

WebCenter Content as Delivery Channel in Oracle BI Publisher for Fusion Applications

A Help Guide to Switch Delivery from SFTP to WebCenter Content

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Introduction

Oracle Business Intelligence (BI) Publisher is an enterprise reporting solution for authoring, managing, and delivering all your highly formatted documents, such as operational reports, electronic funds transfer documents, government PDF forms, shipping labels, checks, sales and marketing letters, and much more. BI Publisher can deliver reports to a variety of destinations such as Printer, Fax, Email, WebDAV servers, FTP Servers, Content Servers, and Oracle Content and Experience Cloud (earlier known as Document Cloud Service).

Oracle Fusion Applications uses Oracle WebCenter Content as a content repository. The content in WebCenter Content is secured through user, roles, privileges and accounts.

Fusion Applications uses BI Publisher to generate pixel-perfect reports with SFTP and email as commonly used delivery channels. In Fusion Applications Release 13, BI Publisher supports Oracle WebCenter Content (earlier known as UCM) as the recommend delivery channel for content management. You can use the provisioned connection to deliver files from BI Publisher to WebCenter Content, but if you want to deliver PGP encrypted files from BI Publisher to WebCenter Content, you must use a custom connection. You can't use the provisioned connection to deliver PGP encrypted files from BI Publisher to WebCenter Content.

You can set up WebCenter Content as the delivery channel in BI Publisher. This document explains how to:

- [Plan the change in report delivery channel](#)
- [Use a provisioned connection](#)
- [Create a new custom connection](#)
- [Configure file encryption](#)
- [Schedule jobs to use WebCenter Content as the delivery channel](#)
- [Define a bursting query](#)
- [Schedule a bursting job](#)
- [Use web services for delivering files](#)
- [Extract the files delivered to WebCenter Content](#)
- [Troubleshoot the WebCenter Content delivery channel](#)

When you configure Oracle WebCenter Content as the delivery channel in BI Publisher, see *Oracle WebCenter Content System Administrator's Guide for Content Server* for managing security and user access.

The [Frequently Asked Questions](#) section provides answers to commonly asked questions. The [Appendix](#) contains more information about Oracle WebCenter Content.



Planning to Change the Delivery Channel for Reports

Conceptually, the file organization and file access permissions in an FTP/SFTP Server is different from that in a Content Server. In FTP/SFTP servers, folders are used to organize files and to control file access, but in WebCenter Content folders are optional and security group and accounts are used to define file access. Therefore, you must plan before switching your delivery channel from SFTP to WebCenter Content. To understand Oracle WebCenter Content, see *Oracle WebCenter Content System Administrator's Guide for Content Server*.

Here are the recommendations to plan the change:

A. File Organization and File Security Transition

1. You can map the folder based security in SFTP to Security Groups in WebCenter Content.
2. If the folder access in SFTP is hierarchical, then you can use Accounts to create a similar hierarchical access in WebCenter Content.
3. You can optionally use folders in WebCenter Content to organize the files similar to the folder structure in SFTP. However, keep in mind that the folders in WebCenter Content is limited to hold a maximum of 1000 files in a folder. If you are creating more than thousand documents, don't use a folder to store the documents in WebCenter Content.

B. Delivery Setup Transition

1. You can use the provisioned WebCenter Content (FA_UCM_PROVISIONED) connection if you don't require encryption. To enable encryption, create a custom connection.
2. If you were using PGP encryption for SFTP delivery, you can use the same PGP encryption key for configuring PGP encryption in WebCenter Content.

C. Delivery Destination Transition in Jobs / Data Models / Web Services

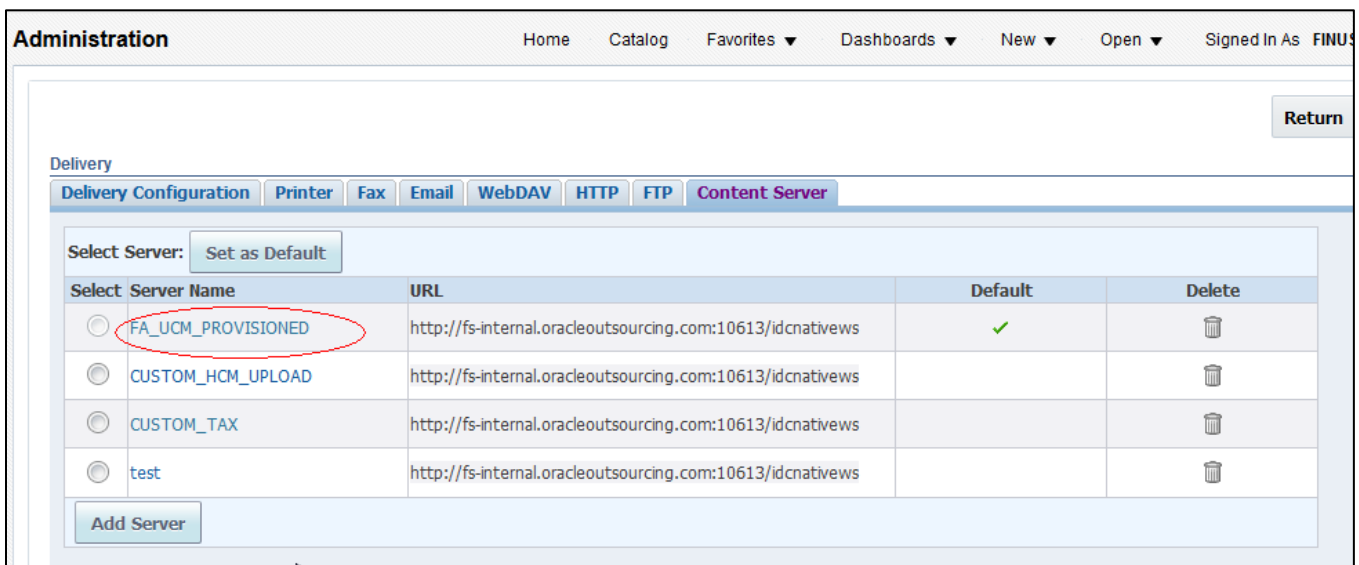
1. Edit the scheduled jobs to deliver the reports to WebCenter Content.
2. In a bursting Job, edit the bursting query in the data model to change the delivery channel and parameters to deliver the reports to WebCenter Content.
3. If you are using web services to submit jobs, edit the web services to deliver the reports to WebCenter Content.

Step A requires changes in WebCenter Content to organize files and secure file access. Step B and C require changes in BI Publisher. BI Publisher changes are explained in detail in the following sections.

