IBM Connections 4.5
Deployment Scenarios

Deployment Scenarios

ERC 1.0

Trademarks

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide.

The following are trademarks of International Business Machines Corporation, registered in many jurisdictions worldwide:

AIX®	Cognos®	DB2 Universal Database™
DB2®	Domino®	FileNet®
Lotus Notes®	Lotus®	Notes®
Power®	Quickr®	Rational®
System z®	Tivoli®	WebSphere®

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Microsoft and Windows are trademarks of Microsoft Corporation in the United States, other countries, or both.

Java™ and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

Other product and service names might be trademarks of IBM or other companies.

June 2013 edition

The information contained in this document has not been submitted to any formal IBM test and is distributed on an “as is” basis without any warranty either express or implied. The use of this information or the implementation of any of these techniques is a customer responsibility and depends on the customer’s ability to evaluate and integrate them into the customer’s operational environment. While each item may have been reviewed by IBM for accuracy in a specific situation, there is no guarantee that the same or similar results will result elsewhere. Customers attempting to adapt these techniques to their own environments do so at their own risk.

© Copyright International Business Machines Corporation 2013.
This document may not be reproduced in whole or in part without the prior written permission of IBM.
US Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

How to set up embedded Connections Content Manager with IBM Connections 4.5

This procedure describes how to set up Connections Content Manager (CCM) with IBM Connections by using the Embedded installation path.

Note

This document does not cover tuning, restoring reliability data population, and so on. A single all-in-one-box deployment for this documentation is used. This document assumes that you understand the installation process of IBM Connections, WebSphere Application Server, HTTP, and database back-end servers.

See other documentation if you are not familiar with those areas.

Reminder

In this example, the Deployment Manager and application server for node 1 are placed on the same physical computer:

- Deployment Manager, DB2, Connections Node >> `myServer`
- Caching Proxy >> `myProxy`

Important

None of the standard connections installation screens is being documented in this procedure, but only the extra steps that are needed to get CCM working. This procedure works when either doing a new installation of Connections with Embedded CCM or if you have an existing installation of Connections and you are modifying the installation.

Course materials may not be reproduced in whole or in part
without the prior written permission of IBM.

Creating the IBM Connections Content Manager databases

__ 1. Using the database creation wizard for Connections, make sure to select **IBM Connections Content Manager** databases so that they are created on the database server. You must create them before you can continue with the CCM setup.

__ 2. You should see something like the following result if they are created successfully.

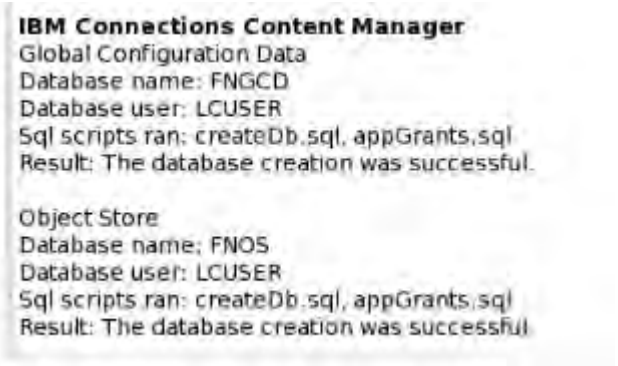

Figure 1. IBM Connections Content Manager databases successfully created

Note

Depending on the number of databases on your database server instance on DB2, you might want to check the numdb value. If it is lower than the number of databases on your server, then DB2 does not allow more open connections to the database, and so you must ensure that it is larger. Usually, it is set to 16: `db2 update dbm config using numdb 16`, which means that you can populate profiles or build Cognos Cubes at the same time as you install Connections.

 © Copyright IBM Corp. 2013

Course materials may not be reproduced in whole or in part without the prior written permission of IBM.

Installation of the CCM add-on into the same Connections Cell (new installation option)

__ 1. First, you must copy the builds of CCM down to your local system. The following installation packages are needed: CEServer, CEClient, and FNCS. They must all be copied into a single folder on your Connections Deployment manager. For example, `/opt/software/fn-install`.

__ 2. When done, also copy your Connections installers and start the installer as normal. If you already have Connections installed and chose to install without CCM, start the installation manager on your Deployment Manager and click **Modify**. Ensure that your Deployment Manager and node agents are running.

__ 3. Continue with the installation of Connections as normal, and complete the panels until you get to the Features area. Make sure to select the **Add-on Feature > IBM Connections Content Manager**. Click **Next** to continue.

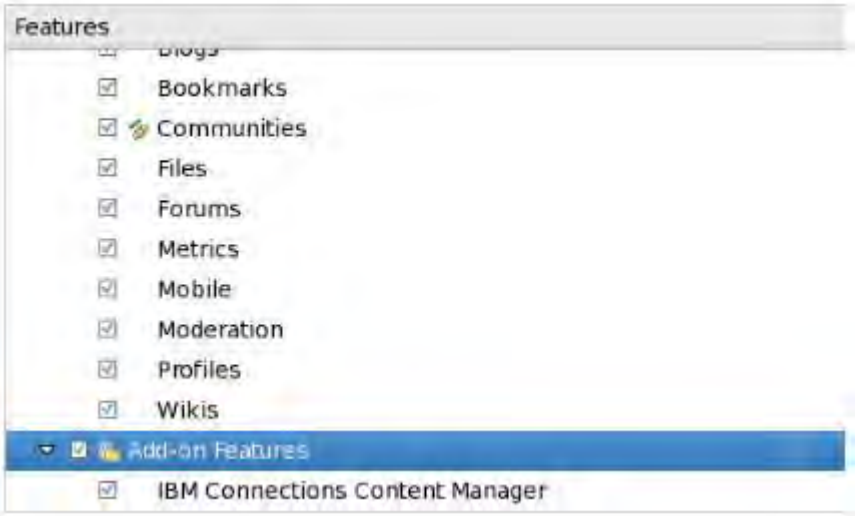

Figure 2. Installation of Connections - Features area

__ 4. Validate your WebSphere server as normal but ensure that you use an LDAP user. The user that you use here must be a member of the LDAP branch you have enabled security for. The local wasadmin user does not work. In this example, `wpsbind` is used. Ensure that validation is successful.

Course materials may not be reproduced in whole or in part
without the prior written permission of IBM.

__ 5. You then see a new installation panel for IBM Connections Content Manager. Click **New deployment** and browse to the location where you copied the CEServer, CEClient, and FNCS installation files. In this example, it is `/opt/software/fn-install`. Click **Validate** and it should be successful. Then, click **Next** to continue.

Figure 3. Validating your WebSphere server

__ 6. Select the topology type for your environment and click **Next** to continue. This is the cluster where CCM is installed.

__ 7. Next, you are asked to validate the connection to the new IBM Connections Content Manager databases. Complete the information here and make sure that the validation is successful.

__ 8. Continue with the installation as normal and after some time it should complete successfully. If so, you should see the following result from the installation manager.

