



## OpenText™ Documentum™ Archive Services for SAP® Solutions

### Installation Guide

Deploy and configure OpenText Documentum Archive Services  
for SAP Solutions.

EDCCOSAPAR250400-IGD-EN-01

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## **OpenText™ Documentum™ Archive Services for SAP® Solutions**

### **Installation Guide**

EDCCOSAPAR250400-IGD-EN-01

Rev.: 2025-Nov-24

This documentation has been created for OpenText™ Documentum™ Archive Services for SAP® Solutions CE 25.4. It is also valid for subsequent software releases unless OpenText has made newer documentation available with the product, on an OpenText website, or by any other means.

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# Chapter 1

## Preparing to install Documentum Archive Services for SAP Solutions

This chapter provides information about preparing to install Documentum Archive Services for SAP Solutions.

### 1.1 Intended audience

This manual is primarily intended for qualified consultants and system administrators. This role covers those who install and configure Documentum Archive Services for SAP Solutions.

The Documentum Archive Services for SAP Solutions integrates two enterprise-level software packages: the OpenText™ Documentum™ Content Management system with the SAP R/3 or ECC system. Documentum Archive Services for SAP Solutions requires detailed knowledge of the SAP DMS and ArchiveLink interfaces.

This manual forms part of a documentation suite designed to support those who install, configure, and use Documentum Archive Services for SAP Solutions. The product and documentation suite can be found on OpenText My Support ([support.opentext.com](http://support.opentext.com)).

### 1.2 Prerequisites

The person installing Documentum Archive Services for SAP Solutions should have administrative experience with the software products. Documentum Archive Services for SAP Solutions depends on specific versions of OpenText Documentum CM; and third-party products, as described in *OpenText Documentum Archive Services for SAP Solutions Release Notes* on OpenText My Support ([support.opentext.com](http://support.opentext.com)).



#### Notes

- Unless the person installing the product has the prerequisite experience, it is recommended that you do *not* perform installations by using only OpenText Documentum Content Management (CM) manuals as guidance.
- OpenText Documentum CM Support can assist only with systems which were installed by qualified persons following the specific instructions outlined in both the documentation and the training manual.

## 1.3 Installation scenarios

Documentum Archive Services for SAP Solutions can be installed in various configurations, depending on how it is mixed and matched with content addressed storage systems such as Centera® or third-party applications such as Apache and Tomcat. Different configurations may also be arrived at depending on how and where the OpenText Documentum Content Management (CM) Server and Documentum Archive Services for SAP Solutions are installed. The possible basic configurations are described in the following sections.

### 1.3.1 All-in-one installation

You may install the repository, Application Server (for example, Tomcat), Documentum Administrator, and Documentum Archive Services for SAP Solutions on one system. This installation scenario is supported on all the operating systems that are supported by Documentum Archive Services for SAP Solutions. For more information about the operating systems that Documentum Archive Services for SAP Solutions supports, see *OpenText Documentum Archive Services for SAP Solutions Release Notes* on OpenText My Support ([support.opentext.com](http://support.opentext.com)).

### 1.3.2 Separate Documentum Archive Services for SAP Solutions

In this installation configuration, Documentum Archive Services for SAP Solutions need not be installed on the same system where the repository is installed. You can install Documentum CM Server and Documentum Administrator on one system (running any Operating System). On another supported Operating System, you can install JDK, a supported Web Application Server, such as Tomcat , and Documentum Archive Services for SAP Solutions (running any Operating System). Documentum Archive Services for SAP Solutions may be configured to access the repository that is installed on the other machine.

### 1.3.3 Integration with Centera

Documentum Archive Services for SAP Solutions integrates with content addressed storage system, Centera. Customers using Documentum Archive Services for SAP Solutions along with Centera can formulate rules that determine where information is archived, and how long it is retained.

For Centera connectivity, configure the Documentum CM Server to use a CA store, as described in *OpenText Documentum Content Management - Server Administration and Configuration Guide (EDCCS250400-AGD)*.

### 1.3.4 Advanced scalability options for Tomcat server

Documentum Archive Services for SAP Solutions may be installed on a Tomcat server. Tomcat can be configured to use load balancing between multiple Tomcat sessions. This configuration is particularly powerful when used in tandem with multiple Tomcat hosts. Use mod\_jk as described in “[Installing connectors for Apache and Tomcat](#)” on page 61, as a connector for communications between Apache and Tomcat.

[Appendix A, Advanced installation option for load balancing](#) on page 61 contains more information on installing Documentum Archive Services for SAP Solutions on a Tomcat server in a load-balancing configuration.

## 1.4 Installing required OpenText Documentum CM software

This section contains information about OpenText Documentum CM software that you must install prior to installing Documentum Archive Services for SAP Solutions.

### 1.4.1 Installing Documentum Administrator

After you install the database and Documentum CM Server, install Documentum Administrator as documented in *OpenText Documentum Content Management - Server and Server Extensions Installation Guide (EDCSY250400-IGD)*.

After the Documentum Administrator installation is complete, install Documentum Archive Services for SAP Solutions as described in “[Installing Documentum Archive Services for SAP solutions](#)” on page 11.

## 1.5 SAP R/3 or ECC server (Windows or Linux)

Manual configuration of SAP ArchiveLink is a prerequisite for installation of Documentum Archive Services for SAP Solutions, as described in *OpenText Documentum Archive Services for SAP Solutions - Configuration Guide (EDCCOSAPAR250400-CGD)*.



#### Caution

OpenText Documentum CM is not responsible for problems encountered during installation due to SAP-related issues, such as empty or incorrectly configured tables, required support packages, hot fixes, or OSS Notes. OpenText Documentum CM requires that you read and apply all ArchiveLink-related OSS Notes and patches prior to Documentum Archive Services for SAP Solutions installation. OpenText Documentum CM support is not responsible for answering SAP configuration questions or problems.

## 1.6 Preinstallation checklist

You must follow the information in the preinstallation checklist before you install Documentum Archive Services for SAP Solutions. If the preinstallation tasks are not done, your system will not function properly.

