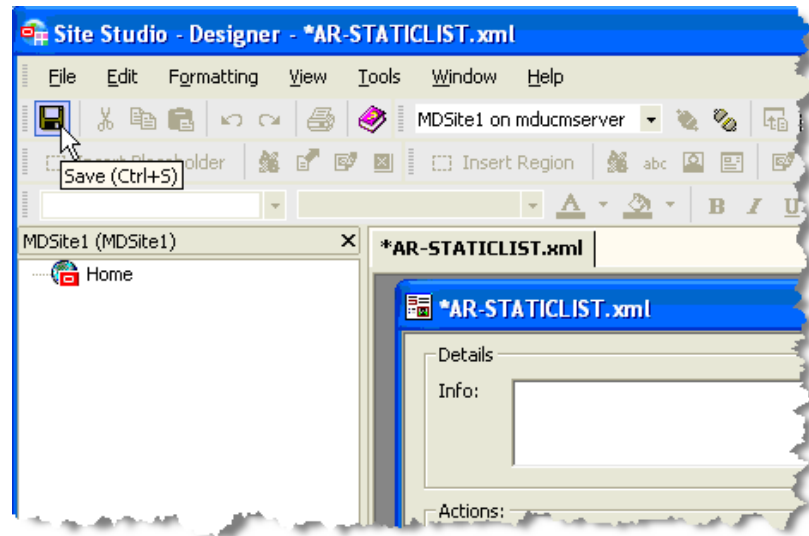
8. After you click OK, the Elements dialog appears again. Click **Add** to repeat the process as needed to add additional elements to the static list. In this example we added one more plain text element, as shown in [Figure 3–17](#) Press the **OK** button to complete the static list elements definition process.

Figure 3–17 *The Elements Dialog*



9. You are now returned to the top-level element definition dialog. *At this point, you must save the element definition.* Click the **Save** icon in the to-left part of the window, as shown in [Figure 3–18](#).

Figure 3–18 Saving the Definitions

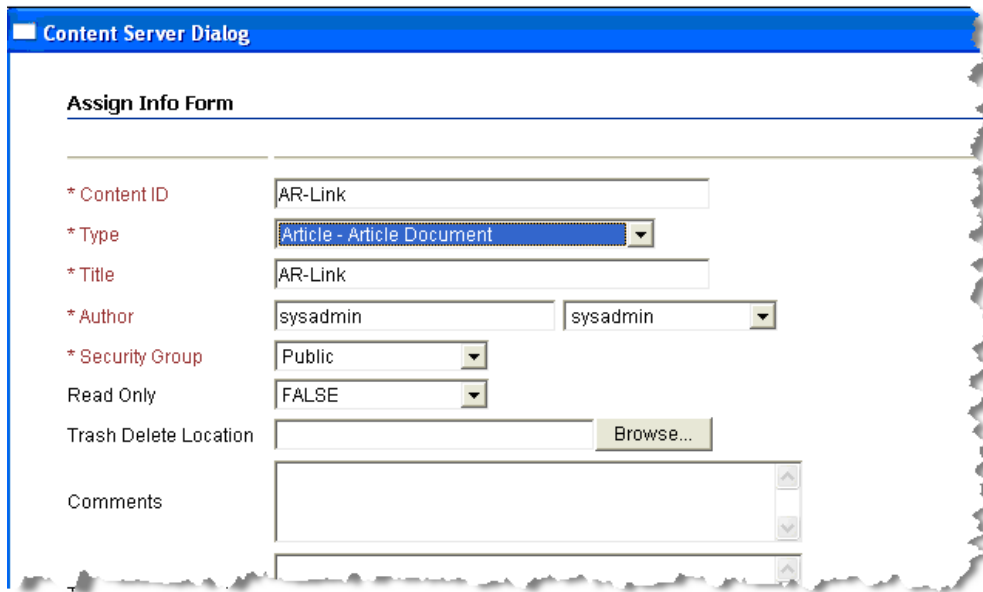


3.8.2.3.4 Create the Link Element A Link element is a custom element that is understood by the Oracle WebCenter Content VCR Adapter. To be able to create this custom element type you must have loaded the custom element form called `ss_docname_link_form.htm` into your Site Studio Configuration. Refer to the WebCenter Content documentation for more information on custom element form.

1. Select the **Page** icon and select **New > New Custom Element Definition**.
2. In the Content Server dialog enter a Content ID and a Title, as shown in [Figure 3–19](#).

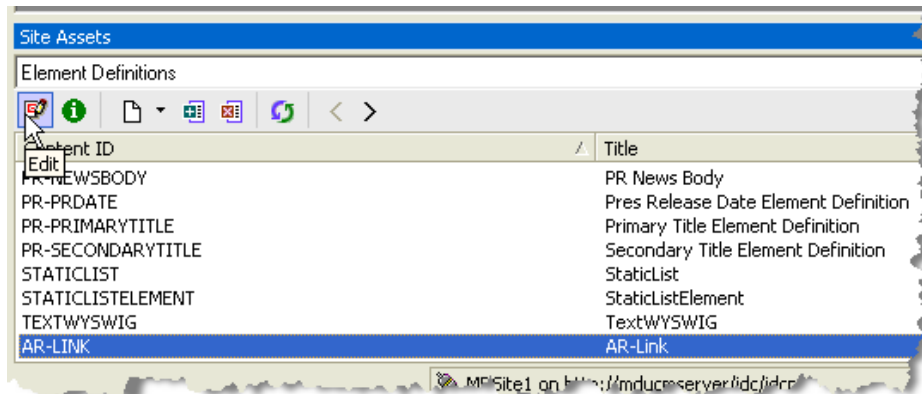
Optionally, associate this Element Definition to the Content Type that it will be used with. In this example, the Article content type is used.