Using a Provisioned Connection

By default, a provisioned WebCenter Content connection named “FA_UCM_PROVISIONED” is available when you get BI Publisher in your Fusion Applications pod. The provisioned connection uses the FUSION_APPS_OBIA_BIEE_APPID system user to connect to WebCenter Content. The FUSION_APPS_OBIA_BIEE_APPID system user is assigned with a set of pre-seeded security groups and accounts to support the most common use cases.

If you have a specific requirement to access WebCenter Content using user credentials other than the FUSION_APPS_OBIA_BIEE_APPID system user credentials, or you want to use PGP key encryption, the BI Publisher administrator can add a custom connection.



The screenshot shows the Administration console interface. At the top, there is a navigation bar with 'Home', 'Catalog', 'Favorites', 'Dashboards', 'New', 'Open', and 'Signed In As FINUS'. Below this, the 'Delivery' section is active, with tabs for 'Delivery Configuration', 'Printer', 'Fax', 'Email', 'WebDAV', 'HTTP', 'FTP', and 'Content Server'. The 'Content Server' tab is selected. Below the tabs, there is a 'Select Server:' section with a 'Set as Default' button. A table lists the servers:

Select	Server Name	URL	Default	Delete
<input checked="" type="radio"/>	FA_UCM_PROVISIONED	http://fs-internal.oracleoutsourcing.com:10613/idcnaviews	✓	
<input type="radio"/>	CUSTOM_HCM_UPLOAD	http://fs-internal.oracleoutsourcing.com:10613/idcnaviews		
<input type="radio"/>	CUSTOM_TAX	http://fs-internal.oracleoutsourcing.com:10613/idcnaviews		
<input type="radio"/>	test	http://fs-internal.oracleoutsourcing.com:10613/idcnaviews		

Below the table is an 'Add Server' button. A 'Return' button is located in the top right corner of the page.

Creating a Custom Connection

When you create a custom connection for WebCenter Content, the user name and password must be different from the one used by the provisioned connection (FA_UCM_PROVISIONED), but the URI for the custom connection and the provisioned connection must be same.

To create a custom connection:

1. Navigate to the **Content Server** tab in the Delivery section, and click **Add Server**.
2. In the URI field, enter the same URI used by the provisioned FA_UCM_PROVISIONED WebCenter Content server.

3. Enter the server name, URI, user name, and password.
4. Leave the **Enable Custom Metadata** box unchecked. Custom metadata is not used in Fusion Applications

Update Server: HB UCM Config

General

Server Name HB UCM Config * URI
(Example: http://host:port/cs/idcplg [OR] idc://host:4444 [OR] http://host:port/idcnativevs)

Security

Username Password

Additional Configuration

Enable Custom Metadata

5. Click **Test Connection** to ensure that you can connect to WebCenter Content.
6. Click **Apply**.

Configuring File Encryption

You can use PGP encryption to secure the file delivery to WebCenter Content. Perform these steps to use PGP encryption:

1. Upload the PGP public keys to import the PGP keys of WebCenter Content. See [Uploading PGP Public Key Files](#).
2. Enable delivery of PGP encrypted files in a custom connection to WebCenter Content. See [Enabling Delivery of PGP Encrypted Files](#).

Uploading PGP Public Key Files

To upload PGP Public Key Files:

1. Navigate to the Security Center section in the BI Publisher Administration page.
2. Click **PGP Keys** to open the PGP Keys page.

3. In the PGP Keys section, click **Browse** and select the PGP key file in the Open dialog.
4. Click **Upload**.

The uploaded file is imported into the keystore and its details are visible in the PGP Keys table. If a key with the same ID is imported again, the file is overwritten.

5. Click **Download** corresponding to the key in the Encrypted Test Output column of the PGP Keys table to download and decrypt a test output file using the secret key of the imported public key. Successful decryption confirms the encryption is working for your keys.

ORACLE Business Intelligence Search All

Administration Home Catalog Favorites Dashboards New Open Signed In

Return ?

Security Center

Security Configuration Roles and Permissions Digital Signature File Data Encryption PGP Keys

PGP Keys

Upload PGP Keys Browse... No file selected. Upload

Key ID	UID	Expiration Date	Encrypted Test Output	Delete
62C77562	oracle <oracle@slc14djh.us.oracle.com>		↓	🗑️
A0249B88	oracle <oracle@slc13jca.us.oracle.com>		↓	🗑️

BI Publisher public key

Download BI Publisher Public Key [F2B92DB5] ↓

Enabling Delivery of PGP Encrypted Files

To enable delivery of PGP encrypted files:

1. Make sure that you have uploaded a PGP public key file to a GPG keystore on the cloud.
2. Navigate to the Content Server page under Delivery.

3. Select the custom content server connection you want to configure.
4. Select the imported key (by ID) from PGP Keys dropdown and verify that gpg command is populated in greyed Filter Command field.

Update Server: Custom_UCM

Test Connection Apply Cancel

General

Server Name Custom_UCM * URI http://slc14d1v.us.oracle.com:11410/cs/idcplg
(Example: http://host:port/cs/idcplg [OR] idc://host:4444 [OR] http://host:port/idcnativevws)

Filter Command gpg --homedir /u01/APPLTOP/instance/BIShared/BIPublisher/reposit

Security

Username hcm.user@oracle.com Password

Additional Configuration

Enable Custom Metadata

PGP Encryption


PGP Key 62C77562 Sign Output

5. Click **Apply**.

Scheduling a Normal Job to Deliver to WebCenter Content

To schedule a normal job to deliver documents to WebCenter Content:

1. From the Home page, under Create, select **Report Job**.
2. In Schedule Report Job, on the General tab, click search next to the **Report** field.
3. In Open, navigate to and select the report, and then click **Open**.
4. In Schedule Report Job, click the **Schedule** tab.
5. In the Frequency list, select the option to use for this report.
6. In Schedule Report Job, click the **Output** tab.

- 
- a. From the **Destination Type** list, choose Content Server.
 - b. Click **Add Destination**.
 - c. Select the server from the **Server** drop-down list.
 - d. Select the WebCenter Content security group to assign to the report.
 - e. (Optional) Select an Account within the Security Group to assign to the report.

Note: The drop-down list contains only the Security Groups and Accounts that the user configured for the WebCenter Content Server connection has write access to. Therefore, if you use the default FA_UCM_PROVISIONED connection, the list may be different from that of a custom connection.

- f. (Optional) Select the Folder Path to deliver files to an existing folder in the content server.
- g. (Optional) Enter a value for Author. If you don't enter an Author, your user name is used for the Author metadata field in WebCenter Content.
- h. (Optional) Type a Title for the report. If you don't enter a Title, the Layout name is used for the Title in WebCenter Content.
- i. Enter the file name to assign to the delivered document on the remote server, for example, myreport.pdf.