1. Launch SAP GUI from the intended Documentum Archive Services for SAP Solutions server or client and sign in to the SAP system you want to support. If this test fails, you must resolve the connection between Documentum Archive Services for SAP Solutions and the SAP system before proceeding.
2. Be sure all previous versions of Documentum Archive Services for SAP Solutions is either removed or deactivated.
3. The repository should be running before installing Documentum Archive Services for SAP Solutions. Documentum Archive Services for SAP Solutions requires a fully functioning repository and writes configuration objects into the chosen repository during the install.
4. Create a directory on the SAP server. This directory will be used by SAP to store files temporarily until they are transported into OpenText Documentum CM.



**Note:** Starting from the 6.5 release, the administration console for both Documentum Archive Services for SAP Solutions and Documentum Content Services for SAP Solutions is the same.

WebAdmin component on Documentum Administrator enables users to administer both Documentum Content Services for SAP Solutions and Documentum Archive Services for SAP Solutions.

The Documentum Content Services for SAP Solutions requires the HVPS component in addition to what Documentum Archive Services for SAP Solutions requires for executing the Document Management System related activities.

## Chapter 2

# Installing Documentum Archive Services for SAP solutions

This chapter describes the installation process for Documentum Archive Services for SAP Solutions.

## 2.1 Preparing the repository

The repository must be running before you install Documentum Archive Services for SAP Solutions. Documentum Archive Services for SAP Solutions requires a fully functional repository so that during installation, an SAP cabinet can be created and Documentum Archive Services for SAP Solutions administration objects can be written to that cabinet in the designated repository.

## 2.2 Creating connections to Centera

If your installation scenario, as described in “[Integration with Centera](#)” on page 8, includes connections to Centera, you will have to create CA stores. For more information on creating CA stores, see *OpenText Documentum Archive Services for SAP Solutions - Administration Guide (EDCCOSAPAR250400-AGD)*.

## 2.3 Preparing the application server host

This section contains information about preparing the application server host for use with Documentum Archive Services for SAP Solutions.

### 2.3.1 Ensuring sufficient temporary disk space on the host

Application servers vary as to how much temporary disk space they require when an application is installed. Allow at least half a gigabyte of free disk space on the application server host for installing Documentum Archive Services for SAP Solutions:

- On Windows hosts, ensure that the free space is on the drive to which the TEMP environment variable points.
- On Linux hosts, ensure that the free space is in \$TEMP.

### 2.3.2 Ensuring the Java heap size is sufficient

Setting the Java heap size appropriately is important to avoid out-of-memory errors. For Tomcat, set the heap size to 512 MB.

## 2.4 Obtaining current version of software

To ensure that you install the current version of this product, visit OpenText My Support ([support.opentext.com](https://support.opentext.com)) and review the product versions available for your platform.

For Windows, download the most recent version of `archive_services_for_SAP_solutions_<version>_windows.zip`, which contains the following files:

- `Enterprise_Integrations_Core.zip`: Contains the Enterprise Integrations Core DAR file and relevant script files for installing the DAR using the command line.
- `assap.war`: Contains the Documentum Archive Services for SAP Solutions application.
- `Enterprise_Integrations_SAP_ILM.zip`: Contains the Documentum Archive Services for SAP Solutions ILM application, which includes the `Enterprise_Integrations_SAP_ILM.dar` and other related files.

For Linux, download the most recent version of `archive_services_for_SAP_solution_<version>_<Operating System>.tar`, which contains the following files:

- `Enterprise_Integrations_Core.tar`
- `assap.war`
- `Enterprise_Integrations_SAP_ILM.tar`

## 2.5 Installing Enterprise Integration Core DAR file

This section provides instructions for installing `Enterprise_Integrations_Core.dar` files on all Documentum Composer supported operating systems.



### Notes

- Use the information in this section to install other .dar files.
- Ensure that the `dfo.properties` of the Composer utility includes the Global repository details.
- Documentum Composer is located in the system where Documentum CM Server 6.5 or later is installed. In Windows Operating System, you can locate Documentum Composer in `%DOCUMENTUM%\product\<release_version>\install\composer\` on the system where Documentum CM Server is installed. Alternatively, you can also download the latest version of Documentum Composer from OpenText My Support ([support.opentext.com](https://support.opentext.com)).

- If the repository used for installing the `Enterprise_Integrations_Core.dar` files is not a Global repository, then install the `Enterprise_Integrations_Core.dar` files on both the Global repository and the repository used for Documentum Archive Services for SAP Solutions.
- You can also use the Documentum Composer GUI to install DARs. The Documentum Composer GUI is specific to the Windows environment. If Documentum CM Server is running on Linux environment, you can connect to repositories from the Documentum Composer GUI installed on your Windows system after you make the required changes in the `dfc.properties` file of Documentum Composer.

**To install Enterprise Integration Core DAR file:**

1. Extract the contents of the following to a temporary directory:

- `Enterprise_Integrations_Core.zip` for Windows
- `Enterprise_Integrations_Core.tar` for Linux

The temporary directory will now contain the following files:

- `dmant.bat` (Windows)
- `dmant.sh` (Linux)
- `DARInstallScript.xml` (composer ANT install script)
- `install.properties` (installation properties)
- `Enterprise_Integrations_Core.dar` (DAR filename)

2. You can install the `Enterprise_Integrations_Core.dar` using the DAR Installer GUI in the Windows environments as described in [Installing a DAR file using the DAR Installer GUI](#). Alternatively, you can also install the DAR file using Headless Composer.
3. Perform the following steps to install the DAR file using Headless Composer:
  - a. Update the `install.properties` file with the repository name, credentials, and the location of the DAR file, as follows:
    - `dar.docbase = <repository_name>`
    - `dar.username = <repository_install_owner_username>`
    - `dar.password = <repository_install_owner_password>`
    - `dar.domain = <domain>` (optional)
    - `dar.core.file = <absolute path>`
  - b. The `DARInstallScript.xml` must have an `emc.install` ant task for every DAR file.
  - c. Specify the location of the Headless Composer and workspace in the `dmant.bat` file:

- Set the ECLIPSE environment variable to the Headless Composer directory on your machine.
- Set the WORKSPACE environment variable to a clean directory. For example:

```
echo off
setlocal
set ECLIPSE=C:\ComposerHeadless
set WORKSPACE=C:\ComposerHeadless\workspace
set BUILDFILE=%1
java -Xmx1024m -XX: MaxPermSize=128m -cp %ECLIPSE%
startup.jar org.eclipse.core.launcher.Main
-clean -data %WORKSPACE%
application org.eclipse.ant.core.antRunner
-buildfile %BUILDFILE%
```



**Note:** The Ant tasks do not pick up the settings from the `eclipse.ini` file. This means that you have to set those parameters on the command line when invoking Java.