Figure 3–19 Assign Info Form for Link Element

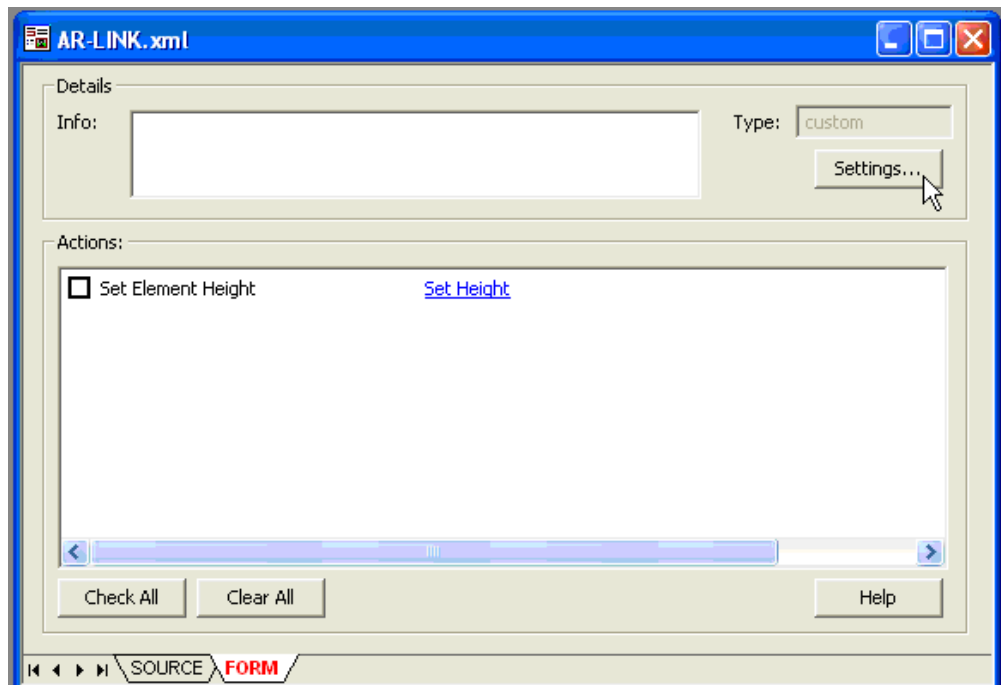


3. Select the link element definition that you just created from the list of elements and select the **Edit** icon, as shown in [Figure 3–20](#).

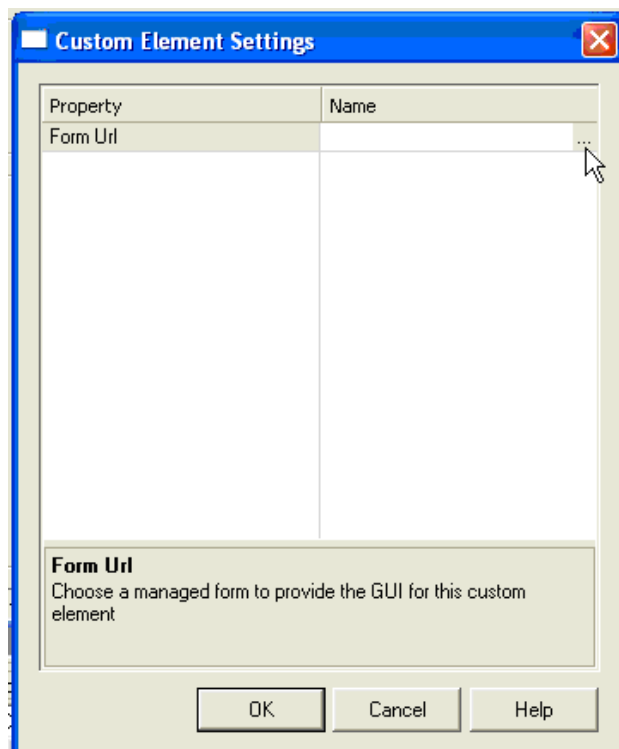
Figure 3–20 Selecting the Edit Icon



4. In the edit dialog for the link, click **Settings**, as shown in [Figure 3–21](#). The custom element Settings Dialog appears.

