opentext™

OpenText™ Documentum™ Content
Services for SAP® Solutions

Configuration Guide

Configure SAP to enable communication between SAP and
OpenText Documentum Content Services for SAP Solutions.

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Chapter 1

Introducing Documentum Content Services for SAP Solutions

1.1 Overview

The Documentum Content Services for SAP Solutions (CS SAP) application integrates the Documentum content management system with the SAP R/3 or ECC system. It is an interface to the SAP R/3 or ECC system based on SAP standard Document Management System (DMS) and ArchiveLink interfaces.

Documentum Content Services for SAP Solutions provides the following functions:

- Enables users to easily access and display documents stored in OpenText™ Documentum™ Content Management repository from a variety of SAP modules.

- Links documents stored in OpenText Documentum Content Management (CM) to a variety of SAP documents.

- Archives SAP data, reports, and documents through ArchiveLink certified interfaces in OpenText Documentum CM.

  > **Note:** To use Documentum Content Services for SAP Solutions with HTTP archiving services, install Documentum Archive Services for SAP Solutions, as described in the *OpenText Documentum Archive Services for SAP Solutions - Installation Guide (EDCCOSAPAR-IGD)*.

- Stores and manages reports and outgoing documents in OpenText Documentum CM.

1.2 Intended audience

In order to address the manuals to the correct audience, the roles of the users of the manuals have been defined as follows:

- System Administrator – This role covers users who install and configure Documentum Content Services for SAP Solutions. The Content Services for SAP Solutions application integrates OpenText Documentum CM and the SAP R/3 system. Therefore, system administrators must have experience with the software products listed in the *OpenText Documentum Content Services for SAP Solutions Release Notes*.

- Content Services Administrator – This role covers users who manage Documentum Content Services for SAP Solutions using WebAdmin.

- Document Controller – This role covers those who release documents to SAP and maintain the links to those documents.

- Standard User – This role covers users who view documents using SAPGUI and the View component of Documentum Content Services for SAP Solutions.

This document is intended for system administrators.

This document forms part of a documentation suite designed to support those who install, configure, and use Documentum Content Services for SAP Solutions. The product and documentation suite can be found on OpenText My Support (https:\\support.opentext.com).

1.3   Documentum Content Services for SAP Solutions architecture
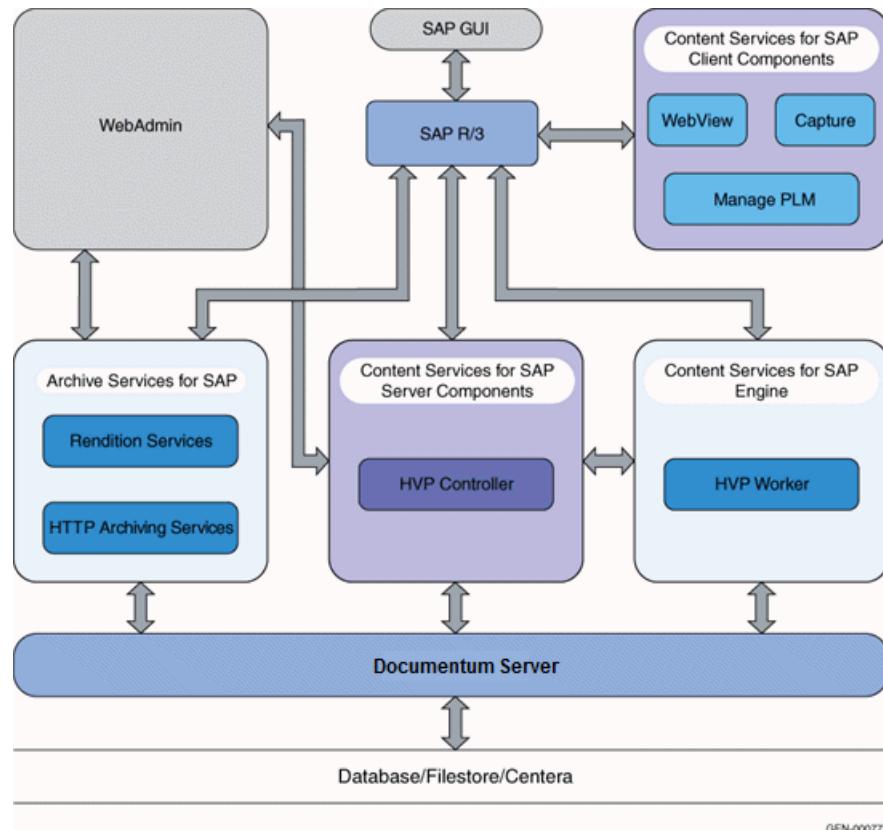
Figure 1-1: Documentum Content Services for SAP Solutions and SAP

📄 **Note:** Content Services for SAP capture component is not present in the 7.2 and later releases.

Documentum Content Services for SAP Solutions consists of the following components:

- WebAdmin

  An administrative console that allows you to:

  – Perform archiving services.

    Using WebAdmin, you can perform the following archiving services:

    ○ Create, configure, and manage archives.

    ○ Manage certificates for the archive.

- ○ Configure document archival for Documentum Content Services for SAP Solutions.

- – Perform DMS-related services. You can:

  - ○ Configure batch jobs for linking and replication tasks.

  - ○ Schedule and manage the execution of linking and replication jobs.

- High Volume Processing Server (HVPS)

  A server component that allows you to automate the linking between SAP objects and documents, as well as maintain those links. This automation improves productivity, information integrity, and information availability. This replaces the Documentum Content Services for SAP Solutions Agent component present in 5.3 and 6.0 releases. Unlike the previous Agent, HVPS is completely a Java-based component. The following are the two main components:

  - – HVP Controller: This server component is packaged as the `HVPS.dar` file. HVP Controller runs in the realm of the method server and delegates the jobs executed from the WebAdmin to the registered HVP Workers.

  - – HVP Worker: The Worker is a .war file which can be installed on any supported application server (*Release notes* provide information on the supported application servers). The jobs delegated by the controller are executed by the HVP Worker. The HVP Worker packages OpenText™ Documentum™ Content Management Foundation Java API libraries that is used to communicate with the repository. It communicates with SAP using the SAP JCo v3.1.x libraries. The JCo libraries have to be downloaded from the SAP marketplace into the lib directory of HVP Worker.

- View

  View is a thick client which must be installed on every client computer that needs to access reports, drawings, and other documents stored in a OpenText Documentum CM repository.

  The View component supports Windows 10.

- WebView

  This is a Web-based View application which could be installed on any supported application server. The advantage of using WebView over View is that the user need not have to install the View application on every client computer and the documents reports are rendered on to the browser window. Unlike View, WebView supports Linux-based operating systems also. WebView also has Daeja viewer plugin which enables users to open TIFF and PDF documents inside the browser window and provides tools to annotate.

- Manage

  Enables you to release OpenText Documentum CM documents to SAP, and to maintain those released documents.

📄 **Note:** The *OpenText Documentum Content Services for SAP Release Notes* provides detailed information about specific Operating System versions and supported software environments.

1.4 Supported SAP document formats

OpenText Documentum CM supports the following SAP document classes/formats:

- Incoming or scanned documents (FAX class, TIFF format)

- Outgoing documents (OTF class, PDF format)

- Archived data (REO class, REO format)

- Reports or print lists (ALF class, ALF format)

1.5 SAP and Documentum Content Services for SAP Solutions terms

The following table presents the SAP and Documentum Content Services for SAP Solutions terms and their definitions used in this guide.

Table 1-1: Terms and definitions

Term	Definition
CS SAP	Product that connects OpenText Documentum CM to and from SAP.
ArchiveLink	Cross-functional interface that is part of the SAP Basis System. ArchiveLink handles the storing and retrieval of documents and data to and from a repository external to SAP.

WebAdmin	An administrative console that allows you to perform:
	
	- Archiving services:
	  – Create, configure, and manage archives.
	  – Manage certificates for the archive.
	  – Configure document archival for Documentum Content Services for SAP Solutions.
	- DMS-related services:
	  – Configure batch jobs for linking and replication tasks.
	  – Schedule and manage the execution of linking and replication jobs.

Term	Definition
HVPS	A server component that allows you to automate the linking between SAP objects and documents, as well as maintain those links. This automation improves productivity, information integrity, and information availability. This replaces the Documentum Content Services for SAP Solutions Agent component present in 5.3 and 6.0 releases. Unlike the previous Agent, HVPS is completely a Java-based component.
SAP DMS	Document Management System that is part of the SAP Basis System. Presents a logical layer to integrate with external systems such as AutoCAD or OpenText Documentum CM. Not directly related to ArchiveLink.
SAP PLM	Product Lifecycle Management (PLM). SAP PLM provides an integrated environment that ensures all personnel involved in product development, manufacturing, and service have quick and secure access to current information. It provides a set of BAPI calls that can be used by external systems. For example, OpenText Documentum CM.
SAP Master Record	A set of master data, such as customer or vendor data, which is used in the creation of SAP documents.
SAP GUI	SAP graphical user interface. Graphical menu/screen tool that connects a client to the SAP server.
Original document	Paper-based version of a document. For example, an invoice can consist of two sheets of paper received from a supplier. Paper documents are scanned in and stored as electronic documents in OpenText Documentum CM.
SAP document	An electronic transactional record of header data and line items in SAP.

Chapter 2

Configuring the ArchiveLink interface for Documentum Content Services for SAP Solutions

2.1 Overview

You can store and retrieve documents, reports, and data through SAP ArchiveLink and DMS interfaces.