Ensure that you don't include files with the same name in one folder. The File Name field is used as the Native File Name in WebCenter Content. If you don't supply a file name value, the Output name is used.

- j. (Optional) Type a description to include with the document in WebCenter Content.

- k. Uncheck **Include Custom Metadata**. Custom metadata is not used in Fusion Applications.

Schedule Report Job

Home Catalog Favorites Dashboards New Open Signed In As

Overview

General Created by hcm user@oracle.com

Report Name /Custom/Human Capital Management/Balance Letter.xdo

Schedule Start Immediately

Outputs Output1

Destination Content Server

Notification

General **Output** Schedule Notification Diagnostic

Make Output Public

Save Data for Republishing

Output

Name	Layout	Format	Locale	Timezone	Calendar
Output1	Balance Letter	PDF	English (United States)	(UTC-11:00) Midway - Samoa Time (ST)	Gregorian

Destination

There are five destination types: Email, Printer, Fax, FTP and Web folder. You can add multiple destinations as you need.

Destination Type Content Server Add Destination

Content Server Output All

Server Custom_UCM

Security Group CRM

Account crm\$/salesAccountResourceT

Folder Path

Author

Title

File Name

Comments

Include Custom Metadata

7. Click **Submit**.
8. In the Submit dialog, type a name in the Report Job Name field, and click **OK**.
9. Click on **Home** and navigate to the Report Job History page to verify the report delivery status.

Report Job History

Home Catalog Favorites Dashboards New Open Signed In As

Last Refreshed Tue Jan 30, 2018 03:50:48 AM Central Standard Time

Return

Time Zone used for filters and display (UTC-06:00) Chicago - Central Time (CT)

Filters

Report Job Name Contains [] Start Processing Equals Or Lat Jan 23, 2018 03:50:44 AM Owner Equals finuser

Report Path Contains [] End Processing Equals Or Ea [] Scope All Histories

Schedule Context Contains [] Status All

Search Reset

Report Job Histories

[33 Report Output Fetched]

Report Job Name	Report Name	Status	Start Processing	End Processing	Owner	Scope
UCM_Test	TCAGeoLoadErrors.xdo	Success	Jan 30, 2018 03:47:59 AM	Jan 30, 2018 03:48:07 AM	finuser1	Private



Defining a Bursting Query to Deliver to WebCenter Content

Bursting is a process of splitting data into blocks, generating documents for each block, and delivering the documents to one or more destinations. The data for the report is generated by executing a query once and then splitting the data based on a key value. For each data block, BI Publisher generates and delivers a separate document. The bursting query is a SQL query that you define to provide the required information to format and deliver the report. See *Data Modeling Guide for Oracle Business Intelligence Publisher*.

To deliver reports to WebCenter Content, define the bursting job with WCC as the delivery channel, and configure the parameter values as shown in the table.

Parameter	Value
DEL_CHANNEL	Delivery channel. Specify 'WCC' for WebCenter Content.
Parameter1	Server Name
Parameter2	Security Group
Parameter3	Author of the file
Parameter4	Account (Optional)
Parameter5	Title
Parameter6	Output file name
Parameter7	Comments (Optional)
Parameter8	Content ID (Optional) If you specify the ID, it must be unique. If you don't specify the ID, the system generates a unique one.
Parameter9	Custom metadata (true/false). Specify 'false'.
Parameter10	Folder Path

Note:

1. Ensure that you don't include files with the same name in one folder.
2. Content ID must be unique.

Sample Bursting Query

This is a sample query for bursting reports to a specific folder in the content server.

```
select distinct
    product_status as "KEY",                -- Split Key from data model SQL
    'BurstTemp' TEMPLATE,                  -- Report template name
    'en-US' LOCALE,
    'PDF' OUTPUT_FORMAT,                   -- Output type
    'WCC' DEL_CHANNEL,                     -- To send to content server
    'Custom_UCM' PARAMETER1,               -- Content Server name
    'CRMStage' PARAMETER2,                 -- Security group
    'hcm.user' PARAMETER3,                 -- Author of the file to be shown in content server
    " PARAMETER4,                           -- Account (Optional)
    'Test_Burst' PARAMETER5,               -- Title
    Product_Status|| TestFile.pdf'PARAMETER6, -- Output File name
    Product_Status PARAMETER8,              -- Content ID (Optional)
    'false' PARAMETER9,                    -- Custom metadata (Optional)
    '/Contribution Folders/Test12311/Check' PARAMETER10 -- Folder path to deliver files
from products
```

Scheduling a Bursting Job

To schedule a bursting job:

1. Make sure the report is enabled for bursting.

Enable a report to use a bursting definition on the Report Properties dialog of the Report Editor.

The screenshot shows the 'Report Properties' dialog box with the 'General' tab selected. The 'Description' field contains 'Payroll Interface Report for NGA'. Under the 'Run Report Online' section, all checkboxes are checked: 'Run Report Online', 'Show Controls', 'Allow Sharing Report Links', 'Open Links in New Window', and 'Auto Run'. In the 'Advanced' section, 'Enable Bursting globalReports' is checked, and 'Report is Controlled by External Application' is unchecked. Below these are two empty text input fields for 'Enterprise Scheduler Job Package Name' and 'Enterprise Scheduler Job Definition Name'. The dialog has 'OK' and 'Cancel' buttons at the bottom right.

2. Select **Use Bursting Definition to Determine Output & Delivery Destination** on the **Output** tab.

The Output and Destination options for the job are disabled because the output and destination details are supplied by the bursting definition.

Using Web Services for Delivering Documents

Apart from using normal jobs and bursting jobs, you can use web services to deliver documents from BI Publisher to WebCenter Content.

Important! In the request XML code that you send to BI Publisher, make sure you specify the WebCenter Content folder path (WCCFolderPath) instead of the folder name (WCCFolderName) for delivering the documents.

Known Issue (Bug 27446781): The /xmlpserver/services/v2/ScheduleService?wsdl scheduler service WSDL incorrectly contains the WCCFolderName element name instead of WCCFolderPath. As a workaround, edit the WSDL to replace the WCCFolderName element with WCCFolderPath element before generating the Java client code.