Figure 4. Message: IBM Connections Content Manager installed successfully

You have CCM installed and you must now configure it.

 © Copyright IBM Corp. 2013

Course materials may not be reproduced in whole or in part without the prior written permission of IBM.

Admin console post-installation steps and checks

Now you have two more applications on your admin console. These applications are FNCS and FileNetEngine:

Figure 5. New applications on the admin console: FNCS and FileNetEngine

__ 1. The first step is to map the manage modules to your web server and your cluster that you installed CCM into. It ensures that CCM can be accessed over HTTP (80) and not the internal ports of your CCM server (9080). Make sure to synch the nodes, and generate and propagate the plug-in to your HTTP server after this change. A restart of the HTTP server is also needed.

__ 2. Now go to **Enterprise Applications > FNCS > User RunAs roles** and check that the user you used to install CCM is recorded as the anonymous user. In this example, it is wpsbind.

Figure 6. Checking that the user used to install CCM is recorded as the anonymous user

Course materials may not be reproduced in whole or in part
without the prior written permission of IBM.

Changing the HTTP or HTTPS URLs for CCM in LotusConnections-config.xml to your web server for CCM

__ 1. The file `LotusConnections-config.xml` has URLs and ports that are hardcoded and they must be changed to your web server. So, they must change to the URL for the HTTP fronting your CCM server.

```
<sloc:serviceReference bootstrapHost="" bootstrapPort="" clusterName="" enabled="true" serviceName="ecm_files" ssl_enabled="true">
    <sloc:href>
        <sloc:hrefPathPrefix>/dm</sloc:hrefPathPrefix>
        <sloc:static href="http://myAppServer.example.com" ssl_href="https://myAppServer.example.com"/>
        <sloc:interService href="https://myAppServer.example.com"/>
    </sloc:href>
</sloc:serviceReference>
```

Figure 7. LotusConnections-config.xml

__ 2. When done, make sure to synch the change to your nodes.

Check if any specific workarounds or patches are needed for the builds of Connections, CEServer, CEClient, or FNCS. They must be applied now before you start connections and configure the object store. When done, start Connections and your CCM server. Ensure that HTTP and the database are also running.

 © Copyright IBM Corp. 2013

Course materials may not be reproduced in whole or in part without the prior written permission of IBM.

Creating the CCM domain

Next, you must create a domain on CCM. Do it before any object store is created or any add-ons are installed, which are done later.

__ 1. First, access the Admin Console for Content Platform Engine (“acce” for short). To do it, go to `http://myProxy.example.com/acce/` and logging in as the user you set up CCM with, `wpsbind`.

__ 2. The Administration Console for Content Platform Engine opens. Click **Next** to continue.

Figure 8. Admin Console for Content Platform Engine

__ 3. Next, you must specify the Directory Services Provider. Change the type to **IBM Virtual Member Manager** and display name to **IBM VMM**. Click **Next** to continue.

Figure 9. Admin Console for Content Platform Engine - Specifying the Directory Services Provider

Course materials may not be reproduced in whole or in part
without the prior written permission of IBM.

__ 4. Next, you specify the domain administrators. It should already contain your `wpsbind` user. Click **Finish** to complete this section. When done, you should see something like the following screen.

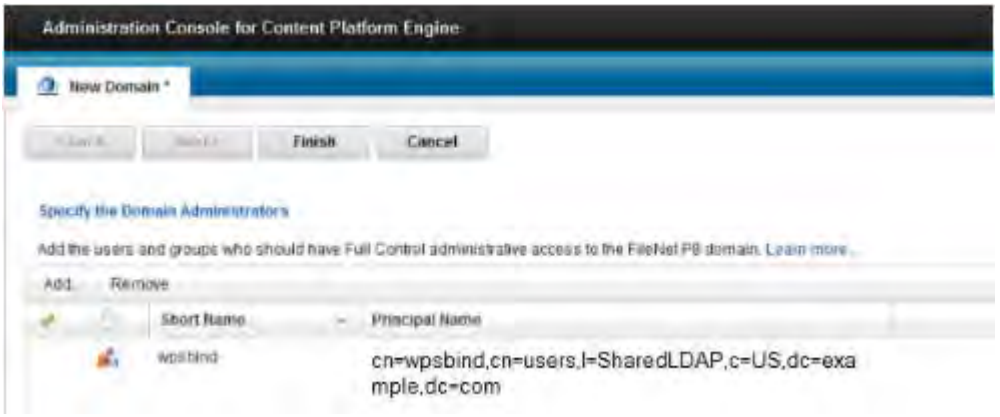

Figure 10. Admin Console for Content Platform Engine - Specifying the Domain Administrators

Reminder

You must restart your Connections server and CCM server after creating the domain.

 © Copyright IBM Corp. 2013

Course materials may not be reproduced in whole or in part without the prior written permission of IBM.

Installing the Quickr 1.1 Services Layer into your CCM domain

__ 1. Now you must install the Quickr 1.1 services layer. Do it by running the following command from where FNCS is installed:

```
export JAVA_HOME=/opt/IBM/WebSphere/DeploymentManager/java/
./addon.sh /opt/IBM/Connections/addons/ccm/FNCS/CE_API
http://myAppServer.example.com/ wsi/FNCEWS40MTOM/
```

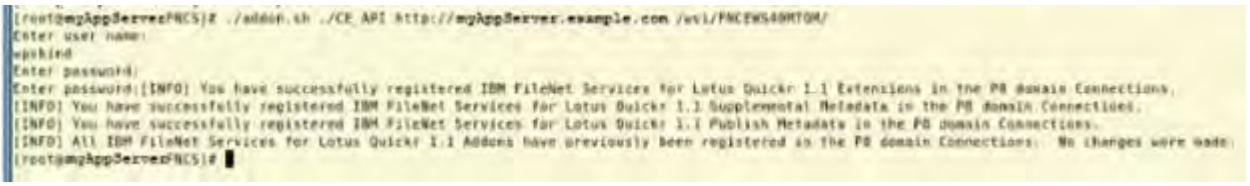

Figure 11. Installing the Quickr 1.1 services layer

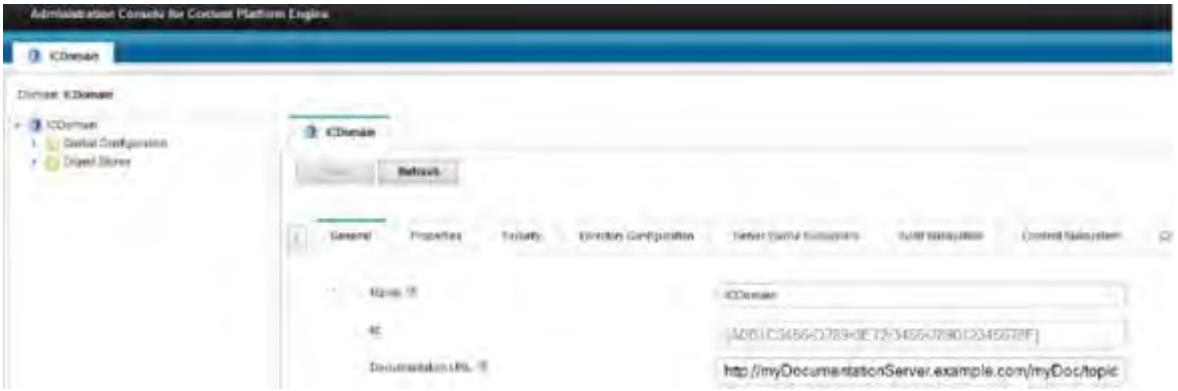

Figure 12. Administration Console for Content Platform Engine

__ 2. You should now be able to restart your deployment. On doing so, go to `http://myAppServer.example.com/dm` and you should see something like this result:

IBM FileNet Collaboration Services

Product name	IBM FileNet Collaboration Services
Product version	2.0.0.0
Build number	p8quickr120.116
Content Platform Engine URL	corbaloc:rir:/cell/clusters/ICCluster/CCM/Engine
Web client application URL	
IBM Connections server URL	http:// myAppServer.example.com:9083/homepage
P8 domain	ICDomain
P8 object store	ICObjectStore
P8 API version (build)	dap511.367
P8 API version (runtime)	P8 Content Engine Java API dap511.444
Quickr web services bindings build	8.0.6

Figure 13. IBM FileNet Collaboration Services

Course materials may not be reproduced in whole or in part
without the prior written permission of IBM.

Creating the object stores

__ 1. Next, you must create the object store. To do it, log in to `http://myProxy.example.com/acce/` and log in as the user that you set up CCM with, `wpsbind`. Expand the ICDomain and click **Object Stores**. It displays the following result. Click **New** from here.

Figure 14. Administration Console for Content Platform Engine - ICDomain

__ 2. Make sure to enter `ICObjectStore` as the Display name and the Symbolic name. It must be set as `ICObjectStore`. Click **Next** to continue.

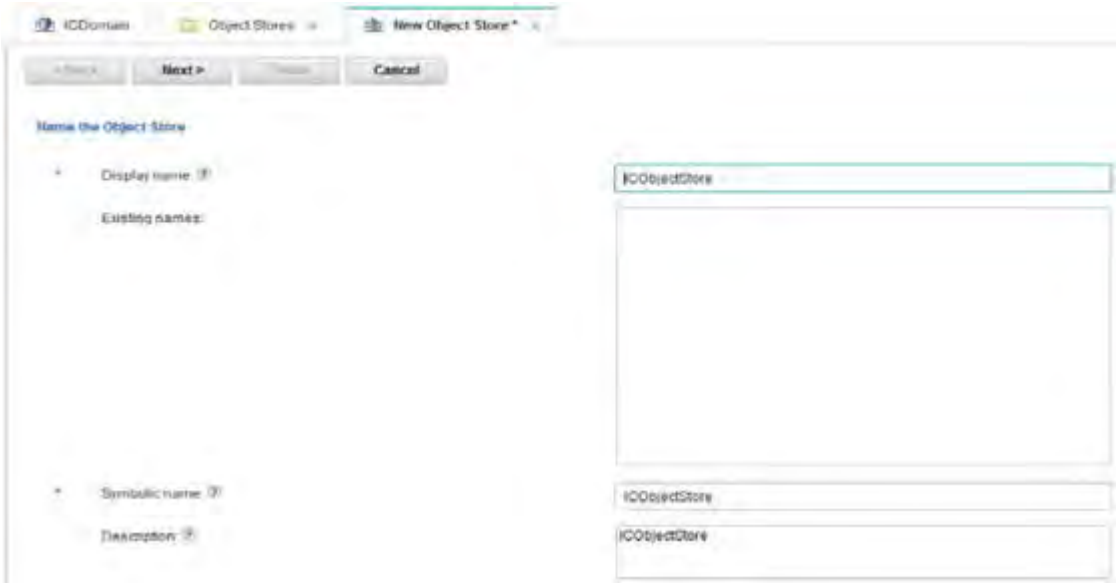

Figure 15. Administration Console for Content Platform Engine - ICDomain - New Object Store

 © Copyright IBM Corp. 2013

Course materials may not be reproduced in whole or in part without the prior written permission of IBM.

__ 3. Next, you are asked for the database information. Click **New** from the following page:

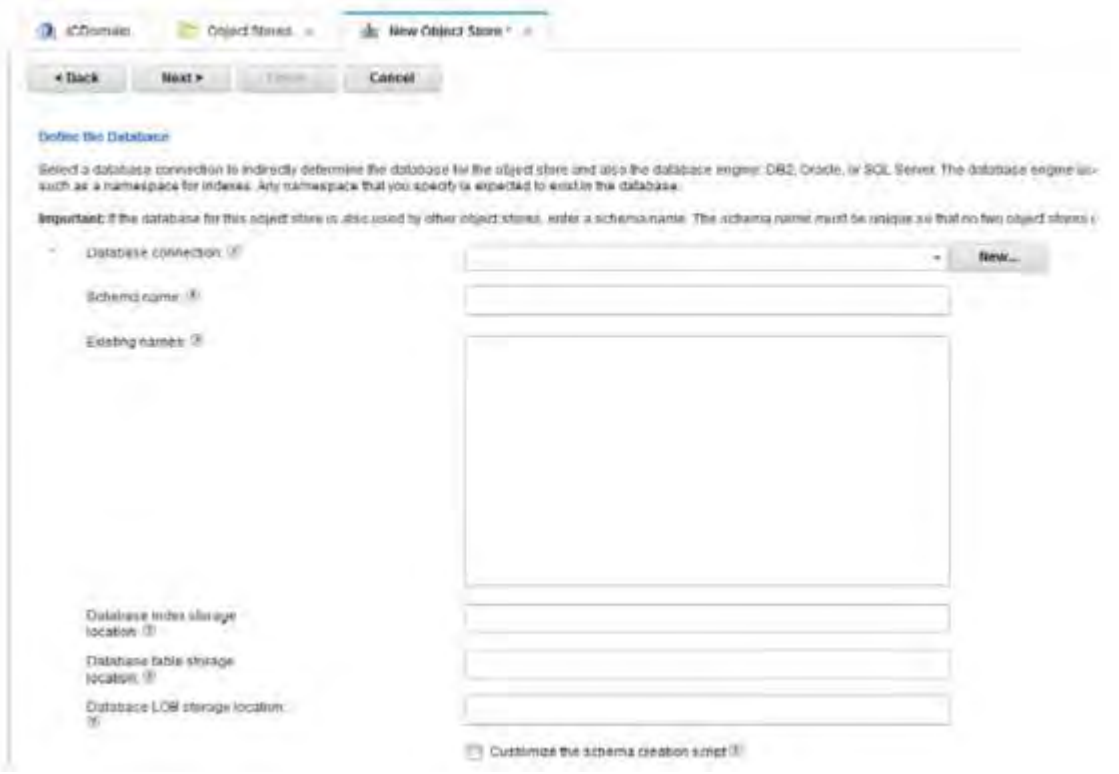

Figure 16. Administration Console for Content Platform Engine - New Object Store - Defining the database

__ 4. Next, enter FNOSDC as the Display name for the database connections. Click **Next** to continue.

Figure 17. Administration Console for Content Platform Engine - New database connection

Course materials may not be reproduced in whole or in part
without the prior written permission of IBM.