After a document is released to OpenText Documentum CM, it is accessible from SAPGUI (the SAP client interface). It is also accessible from a OpenText Documentum CM Client such as Webtop.

Prior to running Documentum Content Services for SAP Solutions, the SAP R/3 system must also be configured. This chapter describes how to configure your R/3 ArchiveLink and other related transactions through SAPGUI and the R/3 system.

> **Note:** The configuration steps often reference direct transaction codes. These codes allow you to navigate directly to the correct configuration screen. Most of the system configuration is performed in the SAP Implementation Guide for R/3 customizing (IMG). You can navigate to this screen using the following transaction code: `spro`.

Archive Services are configured as an HTTP-based Archive Server.

> **Note:** OpenText Documentum CM recommends that all installations be based on the HTTP-based Archive Server because SAP has focused development on the HTTP-based archive protocol.

2.2 oac0—Defining a logical ArchiveID

> **Note:** The name of the logical ArchiveID must be the same as the ArchiveID created using WebAdmin, as described in the *OpenText Documentum Content Services for SAP Solutions - Administration Guide (EDCCOSAPCS-AGD)*.

To define a logical ArchiveID in SAP:

1. Execute the following transaction in the transaction code field:

   `oac0`

2. In the **Display Content Repositories: Overview** page, click on any content repository, specifically whose **Storage type** is HTTP OpenText™ Documentum™ Content Management Server.

3. In the **Display Content Repositories: Detail** page, click **Display/Change**.

The **Copy as ...** is enabled.

4.   Click **Copy as ...** .

5.   Edit the **Content Rep.** field so that it is the same as the ArchiveID created using WebAdmin, as described in the *OpenText Documentum Content Services for SAP Solutions - Administration Guide (EDCCOSAPCS-AGD).*

6.   In the **Transfer drctry** field, type the directory path where SAP can write the Print List until it is in the Storage Queue.

7.   In the **HTTP Server** field, type your system name.

> **Note:** Type the IP address of your system in this field.

8.   In the **HTTP Script** field, type the following:

```
/<<virtual_directory>>/archivelink/<name-of-repository>
```

<<virtual_directory>> refers to the Documentum Archive Services for SAP Solutions virtual installation directory.

9.   To save the logical ArchiveID configuration, select **Content Repository** > **Save**.

2.3   oag1—Configuring basic settings

You must define the basic settings for ArchiveLink.

To configure the basic settings:

1.   Execute the following transaction in the transaction code field:

oag1.

2.   Ensure that **Deactivate Print List Management in DMS** is selected.

3.   Save your changes.

2.4   oanr—Configuring number ranges

You must configure the number ranges for ArchiveLink.

To configure the number ranges:

1.   Execute the following transaction in the transaction code field:

oanr.

2.   To edit the configuration, click **Intervals** (marked with a pencil).

The **Display Number Range Intervals** window opens.

3.   Configure the **Number Range 01** with default values.

4.   Save your changes.

2.5 oaqi—Creating queues

When Print Lists are archived, the SAP print spooler puts the document into the asynchronous queue. The scheduler then picks up the document and sends it to the archive. The queue serves as a buffer for everything sent to an SAP archive. Other queues are used for outgoing documents and barcodes. These queues can be seen on the ArchiveLink Monitor screen (transaction code: oam1). If this screen shows the word MISSING instead of zeros, you must create queues and specify an administrator. Define an SAP user with the proper ArchiveLink administrator profile as the administrator for this queues. Defining an administrator will automatically create the queues. Check that the queues have been created by reviewing transaction oam1.

To create queues:

1. Execute the following transaction in the transaction code field:

    ```
    oaqi
    ```

    The **SAP ArchiveLink: Create All Queues (CFBC, CARA, CGDA)** screen appears.

2. Fill in all the options with **x**.

3. Type a valid SAP login name in the **Queue Administrator** field.

4. Select **Program** > **Execute**.

5. Click **Cancel** to close the window.

2.6 oaat—Scheduling jobs

The SAP schedule job periodically checks the output queue and sends all the items in the queues to the archive. You must configure the schedule job to successfully archive documents to an SAP archive.

To schedule a job:

1. Execute the following transaction in the transaction code field:

    ```
    oaat
    ```

2. Create a new job.

3. Type the following in the **ABAP Program** field:

    ```
    ILQBATCH
    ```

4. To verify that there are no errors, click **Check**.

5. Save your changes.

6. Click **Back** to return to the **Define Background Job** window.

7.   Click **Start Date**.

8.   Set **Start Time** to **Immediate**.

9.   Select **Periodic Job**.

10.   Click **Period Values** and specify an interval such as 20 minutes.

This value should be determined by the following factors:

- Frequency of archival.

- Time taken to archive your largest document; for example, your largest Print List.

11.   Save your changes.

12.   Click **Exit**.

2.7   spad—Configuring optical archives as output devices

An output device is the driver software for the logical output device which archives documents using the ArchiveLink interface. To correctly archive a document to SAP, you must define the output device as an optical archive. Configuring an output device includes defining the type, the device, the spool server, and so on. There should be only ONE ARCH device; therefore, prior to defining a device with the ARCH short name, you should delete any existing ARCH devices such as ARCHIXOS.

2.7.1   Configuring an optical archive as the output device

To configure an optical archive as the output device:

1.   Start **SAPGUI** and connect to your R/3 server.

2.   Execute the following transaction in the in the transaction code field:

spad.

3.   Click **Output Devices**.

4.   Click the pencil button to edit settings.

Note: You can only have one printer and that printer must be named ARCH. If you are already use a printer named ARCH you can either delete it or using the existing ARCH device.

5.   In case ARCH already exists, select device ARCH and click **Delete**.

6.   Click the **New Entries** button to create a new output device.

The **Change Output Device** screen appears.

7. Complete the following fields:

Table 2-1: Field descriptions of change output device screen

Field name	Value
Output Device	ARCHIVE
Short Name	ARCH
Device Type	ARCHLINK
Spool Server	Select spool server from the list box. Usually there is only one spool server listed
Device Class Type	A, for archive program
Access Method Fill	I, for archive service
Location Fill	Archive
Message Fill	ArchiveLink Device

8. Press **Enter.**

   The dialog box changes.

9. Save your changes.

   For this version, you will need to type additional information after you have configured your archives.

10. Execute the following transaction in the transaction code field:

    oac0

11. Click the pencil button to edit the settings.

12. Click **New entries**.

    The **Maintain View for Archive Device** screen appears.

13. Fill in the ArchiveID you plan to use for Print lists. For example, AA.

14. Type **ARCH** in the **Output Device** field.

    Repeat steps 13 and 14 for each archive.

15. Save your changes.

    The archive device name changes from ARCH to Archive device.

2.7.2   Configuring an optical archive as output device for a OpenText Documentum CM installation

To configure an optical archive as the output device for the OpenText Documentum CM installation:

1. Execute the following transaction in the transaction code field:

   spad

2. Click **Output Devices**.

3. Click the pencil button to edit settings.

   Note: You can only have one printer and that printer must be named ARCH. If you are already using a printer named ARCH, you can either delete it or use the existing ARCH device.

4. In case ARCH already exists, select device ARCH and click **Delete**.

5. To create a new output device, click **New Entries**.

   The **Change Output Device** window opens.

6. Complete the following fields:

   Table 2-2: Field descriptions of change output device screen

Field name	Value
Host Printer	a
Device Class	A
Access Method to Host Spool	I
Device Type ARCHLINK	SAP ArchiveLink Archiver
Spool Server	Select spool server from the list

7. Press **Enter** and the dialog box changes.

8. Save your changes.

2.8 sm50—Verifying spool processes

Documentum Content Services for SAP Solutions uses the standard SAP print spooler to send reports to the ArchiveLink queue. To successfully archive a document, the print spooler must be running.

To verify if a spool process is running:

1. Execute the following transaction in the transaction code field:

   sm50

2. Verify that a process named SPO is waiting or running.

   If you do not have a spool process running, contact your SAP system administrator. Starting a spool process usually involves restarting the SAP server.

2.9 sole—Maintaining OLE applications

You must configure the OLE communications so that Documentum Content Services for SAP Solutions and SAPGUI can communicate with each other. OLE allows SAPGUI to display the stored documents.

2.9.1 Configuring Documentum Content Services for SAP Solutions view

To configure OLE communication for Documentum Content Services for SAP Solutions view:

1. Start **SAPGUI**.

2. Execute the following transaction in the transaction code field:

   sole

   The **Maintenance View for OLE Applications** screen opens.

3. Click **Edit**.

4. Click **New Entries** to create a new entry for a supported OLE application.

5. Type the OLE application, press **Enter**, then **double-click** the selected entry.

   The **Details** screen opens.

6. Complete the following fields:

   Table 2-3: Field descriptions

Field name	Value
OLE Application	DMVIEW.DOCUMENT

Field name	Value
CLSID	{B8192AB0-DB3A-11D0-9741-0060974A8A8D}
Type Info Key	NO_TYPELIB
Language	EN [English]
Text	Documentum Content Services for SAP Solutions View

Type the preceding information exactly as it is displayed, leaving the other fields blank.

7.   Save your changes.

2.9.2   Verifying OLE application configuration

To verify the Documentum Content Services for SAP Solutions View configuration:

1.   Execute the following transaction in the transaction code field:

```
soli
```

The **Type Info Loaded** screen opens. The OLE applications you configured should be listed.

2.   Double-click **DMVIEW.DOCUMENT**.

3.   Check to see if you configured the OLE application correctly:

A list of 32 items (NO_TYPELIB) appears for each OLE application configured correctly.