In the following WSDL (v2/ScheduleService?wsdl)

```
<complexType name="WCCDeliveryOption">
<sequence>
<element name="WCCAccount" nillable="true" type="xsd:string"/>
<element name="WCCAuthor" nillable="true" type="xsd:string"/>
<element name="WCCComments" nillable="true" type="xsd:string"/>
<element name="WCCFileName" nillable="true" type="xsd:string"/>
<element name="WCCFolderName" nillable="true" type="xsd:string"/>
<element name="WCCIncludeMetadata" type="xsd:boolean"/>
<element name="WCCSecurityGroup" nillable="true" type="xsd:string"/>
<element name="WCCServerName" nillable="true" type="xsd:string"/>
<element name="WCCTitle" nillable="true" type="xsd:string"/>
</sequence>
</complexType>
```

Make the following change:

```
<complexType name="WCCDeliveryOption">
<sequence>
<element name="WCCAccount" nillable="true" type="xsd:string"/>
<element name="WCCAuthor" nillable="true" type="xsd:string"/>
<element name="WCCComments" nillable="true" type="xsd:string"/>
<element name="WCCFileName" nillable="true" type="xsd:string"/>
<element name="WCCFolderPath" nillable="true" type="xsd:string"/>
<element name="WCCIncludeMetadata" type="xsd:boolean"/>
<element name="WCCSecurityGroup" nillable="true" type="xsd:string"/>
<element name="WCCServerName" nillable="true" type="xsd:string"/>
```

```
<element name="WCCTitle" nillable="true" type="xsd:string"/>
</sequence>
</complexType>
```

The SOAP request to BI Publisher must contain the WCCFolderPath element as highlighted in the sample ScheduleReportService request call.

Sample ScheduleReportService Request

Here's a sample ScheduleReportService web service request to deliver documents from BI Publisher to a WebCenter Content folder:

```
<soap:Envelope xmlns:sch="http://xmlns.oracle.com/oxp/service/ScheduleReportService"
xmlns:soap="http://www.w3.org/2003/05/soap-envelope">
<soap:Header><wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-secext-1.0.xsd" xmlns:wsu="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-
wssecurity-utility-1.0.xsd"/></soap:Header>
<soap:Body>
<sch:scheduleReport>
<scheduleRequest>

<deliveryChannels>
<wccOptions>
<!--Zero or more repetitions!-->
<item>
<WCCAccount>obia$/extractTransformLoad$/WCCAccount>
<WCCAuthor>administrator</WCCAuthor>
<WCCComments>test</WCCComments>

<WCCFolderPath>/Contribution Folders/Test/childTest/</WCCFolderPath>
<WCCIncludeMetadata>>false</WCCIncludeMetadata>
<WCCSecurityGroup>CRMStage</WCCSecurityGroup>
<WCCServerName> Custom_UCM</WCCServerName>
<WCCTitle>tt</WCCTitle>
</item>
</wccOptions>
</deliveryChannels>

<reportRequest>
<attributeFormat>pdf</attributeFormat>
<attributeTemplate>test</attributeTemplate>
<byPassCache>true</byPassCache>
<reportAbsolutePath>/~administrator/Interactive_Viewer/SH_Interactive_Report.xdo</reportAbsoluteP
ath>
</reportRequest>
<saveDataOption>true</saveDataOption>
<saveOutputOption>true</saveOutputOption>
<userJobDesc>dec</userJobDesc>
<userJobName>job11</userJobName>
</scheduleRequest>
</sch:scheduleReport>
</soap:Body>
</soap:Envelope>
```

The Report Job History page will contain the report delivery status and the report job ID.

Report Job History Home Catalog

General Information		Report Job Execution Information	
Report Job ID	7487	Report Job Status	Success
Report Job Name	UCMBurst	Start Processing Time	1/30/18 11:50:13 AM WET
Owner	weblogic	End Processing Time	1/30/18 11:50:35 AM WET
Report Name	ProductRT	Time Elapsed	22.54 seconds
Report Scope	Private		
Report Job Schedule	1/30/18 11:50:10 AM WET		
Active Start Date			
Active End Date			
Trigger Data Model			
Trigger Name			
Trigger Retry Limit			
Trigger Pause Time			
Trigger Parameters			

No parameters available

Bursting Definitions
Split by /DATA_DS/G_1/PRODUCT_STATUS

Output & Delivery
XML Data Diagnostic Log Consolidated Output Republish

Status All

Output Name	Template	Format	Locale	Time Zone	Calendar	Status	Send	XML Data	Republish
UCMBurst	BurstTemp	PDF	English (United States)			Success	Send	XML Data	Republish
UCMBurst	BurstTemp	PDF	English (United States)			Success	Send	XML Data	Republish
UCMBurst	BurstTemp	PDF	English (United States)			Success	Send	XML Data	Republish
UCMBurst	BurstTemp	PDF	English (United States)			Success	Send	XML Data	Republish

The delivery information in the Report Job History page contains the content ID of the document delivered.

Report Job History Home Catalog

No parameters available

Bursting Definitions
Split by /DATA_DS/G_1/PRODUCT_STATUS

Output & Delivery
XML Data Diagnostic Log Consolidated Output Republish

Status All

Output Name	Template	Format	Locale	Time Zone	Calen...	Status	Send	XML Data	Republish
UCMBurst	BurstTemp	PDF	English (United States)			Success	Send	XML Data	Republish

Split Key and Value:
Split by Value orderable

Delivery 1: Content Server
 Server Custom_UCM
 Security Group FAFusionImportExport
 Author weblogic
 Account
 Title Test_Burst
 File Name orderable.pdf
 Comments
 Custom Metadata
 Content Id WCC_orderable
 Last Updated: 1/30/18 11:50:35 AM WET
 Status Success

UCMBurst	BurstTemp	PDF	English (United States)			Success	Send	XML Data	Republish
UCMBurst	BurstTemp	PDF	English (United States)			Success	Send	XML Data	Republish
UCMBurst	BurstTemp	PDF	English (United States)			Success	Send	XML Data	Republish

Extracting the Documents Delivered to WebCenter Content

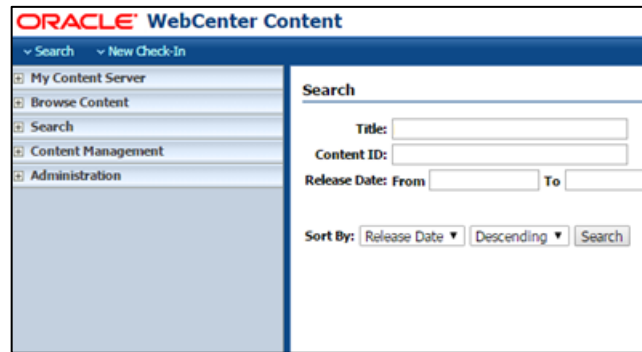
You need Fusion Applications credentials to use these WebCenter Content features to extract the documents from WebCenter Content to your system:

- [WebCenter Content user interface](#)
- [WebCenter Content web services](#)

Using the WebCenter Content User Interface for Extracting Documents

You can use **Search** or **Browse Content** to locate documents in WebCenter Content.