__ 5. Next, enter the JNDI data sources as shown. These must be FNOSDS and FNOSDSXA. Click **Next** to continue.

Figure 18. Administration Console for Content Platform Engine - New database connection - Database connections data source names

__ 6. Then, click **Finish**.

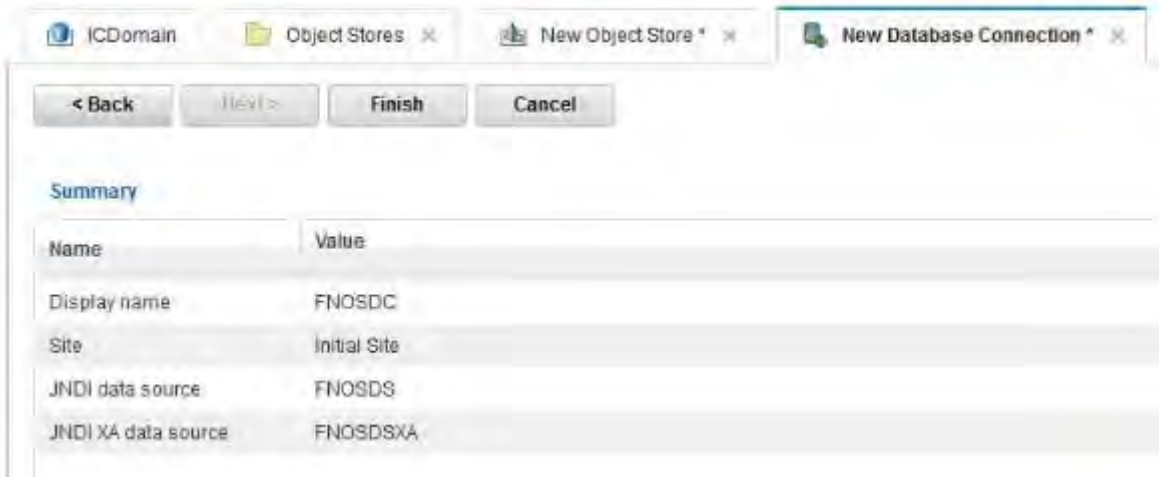

Figure 19. Administration Console for Content Platform Engine - New database connection - Summary

 © Copyright IBM Corp. 2013

Course materials may not be reproduced in whole or in part
without the prior written permission of IBM.

It should create successfully.

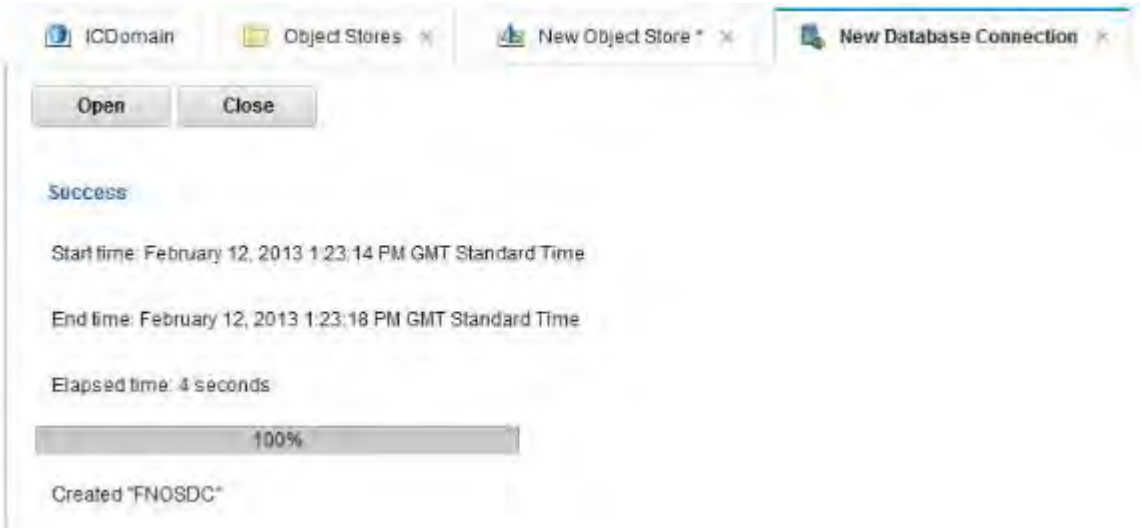

Figure 20. Administration Console for Content Platform Engine - New database connection - Success

__ 7. Click **Close**.

__ 8. Now go back to the New Object Store Page and click **Next** to continue.

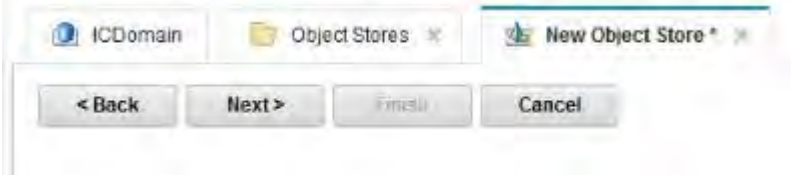

Figure 21. Administration Console for Content Platform Engine - New Object Store

__ 9. Click **File** as the storage area type and then **Next** to continue.

Figure 22. Administration Console for Content Platform Engine - New Object Store - Selecting the type of storage area for content

Course materials may not be reproduced in whole or in part
without the prior written permission of IBM.

__ 10. You must make sure that the root directory is created on your system. In this example, `/opt/IBM/IC_Share/libraries` is used. Also, change the Directory structure size to large. Click **Next** to continue.