4.   If the OLE application does not open for inspection:

- Right-click the OLE application and click **Change Language**.

- Select **EN** for English and click **Execute.**

- Save any changes made and execute transaction code:

```
soli
```

   Note: You must see the 32 lines of NO_TYPELIB for the OLE to work.

2.10 oaa4—Maintaining applications and configuring communications protocol

Complete the following procedure to map the OLE 2 methods just defined under SOLE that are called when a document is archived or when a document is displayed. The OLE 2 methods are assigned when the archive is configured via PROTOCOL. Each pair of document type and SAP object type maps to an archive. For example, when a document is archived, the document type and object type point to an archive. The archive in turn is configured to use a certain protocol. From the protocol the SAPGUI determines how documents are to be scanned and viewed through OLE.

To configure applications' maintenance and the communications protocol to associate the correct OLE 2 method to an SAP archive:

1. Execute the following transaction in the transaction code field:

    `oaa4`

    A window opens, listing the available applications configured for your SAP system.

2. Select **Application Create**.

    The **Application Maintenance** dialog box appears.

3. Type *DCTM* in the **Application** field and click **Back**.

    DCTM is added to the list of available applications in the **Applications Maintenance** window.

4. Select **DCTM** in the **Applications** list (by double-click).

5. Select **Displayed Stored Document** (by double-click).

6. For the View application, fill in the following information in the Application (DMVIEW.DOCUMENT):

    Table 2-4: DMVIEW.DOCUMENT field descriptions

Radio button	Command
S	DOCBASE=*<Your_Repository_Name>*
M	Display @DID
G	@EID=ERRORCODE
G	@ETX=ERRORTEXT

7. Ensure that the **Release generated object after call** box is selected.

8. Return to the previous window and select **Archive From Frontend** (by double-click).

9. Ensure that the **Release generated object after call** box is selected.

10. Return to the previous screen and save your configuration.

11. Display the changes made to transaction oaa4 and be sure that **Display Stored Document** and **Archive From Frontend** show **Maintained**.

12. Execute the following transaction:

    `oa3`

    You should see a screen for **SAP ArchiveLink: Communications interface administration**.

13. Select **Create**.

    The **New Protocol** dialog box opens. For example, you may wish to define the protocol name as **CONSVC167** for Documentum Content Services for SAP Solutions 16.7.

14. Type the HTTP-based archiving version of the protocol:

    `0047`

    > **Note:** You need an HTTP archiving protocol such as, ECONHTTP.

15. Save your changes.

    The **Overview of a Protocol** window opens, displaying your newly defined protocol.

16. Select **Display Stored Document** (by double-click).

    The **Overview of a Protocol** window opens showing a list of document classes.

17. Select the * row which indicates all document classes.

18. Click the pencil button.

    The **Overview of a Protocol** dialog box opens.

19. Type **OPEN** in the **Communication Type** field to view linked documents through desktop applications. Select the **Communication Type HTTP** to view linked documents directly in SAPGUI.

20. Press **Enter**.

21. Type **DCTM** in the **Application** field, and click **Continue**.

22. Save your changes.

    You are returned to the **Overview of a Protocol** window.

    📄 **Note:** This Protocol defines what method SAP will use to display an object. The DCTM application requires Documentum Content Services for SAP Solutions View to be installed on all PCs needed to display Print lists. Additional options are under SPECIAL PROTOCOLS. In this case the Web Admin Client has to be configured to make sure the Best Format sap_print_list is at the top of pdf and html. This is not required if PDF or HTML renditions are not created. More information is in the *OpenText Documentum Content Services for SAP Solutions - Administration Guide (EDCCOSAPCS-AGD)*.

23. Double-click **Archive** from frontend.

24. Select the document class "*" and double-click.

    The **Overview of Protocol** dialog box opens.

25. Type **OPEN** in the **Communication Type** field.

26. Press **Enter**.

27. Type **DCTM** in the **Application** field, and click **Continue**.

28. Save your changes.

    Repeat steps 18 and 23 to verify that the * document class and the ALF document class are indicated as **Maintained Explicitly**. All other document classes should be indicated as **Not Maintained Explicitly**.

2.10.1 Special protocols

You have options for special use protocols which are configured slightly different from the standards described earlier. Anonymous login allows your name and password to be provided each time a login would normally be required. Another option is that you may wish to have Print Lists displayed in the native proprietary format from SAPGUI instead of viewing them using OpenText Documentum CM renditions as described earlier.

2.10.1.1   Protocol for anonymous login

To create a protocol for anonymous logins:

1. Fill in the following information in the Application (DMVIEW.DOCUMENT):

   Table 2-5: DMVIEW.DOCUMENT field descriptions

Radio button	Command
S	USER=<username>
S	PASSWORD=<password>
M	Display @DID
G	@EID=ERRORCODE
G	@ETX=ERRORTEXT

2. Click **Continue**.

3. Ensure that the **Release generated object after call** checkbox is selected. Then continue with Protocol for the SAP Inline Print List viewer.

2.10.1.2   Protocol for the SAP Inline Print List viewer

SAP R/3 includes a Print List viewing feature that allows you to view saved Print lists with SAPGUI in their native ALF format. To enable SAPGUI viewing, you must configure the protocol to support the viewer.

> **Note:** If you convert Print List to PDF with renditioning, they can be viewed and annotated without SAPGUI.

To configure the Print List viewer to display the Print Lists in SAPGUI:

1. Select **Create**.

   The **New Protocol** dialog box appears. For example, you may wish to define the protocol name as ECONALF for Content Services for SAP Solutions with ALF viewer.

2. Type the HTTP-based archiving version of the protocol:

   `0045`

   > **Note:** Type the HTTP archiving protocol, for example, ECONHTTPA.

3. Save your changes.

   The **Overview of a Protocol** window opens, displaying your newly defined protocol.

4. Select **Display Stored Document** (by double-click).

   The **Overview of a Protocol** window opens showing a list of document classes.

5. Select the * row which indicates all document classes.

6. Click the pencil button.

   The **Overview of a Protocol** dialog box opens.

7. Type **OPEN** in the **Communication Type** field.

8. Press **Enter**.

9. Type **DCTM** in the **Application** field, and click **Continue**.

10. In the **Overview of a Protocol** window showing the list of document classes, select the ALF document class.

11. Click the pencil button.

    The **Overview of Protocol** dialog box opens.

12. Type *R/3* in the **Communication Type** field, and then press **Enter**.

    No application is entered here.

13. Save your changes.

    You are returned to the **Overview of a Protocol** window.

    Repeat steps 4 and 11 to verify that the * document class is Maintained Explicitly as well as the ALF document class. All other document classes should show Not Maintained Explicitly.

2.10.1.3 Protocol for HTTP display

To create a protocol for HTTP display, fill in the information in the Application (DMVIEW.DOCUMENT):

Table 2-6: DMVIEW.DOCUMENT field descriptions

Radio button	Command
S	DOCBASE=*<Your_Repository_Name>*
M	Display @DID
G	@EID=ERRORCODE
G	@ETX=ERRORTEXT

Chapter 3

Customizing SAP document classes

This chapter describes how to archive document classes from SAP. The customization of each SAP setup is different depending on which document class the archived document belongs to. The document classes are:

- ALF
- FAX
- OTF
- REO

For all classes you must configure a minimum of:

- OAC0
- OAC2
- OAC3

Also, perform any other specific customizations.

3.1 oac0—Configuring content repositories

SAP allows you to define a content repository (previously known as a logical archive). This content repository is mapped to a OpenText Documentum CM archive using WebAdmin. The OpenText Documentum CM archive links to a set of rules such as content folders, OpenText Documentum CM document types, and so on in the OpenText Documentum CM repository. Store each document type in a separate archive. Using WebAdmin, you must create a matching archive for each ArchiveID defined in SAP. This ArchiveID defines what actions (types, folders, retention, and so on) are applied on a SAP document when it is archived. The following sections explain how to create an archive in SAP for each represented document class.

You can configure HTTP-based archives.

To define a SAP content repository (archive):

1. Execute the following transaction:

    `oac0`

2. Select **SAP Reference IMG** from the menu bar.

    The **IMG** window opens.

3. Navigate to **Basis Components** > **Basic Services** > **SAP** > **ArchiveLink** > **Basic Settings** > **Maintain content repositories**.

---

4. Click the pencil button to edit the table.

5. Click **New** Entries.

6. Select **Full administration**.

    The **Change Content Repositories** window opens.

7. Fill in the following information in the **Change Content Repositories** window.

    Table 3-1: Field descriptions

Field name	Value
Content rep	Specify a two-letter archive name. For example, AA
Description	Meaningful name. For example, SAP Print Lists (AA)
Storage Type	Select HTTP or RFC
Protocol	Previously configured protocol
Version No.	0045 for HTTP or 0031 for RFC
Output Device	ARCHIVE

8. Type appropriate values in the following fields:

    *   HTTP server

        Type the hostname or IP address of the Archive Services host. If you use a server name here, ensure that you can ping the server by name from the SAP server.

    *   Port Number

        Type the port number being used (default is 80).

        When using a default Tomcat configuration, this value is usually 8080.

    *   HTTP Script

        Type the following value in this field: <<*virtual-directory*>>/archivelink/ <<*repository*>>

        <<*virtual-directory*>> is the directory on which the software is installed.

        where <<*repository*>> is the name of the repository into which you will be archiving content. You must configure a corresponding archive in the Archive Services, using WebAdmin.