For Linux environments, add `-Dlogpath=<path>` to the Java command.

- Run the Ant task as follows:

- For Windows – *<directory path of batch file and xml file>*:

```
dmant.bat DARInstallScript.xml
```

- For Linux – Change `sh` script mode:

```
$ chmod a+rwx dmant.sh
```

```
<directory path of batch file and xml file>
```

```
./dmant.sh DARInstallScript.xml
```

## 2.6 Deploying the assap.war file

To prepare the `assap.war` file for installation:

1. Create a directory named `assap`.
2. Copy the `assap.war` file to the `assap` directory created in step [step 1](#).
3. Extract the file using the following jar command:

```
jar -xvf assap.war
```

The WAR file is extracted to the directory named `assap`.

4. Edit the `dfc.properties` file in the `assap/WEB-INF/classes` folder as follows:
  - a. Type the connection broker host name. For example:  

```
dfc.docbroker.host[0]=100.100.100.100
```
  - b. Type the connection broker port number. For example:  

```
dfc.docbroker.port[0]=1489 optional, default 1489
```

- c. Optionally, type the OpenText™ Documentum™ Content Management Foundation Java API data directory. For example:

```
dfc.data.dir=C:/Documentum
```

- d. Type the OpenText Documentum Content Management (CM) Foundation Java API global BOF registry repository name. For example:

```
dfc.bof.registry.repository= cssap53_dev_assap
```

- e. Type the Foundation Java API global BOF registry repository user name. For example:

```
dfc.bof.registry.username=dm_bof_registry
```

- f. Type the Foundation Java API global BOF registry repository user-encrypted password. For example:

```
dfc.bof.registry.password=kBb9DmXB6pQ\=
```

5. Based on the operating system being used, edit the log4j2.properties to have the correct path for the log file.
6. Re-create the assap.war from the temporary folder using the jar -cvf command.
7. Deploy the Documentum Archive Services for SAP Solutions WAR file using the application server procedure appropriate for your installation.

## 2.6.1 Deploying assap.war using Apache Tomcat

1. Make sure that Apache Tomcat is configured to deploy the assap.war file in unpacked mode.  
This is the Apache Tomcat default setting.
2. Copy the assap.war (recompiled JAR file) to the <>Tomcat>>/webapps folder.
3. Restart the Apache Tomcat server.

## 2.6.2 Deploying assap.war on JBoss or WildFly Application Server

1. Copy the assap.war (recompiled JAR file) to the <>wildfly>>/standalone/deployments folder.
2. Create a file named assap.war.dodeploy in the <>wildfly>>/standalone/deployments folder.
3. Start the application server.

## 2.6.3 Deploying assap.war using IBM Liberty

1. Extract assap.war.
2. Update dfc.properties and log4j2.properties.
3. Archive the assap folder to assap.war.
4. Copy the WAR file into the dropins folder of configured server.
5. Add the following parameter in the server.xml file of server:  
`<applicationMonitor updateTrigger="disabled" />`
6. In server.xml, add entry host="\*" in tag httpEndpoint.
7. Start the application server.

## 2.6.4 Editing and viewing the al.properties file using JConsole

This section describes the procedures that are used for viewing and editing the al.properties file in the JConsole editor without the need for restarting the application server.

### 2.6.4.1 Configuration for Apache Tomcat

#### To enable the JMX agent:

To enable the JMX agent for Apache Tomcat for a Windows environment, add the following line in the <TOMCAT Home DIR>\bin\catalina.bat file:

```
set JAVA_OPTS=%JAVA_OPTS% -Dcom.sun.management.jmxremote.port=9999  
-Dcom.sun.management.jmxremote.authenticate=false  
-Dcom.sun.management.jmxremote.ssl=false
```

Check your JDK version. If the JDK version is 17 or 21, add the following parameters in the catalina.bat file:

```
set "JAVA_OPTS=-Dprogram.name=%PROGNAME% %JAVA_OPTS%"  
set "JDK_JAVA_OPTIONS=%JDK_JAVA_OPTIONS% --add-opens=java.base/java.net=ALL-UNNAMED"  
set "JDK_JAVA_OPTIONS=%JDK_JAVA_OPTIONS% --add-opens=java.base/java.lang.ref=ALL-UNNAMED"  
set "JDK_JAVA_OPTIONS=%JDK_JAVA_OPTIONS% --add-opens=java.naming/  
com.sun.jndi.toolkit.url=ALL-UNNAMED"  
set "JDK_JAVA_OPTIONS=%JDK_JAVA_OPTIONS% --add-exports java.base/  
sun.security.provider=ALL-UNNAMED"  
set "JDK_JAVA_OPTIONS=%JDK_JAVA_OPTIONS% --add-exports java.base/sun.security.pkcs=ALL-  
UNNAMED"  
set "JDK_JAVA_OPTIONS=%JDK_JAVA_OPTIONS% --add-exports java.base/sun.security.x509=ALL-  
UNNAMED"  
set "JDK_JAVA_OPTIONS=%JDK_JAVA_OPTIONS% --add-exports java.base/sun.security.util=ALL-  
UNNAMED"  
set "JDK_JAVA_OPTIONS=%JDK_JAVA_OPTIONS% --add-exports java.base/  
sun.security.tools.keytool=ALL-UNNAMED"  
set "JDK_JAVA_OPTIONS=%JDK_JAVA_OPTIONS% --add-opens=java.xml.crypto/  
com.sun.org.apache.xml.internal.security=ALL-UNNAMED"  
set "JDK_JAVA_OPTIONS=%JDK_JAVA_OPTIONS% --add-opens=java.base/java.lang=ALL-UNNAMED"
```