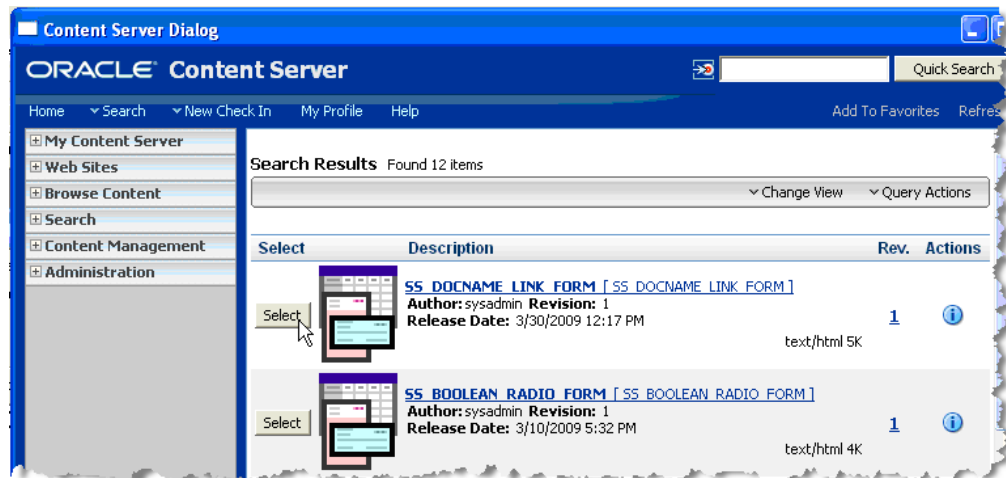
Figure 3–21 The Edit Dialog for the Link Element

5. In the Settings dialog, select the "..." (ellipses) at the end of the name field, as shown in Figure 3–22.

Figure 3–22 The Custom Element Settings Dialog

- The Content Server Dialog appears showing all the custom forms available in the system. Using the **Select** button, select the form named **SS_DOCNAME_LINK_FORM [SS_DOCNAME_LINK_FORM]**, as shown in [Figure 3–23](#).

Figure 3–23 *Selecting the Form in the Search Results*



- The Custom element Settings dialog appears with the Name field populated. Click **OK**.
- You are now returned to the top-level element definition dialog. *At this point, you must save the element definition.* Click the **Save** icon in the to-left part of the window.

3.8.2.4 Create a Region Definition

The next step is to create a Region definition and add the element definitions to it.

- In the Site Assets dropdown menu in the Site Studio window, select **Region Definitions**.
- From the **Page** icon dropdown menu, select **New > Region Definition**.
- In the Content Server dialog enter a Content ID and a Title, as shown in [Figure 3–24](#).

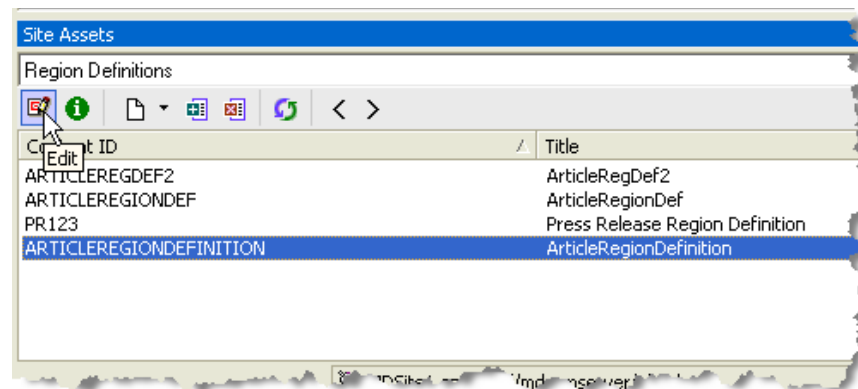
Associate this Region Definition to the Content Type that it will be used with. In this example, the Article content type is used.

Figure 3–24 Assign Info Form for Region Definition

The screenshot shows a dialog box titled "Content Server Dialog" with a sub-section "Assign Info Form". The form contains the following fields:

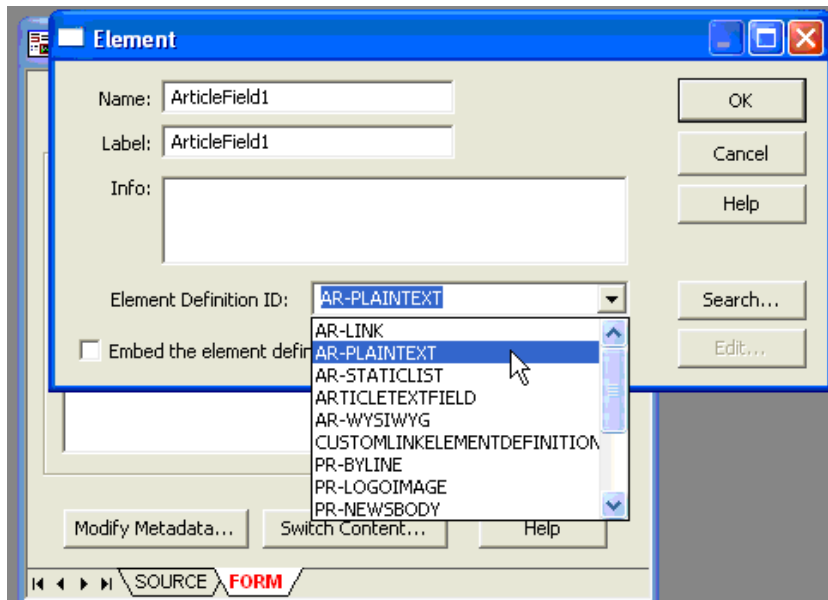
- * Content ID: ArticleRegionDefinition
- * Type: Article - Article Document
- * Title: ArticleRegionDefinition
- * Author: sysadmin
- * Security Group: Public
- Read Only: FALSE
- Trash Delete Location: (empty field with a "Browse..." button)
- Comments: (empty text area)