    *   Basic path

        Type the file system path to the location where SAP will put archived documents to be picked up by Archive Services.

    *   Arch path

        Usually, the same as the Basic path.

Repeat this procedure to define additional archives. You may use this procedure to define any OpenText Documentum CM archives in SAP.

3.2 oac2—Defining document types

You must select which document types you will be archiving, and correlate those to SAP document classes, such as FAX, ALF, OTF, and REO. The list of document types provided by SAP, when using transaction OAC2, are the templates to be used for categorizing your SAP documents for archiving. You can customize the standard document types by using the SAP XYZ naming conventions:

- FAX documents are documents that will be scanned and linked to SAP.

- ALF are reports produced and linked from SAP.

- OTF are outgoing SAPSCRIPT documents produced and linked from SAP.

- REO documents are data archive files which are compressed by the SAP ADK and stored externally in that format.

To define document types for SAP:

1. Execute the following transaction in the transaction code field:

   `oac2`

2. If you are defining a new document type, select **New Entries**.

   You may also copy existing document types.

3. If you are modifying an existing document type, use **Change and Details**.

4. Type information in the **Description** and **Doc. class** fields as appropriate for your configuration.

5. When you have finished selecting document types, save your changes.

3.3 oac3—Defining links

Using the link table, you can categorize SAP documents to define what combination of SAP object type (for example, SOOD) and SAP document type (for example, GENPRILIS) are stored and linked to which archive.

The SAP document type is linked to the SAP document class, previously known as SAP document type (for example, ALF, OTF, REO) which determines how the document is produced and linked. For example, the ALF class refers to reports, FAX to scanned documents, and OTF to outgoing SAPSCRIPT documents.

To define links:

1. Execute the following transaction in the transaction code field:

   `oac3`

   The **Display View "Links for Content Repositories": Overview** screen appears.

2. Select **Table View** > **Display > Change**.

3. Complete the following fields:

Table 3-2: Field descriptions of New Entries table

Field name	Value
Object Type	Use legitimate object type such as SOOD for Print Lists, and BKPF for accounting documents.
Document Type	The SAP doc type, as defined earlier in OAC2, such as GENPRILIS.
S (Status)	Type an **x** in this column.
Arch. ID	Type the archive ID of a newly created archive, for example, AA.
Link	Type the name of the link tables where links will be maintained. TOA01-TOA03.
Ret Prd.	0

4. Save your changes.

3.4   ALF Reports/Print Lists

To customize ALF Reports/Print Lists, perform the following procedures:

- "oac0—Configuring content repositories" on page 27
- "oac2—Defining document types" on page 29
- "oac3—Defining links" on page 29

Then perform the test.

3.4.1   Testing archiving reports

After completing the configuration procedures in this section, you must test the new Print List archive by:

- Archiving a Print List
- Displaying the archived Print List

The following section explains how to perform these tasks.

To archive a Print List:

1. Execute the following transaction in the transaction code field:

   ```
   f.21
   ```

2. Click **Execute**.

3. In the **List of Customer Open Items** page that appears, select **List** > **Print**.

   The **Print Screen List** dialog box appears.

4. Click **Properties**.

   The **Spool Request Attributes** dialog box appears.

5. In the **Parameters name** column, click **Output Options**.

6. From the **Storage Mode** list box, select **Archive only**.

   📄 **Note:** Whenever you edit a parameter in this dialog box, select **Show Selected Print Parameters on Initial Screen**. This ensures that the customized settings are available in the initial **Print Screen List** dialog box.

7. Verify that the **Object Type** and **Document Type** fields contain the correct values, as configured in the **New Entries table** in . Pick the following values for example:

   SOOD GENPRILIS

   If your Document Type is incorrectly configured, refer to the following procedures for configuring document types in SAP archives: and .

8. Type additional information in the **Information** field.

   This label may be anything you wish; for example, your initials.

9. Optionally, type a description of the Print List in the **Text** field.

10. In the **Parameter name** column, select **General attributes** > **Time of printing.**

11. From the **Time of print** list box, select **Print out immediately**.

12. Click **Continue** in the **Spool Request Attributes** dialog box.

13. Click **Continue** in the **Print Screen List** dialog box.

14. To verify that the Print List is in the archiving queue, execute the following transaction in the transaction code field:

    oam1

    The **ArchiveLink Monitor** screen appears.

    The Print List is now queued, waiting for the scheduler to pick it up and transfer it to the archive.

    "oaat—Scheduling jobs" on page 15, contains information about configuring the ArchiveLink scheduler.

15. To accelerate the transfer of the Print List from the queue to the archive in the repository, click **Storage Queue**.

The **Queue: Content server (CARA)** screen appears. You should now see an entry for the newly archived Print List in this screen.

16. To view the archiving parameter details, double-click the Print List entry.

   The **Archiving request** window opens.

   Verify that the details are correct

17. To archive the Print List in an archive located in a repository, click **Execute**.

   You should see a confirmation message that the queue has been processed.

   If no errors occur, you can continue testing by displaying the archived Print List.

3.4.2   Displaying a newly archived Print List

To display the newly archived Print List in SAPGUI:

1. Execute the following transaction in the transaction code field:

   `oadr`

2. To find a particular Print List, type appropriate search parameters in the appropriate fields.

   The **ArchiveLink: Hit List for Stored Print Lists** page appears.

3. Double-click an item in the list to select it.

4. Select **Print List** > **Display From Content Server**.

   SAP executes the GET command to retrieve the document from the OpenText Documentum CM archive. The retrieved document is displayed in SAPGUI and has the DocumentID of the Print List in OpenText Documentum CM.

3.5   Deleting archived and linked documents

In a repository, if you delete version 1.0 of a document that is linked to SAP or archived from SAP, the link to SAP is also deleted. This is because the dm_relation object which creates the link to SAP is deleted when the parent object (which is always version 1.0) is deleted.

Do not delete the original version of objects that are linked to SAP if you want to maintain their link to SAP. If you need to delete version 1.0 of a document, but want to keep the link to SAP, then, after deleting the document, you must relink the object to SAP, outside of Content Services.

3.6 Customizing FAX-scanned documents

To customize FAX-scanned documents, you must perform the following procedures:

Then you can make specific customizations using the following procedures:

3.6.1 oaws—Settings

OAWS contains the settings for routing and linking newly scanned FAX documents in SAP. For each document type, you can specify which type of archiving is available:

- Store for subsequent entry (Early)
- Store and Enter (Simultaneous)
- Assign and Store (Late)

For storing for subsequent entry which uses SAP workflow to move the image to the SAP inbox, you can specify what organizational object will be used for routing (such as User) and then what specific organizational object to route to (such as the SAP User ID).

To display or change SAP settings for document types:

1. Type **/NOAWS** (previously /NSOA6) in the command field.

   In earlier versions of SAP a Get Settings dialog box opens if settings have been entered. If Get Settings dialog box does not open, select **Edit** > **Insert doc. type** and build your own list of settings.

   When the new settings are saved, a name has to be specified under which the settings are stored. You may also have to create duplicate settings for early, simultaneous, and late archiving instead of using the check-boxes described in this procedure.

2. Select a setting from the list of available settings, or create a new setting.

3. Select the setting for the application where you wish to link scanned documents and select **Entries**.

   The **Maintenance** screen opens.

4.   Select **New Entries** to select an item from the Document Type list box which matches your entries for OAC2 and OAC3.

5.   For testing purposes, type **US** (USER) and your SAP ID in the Agent ID field.

This enables you to send scanned documents to your SAP workflow inbox. (You may want to integrate these entries with the SAP organizational roles. See your workflow consultant for details.)

6.   Make sure that each checkbox is selected to use:

- Storing For Subsequent Entry

- Early Archiving (SAP workflow)

- Store and Enter Simultaneous Archiving (no workflow)

- Assign then Store Late Archiving (no workflow)

7.   Make sure to note the values of document type and object type fields.

You will need these values to complete later configuration steps. For example, Incoming Invoice Preliminary Posting has an object type BKPF and object type FIIINPREL.

3.6.2   Optional for SAP workflow

To configure all SAP object type/document type combinations you want to use with Storing for Subsequent Entry, coordinate configuration with your SAP workflow consultant:

- SWU3 - Workflow Initialization

- SOA0 - Workflow Document Types

- OACA - Workflow Parameters

3.6.3   Optional for barcode

Barcodes are a good way to automatically scan and link documents that have already been entered into SAP transactions from paper. For example, you can enter an invoice with a barcode sticker, type or scan the barcode number, and later, when all the invoices are scanned, they can be automatically linked with their entry transactions.

The information in this section assumes that you have already set up a bar code configuration object in WebAdmin. If you have not yet done this, the *OpenText Documentum Content Services for SAP Solutions - Administration Guide (EDCCOSAPCS-AGD)* has complete information. This section explains how to configure SAP R/3 object types and document types to accept bar code on transactions in SAP to be later linked with scanned documents stored in a repository.

3.6.3.1 OAC5—Barcode settings

To configure all SAP object type/document type/User ID combinations for use with bar codes:

1. Type **/NOAC5** in the command window.

2. Click **Edit**.

3. Click **New Entries**.

    The **Details of Added Entries** window opens.

4. Type any SAP object types for which you want a barcode dialog box to open upon saving of that object.

5. Type any SAP document types for which you want a barcode dialog box to open upon saving of that document.

6. Type any User IDs for which you want a barcode dialog box to open upon saving under that user ID.

7. Save your changes.

8. Type your object, document, and user ID to test your barcode.

3.7 Testing scanning documents

After you have completed the customizing described earlier, you can test document scanning, linking, and viewing the archived images.