**To remove the default page:**

1. Open the web.xml in the conf folder. For example, C:\apache-tomcat-10.1.10-windows-x64\apache-tomcat-10.1.10\conf).
2. Comment out the welcome-file-list tag in the web.xml.

```
<!--
<welcome-file-list>
    <welcome-file>index.html</welcome-file>
    <welcome-file>index.htm</welcome-file>
    <welcome-file>index.jsp</welcome-file>
</welcome-file-list>
-->
```

3. Clear the Tomcat cache and restart the server.

**2.6.4.2 Configuring IBM WebSphere Liberty**

Check your JDK version. If the JDK version is 17 or 21, perform the following tasks.

- Add the following parameters in the server.bat file:

```
set "JAVA_OPTS=%JAVA_OPTS% --add-opens=java.base/java.lang=ALL-UNNAMED"
    set "JAVA_OPTS=%JAVA_OPTS% --add-opens=java.base/java.io=ALL-UNNAMED"
    set "JAVA_OPTS=%JAVA_OPTS% --add-opens=java.base/java.util=ALL-UNNAMED"
    set "JAVA_OPTS=%JAVA_OPTS% --add-opens=java.base/java.util.concurrent=ALL-UNNAMED"
    set "JAVA_OPTS=%JAVA_OPTS% --add-opens=java.rmi/sun.rmi.transport=ALL-UNNAMED"
    set "JDK_JAVA_OPTIONS=%JDK_JAVA_OPTIONS% --add-opens=java.base/java.net=ALL-
UNNAMED"
    set "JDK_JAVA_OPTIONS=%JDK_JAVA_OPTIONS% --add-opens=java.base/java.lang.ref=ALL-
UNNAMED"
    set "JDK_JAVA_OPTIONS=%JDK_JAVA_OPTIONS% --add-opens=java.naming/
com.sun.jndi.toolkit.url=ALL-UNNAMED"
    set "JDK_JAVA_OPTIONS=%JDK_JAVA_OPTIONS% --add-exports java.base/
sun.security.provider=ALL-UNNAMED"
    set "JDK_JAVA_OPTIONS=%JDK_JAVA_OPTIONS% --add-exports java.base/
sun.security.pkcs=ALL-UNNAMED"
    set "JDK_JAVA_OPTIONS=%JDK_JAVA_OPTIONS% --add-exports java.base/
sun.security.x509=ALL-UNNAMED"
    set "JDK_JAVA_OPTIONS=%JDK_JAVA_OPTIONS% --add-exports java.base/
sun.security.util=ALL-UNNAMED"
    set "JDK_JAVA_OPTIONS=%JDK_JAVA_OPTIONS% --add-exports=java.base/
sun.security.tools.keytool=ALL-UNNAMED"
    set "JDK_JAVA_OPTIONS=%JDK_JAVA_OPTIONS% --add-opens=java.base/java.lang=ALL-
UNNAMED"
```

- In the server.xml file:

- Add the following parameter:

```
<applicationMonitor updateTrigger="disabled"/>
```

- Update the featureManager with the following content:

```
<featureManager>
    <feature>jakartee-10.0</feature>
</featureManager>
```

**To configure IBM Liberty while deploying SAP Connectors to SSL enabled Documentum CM Server:**

1. Run the following command to create a new KeyStore file:

```
-> <server_path>\bin>securityUtility createSSLCertificate --server=<server_name>
--password=<Password>--validity=365
```

2. Copy and paste the output in the server.xml file. Following is an example of the output:

```
<featureManager>
<feature>transportSecurity-1.0</feature>
</featureManager>
<keyStore id="defaultKeyStore" password=<Password>
```

3. Replace the existing KeyStore file with the newly generated KeyStore file in the following path:

```
<server_path>\usr\servers\<server_name>\resources\security\key.p12
```

4. Add the following tags to the server.xml file for non-SSL and SSL connection:

```
<feature>servlet-6.0</feature>
<feature>jsp-3.1</feature>
```

5. Go to <server\_path>\usr\servers\<server\_name>\resources\security and run the following commands to add the dockbroker and docbase certificates to the keystore file:

- For docbroker certificate:

```
keytool -import -trustcacerts -file C:\brokercrt.der -alias broker1 -keystore
key.p12 -storepass <Password>
```

- For docbase certificate:

```
keytool -import -trustcacerts -file C:\servercrt.der -alias server1 -keystore
key.p12 -storepass <Password>
```

#### 2.6.4.3 Configuring WildFly web application servers

Check your JDK version. If the JDK version is 17 or 21, perform the following tasks.

##### To configure WildFly web application servers:

1. Add the following lines in the <WebApp\_Root>/WEB-INF/jboss-deployment-structure.xml file:

```
<?xml version="1.0"?>
<jboss-deployment-structure>
<deployment>
<exclude-subsystems>
<subsystem name="jaxrs"/>
<subsystem name="webservices"/>
<subsystem name="logging"/>
</exclude-subsystems>
<exclusions>
<module name="org.apache.logging.log4j.api"/>
</exclusions>
</deployment>
</jboss-deployment-structure>
```

2. Add the following parameter in the standalone.conf.bat file present in the bin folder of the WildFly server:

```
set "JAVA_OPTS=%JAVA_OPTS% -Djava.locale.providers=COMPAT,SPI --add-opens=java.base/
java.lang=ALL-
UNNAMED --add-opens=java.base/java.lang.invoke=ALL-UNNAMED --add-
exports=java.base/sun.security.provider=ALL-UNNAMED --add-exports=java.base/
sun.security.pkcs=ALL-
UNNAMED --add-exports=java.base/sun.security.x509=ALL-UNNAMED --add-
exports=java.base/sun.security.util=ALL-UNNAMED --add-exports=java.base/
sun.security.tools.keytool=ALL-
UNNAMED"
```

3. Run the following command at <WebApp\_Root> to repackage the Documentum Archive Services for SAP Solutions WAR file:

```
jar -cvf assap.war *
```

#### 2.6.4.4 Configuring Red Hat JBoss EAP web application servers

Check your JDK version. If the JDK version is 17 or 21, you must configure the Red Hat JBoss EAP web application servers.