The following image shows the Search page.



The following image shows the Browse Content page.





Using the WebCenter Content Web Services for Extracting Documents

You can use WebCenter Content web services to extract documents from WebCenter Content. You have to specify the Content IDs of the documents you want to extract.

To extract the delivered documents from WebCenter Content:

1. Check the status of the document delivery to make sure the documents are delivered from BI Publisher to WebCenter Content. You can confirm the delivery status by using:

- The Report Job History page, check the **Report Job Status** field.
- The `getScheduledReportStatus()` method to check the status of the job. For example:

```
JobStatus status = getScheduledReportStatus(submitJobId, username, password);
```

where *submitJobId* is the ID of the job used to deliver the documents. You can get job ID from the response of the `ScheduleReport()` method or from the **Report Job ID** field from the Report Job History page.

2. Get the Content IDs of the documents stored in WebCenter Content.

Use the following BI Publisher services to get the content IDs of the documents delivered from BI Publisher to WebCenter Content.

- a. Schedule a report and get the job ID. For example:

```
String submitJobId = schedService.scheduleReport();
```

See [scheduleReport\(\) Method](#).

- b. Fetch the instance IDs of the successful jobs. For example:

```
String[] instanceIds = schedService.getAllJobInstanceIDs(submitJobId, username, password);
```

- c. Use the job instance ID to get the job output ID for each job instance ID. For example:

```
JobOutputsList jobOutputInfo=  
schedService.getScheduledReportOutputInfo(instanceJobId, username,  
password];
```



See [getScheduledReportOutputInfo\(\) Method](#).

- d. Use the job output ID to get the details of the job output. For example:

```
jodl = schedService.getScheduledReportDeliveryInfo(outputId.toString(),  
username, password);
```

See [getScheduledReportDeliveryInfo\(\) Method](#).

- e. From the job output details, get the Content ID of the document stored in WebCenter Content. For example:

```
byte[] b1 =  
(JobOutputDelivery)jodl.getJobOutputDeliveryList()[0].getDeliveryParameters  
();  
  
//Create a byte array input stream with the delivery parameters  
  
java.io.ByteArrayInputStream in = new java.io.ByteArrayInputStream(b1);  
  
//Load the parameters into a Properties object  
  
java.util.Properties pr = new java.util.Properties();  
  
pr.load(in);  
  
//Fetch the content ID using the key: d_wccd_contentid  
  
System.out.println ("Content ID:" + pr.getProperty("d_wccd_contentid"));  
  
//d_wccd_contentid: UCMFA000001  
  
in.close();
```

Here is a sample code to list the WCC content ID(s) of documents delivered by a BI Publisher Job:

```
package com.oracle.xmlns.oxp.service.v2;
```

```
public class ScheduleServiceTest
{
    public static void main (String[] args)
    {
        if (args.length > 0)
        {
            System.out.println("Fetching UCM Content ID for Job ID: " + args[0]);
            getContentId(args[0], args[1], args[2]);
            System.out.println("Done.");
        }
        else
        {
            System.out.println("Please specify arguments: <submitJobID> <username>
<password>");
            System.out.println("No arguments specified. Exiting ...");
        }
    }
}

public static void getContentId(String submitJobId, String username, String password){
    try
    {
        ScheduleServiceProxy schedService = new ScheduleServiceProxy();
        //Use the submit job ID to check the status of the job as the customer is
        currently doing
        JobStatus status = schedService.getScheduledReportStatus(submitJobId,
        username, password);
        System.out.println("Job Status for Job ID:" + submitJobId+ " is: "+
        status.getJobStatus());
        /*
         * Wait for the job to complete successfully and check the status.
         *
         */
        //After successful completion of the job, fetch the instance ID corresponding
        to the job
        System.out.println("Fetching instance job Ids ...");
        String[] instanceIds = schedService.getAllJobInstanceIDs(submitJobId,
        username, password);
    }
}
```

```

for (int id=0; id < instanceIds.length; id++)
{
String instanceJobId = instanceIds[id];

System.out.println("Instance job for Job ID:" + submitJobId+ " is: "+
instanceJobId);

// For each instance Job ID corresponding to the parent job, get the output
IDs

System.out.println("Fetching output information ...");

JobOutputsList jol = schedService.getScheduledReportOutputInfo(instanceJobId,
username, password);

if (jol != null && jol.getJobOutputList() != null)
{

JobOutput[] listoutput = jol.getJobOutputList();

for ( int i = 0 ; i < listoutput.length; i++)
{

JobOutput output = (JobOutput) listoutput[i];

Long outputId = output.getOutputId();

System.out.println("Output ID for instance job ID:" +
instanceJobId+ " is: "+ outputId);

//For each output ID, find the corresponding delivery
information

System.out.println("Fetching delivery information ...");

JobOutputDeliverysList jodl =
schedService.getScheduledReportDeliveryInfo(outputId.toString(),
username, password);

if (jodl != null && jodl.getJobOutputDeliveryList() != null)
{

JobOutputDelivery[] listdelivery =
jodl.getJobOutputDeliveryList();

for (int j=0; j< listdelivery.length; j++)
{

// Get the delivery parameters for each delivery
corresponding to the output ID

JobOutputDelivery jod =
(JobOutputDelivery)listdelivery[j];

System.out.println("Delivery ID for output ID:" +
outputId + " is:" + jod.getDeliveryID());

byte[] b1 = jod.getDeliveryParameters());

```

```

//Create a byte array input stream with the
//delivery parameters

java.io.ByteArrayInputStream in = new
java.io.ByteArrayInputStream(b1);

//Load the parameters into a Properties object

java.util.Properties pr = new
java.util.Properties();

pr.load(in);

//Fetch the content ID using the key:
d_wccd_contentid

System.out.println ("Content ID:" +
pr.getProperty("d_wccd_contentid"));

//d_wccd_contentid : UCMFA000001

in.close();

}

}

}

}

}

}

catch(Exception ex){
System.out.println("Fetching content ID failed due to "+ex.getMessage());
}
}
}

```

3. Use the WebCenter Content services to extract documents from WebCenter Content. You have to specify the Content IDs of the documents you need.

See [Configuring Web Services with WSDL, SOAP, and the WSDL Generator](#) and [Get File](#) in *Developing with Oracle WebCenter Content*.

Troubleshooting Issues with Connection to WebCenter Content

You aren't likely to experience issues with connection to WebCenter Content. If you see any errors in the configuration page or in the job status, you as the BI Administrator can use various options in BI Publisher to resolve the issue.