To test scan and link documents:

1. Start OpenText Documentum CM Content Services for SAP Solutions Capture from **Programs** > **Documentum Content Services for SAP Solutions**.

2. Type your username and password for the repository.

3. In Documentum Content Services for SAP Solutions Capture, scan or import a few pages and fill in the default attributes.

4. From the Document Type list box, select **Sap_invoice** (or other valid OpenText Documentum CM document type).

5. Click **Scan**.

6. Click **OK** to the message "No Scanner Available."

7. Select **File** > **Import in Content Services Image Viewer**.

8. Select an example TIFF image file from any directory on your file system.

9. While the image appears in Content Services Image viewer, fill in the attributes.

10. Click **Content Services Capture** > **Add to Queue** and the image disappears from the viewer.

11. Minimize **Content Services Capture**.

12. In SAP, use transactions OAC2, SOA0, OACA, OAC3, OAC0, and OAWS to review the settings for the doc type you are planning to use. For example, FIIINPREL.

13. In WebAdmin, make sure you have set up an Archive for incoming fax which matches the Archive ID information found with OAC3 and OAC0.

    You can copy and modify an existing incoming document archive.

14. On your Content Services Server, make sure that:

    • Archive Services are started with the correct share user ID.

    • IIS is running with HTTP.

    • Certificates are installed.

15. To link the document with SAP workflow and remove it from the queue.

16. Maximize Content Services Capture.

17. Capture and select the document in the linking queue.

18. Start **SAPGUI** and select **Office** > **Business Documents** > **Documents** > **Move** > *<your OAWS setting>*.

    Size the windows so that you can see both SAP and Capture.

19. Select the SAP document type which points to your user ID.

20. Click **Store For Subsequent Entry**.

21. Replace the existing text with meaningful text so you will be able to recognize the file in a later step.

22. Select **Continue**. The item is removed from the **Content Services Capture Queue**.

23. Exit out of the SAP dialog box.

24. Close Content Services Capture. To process the document in SAP, post it and link it to an SAP record.

25. In the SAP inbox type/**NSIN1**.

26. Go to Workflow and double-click to launch a workitem. The image should be retrieved from OpenText Documentum CM. The Process Document Type dialog box opens.

27. Click **Process**. You may need to move the image to see the SAP dialog box.

    The SAP transaction appears. You may need to rearrange windows to see both image and SAPGUI.

28. Fill in the sap document with data appropriate to your installation and press **Enter**. For example:

- Document date: today's date

- Company code: 3000

- Currency/date: USD

- Doc type: KR

- PstKy: 31 Account: 3980

29. In the **Amount** field, type any amount.

30. In the **Doc Header** Text field, type your Vendor Name.

31. Scroll to the bottom of the form, type the following and press **Enter**: `PstKy: 40 Account: 491000`.

32. In the **Amount** field, type the same amount entered in step 7, or * and then save the SAP document.

33. Refresh the inbox. The workitem should have disappeared.

34. Close the **Content Services Image** viewer.

35. From **SAPGUI**, type the display version of the transaction earlier.

36. Select **List** and your **User ID** and **Execute**. The document you marked earlier should appear.

37. Select this document.

38. From your displayed document, select **Environment** > **Object Links**.

39. Select **Archived Documents**. The original document now appears.

Chapter 4

Creating custom BAPIs

Documentum Content Services for SAP Solutions enables you to create and install custom configuration objects—known as BAPIs—for linking and querying SAP data.

To create a custom BAPI, you must modify the custom.xml file that is included with the Documentum Content Services for SAP Solutions installation files. After modifying the custom.xml file as shown in the following example, when you install Documentum Content Services for SAP Solutions, the custom BAPI will be available for linking and querying using WebAdmin.

The following example details creating a custom BAPI to link and query purchase orders. The query type for this custom BAPI is EKPO Table.

To create a custom BAPI:

📄 **Note:** This procedure must be done prior to installing the current release of Documentum Content Services for SAP Solutions. The custom BAPI is installed with the release and is available to end-users only after product installation.

1. Download and install the current release of Documentum Content Services for SAP Solutions Server, as described in the *OpenText Documentum Content Services for SAP Solutions - Installation Guide (EDCCOSAPCS-IGD)*.

2. Locate the file named custom.xml in the Server folder of the installation files.

3. Open the `custom.xml` file in a text editor or XML edtior.

4. Add the following sample XML code to the `custom.xml` file. Modify this code as appropriate to create your own custom BAPIs. You may copy/paste this sample code inside the Request ON_ERROR tag of the `custom.xml` file:

```xml
<OBJECT_CREATE ON_EXIST="version">
      <API_CONFIG TYPE="sap_query_plm_type_table" CLASS="sap">
            <ATTRIBUTE NAME="object_name" IS_KEY="true">EKPO_Table</ATTRIBUTE>
            <ATTRIBUTE NAME="table_name">EKPO</ATTRIBUTE>
            <ATTRIBUTE NAME="function_module">RFC_READ_TABLE</ATTRIBUTE>
            <ATTRIBUTE NAME="sap_object_type">EKPO</ATTRIBUTE>
            <ATTRIBUTE NAME="query_parameters" IS_REPEATING="true">
                  <VALUE>Client=MANDT</VALUE>
                  <VALUE>Document_Number=EBELN</VALUE>
                  <VALUE>Item_Number=EBELP</VALUE>
            </ATTRIBUTE>
            <ATTRIBUTE NAME="parameter_defaults" IS_REPEATING="true"></ATTRIBUTE>
            <ATTRIBUTE NAME="result_parameters" IS_REPEATING="true">
                  <VALUE>Client=MANDT</VALUE>
                  <VALUE>Document_Number=EBELN</VALUE>
                  <VALUE>Item_Number=EBELP</VALUE>
            </ATTRIBUTE>
            <ATTRIBUTE NAME="key_attributes" IS_REPEATING="true">
                  <VALUE>Document_Number=EBELN</VALUE>
            </ATTRIBUTE>
            <ATTRIBUTE NAME="methods" IS_REPEATING="true">
                  <VALUE>Link</VALUE>
```

```
            </ATTRIBUTE>
            <ATTRIBUTE NAME="descriptive_field">EBELP</ATTRIBUTE>
        </API_CONFIG>
    </OBJECT_CREATE>
```

Save the `custom.xml` file and close it.

5. Repeat these steps to create as many custom BAPIs as you need, creating separate XML elements in the `custom.xml` file for each custom BAPI.

6. To install the custom BAPIs into your repository, run the Documentum Content Services for SAP Solutions Server setup.exe file, choose Docbase Configuration, then for the version number choose Custom.XML.

   If you are creating custom BAPI of type `sap_query_type_plm` make sure the key name for the description field in the result parameters is called "Description" as shown in following sample code:

```
1 <ATTRIBUTE NAME="result_parameters" IS_REPEATING="true">
2 <VALUE>Description=MATL_DESC,18,40</VALUE>
3 </ATTRIBUTE>
```

Chapter 5

Configuring the DMS interface for the View components

The procedures in this chapter assume that the software is installed on at least one PC and that the OpenText Documentum CM repository is configured according to your business needs. It is assumed that a default installation of SAP has been performed. If this is not the case, you may find that the installation steps differ in your R/3 system.

The examples in this chapter also assume a SAP default installation.

5.1 Configuring the View component

The complete customization is done in the same SAP menu from SAPGUI.

To configure the View components:

1. Start **SAPGUI** and connect to R/3.

   The **SAP R/3** window appears.

2. Type */nspro* in the command field.

3. Press **Enter**.

4. Select **Implement Projects** > **SAP Reference IMG** (or click the button for your specific project if you configure your system on a project basis).

   The **Implementation Guide for R/3 Customizing** screen appears.

5. Click **Cross-Application Components**, then click **Document Management** from the expanded list of items.

5.1.1 Opening the Document Management Control Data window

To open the Document Management Control Data window:

1. Type **/nspro** in the command field.

2. Select SAP Reference IMG (or click on the button for your specific project if you configure your system on a project basis).

   The Implementation Guide for R/3 Customizing window appears.

3. Click **Cross-Application Components**, then click on **Document Management System** from the expanded list of items.

This window is the starting point for all configurations described in this chapter.

5.2   Configuring Document Management Control data

To verify parameters in Document Management Control data:

1.   If necessary, open the Implementation Guide for R/3 Customizing window and navigate to the Document Management System cabinet described in .

2.   To navigate there, click on the cabinet icons to expand the selection:

     Cross-Application Components > **Document Management** > **Control Data**.

     The following items appear in a list:

     • Define number ranges for document numbers.

     • Define document types.

3.   Click on each item to configure, as described in the following procedures.

5.2.1   Defining number ranges for document numbers

To define the number ranges:

1.   To edit the configuration, click on *Intervals* (marked with a pen icon).

     The **Display Number Range Intervals** window lists the following number ranges that are configured:

     Table 5-1: Number ranges

No.	From number	To number	Ext.
01	00000000000000000001	00000000000000999999	Checked
02	00000000010000000000	00000009999999999999	Unchecked
03	00000010000000000000	99999999999999999999	Checked
04	00000000000001000000	00000000009999999999	Checked

2.   Save changes if necessary.

3.   Click **Back** twice. This returns you to the **Document Management Control Data** window.

5.2.2 Defining document types

To define document types:

1. If necessary, open the Implementation Guide for R/3 Customizing window and navigate to the Document Management System cabinet. Click on the cabinet icons to expand **Cross-Application Components** > **Document Management** > **Control Data.**

2. Select **Define Document Types**.

   A list of your configured Document types appears.