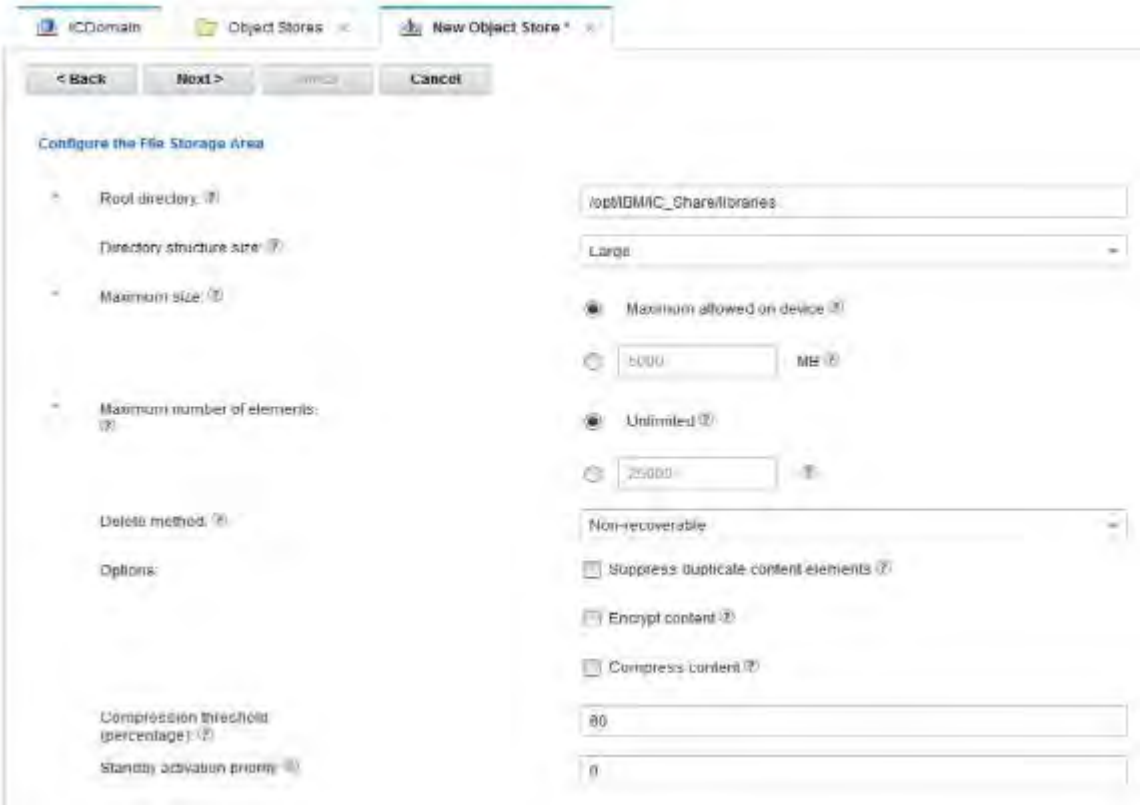

Figure 23. Administration Console for Content Platform Engine - New Object Store - Configuring the file storage area

__ 11. Next, you are asked for the admin access user. It should already be set to `wpsbind`. Click **Next** to continue.

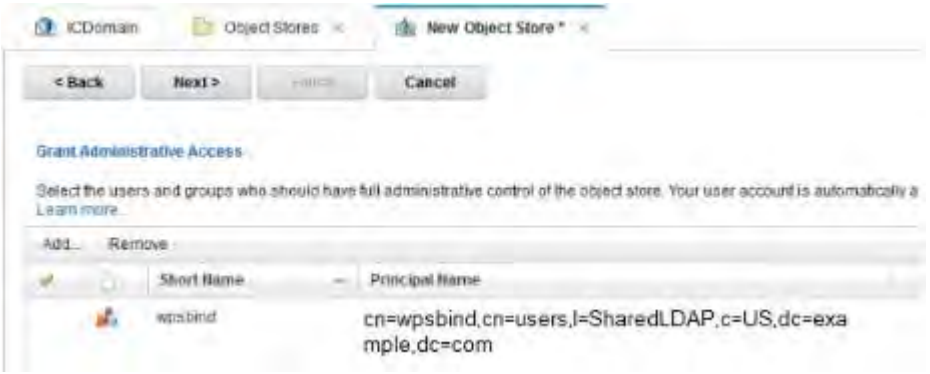

Figure 24. Administration Console for Content Platform Engine - New Object Store - Granting Administrative Access

 © Copyright IBM Corp. 2013

Course materials may not be reproduced in whole or in part
without the prior written permission of IBM.

__ 12. Next, you grant access to non-admin users. Click **Add**. You must search for * and then the #authenticated-users displays. Add that to the selected users and groups area and click **OK**.