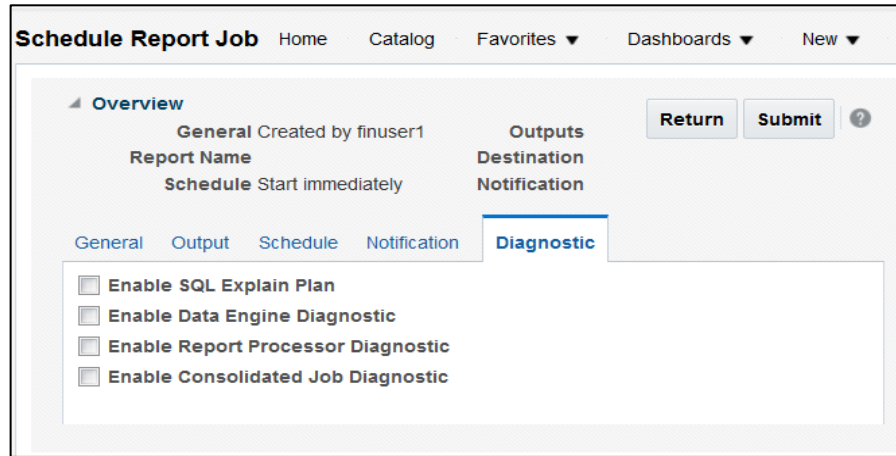
- Test Connection

Test the WebCenter Content configuration using the **Test Connection** option in the Content Server configuration page.

The screenshot displays the BI Publisher configuration interface for the Content Server. At the top, a confirmation message states "Confirmation Connection established successfully." Below this, the "Update Server: CUSTOM_HCM_UPLOAD" section contains a "Test Connection" button, which is circled in red. The configuration is organized into several sections: "General" with fields for "Server Name" (CUSTOM_HCM_UPLOAD), "Filter Command" (opq -homedir /u01/APPLTOP/instance/BIShared/BIPublis), and "* URI" (rnal.oracleoutsourcing.com:10613/idcnativevs); "Security" with "Username" (FINUSER1) and "Password" (masked); "Additional Configuration" with "Enable Custom Metadata" (checked); and "PGP Encryption" with "PGP Key" (CE43732B) and "Sign Output" (unchecked).

- Diagnostic Logs

You can enable job diagnostics in the **Diagnostics** tab in the Schedule Report Job page, and download the job diagnostic logs from Report Job History.



- Scheduler Diagnostics

System Maintenance

Server Configuration Scheduler Configuration Scheduler Diagnostics Report Viewer Configuration Manage Cache Manage Job Diagnostics Log

Last Refreshed January 30, 2018 11:13:13 AM UTC [Diagnose](#)

Result: Passed

Diagnostic Item	Value	Status	Details
Enterprise Scheduler		Passed	
--JMS		Passed	
----JMS Cluster Config	/u01/APPLTOP/instance/BIShared/BIPublisher/repository/Admin/Scheduler/jms_cluster_config.properties	Passed	
-----JMS_PROVIDER_TYPE	WebLogic	Info	WebLogic JMS is selected.
-----JMS_WEBLOGIC_VERSION	10.3	Info	
-----JMS_WEBLOGIC_JNDI_FACTORY	weblogic.jndi.WLInitialContextFactory	Info	
-----JMS_WEBLOGIC_JNDI_URL	cluster:t3://bj_cluster	Info	
-----JMS_WEBLOGIC_SECURITY_MODE	Oracle BI	Info	FUSION_APPS_BI_SYSTEM_APPID
-----BIP_CONNECTION_FACTORY_NAME	BIP.JMS.CF	Info	
-----BIP_SYSTEM_TOPIC_NAME	BIP.System.T	Info	
-----BIP_BURST_JOB_QUEUE_NAME	BIP.Burst.Job.Q	Info	
-----BIP_BURST_REPORT_QUEUE_NAME	BIP.Burst.Report.Q	Info	
-----BIP_DELIVERY_FTP_QUEUE_NAME	BIP.Delivery.FTP.Q	Info	
-----BIP_DELIVERY_FILE_QUEUE_NAME	BIP.Delivery.File.Q	Info	
-----BIP_DELIVERY_FAX_QUEUE_NAME	BIP.Delivery.Fax.Q	Info	
-----BIP_DELIVERY_WEBDAV_QUEUE_NAME	BIP.Delivery.WebDAV.Q	Info	
-----BIP_DELIVERY_PRINT_QUEUE_NAME	BIP.Delivery.Print.Q	Info	
-----BIP_DELIVERY_EMAIL_QUEUE_NAME	BIP.Delivery.Email.Q	Info	
-----BIP_DELIVERY_WCC_QUEUE_NAME	BIP.Delivery.WCC.Q	Info	
-----NUMBER_THREADS_PER_PROCESSOR	5	Info	
-----JMS_Shared_Temp_Directory	/u01/APPLTOP/instance/BIShared/BIPublisher/biptemp	Info	
----JMS Runtime		Passed	
-----Topic - BIP.System.T		Passed	

Check the status of the JMS queue and of traffic in the channel using the scheduler diagnostics.

- Test Encryption.

In the PGP Keys page of the Security Center section, download the key and decrypt a test output file using the secret key of the imported public key. If you see successful decryption, then the encryption is working for your keys.

Security Center

Security Configuration | Roles and Permissions | Digital Signature | **PGP Keys**

PGP Keys

Upload PGP Keys No file selected.

Key ID	UID	Expiration Date	Encrypted Test Output	Delete
CE43732B	Sudhir <kolli.sudhir@gmail.com>			
3980480F	Sean Peden <sean.peden@hrblock.com>			
5FF7EF3F	ONSemiconductor Middleware DEV (ONSemiconductor middleware development key pass:0123456789) <IT-MI...			

BI Publisher public key

[Download BI Publisher Public Key \[84D01F85\]](#)

- Test Bursting Report

To ensure that the files are delivered correctly to the intended users and to prevent unauthorized access of reports, make sure:

- The bursting query uses **WCC** as DEL_CHANNEL.
- There are no spelling mistakes in the bursting query for any of the parameters.
- The content server name, security group, and accounts are correct.



Frequently Asked Questions

This reference provides answers to common questions asked by administrators configuring BI Publisher for delivering reports.

Can I change the delivery destination of an existing scheduled job that is scheduled to run on a future date and time, or is a recurring job?

Yes. You need to edit the scheduled job and change the destination to Content Server. After the job completes, you can verify that the files are delivered to WebCenter Content instead of SFTP server.

