Installing WebCenter Content

on Windows 7 with MS SQL Server

A Green Field Installation Guide

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This guide assumes you are installing Oracle WebCenter Content 12.2.1.3 on Windows 7 SP1 x64 using SQL Server as your target database. Some portions of the installation process may be applicable to other databases as well. Note: if you plan to use this environment with other Oracle components, make sure you validate the prerequisite requirements for those components with what you're installing here. For example, Oracle Documaker 12.6 requires WebLogic 12c 12.2.1.2.0, so if you intend to deploy Oracle Documaker into the WebLogic domain you establish with this exercise, you will need to use WebLogic 12.2.1.2.0 and FMW 12.2.1.2.0 and WebCenter Content 12.2.1.2.0 as well. Otherwise, you will need to install a separate WebLogic domain.

Prerequisites

1. Database - SQL Server 2012 Express, using defaults with the following exceptions:
    1. Use Mixed Mode authentication; provide a strong password for *sa* user.
    2. Default instance `MSSQLSERVER` rather than named instance).
    3. Using the `Latin1_General_CS_AS_WS` collation (case-sensitive with Unicode support).
    4. Install the SQL Server Management Studio (SSMS) from here.
    5. Create a database using SSMS; name the database something appropriate; referred to hereafter as <WCC_DB>. Note: you must enable `Read Committed Snapshot` or else the RCU will fail. You can turn this on during the creation of the database setting appropriate option, or you can do this after the fact with SSMS (`Database` > `Properties` > `Options` > `Miscellaneous` > `Is Read Committed Snapshot On` = `True`).
    6. Ensure the database owner account is enabled and you know the password. This document assumes the `sa` user.

2. Java Development Kit 1.8.x
    1. Download and install latest JDK 1.8 from here. Must be 64-bit version of JDK.
    2. Set JAVA_HOME environment variable
        1. Start -> Computer -> Right Click -> Properties -> Advanced System Settings -> Environment Variables -> System Variables
        2. Locate JAVA_HOME. If not available, click New -> Variable Name and enter JAVA_HOME
        3. Set Variable Value as the path to JDK installation folder, e.g. c:\proga~1\Java\JDK1.8.0_144
3. Windows Configuration
    1. Disable 8.3 file naming by opening Windows Registry Editor.
        1. Locate HKEY_LOCAL_MACHINE/SYSTEM/CurrentControlSet/Control/FileSystem
        2. Set NtfsDisable8dot3NameCreation = 1
        3. Reboot.
    2. Refer to product documentation on acquiring and installing the **Visual C++ 2005 Redistributable** package. If this is not installed, the product may fail to start.

Installation

1. Navigate to here. Accept the license agreement.
2. Download **either** *Quick Installer for Mac OSX, Windows and Linux (209 MB)* or *Generic Installer for Oracle WebLogic Server and Coherence (800 MB)*. This document assumes use of the Generic installer, but either will work.
    1. The Generic installer allows you to customize the installation, selecting an Oracle Home directory, JDK location, and more.
    2. The Quick Installer uses built-in defaults.
3. Download *Fusion Middleware Infrastructure Installer (1.5 GB).*
4. Navigate to here. Accept the license agreement.
5. Download the *Release 12c 12.2.1.3.0 Generic (1.6 GB).*
6. Unzip all zip archives into a directory, referenced as <INSTALL_DIR>
7. Open a command window as Administrator (Start -> Command Window -> Right-Click -> Run as Administrator
8. Execute the following in <INSTALL_DIR>

C:\> %JAVA_HOME%\bin\java -jar fmw_12.2.1.3.0_wls.jar

1. [Welcome] Click Next.
2. [Auto Updates] Select Skip Auto Updates, click Next.
3. [Installation Location] Select desired Oracle Home directory, referred to hereafter as <ORACLE_HOME>. Click Next.
4. [Installation Type] Select WebLogic Server, click Next
5. [Prerequisite Checks] Click Next. Note: if you have problems, resolve them.
6. [Installation Summary] Click Install. Click Next.
7. [Installation Complete] Uncheck Automatically Launch Configuration Wizard. Click Finish.