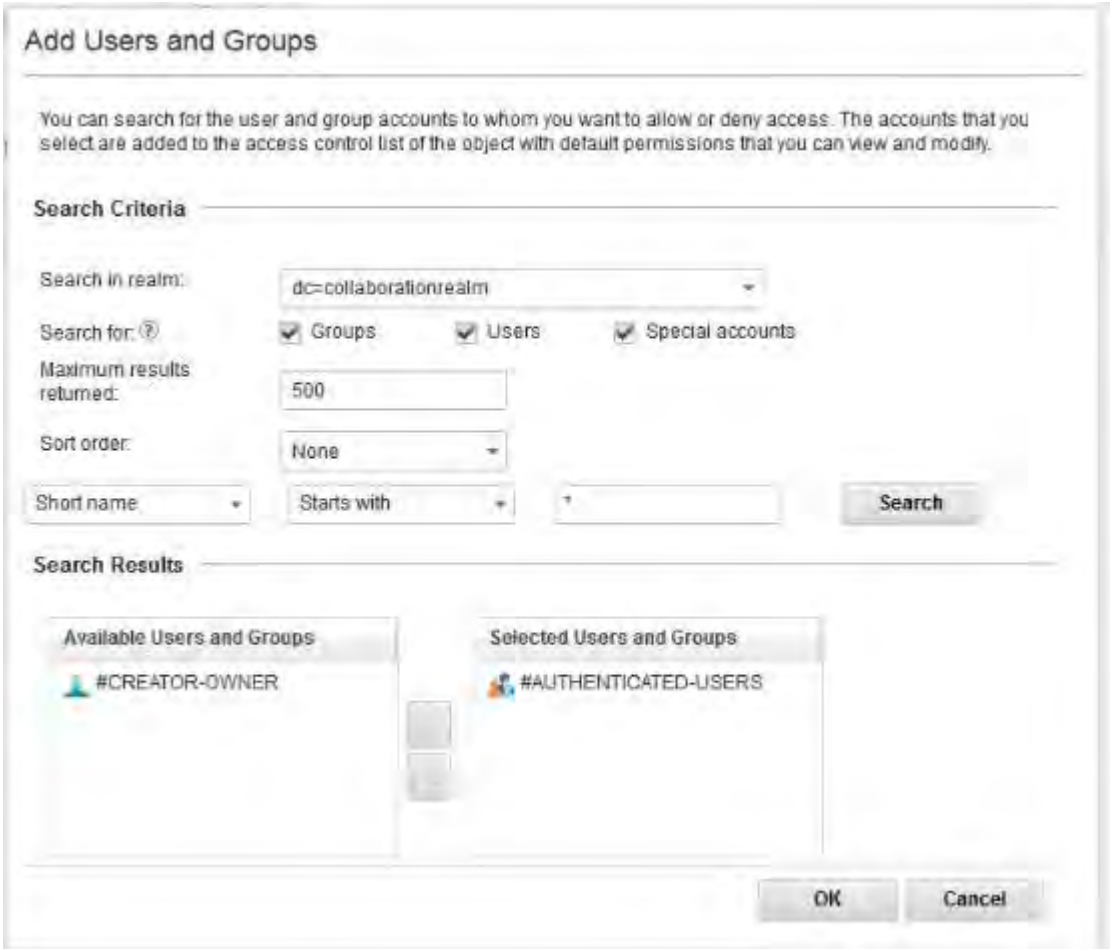

Figure 25. Adding users and groups

__ 13. The #authenticated-users is added. Click **Next** to continue.

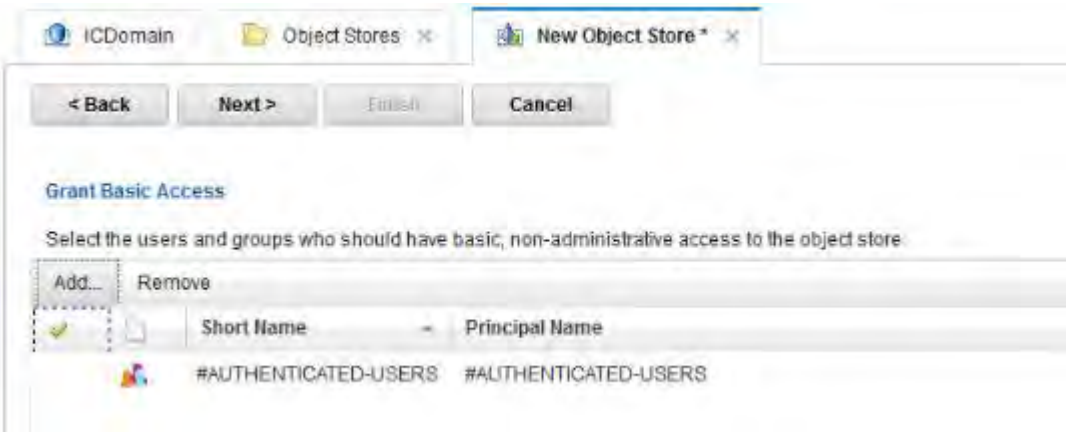

Figure 26. Administration Console for Content Platform Engine - New Object Store - Granting Basic Access

Course materials may not be reproduced in whole or in part
without the prior written permission of IBM.

__ 14. Next, you are asked which add-ons to install. You must select all of the following ones:

- 5.2.0 Base Application Extensions
- 5.2.0 Base Content Engine Extensions
- 5.2.0 Custom Role Extensions
- 5.2.0 Social Collaboration Base Extensions
- 5.2.0 Social Collaboration Document Review Extensions
- 5.2.0 Social Collaboration Notification Extensions
- 5.2.0 Social Collaboration Role Extensions
- 5.2.0 Social Collaboration Search Indexing Extensions
- 5.2.0 TeamSpace Extensions
- IBM FileNet Services for Lotus Quickr 1.1 Extensions
- IBM FileNet Services for Lotus Quickr 1.1 Supplemental Metadata
- IBM FileNet Services for Lotus Quickr 1.1 Publish Metadata

Note

If you get errors when adding the Quickr add-ons, ignore them.

__ 15. Click **Next** to continue.

 © Copyright IBM Corp. 2013

Course materials may not be reproduced in whole or in part
without the prior written permission of IBM.

__ 16. A summary screen displays. Click **Finish** and the object store should be created. Assuming it is successful, you should see something like the following screen:

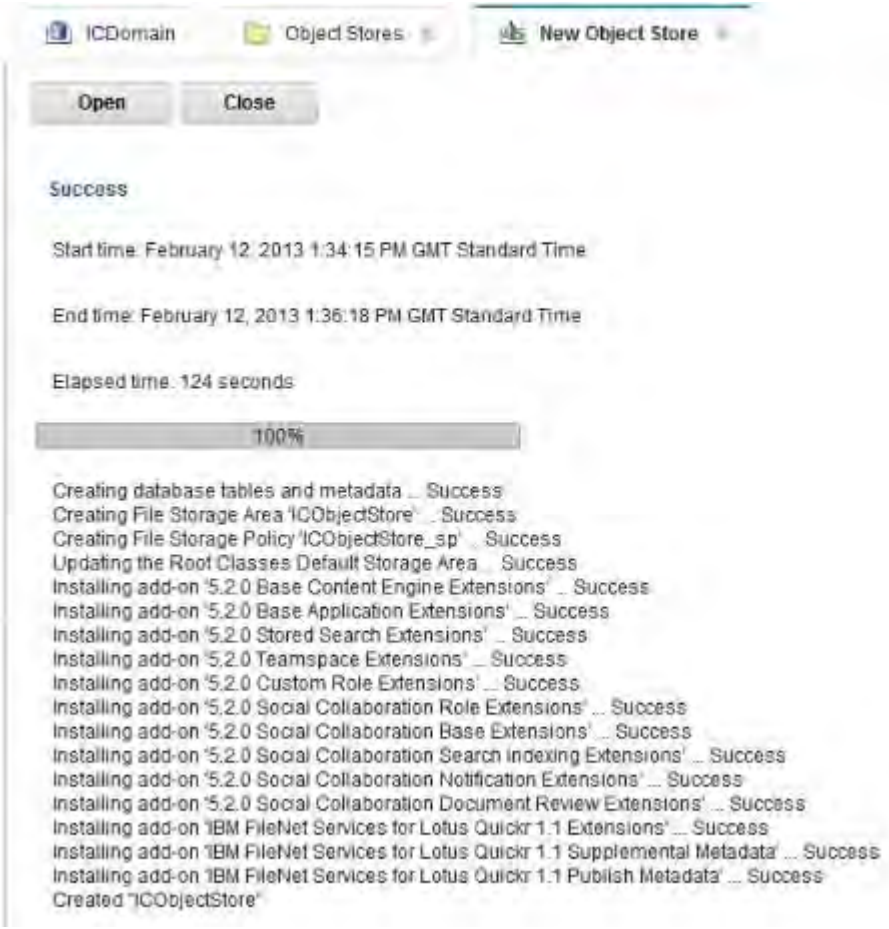

Figure 27. Administration Console for Content Platform Engine - New Object Store - Success

__ 17. Everything is done. The object store is now created. Click **Close** to exit this page.

Course materials may not be reproduced in whole or in part
without the prior written permission of IBM.

Extra changes to the object store for Connections

__ 1. Go to `http://myProxy.examplecom/acce/` and log in as the user that you set up CCM with, `wpsbind`. Select the object store. The following screen is displayed.