3. Starting with the document type DRW, define the parameters for each document type you intend to store within OpenText Documentum CM.

   > **Note:** Since the PLM type objects are usually drawings, a default value of "DRW" is used. You can always override this setting in the Query Conditions field of the SAP Query Composer, as described in the *OpenText Documentum Content Services for SAP Solutions - Administration Guide (EDCCOSAPCS-AGD).*

   Example 5-1:

   You can assign the value of DocumentType as DES for a DES document type.

   For all document types, you can set the value of DocumentType as one of the following:

   - DocumentType=*

   - DocumentType=

     In this case, no value has been assigned to the parameter. The value for the parameter has been set to blank.

4. Click the box at the beginning of the document type line.

5. Click the magnifying glass button.

6. Define the following parameters for DRW. Leave all other fields blank.

   Table 5-2: Field descriptions

Parameter	Setting
Doc. type desc	Engin/Des. Drawing
Version Assign.	Checked (optional)
Ass. of rev. lev	Checked (optional)
Archiving authorization	Checked

Parameter	Setting
Change docs	Checked (optional)
Internal number range	02
External number range	01
Number exit	MCDOKZNR
Vers. no. incr.	1
File size	0

7.   Save your changes.

8.   Click **Back** twice.

You are returned to the **Document Management Control Data** window.

5.2.3   Defining and maintaining object link descriptions

To define and maintain object link descriptions:

1.   Select the document type.

2.   Select **Document Types** > **Maintain Object Link Descriptions**.

3.   Verify that the following three items are configured and the names are spelled *exactly* as follows:

Table 5-3: Object Link descriptions

Language	Object	Name
EN	EQUI	Equipment master
EN	IFLOT	Functional location
EN	MARA	Material master

4.   Click **Back** twice.

The **Document Management Control Data** window reappears.

5.3 Configuring general data

This section explains how to configure several required parameters that are usually not configured in a default R/3 installation.

To configure general data:

1. If necessary, open the Implementation Guide for R/3 Customizing window and navigate to the Document Management System cabinet. Click on the cabinet icons to expand **Cross-Application Components** > **Document Management** > **General Data**.

2. Select **General Data**.

   The following items are listed:

   - Define data carrier.
   - Define workstation application.
   - Maintain CAD systems.

3. Click on each item (marked with a tick and a clock) to configure it.

   The following sections explain how to do this.

5.3.1 Defining Data Carrier and Data Carrier types

Select **Define data carrier** from the list.

This section describes how to configure the following settings under the Define Data Carrier Type window:

- Define data carrier type "external DMS".
- Define "external DMS" (document management system)
- Define data carrier type "server, front end".
- Identify front-end computers.

5.3.1.1 Defining external DMS

To configure the DMS:

1. Select **Define external DMS**.

2. Click **New Entries**.

3. Define the following parameters:

   - TY = EX
   - Description = Documentum
   - Online and EX checked

---

4. Select **Define External DMS**.

5. Create a Data Carrier called **Documentum** of type **EX** with description = Documentum.

6. Save the new entry. You should then go on to define the data carrier type "server, front end."

5.3.1.2   Defining data carrier type "server, front end"

To configure a new carrier type:

1. Verify that type PC exists in the listing:

   - If the type PC exists, verify the parameters listed in step 2.

   - If the type PC does not exist, click **New Entries** and set the parameters as listed in step 2.

2. Define the following parameters:

   - Type = PC

   - Description = Windows PC

   - Online = Checked

   - The Path entry should be left blank.

3. Save your changes.

4. Close the dialog box.

5. Click **Back**.

   You should then go on to define the data carrier.

5.3.1.3   Identifying front-end computers

To configure a default front-end computer that is not already configured:

1. Navigate to the Define data carrier type "server, front end" option and select the type **PC**.

2. Select **Identify frontend computers** from the navigation area.

3. Make sure that the following entry is defined:

   - FrontendComputer. = DEFAULT

   - Data carr. type = PC

   - Netw. address = DEFAULT

   - Description = Default for local PC

> 📄 **Note:** If DEFAULT is not defined, check to see if it has been defined under a different data carrier. If this is the case, continue to use this data carrier from now on, instead of PC.

4. Save your changes.

5. Close the dialog box.

6. Click **Back**.

   You should then go on to define the workstation applications.

5.3.2 Defining workstation application

This section describes how to configure the following settings under the **Document Management System Control Data** window > **General Data** > **Define workstation application** section. The following entries must be configured in this window:

- Define workstation application

- Define workstation applications in network

To define a workstation application:

1. Navigate to **Define workstation application settings** in **Workstation Application**.

2. Click **New Entries**.

3. Define the following parameters:

   - WS application = DCM

   - Description = Documentum View component

   - Start authorization = checked

   - All other fields should be left empty

   - All the other check boxes must be unchecked

4. Save your new entry.

5. Close the dialog box.

5.3.2.1   Defining workstation applications in network

To define a workstation application in the network:

1. Navigate to the **Define workstation applications settings** in the **Workstation Application**.

2. Select the DCM entry and navigate to **Define workstation applications in network**.

3. Click **New Entries**.

    Under 4.6, it is not possible to pass program arguments. For example, this means that it is not possible to launch dmview.exe with program arguments such as /PRINT to trigger the print function or the arguments required to use anonymous login. To get around this problem, see OSS notes: 0135155 and 0105208.

4. Type the following parameters:

    *   WS application = DCM (this entry is read-only)

    *   Data carr. type = PC

    *   Application Type = 1 (Display)

    *   Path with prog. name = dmview.exe

    If you have installed the View component somewhere other than the default SAP main program directory, you must define the path.

    This configuration may look different for a Linux Web server.

    *   Path for ref. file = [leave this field empty]

    *   Start Authorization = X (yes)

5. Save your changes.

6. Close the dialog box.

7. Click **Back**.

Chapter 6

Configuring Secure Network Communications

Secure Network Communications (SNC) is a software layer in the SAP system architecture that provides an interface to connect to an external product securely. SNC provides security at the application level which means that a secure connection between the components of the SAP system (for example, between the SAP GUI and the SAP application server) as well as third-party application software (for example, OpenText Content Server for SAP), regardless of the communication link or transport medium. Therefore, a secure network connection between two SNC-enabled communication partners is ensured. This chapter describes how to configure the SNC to secure communications between the SAP Application Server and OpenText Content Server for SAP.

To set up the server to use SAP Cryptographic Library for SNC:

1. Install the SAP Cryptographic Library on the Application Server.

   Perform the following steps in sequence:

   a. "Installing the SAP Cryptographic Library on the SAP Application Server" on page 50

   b. "Setting SNC profile parameters on the SAP Application Server" on page 51

   c. "Setting the SNC SAPCryptolib and PSE" on page 51

2. Configure SNC on the Documentum Content Services for SAP Solutions host.

   Perform the following steps in sequence:

   a. "Installing the SAP Cryptographic Library on the Documentum Content Services for SAP Solutions host" on page 52

   b. "Creating the SNC PSE for the Documentum Content Services for SAP Solutions host" on page 53

   c. "Exchanging the Public-Key certificates" on page 54

   d. "Exporting the Documentum Content Services for SAP Solutions certificate (client)" on page 54

   e. "Importing the Documentum Content Services for SAP Solutions certificate into the SAP Application Server" on page 55

3. Exchange Public Key Credentials. See "Creating credentials for the PSE on the Documentum Content Services for SAP Solutions host" on page 56.

4. Configure Documentum Administrator SNC. See "Updating the SAP access control list" on page 57.

6.1   Install the SAP Cryptographic Library on the SAP Application Server and set up the PSE

In this section you will learn how to install the SAP Cryptographic Library installation package and set the SNC profile parameters on the SAP Application Server. You will also understand how to set up the Personal Security Environment (PSE).

6.1.1   Installing the SAP Cryptographic Library on the SAP Application Server

Prerequisite

- Download the following package and tools from the SAP Marketplace:

  - SAP Cryptographic Library installation package (SAPCRYPTOLIB) using SAPCAR

  - Configuration Tool (SAPGENPSE)

  For more information about downloading the SAP Cryptographic software, see *SAP documentation*.

To install the SAP Cryptographic Library on the SAP Application Server:

1. Log in as administrator.

   *<sid>*adm

2. Extract the content of the SAP Cryptographic Installation package.

3. Copy the library to the SID instance directory (`sapcrypto.dll`).

   For example, *<dir>*\usr\sap*<SID>*\SYS\exe\run\sapcrypto.dll

4. Create a sec directory in the SAP Application Server at the following location to place the ticket file:

   <dir>\usr\sap*<sid>**<instance id>*\sec

5. Set the `SECUDIR` environment variable for the user to the sec sub directory created in the previous step.

6. Restart the SAP Application Server.

6.1.2 Setting SNC profile parameters on the SAP Application Server

1. Log in to the SAP GUI.

2. Start the RZ10 transaction and select the instance profile used by the server startup.

3. Set the following profile parameters in the application server instance profile:

Parameter	Description	Example
`snc/identity/as`	Specify the SNC name of the SAP Application Server with this parameter.	`snc/identity/as =` `p:CN=<SID>,` `OU=<Organization Unit>,` `O=<Organization>,` `C=<Region>`
`snc/gssapi_lib`	Specify the path and file name of the `sapcrypto.dll`	`<dir>\usr\sap\<SID>` `\SYS\exe\run\` `sapcrypto.dll`

6.1.3 Setting the SNC SAPCryptolib and PSE

To set up the SNC SAPCryptolib and Personal Security Environment:

1. Log in to the SAP GUI.

2. Use transaction code **STRUST**.

3. Select the **SNC (SAPCryptolib)** node and then, select the **Create PSE** option from the list.

4. Choose the SNC ID similar to the one created in the parameter `snc/identity/as`.

5. Save the settings.

6. Add and enable the parameters in the order that must appear.

   📄 **Note:** Enable the parameter `snc/enable=1` after completing all the configurations.