9. Execute the following in <INSTALL_DIR>:

   C:\> %JAVA_HOME%\bin\java -jar fmw_12.2.1.3.0_infrastructure.jar

   1. [Welcome] Click Next.
   2. [Auto Updates] Select *Skip Auto Updates*, click Next.
   3. [Installation Location] Select <ORACLE_HOME> from the dropdown. Click Next.
   4. [Installation Type] Select *Fusion Middleware Infrastructure*, click Next
   5. [Prerequisite Checks] Click Next. Note: if you have problems, resolve them.
   6. [Installation Summary] Click Install. Click Next.
   7. [Installation Complete] Click Finish.

10. Execute the following in <INSTALL_DIR>:

    c:\> %JAVA_HOME%\bin\java -jar fmw_12.2.1.3.0_wccontent.jar

    1. [Welcome] Click Next.
    2. [Auto Updates] Select *Skip Auto Updates*, click Next.
    3. [Installation Location] Select <ORACLE_HOME> from the dropdown. Click Next.
    4. [Prerequisite Checks] Click Next. Note: if you have problems, resolve them.
    5. [Installation Summary] Click Install. Click Next.
    6. [Installation Complete] Click Finish.

11. Run the *Repository Creation Utility (RCU)* in:

    <ORACLE_HOME>/oracle_common/bin/rcu.bat

    1. [Welcome] Click Next.
    2. [Create Repository] Select *Create Repository* and *System Load and Product Load*. Click Next.

3. [Database Connection Details] Select *Microsoft SQL Server, Unicode Support = Yes,* and *Connection Parameters.* Enter the following as your connection parameters[1], then click Next. Click OK on the prerequisite check dialog.
   1. *Server Name* = localhost
   2. *Port* = 1433
   3. *Database Name* = <WCC_DB>
   4. *Username* = sa
   5. *Password* = <sa password>
4. [Select Components] Use the DEV schema prefix, Select *WebCenter Content* which will check other components as well. Click Next. Click OK to dismiss the prerequisite check dialog. Note: if you experience any errors, note the location of the error log and review for remediation.
5. [Schema Passwords] Enter passwords for schema(s) as desired. Note this password as you will be required to enter it in the next section. Click Next.
6. [Summary] Review summary and click Create. Watch the system load progress, click Close when completed.

Configuration

1. Run the *Configuration Wizard* in: <ORACLE_HOME>/oracle_common/common/bin/config.cmd
2. [Create Domain] Select *Create a new domain*. Optionally, select the domain location (hereafter referenced as <DOMAIN_HOME>). Click Next.
3. [Templates] Select the following templates (this will require some additional packages that will be automatically selected), then click Next
   1. Oracle Universal Content Management - Inbound Refinery
   2. Oracle Universal Content Management - Content Server
   3. Oracle Universal Content Management - Web UI
   4. Oracle WebCenter Enterprise Capture
4. [High Availability Options] Accept defaults and click Next.
5. [Application Location] Accept defaults and click Next.

[1] If you chose a named instance other than the default you may need to use Connection String instead.

6. [Administrator Account] Enter a password for the weblogic user and click Next.
7. [Domain Mode and JDK] Select development mode and specify the JDK (it should be set to the JDK you use to execute the installer JAR. Click Next.
8. [Datasources] Check the box for the given datasource(s) and then update the settings as shown below, then click Next.
    1. Vendor : MS SQL Server
    2. Driver : Oracle's MS SQL Server Driver (Type 4) Versions: Any[2]
    3. Hostname : localhost
    4. DBMS/Service : WCC
    5. Port : 1433
    6. Username : DEV_MDS
    7. Password : <password entered in Schema Passwords step>
9. [JDBC DS Test] All tests should complete ok, Click Next.
10. [Database Configuration Type] Select *RCU Data*, then use the same settings as shown Datasources (exception is that Username : DEV_STB. Click *Get RCU Configuration*. Click Next.
11. [Component Datasources] Click Next.
12. [JDBC Test] All tests should complete ok, Click Next.
13. [Credentials] Enter a username and password, then click Next. Note: MOS note suggests this username should be set to sysadmin.
14. [Advanced Configuration] Select *Administration Server*, *Topology*, and *Deployments and Services*[3]. Click Next.
15. [Administration Server] Choose a *single* Listen Address (specifically an IP address, not localhost and not All Local Addresses). Leave Server Groups as Unspecified. You may enable SSL and optionally change all Listen Ports (although for this guide I will leave as default 7001/7002). Click Next.
16. [Managed Servers] Choose a *single* Listen Address for each Managed Server. *If you don't choose the actual IP address, the installer may complain later.* Note: the names for the managed servers may be slightly different, but the names aren't important.