##### To configure Red Hat JBoss EAP web application servers:

1. Download the JBoss EAP 8 Update 4 patch file named jboss-eap-8.0.4-runtime-maven-repository.zip from the Red Hat website.
2. Extract the jboss-eap-8.0.4-runtime-maven-repository.zip file to a temporary location.
3. Apply the JBoss EAP 8 Update 4 patch.

##### Windows

For example, from <JBoss EAP\_Home>/bin, run the following command as an administrator:

```
jboss-eap-installation-manager.bat update perform ^
--dir C:\jboss-eap-8.0 ^
--repositories mrrc::file:C:\jboss-eap-8.0.4.GA-runtime-maven-repository
\maven-repository ^
--offline
```

##### Linux

For example, from <JBoss EAP\_Home>/bin, run the following command as an administrator:

```
./jboss-eap-installation-manager.bat update perform \
> --dir ../../jboss-eap-8.0 \
> --repositories mrrc::file:C:\jboss-eap-8.0.4.GA-runtime-maven-repository
\maven-repository \
> --offline
```

4. Modify the existing contents of the <WebApp\_Root>/WEB-INF/jboss-deployment-structure.xml file to have the following lines only:

```
<?xml version="1.0"?>
<jboss-deployment-structure>
  <deployment>
    <exclude-subsystems>
```

```
<subsystem name="jaxrs"/>
<subsystem name="webservices"/>
<subsystem name="logging"/>
</exclude-subsystems>
<exclusions>
    <module name="org.apache.logging.log4j.api"/>
</exclusions>
</deployments>
</jboss-deployment-structure>
```

5. Add the following parameter in the standalone.conf.bat file present in the bin folder of JBoss server:

```
set "JAVA_OPTS=%JAVA_OPTS% -Djava.locale.providers=COMPAT,SPI --add-opens=java.base/
java.lang=ALL-
UNNAMED --add-opens=java.base/java.lang.invoke=ALL-UNNAMED --add-
exports=java.base/sun.security.provider=ALL-UNNAMED --add-exports=java.base/
sun.security.pkcs=ALL-
UNNAMED --add-exports=java.base/sun.security.x509=ALL-UNNAMED --add-
exports=java.base/sun.security.util=ALL-UNNAMED --add-exports=java.base/
sun.security.tools.keytool=ALL-
UNNAMED"
```

6. Run the following command at <WebApp\_Root> to repackage the Documentum Archive Services for SAP Solutions WAR file:

```
jar -cvf assap.war *
```

#### 2.6.4.5 Editing al.properties using JConsole

##### To edit al.properties using JConsole:

1. Open a command prompt at:

```
<JAVA_HOME>/bin
```

2. Type JConsole.

The JConsole editor is displayed.

3. In the remote tab, type <Host Name> and the JMX port number.

Use 9999 for the JMX port number.

4. Click **Connect**.

5. In the com.documentum.ei.al.jmx.mbeans section, navigate to the **Mbeans** tab and click **AlProperties**.

6. Edit the desired properties and press **Enter**.

## 2.6.5 Significant system objects

This section contains information about significant system objects installed during Documentum Archive Services for SAP Solutions WAR file deployment.

### 2.6.5.1 dfc.properties

OpenText Documentum CM stores data in the `dfc.properties` file located in the `<Tomcat_installation_directory>\webapps\<Archive_Services_virtual_directory>\WEB-INF\classes` directory.

More information is in the *OpenText Documentum Content Management - Server and Server Extensions Installation Guide (EDCSY250400-IGD)*.

### 2.6.5.2 log4j2.properties

All logging details are available in the `log4j2.properties` file available in the following directory:

```
<Tomcat-Installation-Directory>\webapps\
<Archive Services-Virtual-Directory>\WEB-INF
```

By default, the log output goes to the `alserver.log` file available in the following directory:

```
<Tomcat-Installation-Directory>\webapps\
<Archive Services-Virtual-Directory>\WEB-INF\logs
```

`Log4j2.properties` can be changed during runtime of servlet, and updates are detected automatically.

### 2.6.5.3 docbases.properties

This file contains the repository login configuration details such as the server ID, user name, and password.

If you intend to edit this file, OpenText recommends WebAdmin. For more information, see *OpenText Documentum Archive Services for SAP Solutions - Administration Guide (EDCCOSAPAR250400-AGD)*.

### 2.6.5.4 al.properties

The system parameters for the Documentum Archive Services for SAP Solutions servlet are defined in `al.properties`. `al.properties` is located in the following directory:

```
//depot/Archiving/EISAP/Main/dmal_http/web/WEB-INF/al.properties
```

The following table provides information about the key and value for `al.properties`.

The expression is represented as key=value. For example, `log.properties = WEB-INF/log4j2.properties`. Where, key is “`log.properties`” and value is “`WEB-INF/log4j2.properties`”.