   For example:
   ```
   snc/data_protection/max = 3
   snc/data_protection/min = 1
   snc/data_protection/use = 3
   snc/r3int_rfc_secure = 0
   snc/r3int_rfc_qop = 1
   snc/accept_insecure_cpic = 0
   snc/accept_insecure_gui = 1
   snc/accept_insecure_r3int_rfc = 1
   snc/accept_insecure_rfc  = 0
   snc/permit_insecure_start = 1
   ```

Parameter name	Parameter value
`snc/data_protection/max`	3
`snc/data_protection/min`	1
`snc/data_protection/use`	3
`snc/r3int_rfc_secure`	0
`snc/r3int_rfc_qop`	1
`snc/accept_insecure_cpic`	0
`snc/accept_insecure_gui`	1
`snc/accept_insecure_r3int_rfc`	1
`snc/accept_insecure_rfc`	0
`snc/permit_insecure_start`	1
`snc/gssapi_lib`	`E:\usr\sap\B76\SYS\exe\run\` `sapcrypti.dll`
`snc/identity/as`	`P:CN=B76, OU=SAPConn, O=OT, C=IN`
`snc/enable`	1

7.   Restart the SAP Application Server after adding the entries.

6.2   SNC configuration on the Documentum Content Services for SAP Solutions host

6.2.1   Installing the SAP Cryptographic Library on the Documentum Content Services for SAP Solutions host

Prerequisite

1.   Download the installation package from the SAP Marketplace.

   `Download > SAP Cryptographic Software`

2.   Download the configuration tool `sapgenpse.exe`.

To install the SAP Cryptographic Library on the Documentum Content Services for SAP Solutions host:

1.   Extract the content of the SAP Cryptographic Installation package.

2.   Move the extracted contents and `sapgenpse.exe` to the local directory. For example,

   `<dir>\SAP\SNC\sec`

   📄   **Note:** This directory will be used as the PSE directory where the certificate credentials are stored.

3. Set the environment variable SECUDIR for the user to the sec sub-directory created in the previous step.

6.2.2 Creating the SNC PSE for the Documentum Content Services for SAP Solutions host

A PSE is a secure location where the public-key information of a user or component is stored. It contains both the public information (public-key certificate and private address book) and the private information (private key) for its owner.

To create SNC PSE for the Documentum Content Services for SAP Solutions host:

1. Log in as administrator.

2. Change directory to `<dir>\SAP\SNC\sec`.

3. Run the following command:

   `sapgenpse.exe gen_pse -v -p CSSAP.pse`

4. In the `PSE PIN/Passphrase`, enter the PSE PIN or passphrase and reconfirm it.

5. In the `Distinguished name of PSE owner`, enter the name of the PSE owner name in the following format:

   `CN=<Name>, OU=<Organizastion Unit>, O=<Organization>, C=<Region>`

   For example, `CN=CSSAP, OU=SAPConn, O=OT, C=IN`

   The `CSSAP.pse` file is created in the directory.

   ➡ **Example 6-1: Creating the SNC PSE for the Documentum Content Services for SAP Solutions host**

   ```
   C:\Users\Administrator\SAP\SNC\seosapgenpse.exe gen_pse -v -p CSSAP.pse
   Got absolute PSE path "C:\Users\Administrator\SAP\SNC\sec\CSSAP.pse".
   Please enter PSE PIN/Passphrase: ██████
   Please reenter PSE PIN/Passphrase:

   ! ! ! WARNING: For security reasons it is recommended to use a PIN/passphrase
   !!! WARNING: which is at least 8 characters long and contains characters in
   !!! WARNING: upper and lower case, numbers and non-alphanumeric symbols.

   gct_pse: Distinguished name of PSE owner: CN-CSSAP, OU-SAPConn, O-OT, C-IN
   Supplied distinguished name: "CN=CSSAP, U=SAPConn, O=OT, C=IN"
   Creating PSE with format v2 (default)
   succeeded.
   certificate creation... ok
   PSE update... ok
   PKRoot... ok
   Generating certificate request... ok.
   Certificate Request:
   Signed Part:
   Subject:                    CN-CSSAP, OU-SAPConn, O-OT, C-IN
   Key:                        rsaEncryption (2048 bits)
   Attributes:                 None
   Signature:
   Signature algorithm:        ha2S6WithRsaEncryption (1.2.840.113549.1.1.11)
   Signature:                  <Not Displayed>
   ```

```
PKCSH1O certificate request for "C:\Users\Administrator\SAP\SNC\sec\CSSAP.pse":

-----------     BEGIN CERTIFICATE REQUEST-------------------------

MIICgTCCAWkCAQAwPDElMAkGAlUEBhMCSU4xCzA3BgMVBAoTAk9UMRAwOgYDVQQL
FwdTQVBDDb2SuMQ4wOAYDVQQOEwVDU1N8UOCCASIwOQYJKoZIhvcNAQEBBQADggEP
ADCCAQoCggEBAPSiLSRRTr/msIgGhvnua»fS2h7bOZx4VAQWCMkyFRg4oPpoj 3US WScrOAlD/P/7XOF/
livqugHMdiSFalaB8LiAF5slSeXjcr6Wyx61QTuX/wPWQNBe DpSoS3m/
RSKtpNHV»OPATmK*ywWA*jxNIGNT38E4xMePpIPaoRROFNEZ9YukcOZh
sFwGW3X.V3ryk3D7YAMutBIMIVgF69iNZmblx42kRFelHlK/4Vz6xQttx4pjCG2W
M3NPi4tOHB.E3joqe7ap.aLsWZImR.kQR2uwGTjFEjOIiIIRPp2vXqqDbihaGhMv X*Ocj/
WvZXtb44e8jB3Bp»8sHSZjhSYiqmOCAwEAAaAAMAOGCSqGSIb3DQEBCwUA
A4IBAQBOxUcbaOQ4UgHKOpv8GHwETWtmgK63p/yxu3qpQxIuKa4.H6sdEO3OUO3R
t3Oa34izlFZuK2YTLsaznc5PS»31VgYLygbt62KS2vSRrP/Vmls25FFrqFFNGSTh
7*AdplWN8v5Wp71ppUf17dfwROA/Xe»qf8dRXXfZ59WSj/4tqF3nmUKm/fnG4VLA
E4hAmReUZ5sNulmddtT.oQAesKaNDbD9rBf3EoTyllZOtijOl.MiKfAExN3Bylw6 GSxgUDy4DompHNU3/
OpVfhEKhsOUclkIlaQZ.T9Ut.gZQ31pPInirLcooVbEOqND 8X6oVglbxnROS34olNyCgWamfcvO

-----------------END CERTIFICATE REQUEST----------------------
```

6.2.3   Exchanging the Public-Key certificates

The communication between the Documentum Content Services for SAP Solutions client and the SAP Application Server is possible only if both the client and server can identify each other. This is facilitated with the help of certificates.

There are two PSE policies. One is present in the SAP Application Server and the other is for the Documentum Content Services for SAP Solutions host.

To communicate with each other, the two PSEs must exchange the server-level public-key certificates.

6.2.4   Exporting the Documentum Content Services for SAP Solutions certificate (client)

1. Log in as administrator.

2. Change the directory to *<dir>*\SAP\SNC\sec.

3. Run the following command to generate the CSSAP.crt file:

   sapgenpse export_own_cert -v -p CSSAP.pse -o CSSAP.crt

4. In the PSE PIN/Passphrase, enter the PIN or passphrase for the PSE.

Example 6-2: Exporting Documentum Content Services for SAP Solutions certificate

```
C:\Users\Administrator\SAP\SNC\seosapgenpse export_own_cert -v -p CSSAP.pse -o CSSAP.crt
Opening PSE "C:\Users\Administrator\SAP\SNC\sec\CSSAP.pse"...
No SSO credentials found for this PSE.
Please enter PSE PIN/Passphrase: ***
PSE (v2) open ok.
Retrieving my certificate... ok.
Writing to file (PEM-framed base64-encoded)... ok.
```

6.2.5 Importing the Documentum Content Services for SAP Solutions certificate into the SAP Application Server

1. Log in to the SAP GUI.

2. Use the transaction **STRUST**.

3. Select the node, **SNC SAPCryptolib**.

4. In the Edit mode, click the **Import Certificate**.

5. Provide the path to the certificate (Documentum Content Services for SAP Solutions cert).

6. Select **Add to certificate list**.

7. Click **Save**.

6.2.6 Exporting the SAP Application Server certificate

1. In the **STRUST**, double-click the **Own certificate** and select the **Subject**.

2. Select the **Export Certificate**.

3. Specify the path to the sec directory.

4. Specify the file name.

   Example, `<dir>\SAP\SNC\sec\SNCSAP.crt`

5. Select the file format **Base64**.

6. Click **Ok**.

   A file with the name `SNCSAP.crt` is generated.