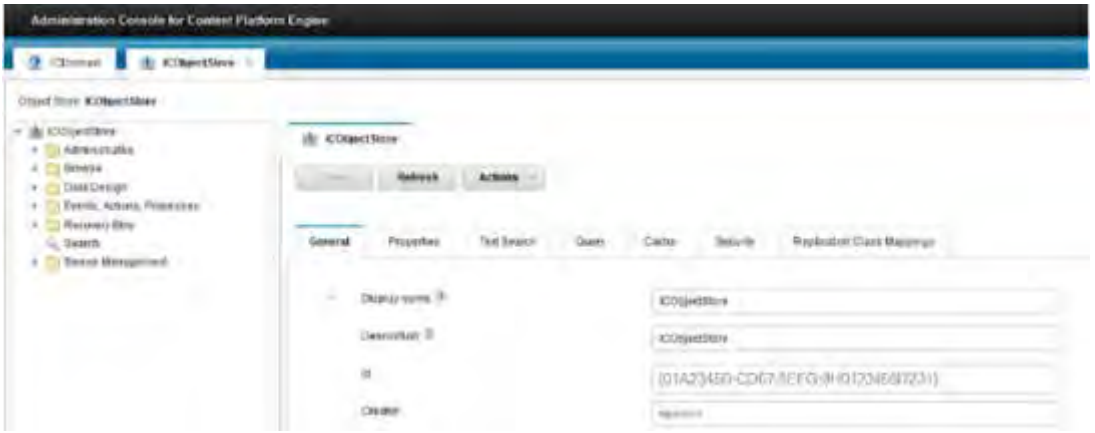

Figure 28. Administration Console for Content Platform Engine - ICObjectStore

__ 2. Now click **Search** on the left side. From the “Select from” table, click **Collaboration Configuration** and ***** for the column. Click **Search**.

Figure 29. Administration Console for Content Platform Engine - Search

© Copyright IBM Corp. 2013

Course materials may not be reproduced in whole or in part
without the prior written permission of IBM.

__ 3. It finds a document like the following one. Select this document to open it.

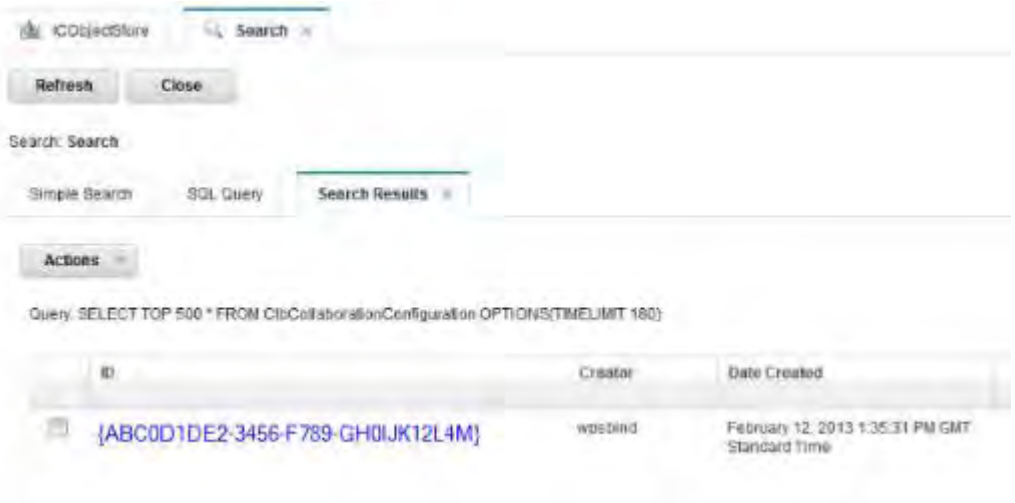

Figure 30. Administration Console for Content Platform Engine - Search - Selecting document

__ 4. From this document, select **Properties** and enter the following information:

- Download Count Anonymous User IDs >> `wpsbind` (your admin user)
- Activity Stream Retrieval URL >> `{ecm_files}` (should be copied exactly)
- Activity Stream HTTP Endpoint URL >> `https://myAppServer.example.com`
- Activity Stream Gadget URL >> `{connections}/resources/web/com.ibm.social.ee/ConnectionsEE.xml` (should be copied exactly)
- Config 1 >> `wpsbind` (your admin user password)
- Config 2 >> `wpsbind` (your admin user)
- Activity Stream Extended Settings >> Click the small triangle that is associated with the Property Value for this entry and select Display or Edit Value. Sequentially enter the following five entries by placing each of the strings in the “Enter a string value” field and clicking **Add** for each entry. When finished, click **OK**.

  ```
  activityStreamRetrievalURL={0}/atom/library/{1}%3B{2}/{3}/{4}/entry
  activityStreamAnonymousRetrievalURL={0}/atom/anonymous/library/{1}%3B{2}/{3}/{4}/entry
  activityStreamOauthRetrievalURL={0}/atom/oauth/library/{1}%3B{2}/{3}/{4}/entry
  activityStreamFileLinkURL={0}/atom/library/{1}/document/{2}/media/{3}
  activityStreamNullifyActionableURL={0}/connections/opensocial/basic/rest/activitystreams/@me/@all/@all/{1}
  ```

__ 5. Save the document and you are done.

Course materials may not be reproduced in whole or in part
without the prior written permission of IBM.

Setting up update server caching to ensure immediate replication of access control between Connections and FileNet P8

__ 1. Go to `http://myProxy.example.com/acce/` and log in as the user you set up CCM with, `wpsbind`.

__ 2. Select your Domain. In this example, it is ICDomain. Then, in the tabs on the right, click **'Server Cache Subsystem'.#**.

__ 3. Now **Scroll to User Token Cache** and change the Entry TTL value from `3600` to `1` and set Subject Cache and change the Entry TTL value from `3600` to `1`.

Figure 31. Setting up update server caching

 © Copyright IBM Corp. 2013

Course materials may not be reproduced in whole or in part without the prior written permission of IBM.

Setting up the Linked Library widget

Note

This step is optional.

Previous versions of Connections had integration between Connections and FileNet P8/CM8 with the Linked Library widget. This widget uses some of the Quickr Picker code to link to a team space or folder on FileNet P8/CM8.

__ 1. To enable it, you must edit the `widgets-config.xml` and uncomment the following lines:

```
<!--
   The Linked Library widget allows you to connect to your existing IBM FileNet or IBM Content Manager document libraries.
-->
  <widgetDef defId="CustomLibrary" bundleRefId="lc_clib" url="{webresourcesSvcRef}/web/quickr.lw/widgetDefs/LibraryWidget_QCS_Connections.xml?ctag={version}"
          description="CustomLibrary.description" modes="view edit fullpage" primaryWidget="false"
          helpLink="{helpSvcRef}/topic/com.ibm.lotus.connections.communities.help/c_com_library_frame.html"
          iconUrl="{contextRoot}/nav/common/images/LinkedFiles.png">
   <itemSet>
      <item name="prokyUrl" value="{contextRoot}/commonProky" />
   </itemSet>
</widgetDef>
```

Figure 32. widgets-config.xml

__ 2. Restart the server. After you do it, if you customize a Community you have another widget to select: the Linked Library one.