**Table 2-1: al.properties**

<b>Expression</b>	<b>Key</b>	<b>Description</b>
log.properties=WEB-INF/ log4j2.properties	log.properties	Specifies the log4j configuration file location. This determines what messages are logged by the ArchiveLink server and where the logs are stored.
docbases.keyfile=WEB-INF/archivelink.key	docbases.keyfile	Specifies the key file location used for password encryption. You can also use the dm_crypto_create tool (included in Documentum CM Server) to generate your own key file using the default passphrase. The path can be a full or relative to the deployment directory.
docbases.signatureCheck=on off	docbases.signatureCheck	Specifies to enable or disable the signature check. The following are the values: <ul style="list-style-type: none"> <li>• off: requests with and without secKeys are accepted. The secKey and s-mandatory parameters are not checked even if they are present. In oac0, the No signature value can be on or off.</li> <li>• on: only the requests with valid secKeys and all corresponding s-mandatory parameters are accepted. In oac0, the No signature value must be off.</li> </ul>

Expression	Key	Description
docbases. numberOfConnections=9	docbases. numberOfConnections	Determines how many repository sessions per repository must be created and reused by the ArchiveLink connection pool. When a user disconnects from a session, the session is held in the pool to be used for the next time. It can be used for the same user or if a different user requests a connection to the repository.  The value must be a positive integer.
docbases.connection. timeout=540	docbases.connection. timeout	Specifies the wait time before the session request times out and the request fails. The length of time is in decaseconds.  The value must be a positive integer.
docbases.connection. recycle.interval=10000	docbases.connection. recycle.interval	Controls how many times a repository session can be reused. The limit prevents a single session process from becoming big. When a session is closed, the reused file cache under archiving.tempDir pertaining to the session is deleted.  The value must be a positive integer.
archiving.tempDir=C:/ archivelink	archiving.tempDir	Defines the directory where the ArchiveLink server caches the files. Refer to the related key docbases.connection.recycle.interval. At JConsole, ensure to use forward slash for Windows.  The value must be full path.
archiving.contenttype. default=empty	archiving.contenttype. default	Optional. Depending on the SAP version, the expected OpenText Documentum CM full_format for empty documents is html or empty.

Expression	Key	Description
archiving.info.useLocalDate=true false	archiving.info.useLocalDate	<p>Optional. Values are:</p> <ul style="list-style-type: none"> <li>• <b>false</b>: creation and modification dates of documents are reported in UTC to the SAP server because some SAP tests expect the date portion of document "info" to be in the timezone of the SAP server.</li> <li>• <b>true</b>: date is reported in the local timezone of the Archivelink servlet.</li> </ul> <p>By default, the value is <b>false</b>.</p>
archiving.inmemory.maxSize=10	archiving.inmemory.maxSize	<p>Specified size in KB. Effective processing depends on the available system memory. By default, memory is zero. The maximum file size is processed in-memory by the Archiving Server without any corresponding disk input or output.</p>
archiving.fileOpen.confirmation=true false	archiving.fileOpen.confirmation	<p>Values are:</p> <ul style="list-style-type: none"> <li>• <b>true</b>: when a document is retrieved, Open, Save and Cancel options are enabled in the File Download window.</li> <li>• <b>false</b>: there is no confirmation dialog and the document opens with default application based on its mime type.</li> </ul> <p>By default, the value is <b>false</b>.</p>

Expression	Key	Description
archiving.compId.decode=true false	archiving.compId.decode	<p>Values are:</p> <ul style="list-style-type: none"> <li>• true: decodes the compId value sent by SAP. This is required because SAP sends the value of compid in the encoded form sometimes.</li> <li>• false: compId value sent by SAP is not encoded.</li> </ul> <p>By default, the value is false.</p>
archiving.acceleratedDownload=true false	archiving.acceleratedDownload	<p>Activates or deactivates the new and improved implementation of Byte Stream reading. Values are:</p> <ul style="list-style-type: none"> <li>• true: new implementation is activated. This leads to performance enhancement.</li> <li>• false: new implementation is not activated.</li> </ul> <p> <b>Note:</b> Set the property to true only when Documentum Archive Services for SAP Solutions runs on Foundation Java API 5.3 and later. For Foundation Java API releases prior to 5.3, this value must be set to false. By default, the property is true.</p>

<b>Expression</b>	<b>Key</b>	<b>Description</b>
archiving.statisticsCollection.Enabled=true false	archiving.statisticsCollection.Enabled	<p>Enables or disables collection of Process Statistics. Values are:</p> <ul style="list-style-type: none"> <li>• <b>true</b>: the Process Statistics for every incoming request is collected. This process consumes memory. When the number of requests are large and the log level is set to DEBUG, an OutofMemory can occur.</li> <li>• <b>false</b>: disables collection of Process Statistics.</li> </ul> <p>By default, the value is <b>false</b>.</p>
archiving.enableACS=true false	archiving.enableACS	<p>Enables or disables content transfer through ACS or BOCS. If the value is <b>true</b>, content transfer of archived or the linked documents are handled through optimal BOCS or ACS server based on the configuration in Global Repository. By default, the value is <b>true</b>.</p>
archiving.NetworkLocation=BOCSLoc1	archiving.NetworkLocation	<p>Specifies the name of the network location configured in Global Repository. Documentum Archive Services for SAP Solutions transfers contents through the BOCS server associated to this network location. If the value is not set, GR config is taken.</p> <p>The value must be a string.</p>
archiving.use.configFile=true false	archiving.use.configFile=false	<p>Specifies whether to use docbases.properties file to load repository configurations. By default, the value is <b>false</b>.</p> <p>The value must be a string (use only release 6.5 and later).</p>

Expression	Key	Description
archiving.enabled=true false	archiving.enabled	Specifies whether to enable or disable archiving. By default, the value is true and the archiving is done.
archivegetbytes.enabled=true false	archivegetbytes.enabled	Specifies whether to enable or disable archivegetbytes.enabled. If the value is true, the archiving is done. By default, the value is false.
archiving.enable.long_compId.retrieval=true false	archiving.enable.long_compId.retrieval	Enable this property while retrieving archived documents with long compId. If dmr_content.set_file exceeds 255 characters, its value gets truncated. By default, the value is false.
archiving.use.custom.formats=null	archiving.use.custom.formats	Specifies usage when the mime type has more than one format name and if Documentum Archive Services for SAP Solutions is not picking the right format name at runtime. Define one or many formats for different mime-types using comma as separator value to avoid truncation. For example, archiving.use.custom.formats=crtext,jpeg-preview. By default, value is null.
archiving.use.file.extension=true false	archiving.use.file.extension	Enable this property while archiving documents with file extension validation. By default, value is false.
archiving.use.file.extension.HTTPParameter.name=filename	archiving.use.file.extension.HTTPParameter.name	When the archiving.use.file.extension property is set to true, it identifies from which HTTP request parameter the extension must be derived. By default, the value for archiving.use.file.extension.HTTPParameter.name is filename.