6.2.7 Importing the SAP Application Server certificate into the Documentum Content Services for SAP Solutions PSE

1. Log in as administrator.

2. Change the directory to `<dir>\SAP\SNC\sec`.

3. Enter the following command to add the SAP Application Server certificate into the Documentum Content Services for SAP Solutions PSE:

   `sapgenpse.exe maintain_pk -v -a SNCSAP.crt -p CSSAP.pse`

   The SAP Application Server and Documentum Content Services for SAP Solutions PSE identify each other.

Example 6-3: Importing the SAP Application Server certificate into the Documentum Content Services for SAP Solutions PSE

```
C:\Users\Administrator\SAP\SNC\seosapgenpse.exe maintain_pk -v -a SNC.crt -p
Opening PSE "C:\Users\Administrator\SAP\SNC\sec\CSSAP.pse"...
No SSO credentials found for this PSE.
Please enter PSE PIN/Passphrase: ******
PSE (v2) open ok.
retrieving PKlist
Adding new certificate from file "SNC.crt"
---------------------------------------------------------------------------------------
-----------
Subject                  :          CN=RFC, OU=SAPConn, O=OT, C=IN
Issuer                   :           CN=RFC, OU=SAPConn, O=OT, C=IN
Serialno                 :          0A: 20:20:04:07:13:45:38
Keylnfo                  :          RSA, 2048-bit
Validity -    NotBefore  :          Tue Apr 7 05:45:38 2020 (200407134538Z)
              NotAfter   :      Thu Dec 31 16:00:01 2037 (380101000001Z)
KeyUsage                 :          none
ExtKeyllsage             :           none
SubjectAltName           :           none
------------------------------
PKList updated (1 entries total, 1 newly added)
```

6.3   Creating credentials for the PSE on the Documentum Content Services for SAP Solutions host

The Documentum Content Services for SAP Solutions host must have active credentials at run time for accessing its PSE. This is to avoid the need to provide the password from the command line when the programs are executed.

1.   Log in as administrator.

2.   Change the directory to `<dir>\SAP\SNC\sec`.

3.   Run the following command:

   `sapgenpse.exe seclogin -p CSSAP.pse -O <system user name>`

   For example, `sapgenpse.exe seclogin -p CSSAP.pse -O Administrator`

Example 6-4: Creating credentials for the PSE on the Documentum Content Services for SAP Solutions host

```
C:\Users\Administrator\SAP\SNC\seosapgenpse.exe seclogin -p CSSAP.pse -O Administrator
running seclogin with USER="Administrator"
creating credentials for user "CS689TEST\AdministratorM (yourself)...
Please enter PSE PIN/Passphrase: ******
Adjusting credentials and PSE ACLs to include "CS689TEST\Administrator"...
Oh, you supplied your own name explicitly ... ok.
C:\Users\Administrator\SAP\SNC\sec\cred_v2 ... ok.
C:\Users\Administrator\SAP\SNC\sec\CSSAP.pse ... ok.
Added SSO-credentials for PSE "C:\Users\Administrator\SAP\SNC\sec\CSSAP.pseM
```

6.4 Updating the SAP access control list

To update the VSNCSYSACL (transaction code SM30) table:

1. On the SAP GUI, use the transaction code **SM30**.

2. In the table enter the name **VSNCSYSACL**.

3. Click **Maintain**.

4. In the **Type of ACL entry** box, enter **E**.

5. Click new entry.

6. In the **System ID** box, enter the system ID.

7. In the **SNC name** box, enter the SNC name by prefixing **p:** and ensure that the SNC name is the same as the distinguished name given while creating the PSE.

    For example, `p:CN=CSSAP, OU=SAPConn, O=OT, C=IN`

8. Select the following check boxes:

    *   **Entry for RFC activated**
    *   **Entry for CPIC activated**
    *   **Entry for certificate activated**
    *   **Entry for ext. ID activated**

9. Click **Save**.

To update the USRACLEXT (transaction code SM30) table:

1. On the SAP GUI, use transaction code **SM30**.

2. In the table enter the name **USRACLEXT**.

3. Click **Maintain**.

4. In the **User** box, enter ***** (asterisk) as a wildcard.

5. In the **SNC name** box, enter the SNC name by prefixing **p:**. Ensure that the SNC name is the same as the distinguished name given while creating the PSE.

    For example, `p:CN=CSSAP, OU=SAPConn, O=OT, C=IN`

6. Click **Save**.

6.5   Configuring the SNC in Documentum Administrator

1.   Log in to the Documentum Administrator.

2.   Navigate to the **Content Services for SAP** node.

3.   Select the **SAP** node.

4.   Select the **User** node.

5.   Select **File** > **New** > **SAP User**.

6.   In the **User ID** box, enter the user ID.

7.   In the **Password** box, enter the password.

8.   In the **Client No** box, enter the client number.

     The value range is from 0 to 999. For example, if the client number is 1, enter 001.

9.   From the **Language** list, select the preferred language.

10. In the **SNC Mode** box, enter the mode. Valid values are 1 (on) or 0 (off). By default, the SNC mode is 0.

11. In the **SNC Library Path** box, enter the path and file name of the external library. The path to the library provides the SNC service. Obtain the SAP Cryptographic Library installation package, from the SAP Marketplace. For example, `C:\Windows\SAP\SNC\sec\sapcrypto.dll`

12. In the **SNC QOP** box, specify the level of protection to use the connection. Valid values are **1**, **2**, **3**, **8** or **9**. Value details are:

     •   1: Authentication protection.

     •   2: Authentication and integrity protection.

     •   3: Authentication, integrity, and privacy protection.

     •   8: Default protection.

     •   9: Maximum protection.

13. Optional In the **SNC X509Certificate** box, specify the certificate-based authentication. The logon with X.509 is based on SNC encryption and can only be used in combination with a secure network connection. Enter the X509 Certificate content in a single line.

14. In the **SNC Partner Name** box, specify the SNC name of the communication partner server (SAP Application Server).

     For example, **p:CN=SID, O=ACompany, C=EN**

15. Optional In the **SNC My Name** box, specify the SNC name of the caller (CS SAP). This name overrides the default SNC name.

For example, **p:CN=MyUserID, O=ACompany, C=EN**

16. Click **Save**.

Appendix A. Configuration and usability notes

A.1 Webtop integration – JRE causes slow performance

If a Java Runtime Environment (JRE) is installed on the same workstation with Content Services for SAP Solutions View, the performance of viewing linked objects from SAP GUI using Webtop is significantly slower. When JRE is running on the same workstation the user should not use the View preference using Webtop.

A.2 Limitations found concerning SAPGUI for HTML configuration

Protocols are not allowed when displaying via SAPGUI for HTML, only FAX doc class (images) loaded via Agents (barcode or workflow) without protocols defined in OAC0, can be displayed. Content Repositories (OAC0) that require protocols for scanning via Capture or for displaying via the thick SAPGUI client can not currently be displayed via SAPGUI for HTML. Protocol is currently still required by Content Services Capture as described in the Content Services for SAP Solutions ArchiveLink configuration (OAA3 and OAA4).

SAPGUI for HTML cannot display ArchiveLink stored documents unless Protocol is removed from the OAC0 (Content Repository) configuration. Be aware that the HTTP OAC0/protocol combination which works for SAPGUI display may not work for SAPGUI for HTML display and visa versa. This means that for one Content Repository all clients must view either from SAPGUI or from SAPGUI for HTML. Currently there are difficulties in mixing the two clients when viewing from a single repository since the thick client requires protocols and the thin client appears to prohibit them.

Also be advised that although archived documents display via SAPGUI for HTML from OAAD and OADR, they may not display from other transaction codes such as FBV3 and instead you may receive a runtime error. A similar functional performance is expected by OpenText Documentum CM when displaying archived documents from different transactions within SAP. You may wish to take up the preceding issues with SAP via OSS.

A.3 Custom BAPIs

BAPI table queries the SAP API on the client side and loads the whole result table into memory.

You can easily calculate be required (number of rows * row-length) and for large tables this will not be possible.

If there are too many rows, the work around is to write a BAPI on the SAP server side which returns a smaller number of rows.

Implementing this bapi requires coding a a custom BAPI functional module in ABAP which is RFC-enabled to take any number of input parameters and return a table of results.

As an example BAPI, look at BAPI_COSTCENTER_GETLIST1 in SE37 which has 13 input parameters and one result table. Such a custom bapi can then easily be configured on the Content Services for SAP Solutions side via building a custom bapi configuration to match using the CUSTOM.XML feature of the installer.

Another way to avoid this limitation is to create a custom filter and parse a printlist for the attributes needed, then modify the OpenText Documentum CM object attributes via this filter when archiving the relevant printlist.

A.4 WebAdmin simplified Chinese localization pack installation

Use the following steps to install the WebAdmin simplified Chinese localization pack:

> **Note:** Ensure that the WebAdmin is installed in Documentum Administrator (DA) before you install simplified Chinese localization pack.

1. Download the Windows and Linix binaries from OpenText My Support (https://support.opentext.com). The zip files contains the following files:

   - `SAP_ WebAdmin_Language_Pack_SCh_zh_CN.zip`

   - `Limited_Administrator_Language_Pack_Chinese_zh_CN.zip`

2. Extract the files of `SAP_ WebAdmin_Language_Pack_SCh_zh_CN.zip` and `Limited_Administrator_Language_Pack_Chinese_zh_CN.zip` to the Documentum Administrator (DA) folder created during the Documentum Administrator installation.

3. Open `DA\Custom\app.xml` in a text editor and add the locale *zh_CN* in *<supported_locales>*. For example:

   <supported_locales>

   <locale>en_US</locale>

   <locale>zh_CN</locale>

<supported_locales>

4. Save and close the file.

5. Restart the application.