Figure 33. Customizing a Community and selecting another widget

Course materials may not be reproduced in whole or in part
without the prior written permission of IBM.

__ 3. You can then enter the server URL to your FileNet P8/CM8 server and select the team space folder that you want to link to the library widget to (see following screen):

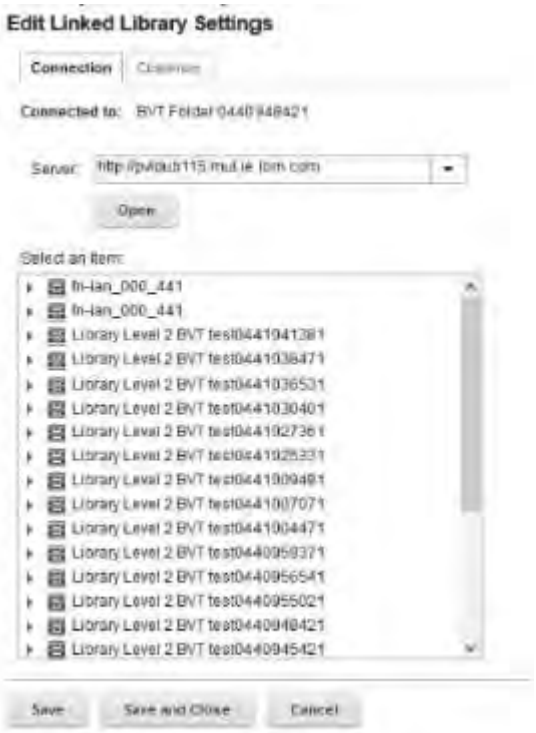

Figure 34. Editing Linked Library Settings

When done, you can access the files on your FileNet P8/CM8 server directly from within the Community.

__ 4. That is it. Now restart your whole deployment and you are ready to test it.

 © Copyright IBM Corp. 2013

Course materials may not be reproduced in whole or in part without the prior written permission of IBM.

Testing the CCM integration

__ 1. Log in to Connections as a non-admin user, create a community, and customize that community to add the library widget. It should be added successfully.

__ 2. Then, from the library in that community, upload a file. It should be uploaded correctly.

Figure 35. Connections - Uploading a file in a community

__ 3. Also, if you log in to Administration Console for Content Platform Engine, you should be able to log in as the user that you used to create the document and see it.

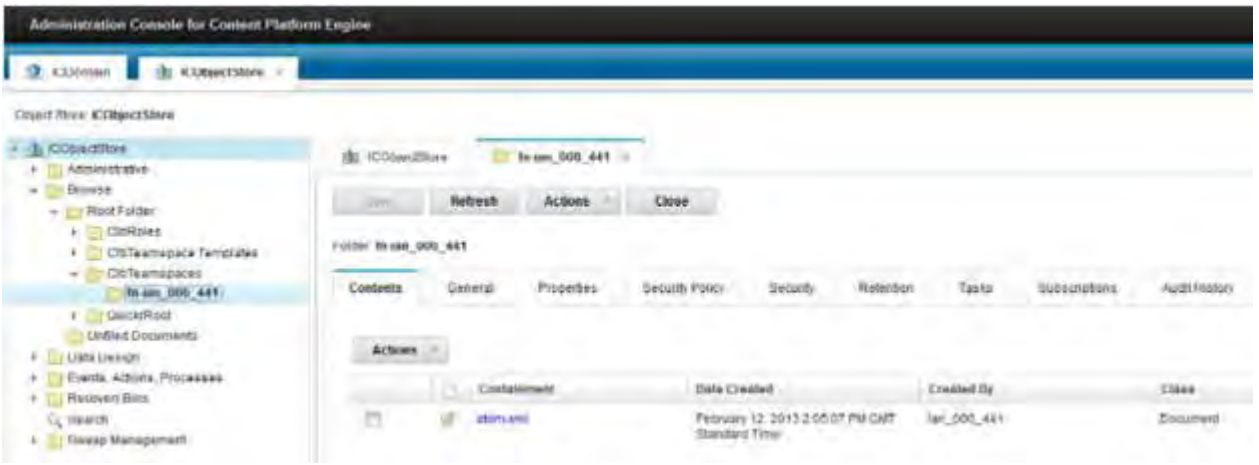

Figure 36. Administration Console for Content Platform Engine

Course materials may not be reproduced in whole or in part
without the prior written permission of IBM.

__ 4. Also, if you go to the home page and click **Discover**, you should see the document that is displayed.

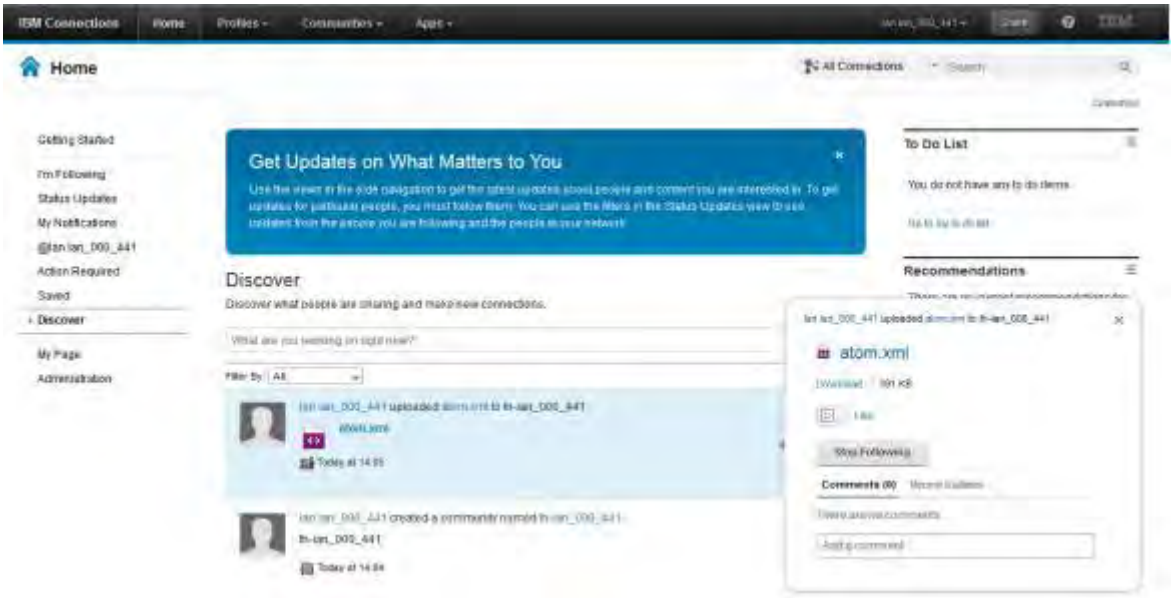

Figure 37. Home page - Discover

 © Copyright IBM Corp. 2013

Course materials may not be reproduced in whole or in part without the prior written permission of IBM.