Expression	Key	Description
archiving.read.docs. nocompid.data=true  false	archiving.read.docs. nocompid.data	Enable this property only for accessing old documents only if compId 'data' is missing. By default, value is false.
archiving.read.docs. 53SP2.assap901=true  false	archiving.read.docs. 53SP2	Enable this property only if 5.3 SP2 version of Documentum Archive Services for SAP Solutions archived documents are available in the system. By default, value is false.
archiving.use.formats. caching=true false	archiving.use.formats. caching	Disable this property if you do not want to depend on the caching mechanism of formats and have Documentum Archive Services for SAP Solutions query the formats for each request. Enable this property to utilize the cache for comparatively faster retrieval. By default, value is true.
archiving.compid. noEncodingInfoRes=true  false	archiving.compid. noEncodingInfoReq	Sets the value of compId in the Info Response Payload to not encode. When set to false, the regular double encoding of the compId is used. This property is for users who use the compId from info response having empty space in the compId at times. For example, file name.txt.

## 2.7 Post-installation configuration and tasks

This section contains information on Documentum Archive Services for SAP Solutions post-installation configuration and tasks.

## 2.7.1 Licensing Documentum Archive Services for SAP Solutions

OpenText Documentum CM uses OpenText Directory Services (OTDS) to apply licenses for all the OpenText Documentum CM components. For more information about procuring the license file and configuring OTDS and license, see *OpenText Documentum Content Management - Server and Server Extensions Installation Guide (EDCSY250400-IGD)*.

## 2.7.2 Configuring the temporary store

The `al.properties` file is located in `<Tomcat-Installation-Directory>\webapps\<Virtual-Directory>\WEB-INF`. You must configure the `al.properties` file so that it points to a valid directory in the file system with complete access rights; Documentum Archive Services for SAP Solutions writes data to file in this temporary store before reading or writing to HTTP request.

For example, you could customize the relevant section of the `al.properties` file as follows:

```
archiving.tempDir=C:\\archivelink
```



**Note:** If you are running Documentum Archive Services for SAP Solutions on Linux, you will need to customize the file differently. In Linux, you could customize the relevant section as follows:

```
archiving.tempDir=/usr/temp/AL_SERVER_DATA
```

## 2.7.3 Customizing the `dfc.properties` file for optimum performance

Certain parameters must be customized in the `dfc.properties` file in order to optimize Documentum Client Library (DMCL) behavior; this is necessary to obtain optimum performance from Documentum Archive Services for SAP Solutions.

### To customize parameters in `dfc.properties`:

1. Select **Start > Run**.
2. In the **Open** field, type **dfc.properties**.

The `dfc.properties` file opens.



**Note:** In Linux, the `dfc.properties` file is usually available in `$DOCUMENTUM`.

3. Add the following attribute to `dfc.properties`:

```
dfc.session.max_count = 10
```

This attribute determines the maximum number of sessions.



**Note:** The value for this attribute is determined by the following formula:

```
dfc.session.max_count ≥ [ docbases.numberOfConnections (default: 9) * numberOfDocbases] + 1.
```

In this formula, the following attributes occur in the `al.properties` file, as described in “[Configuring the temporary store](#)” on page 29:

- `docbases.numberOfConnections`

This attribute determines the number of connections established by the repository. The default value is 9.

- `numberOfDocbases`

This attribute indicates the number of repositories that have been installed. If you have installed one repository, this value will be 1.

After installing the first repository, you must set the value of `dfc.session.max_count` as 10 because, per the formula, `dfc.session.max_count ≥ [ docbases.numberOfConnections (default: 9) * numberOfDocbases (1) ] + 1.`

If you have three repositories installed, and the value of `docbases.numberOfConnections` is 5, then `dfc.session.max_count` should be  $\geq 16$ .

4. Set the values of the following attributes:

```
dfc.session.max_count  
dfc.data.local_dir = ${dfc.data.user_dir}/local  
dfc.data.local_diskfull_limit = 0  
dfc.data.local_purge_on_diskfull = true
```



**Note:** Customizing these attributes is not mandatory for Documentum Archive Services for SAP Solutions to function correctly:

- `dfc.data.local_diskfull_limit`
- `dfc.data.local_purge_on_diskfull`

These customized attributes improve the performance of Documentum Archive Services for SAP Solutions, although Documentum Archive Services for SAP Solutions functions even if these attributes are not set. It is mandatory to add `dfc.session.max_count` to `dfc.properties`.

## 2.8 Archive Services for SAP Solutions ILM extension, installation, and configuration

Unzip the Enterprise\_Integrations\_SAP\_ILM.zip (Enterprise\_Integrations\_SAP\_ILM.tar for Linux) to a local directory. The following files are contained in the directory:

- Enterprise\_Integrations\_SAP\_ILM.dar and the related dar installer scripts
- ConfigSAPILM.jar
- dmwebdav.jar
- Namespace.jar

 **Note:** Do not install the Documentum Archive Services for SAP Solutions ILM extension if you do not specifically plan to use the Documentum Archive Services for SAP Solutions ILM extension.

### 2.8.1 Setup for Documentum Archive Services for SAP Solutions ILM extension

**To set up your Documentum Archive Services for SAP Solutions ILM extension installation solution:**

1. Install RPS and PRM DAR files on the repository in the same order. For more information, see *OpenText Documentum Content Management - Records Client Deployment Guide (EDCRM250400-IGD)*.
2. Install dmwebdav.war on a web server.
3. Install records.war and da.war if it is not already installed, preferably on a different web server than the dmwebdav.
4. dmWebDAV service configuration:
  - Edit the dfc.properties to connect to the configured repository.
  - Edit the web.xml file of dmwebdav with information on the repository to be used for ILM-based archiving.
  - Copy the necessary RPS library files to dmwebdav /WEB-INF/lib directory.
  - Copy SAP ILM namespace JAR file to dmwebdav /WEB-INF/lib directory.