4. Click **Assign Info** at the bottom of the dialog.
5. Highlight the region definition that was just created and select the **Edit** icon, as shown in [Figure 3–25](#). An Edit Dialog appears.

Figure 3–25 Selecting the Edit Icon

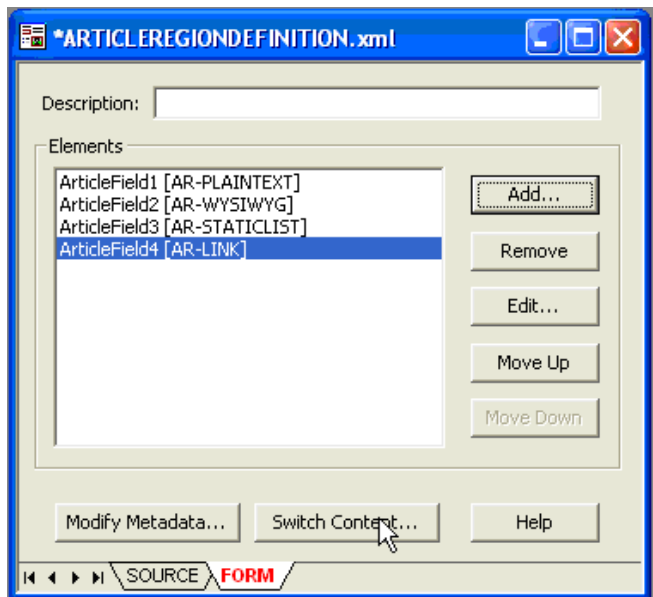
6. In the Edit dialog, click **Add**.
7. In the next dialog, enter the Name and Label fields. The values you enter in these fields will appear in the Property fields in the VCR. Select one of the previously defined element definitions in the Element Definition ID drop down box, as shown in [Figure 3–26](#). Do not check the **Embed the element definition inside the region definition** checkbox. Click **OK** when finished.

Figure 3–26 *Selecting a Previously Defined Element Definition*



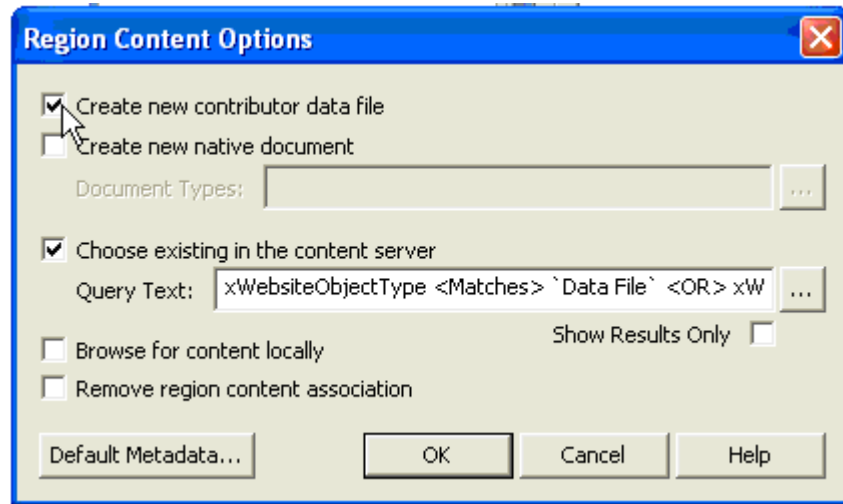
8. Repeat the previous step to add all the other element definitions that you wish to add, and you will see something similar to [Figure 3–27](#).

Figure 3–27 *Element Definitions Added to Region Definition List*



Note: The next step creates a contributor data file based on this region definition.

9. Select **Switch Content** at the bottom of the region element list dialog (see [Figure 3–27](#)). The Regions Content Options dialog appears.
10. In the Regions Content Options dialog, make sure that the **Create new contributor data file** option box is checked, as shown in [Figure 3–28](#), and click **OK**.

Figure 3–28 Region Content Options Dialog

Note: You can optionally associate the region definition with a profile. This technique is useful to expose in the WLP content type a combination of the fields from the profile as well as elements from the region. If no profile association is configured, then the WLP content type will contain a combination of all metadata fields on the content server as well as elements from the region.

To associate a profile with the region definition, select **Modify Metadata** at the bottom of the region edit dialog. The Enable Metadata Modification dialog appears. In this dialog, select a profile from the Profile Trigger Value popup menu in the lower-right hand corner, then click **OK**. This associates the region definition with that profile.