Can I change the delivery destination in a bursting job from SFTP to WebCenter Content?

Yes. Edit the report properties and change the destination to Content Server. After the job completes, you can verify that the files are delivered to WebCenter Content instead of SFTP server.

Can I change the delivery destination in a bursting query from SFTP to WebCenter Content?

Yes. Edit the bursting query in the data model to change DEL_CHANNEL to **WCC**.

Can external users without Fusion Applications credentials access the files delivered to WebCenter Content?

No. Only users with Fusion Applications credentials can access the files in WebCenter Content.

Can I add PGP keys to the “FA_UCM_PROVISIONED” provisioned WebCenter Content connection?

No. You can't add PGP keys to the default “FA_UCM_PROVISIONED” WebCenter Content connection.


Can I schedule a report to deliver to multiple destinations?

Yes. In the Schedule Report Job page, you can schedule a report to deliver to multiple destinations.

Can I generate PGP keys in WebCenter Content and schedule a job in BI Publisher to deliver a file with PGP keys to WebCenter Content?

Yes. Perform the following steps:

1. Create the PGP keys in WebCenter Content.
2. In the Security Center section in the BI Publisher Administration page, select **PGP Keys** and click **Upload** to import the PGP keys of WebCenter Content.

- 
3. Configure a custom connection to WebCenter Content to use the imported PGP keys.
 4. Schedule a job to run a report that delivers files to WebCenter Content.

Are there any limitations to using folders in WebCenter Content?

Yes. Ensure that you don't include files with the same name in one folder and the number of files in a folder is less than 1000.

When a document is delivered to WebCenter Content, how can I get the document ID or URL?

The document ID and URL of the document delivered to WebCenter Content is available in:

- Report Job History page.
- Delivery parameters when you call `getScheduledReportDeliveryInfo()` with the `job outputID` parameter.

Appendix

Overview of Oracle WebCenter Content

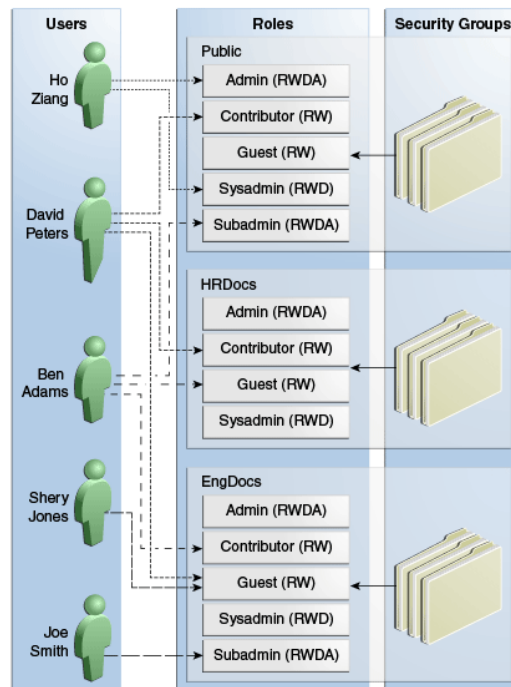
Oracle WebCenter Content manages the information you use every day such as information found in emails, reports, memos, and slide presentations. Oracle WebCenter Content stores, organizes, and secures information so that only users with the required privileges can access the information.

To deliver content to WebCenter Content, BI Publisher uses the following standard metadata:

- Document Type (Document Type value has been set to “Document” for BI Publisher report documents)
- Security Group
- Accounts (Optional)

Security Group

A security group is a set of files grouped under a unique name. Every file in the Content Server repository belongs to a security group. Security groups enable you to group and organize content files that can be accessed only by specific users. For example, files can be assigned to a security group with the name HRDocs for documents belonging to the Human Resources department, and these files can be accessed only by employees working in the Human Resources department.

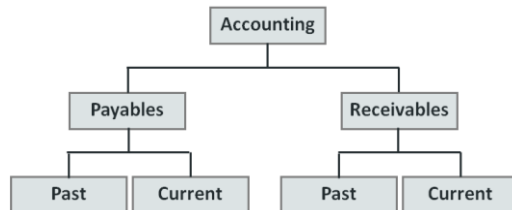


Accounts

Accounts give you greater flexibility and granularity in your security structure than the security groups. You can set up Accounts in a hierarchical structure that enables you to give some users access to all the branches of the structure, and limit permissions for other users, who are assigned accounts at a lower level in the structure.

For example, to handle the following hierarchical security structure, create the following accounts:

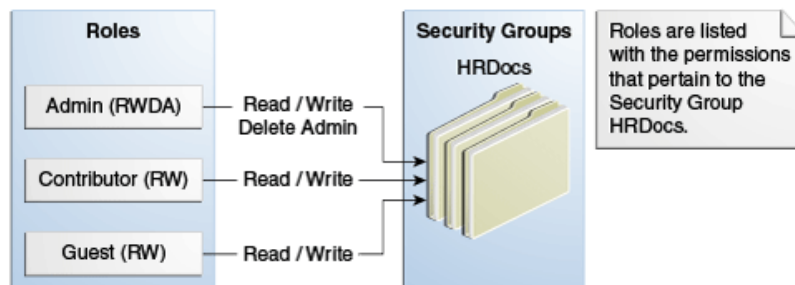
- Accounting
- Accounting/Payables
- Accounting/Receivables
- Accounting/Payables/Past
- Accounting/Payables/Current
- Accounting/Receivables/Past
- Accounting/Receivables/Current



Roles

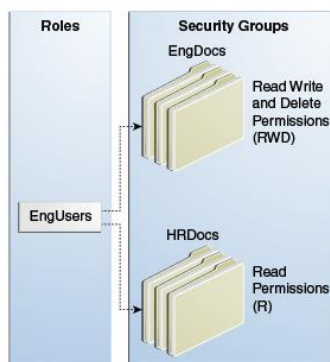
A role is a set of permissions (Read, Write, Delete, Admin) for each security group. You can think of a role as a user's job. Users can have different jobs for various security groups. Users can also have different jobs to identify the different teams in which they participate.

For example, the following figure shows three roles and the permissions those roles have to the same security group.



Roles are assigned to one or more users by the system administrator to provide access to the security groups.

The following figure shows the EngUsers role with only Read permission to the HRDocs security group. However, this role provides Read, Write, and Delete permissions to the EngDocs security group. This provides an added measure of security, ensuring that only users who need access to certain documents can modify them.



Users

Users are centrally managed for Fusion Applications and authenticated using Oracle Platform Security Services (OPSS).