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[2] Do NOT choose the Type 4:XA driver!

[3] You may add Node Manager, but for a development server this is probably not required. If so, follow the product installation documentation for specifics.

Do not enable SSL until you have a functional SSL certificate. Recommended settings are shown below; do not change the group names. Click Next[4].

1. WCC User Interface
    1. Server Name=wccui_server_1 (may show as wccadf_server1)
    2. Listen address=<IP_ADDRESS>
    3. Listen port=16225
    4. Enable SSL on SSL Listen port 16227
    5. Server Group is UCM-ADF-MGD-SVR
    6. Click add and repeat above, incrementing the server name by 1, Listen Port = 7003, and SSL Port 16227.
2. Capture Server
    1. Server Name=capture_server1 (may show as cpt_server1)
    2. Listen address=<IP_ADDRESS>
    3. Listen port=16400
    4. Server Group is CAPTURE-MGD-SVR
    5. Click add and repeat above, incrementing the server name by 1, Listen Port = 7004. No SSL.
3. WCC Server
    1. Server Name=wcc_server_1 (may show as UCM_server1)
    2. Listen address=<IP_ADDRESS>
    3. Listen port=16200
    4. Enable SSL on SSL Listen Port 16201.
    5. Server Group is UCM-MGD-SVR
4. IBR Server
    1. Server Name=ibr_server_1
    2. Listen address=<IP_ADDRESS>
    3. Listen port=16250
    4. Server Group is IBR-MGD-SVR

17. [Clusters] Name the default cluster wcc_cluster_1. Leave defaults.Click Add.
    1. Name the cluster cpt_cluster_1. Leave defaults. Click Add.

[4] The product installation documentation suggests creating additional managed servers for high availability but this step is not required for a development environment.

2. Name the cluster ibr_cluster_1. Leave defaults. Click Add.
3. Name the cluster wccui_cluster_1. Leave defaults. Click Next.

18. [Server Templates] Click Next. This is not needed for development environments.
19. [Dynamic Servers] Click Next.
20. [Assign Servers to Clusters] Select cpt_server_*n* in the Servers panel, select the cpt_cluster_1 in the Clusters panel. Click the Right arrow. Repeat for similarly-named servers and clusters. Click Next.
21. [Coherence Clusters] Click Next.
22. [Machines] Click Add and set the machine name to wcc_machine_1. Select a listen address that is *not localhost*. Click Next.
23. [Assign Servers to Machines] Move all servers to the machine wcc_machine_1. Click Next.
24. [Virtual Targets] Click Next. This is not needed for development environments.
25. [Partitions] Click Next. This is not needed for development environments.
26. [Deployments Targeting] Review the AppDeployment sections under each server, so you can see which applications are deployed to which managed server. Click Next. Example:
    1. UCM_server1 contains Oracle Universal Content Management - Content Server
    2. WCCADF_Server1 contains Oracle WebCenter Content - Web UI
27. [Services Targeting] Click Next.
28. [Configuration Summary] If you see any warnings, correct them then come back to this screen. Click Create.
    1. If you didn't pick IP addresses here or here, you may see a complaint from Coherence clustering. To resolve, click the Administrator Server link on the left and select an IP address, and/or click Managed Servers on the left and select an IP address.
29. [Configuration Progress] Click Next when available.
30. [End of Configuration] Note the AdminServer URL that should look like *http://ipaddress:port/console*. Note the IP address and port as <ADMINSERVER>. Click Finish.
31. Install NodeManager as a Windows Service by executing <DOMAIN_HOME>/bin/installNodeMgrSvc.cmd.