11. You are now returned to the top-level element definition dialog. *At this point, you must save the element definition.* Click the **Save** icon in the to-left part of the window.

The creation of the regions-based content type is now complete.

3.8.2.5 Viewing the Region-Based Content Type from the WLP Repository

Figure 3–29 and Figure 3–30 show what the regions-based content type created in this section looks like when viewed from the WebLogic Portal Administration Console.

Figure 3–29 Region-Based Content Type Surfaced in WebLogic Portal

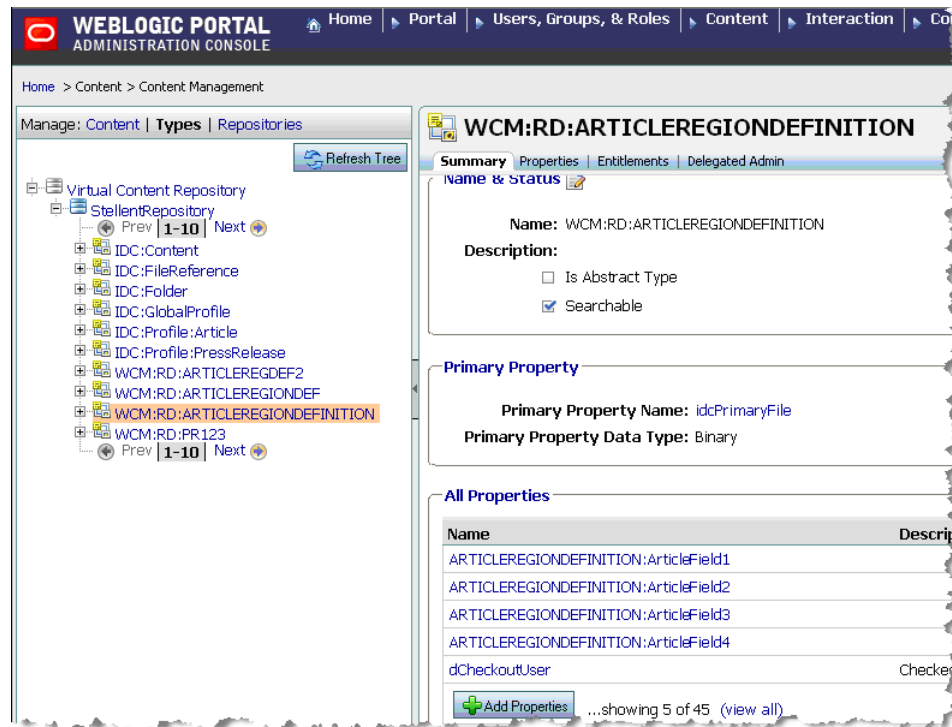


Figure 3–30 shows the property descriptions for the content type.

Figure 3–30 Property Descriptions

All Properties		
Name	Description	Data Type
ARTICLEREGIONDEFINITION:ArticleField1		String
ARTICLEREGIONDEFINITION:ArticleField2		String
ARTICLEREGIONDEFINITION:ArticleField3		WCM:SL:AR-STATICLIST (Nested)
ARTICLEREGIONDEFINITION:ArticleField4		Link
dCheckoutUser	Checked out by	String

At the bottom of the table is an 'Add Properties' button and a note '...showing 5 of 45 (view all)'.

3.8.3 Creating a New Contributor Data File Based On a Region Definition

This section explains how to use Oracle Site Studio and the Oracle WebCenter Content Administration console to create content using region definitions. The goal of this procedure is to create region-based content in WebCenter Content and have that content and its properties appear in the WebLogic Portal VCR. The Site Studio region elements will be expressed as property fields in the VCR.

For background information on Site Studio, see [Section 3.1.2, "Best Practices for Modeling Content."](#)

3.8.3.1 Prerequisites

As a best practice, it is recommended that you first create a profile definition to associate with a newly created region-based content type definition. If you do not associate a region definition with a profile, then by default the region-based content

type will be associated with a global profile and all WebCenter Content metadata fields will be exposed when viewing instances of content based on the region. WebCenter Content uses profiles to manage how metadata is structured and displayed.

Note: The example in this section uses the Article profile definition discussed in the previous example, [Section 3.8.1, "Creating Profile-Based Content Types with the Oracle WebCenter Content Administration Console."](#)

3.8.3.2 Overview of Steps

The basic steps described in this section are:

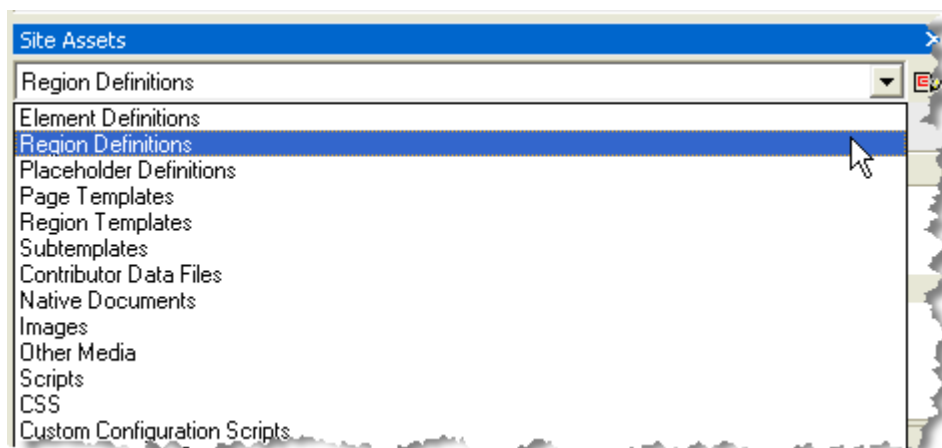
1. Select the region definition from which the new content node will be created.
2. Create an empty contributor data file based on that region definition.
3. Edit the contributor data file to populate the content fields.