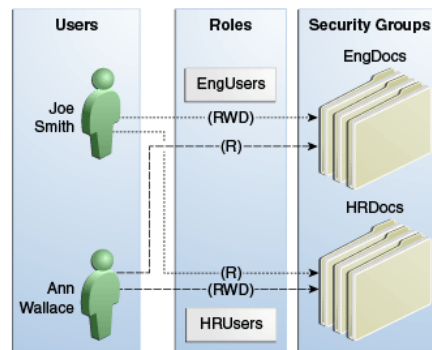
Permissions

Each role allows the following permissions for each security group: Read (R), Write (W), Delete (D), or Admin (A). The permission that a user has to access the files in a security group is the highest permission defined by any of the user's roles. If a user has the guest and contributor roles, where guest is given Read permission and contributor is given Write permission to the Public security group, the user will have Write permission to content in the Public security group.

In the following example, Joe Smith and Ann Wallace have permissions to two security groups:

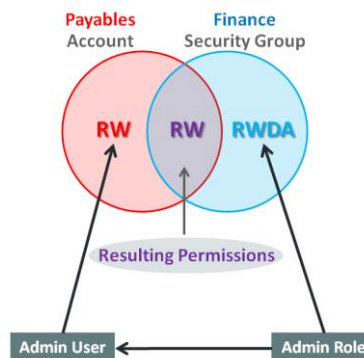
Joe Smith has Read, Write, and Delete permission to the EngDocs security group, but only Read permission to the HRDocs security group. As a member of the EngUsers role, he has been given Read, Write, and Delete access to Engineering Documents, but only Read access to Human Resource documents.

Ann Wallace has Read, Write, and Delete permission to the HRDocs security group, but only Read permission to the EngDocs security group. As a member of the HRUsers role, she has been given Read, Write, and Delete access to Human Resource documents, but only Read access to Engineering documents.



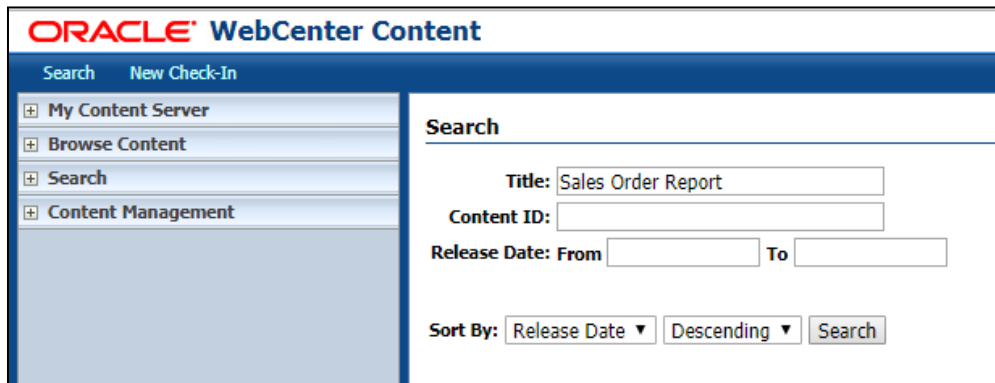
When accounts are used, the account becomes the primary permission to satisfy before security group permissions are applied.

Therefore, user access to a particular document is the intersection between their account permissions and security group permissions.

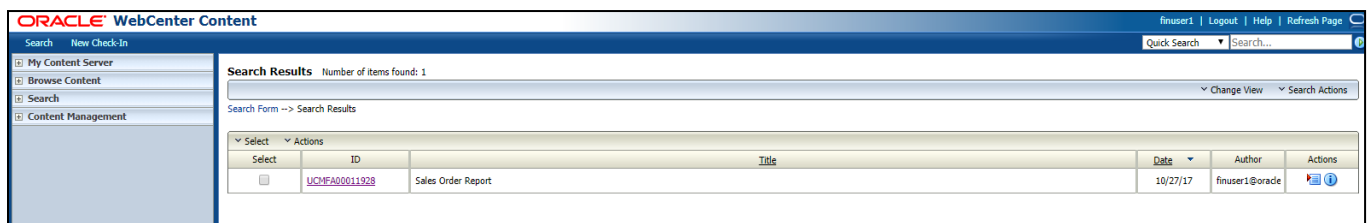


WebCenter Content Users

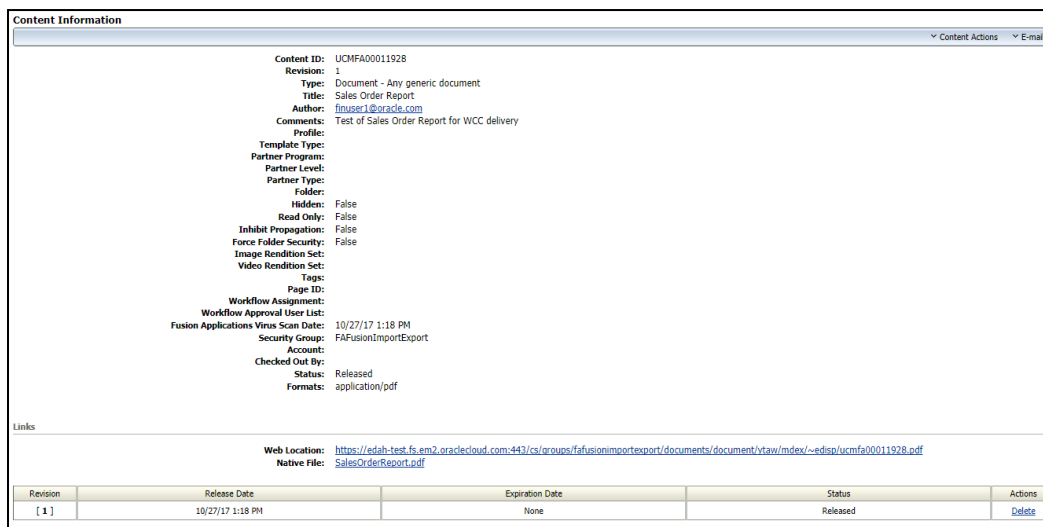
WebCenter Content users can log in and access files based on their Roles, Security Group, Accounts and Permissions. Users can search the documents submitted through BI Publisher by author, title, and file name.



The following figure shows the search result.



Click the info icon to view all the metadata information for the document.



If you click the link to the document, you can view the report within the WebCenter Content environment.

ORACLE WebCenter Content

Search Now Check-In

- My Content Server
- Browse Content
- Search
- Content Management

Order Document Order # 273078-1
Date 2015-06-29
Page 1 of 2

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WebCenter Content as Delivery Channel in Oracle BI Publisher for Fusion Applications
April 2018