32. Optional: When starting the AdminServer, you will be prompted for the WebLogic admin credential. You can prevent this check by creating the <DOMAIN_HOME>/servers/AdminServer/security/boot.properties file with username=weblogic and password=<password>. After a successful startup, these values will be encrypted.
33. Start NodeManager.
    1. Start -> Run -> Services.msc
    2. Locate "Oracle WebLogic base_domain NodeManager" service. Right click and select Start.
34. Start the AdminServer
    1. Execute <DOMAIN_HOME>/bin/startWebLogic.cmd
    2. A shell window will appear; when the system is ready you should see <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>
35. Start Managed Servers. This can be done with either Enterprise Manager or WLS Console.
    1. To use EM:
        1. Browse to <ADMINSERVER>/em (e.g. http://localhost:7001/em) and login with the credentials from Configuration Step 6.
        2. Select each desired server, and select Control > Start
    2. To use Console:
        1. Browse to <ADMINSERVER>/console and login with the credentials from Configuration Step 6.
        2. Select Environment > Servers from the Domain Structure.
        3. Select the Control tab in Summary of Servers
        4. Select the ibr_server_1 and wcc_server_1 servers using the checkbox.
        5. Click the Start button.
36. Configure Inbound Refinery (IBR)
    1. Open a browser to http://<server>:16250/ibr, where server is the host where IBR is installed. Login the credentials from Configuration Step 6.
    2. You can review the default settings here, the defaults should be sufficient.
    3. Click Submit. Restart the node as shown in step 35.
37. Configure Content Server (CS)
    1. Open a browser to http://<server>:16200/cs, where server is the host where CS is installed. Login the credentials from Configuration Step 6.

2. You can review the default settings here, the defaults should be sufficient.
3. Click Submit. Restart the node as shown in step 35.

Exploration

Now you can proceed to explore the system and its configuration. Before beginning, you may wish to review the Using WebCenter Content documentation. This will allow you to become familiarized with concepts of working with and managing content, including general concepts of content management, document libraries, enterprise libraries, folders, and document workflows. This information is in Part I of the Using Oracle WebCenter Content document, available here.

The Oracle WebCenter User Interface is a modern, intuitive interface that enables users to manage content in dynamic ways. Information on how to use this interface covers finding libraries, folders, and documents, viewing and annotating documents, check-in and check-out of documents, how to work with libraries and content folders, and use of workflows. This information is in Part II of the Using Oracle WebCenter Content document, available here.

Use Cases

The list of use cases below is separated into non-functional and functional, where non-functional use cases are exemplary of system administration and configuration, and functional use cases are for end-users. The list of use case shows recommended application(s) and function(s) that will satisfy those use cases.

Non-Functional Use Cases

1. To create highly-available service clusters, use the WebLogic Console.
2. To administer managed servers, use the WebLogic Console or WebLogic Enterprise Manager.
3. To administer clusters, use the WebLogic Enterprise Manager.
4. To administer the Content Server, use the WebLogic Content Server. This can include:
    1. Creating workflows
    2. Defining retention requirements

3. Defining and administering scheduled jobs
4. Configuring records settings
5. Reviewing log files
6. Refinery administration (the refinery is responsible for file format conversions).
7. Security Configuration

Functional Use Cases

1. To define Libraries, Workflows, Folders, use WebCenter Content Server.
2. To participate in Workflows, use WebCenter Content Server or WebCenter User Interface.

Application URLs

Replace localhost with the hostname or IP address where you have installed the products using the steps above.

WebLogic Console	http://localhost:7001/console
WebLogic Enterprise Manager	http://localhost:7001/em
WebCenter Content Server	http://localhost:16200/cs
WebCenter Content User Interface	http://localhost:16225/wcc
WebCenter Inbound Refinery	http://localhost:16250/ibr
WebCenter Capture	http://localhost:7004/cpt