3.8.3.3 Selecting the Region Definition

This section describes how to select the region definition in Site Studio. Region definitions can also be selected outside of Site Studio Designer, in the Content Server.

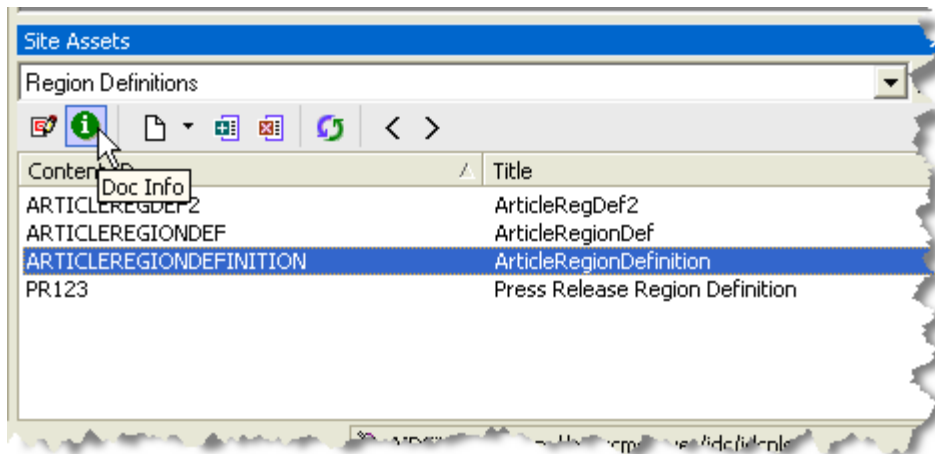
1. Start Oracle Site Studio.
2. In Site Studio, select **Region Definitions** from the Site Assets dropdown menu, as shown in [Figure 3-31](#).

Figure 3-31 Site Assets Dropdown Menu



3. From the resulting list of region definitions, select a region type on which to base the new content node, and select the **Doc Info** button to launch the Oracle Content Server Administration console, as shown in [Figure 3-32](#). It is also possible to create contributor data files outside of Site Studio Designer, on the Content Server. The important part is to first locate the region definition.

Figure 3–32 *Selecting the Doc Info Icon*



- From the Content Server Administration console, select **Create New Web Asset** from the Content Actions dropdown menu, as shown in [Figure 3–33](#).

Figure 3–33 *Selecting from the Content Actions Menu*



- The Content Check In form appears for the Contributor data file. Fill out the ContentID and Title fields. Be sure and associate the Type field with the appropriate profile. In this case, select **Article Document**. Set the Author and Security group fields as appropriate. See [Figure 3–34](#).

Figure 3–34 Content Check In Form

Content Check In Form

* Content ID

* Type

* Title

* Author

* Security Group

Web Asset:

* Revision

Read Only

Trash Delete Location

Comments

Trash Delete Old Name

Trash Delete Date

Inhibit Propagation

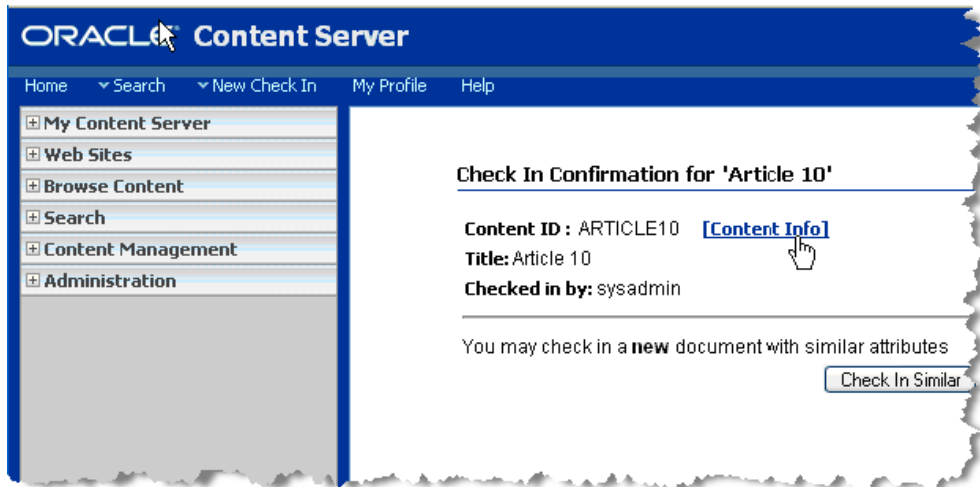
Hidden

Force Folder Security

Note: Be sure and set the Folder location to save the data file otherwise it will not be browseable by the Portal Administration Console or Content Presenter, though it can be located via search.

6. Select **Check In**. The Check in Confirmation Dialog appears.
7. In the Check In Confirmation Dialog, click the **Content Info** link to navigate to the entry for the contributor data file, as shown in

Figure 3–35 Clicking the Content info Link



8. From the Content Information screen, select **Content Actions > Edit Data File** from the Content Actions dropdown menu. The Site Studio Contributor Data File Editor appears.
9. Use the editor to enter information in each of the pre-defined region fields (plain text, WYSIWYG, static list, and link). Also, select the Metadata tab and enter metadata for the contributor data file. Note that the available metadata fields are associated with the profile with which this content is associated. See [Figure 3–36](#) and [Figure 3–37](#).

Figure 3–36 Editing the Contributor Data File

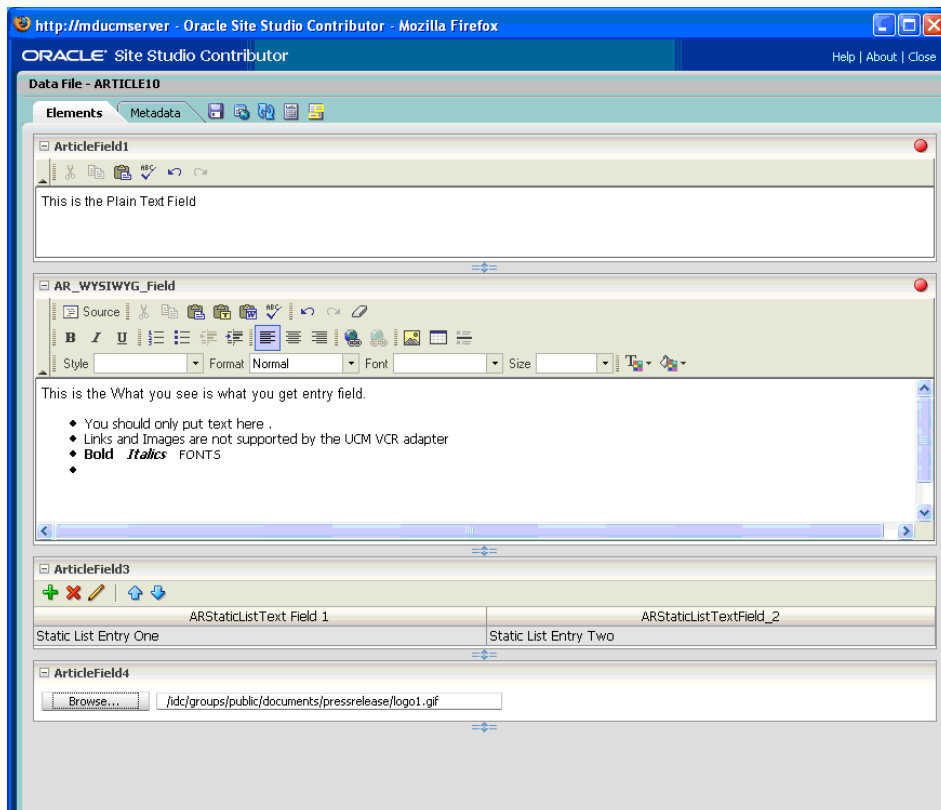


Figure 3–37 Editing the File's Metadata

http://mducmsserver - Oracle Site Studio Contributor - Mozilla Firefox

ORACLE Site Studio Contributor Help | About | Close

Data File - ARTICLE10

Elements Metadata

Assign Info Form

* Content ID: ARTICLE10

* Type: Article - Article Document

* Title: Article 10

* Author: sysadmin sysadmin

ArticleAuthor: John Hemingway

ArticleTopic: How To Create Regions Content

Reset

10. Save the file.

3.8.3.3.1 Viewing the Content in WLP The following figures illustrate how this new content appears in the WebLogic Portal Administration Console. Remember that all Site Studio Region Elements are presented as WLP properties fields. See Figure 3–38, Figure 3–39, Figure 3–40, and Figure 3–41.

Figure 3–38 WebCenter Content Information Surfaced in VCR

WebLogic Portal Administration Console :: Content :: Content Management - Mozilla Firefox

WEBLOGIC PORTAL ADMINISTRATION CONSOLE

Home > Content > Content Management

Manage: Content | Types | Repos

Repository View

Virtual Content Repository

StallenRepository

Contribution Folders

eposner

MDDemo

Trash

MDDemo

Browse Contents

Showing 1-10 of 10

Order	Name	Type	Last Modified	Delete
	ARTICLE10.xml	WCM:RD:ARTICLEREGIONDEFINITION	Apr 1, 2009	<input type="checkbox"/>
	article2regiondefbaseddoc3.xml	WCM:RD:ARTICLEREGDEF2	Mar 30, 2009	<input type="checkbox"/>
	Computer History Long.htm	IDC:Profile:Article	Mar 13, 2009	<input type="checkbox"/>
	Computer History Short2.htm	IDC:Profile:Article	Mar 13, 2009	<input type="checkbox"/>
	Computer History Short 2.htm	IDC:Profile:Article	Mar 17, 2009	<input type="checkbox"/>
	Computer History Short 3.htm	IDC:Profile:Article	Mar 17, 2009	<input type="checkbox"/>
	midtest99.xml	WCM:RD:ARTICLEREGDEF2	Mar 30, 2009	<input type="checkbox"/>
	regionarticl3.xml	WCM:RD:ARTICLEREGIONDEF	Mar 19, 2009	<input type="checkbox"/>
	REGIONARTICLE4.xml	WCM:RD:ARTICLEREGIONDEF	Mar 19, 2009	<input type="checkbox"/>
	REGIONARTICLE2.xml	WCM:RD:ARTICLEREGIONDEF	Mar 23, 2009	<input type="checkbox"/>

Add Content Add Folder

Showing 1-10 of 10

Figure 3–39 WebCenter Content Fields Surfaced in VCR

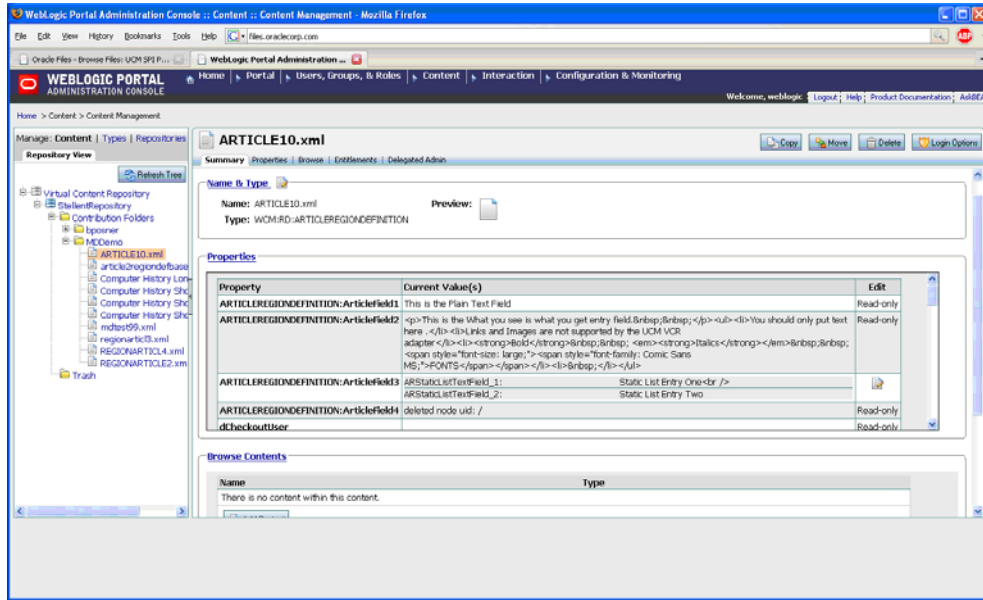


Figure 3–40 WebCenter Content Properties in the VCR

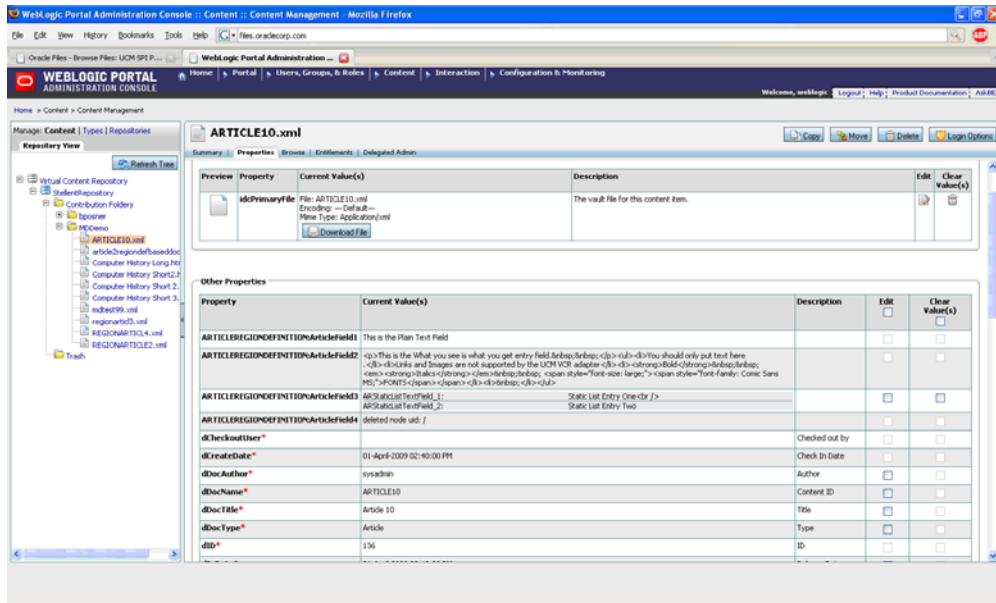


Figure 3-41 WebCenter Content Properties Surfaced in the VCR