 **Note:** The application server needs to be restarted if you make changes to the dfc.properties or the web.xml file or if you copy JAR files to webdav lib folder.

5. Install Enterprise\_Integrations\_Core.dar (if it is not already installed) on the repository.

6. Install Enterprise\_Integrations\_ILM.dar.
7. Enable Privileged DFC on WebDAV for RPS using the Privileged Clients utility in Documentum Administrator.
8. Create default objects for Documentum Archive Services for SAP Solutions ILM extension – execute ConfigSAPILM tool.
9. Configure DmSapILM.properteis. To customize the DM WebDav server functionality, edit the properties..
10. If using Centera, create Centera store with retention attribute information. [“Centera integration with ILM” on page 38](#) provides more details.

The Documentum Archive Services for SAP Solutions ILM extension solution is ready to run.

## 2.8.2 WebDAV service configuration

WebDAV is distributed as a WAR file containing all the application files.

- dfc.properties
- web.xml
- DmSapILM.properties

### 2.8.2.1 Configuring dfc.properties

Set field dfc.docbroker.host[0] to the name of your connection broker machine.



**Note:** To use the Legal Hold functionality, add the following property:

```
dfc.application_code=dmc_rps
```

### 2.8.2.2 Configuring web.xml

Set these web.xml parameter values as follows.

Parameter name	Value
docbase	repository name (your repository)
auth-type	BASIC (default)
documentObjectType_docbaseName	sap_ilm_document
folderObjectType_docbaseName	sap_ilm_folder
return200ForCollection	yes
extensions-enabled	true



**Note:** The parameter names *documentObjectType\_docbaseName* and *folderObjectType\_repositoryName* should be changed to

*documentObjectType\_<your docbase name>* and  
*folderObjectType\_<your repository name>* respectively.

The following is an example excerpt of a `web.xml` file for a repository named `dctmsapilm`:

```

<init-param>
<param-name>docbase</param-name>
<param-value>dctmsapilm</param-value>
<description>
    Name of the Docbase to be made accessible through Documentum WebDAV Services
</description>
</init-param>

<init-param>
<param-name>documentObjectType_<code>dctmsapilm</code></param-name>
<param-value>sap_ilm_document</param-value>
<description>
    The docbase object type that will be used while creating new objects.
</description>
</init-param>

<init-param>
<param-name>folderObjectType_<code>dctmsapilm</code></param-name>
<param-value>sap_ilm_folder</param-value>
<description>
    The docbase object type that will be used while creating new objects.
</description>
</init-param>

<init-param>
<param-name>return200ForCollection</param-name>
<param-value>yes</param-value>
<description>
    This is to enable new certification for SAP Client, this returns 200
    instead of 403 for collection objects for a HEAD/GET method.
</description>
</init-param>

```

### 2.8.2.3 Configuring the Administrative User for SAP ILM

Documentum Archive Services for SAP Solutions ILM administrator user should be a member of `dmc_rps_retention_manager` group, which is created by RPS installation.

#### To configure the administrative user for SAP ILM:

1. Connect to WebAdmin, as described in [Logging in to WebAdmin through Documentum Administrator](#).
2. Click to expand the **System** subnode and select the **DocLink** subnode.  
The **SAPILM** screen appears.
3. Edit the `DmSapILM.properties` file, as follows:  
**SAPILM.admin.username** = <*admin user name*> – Name of the administrative user.  
**SAPILM.admin.password** – Password of the administrator user in encrypted format. Use Foundation Java API utility for encryption.

4. Click **OK** to save the new administrative user for SAP ILM configuration.

### 2.8.3 Enabling Privileged DFC on WebDAV for RPS

Foundation Java API client instance for dmwebdav and Foundation Java API client instance used for executing configSAPILM, should be privileged, to complete any ILM actions. Global repository name should be the same for both Foundation Java API instances. In order to achieve this, first open dmwebdav URL, so that Foundation Java API instance is registered in the global repository. Then enable privileged client for dmwebdav Foundation Java API instance from Documentum Administrator. RPS version 6.7 SPx is required for SAP ILM, which uses Privileged DFC to dynamically grant users permissions in the repository.



**Note:** You can use the same Foundation Java API instance of dmwebdav for executing configSAPILM tool, so that privileged DFC client is reused.

Configure Privileged DFC for specific instances of `dfc.jar` when multiple `dfc.jar` files are present following these guidelines:

1. After installing WebDAV, connect to WebDAV by using Microsoft Internet Explorer and selecting **File > Open**.
2. Type your WebDAV URL (`http://<host>:<port>/dmwebdav/files`) and select **Open as Web Folder**.  
The `dfc.keystore` file is created in the same directory as your `dfc.properties` file.
3. Open `dfc.keystore` in a text editor and search on Foundation Java API. A string beginning with `dfc_` followed by 28 alphanumeric characters, used as the ClientID by Documentum Administrator, is found; for example, `dfc_hIQLX2KxxqSHgkIGcu7TD6nX3Nka`.
4. Start Documentum Administrator, navigate to the Privileged Clients node, and select **File > Manage Clients**.  
A list of clients and `dfc.jar` files connected to the Documentum CM Server appears.
5. Locate the ClientID retrieved from your `dfc.keystore` file, move it to the right, and click **OK**.
6. Right-click the new entry from the list and select **Approve Privilege**.  
Privileged DFC is now enabled.

## 2.8.4 Installing the Enterprise\_Integrations\_SAP\_ILM.dar file

Use the information in “[Installing Enterprise Integration Core DAR file](#)” on page 12 section to first install the Enterprise\_Integrations\_Core.dar file, and then as guidance for installing the Enterprise\_Integrations\_SAP\_ILM.dar file.

### 2.8.4.1 Dar installation objects for Documentum Archive Services for SAP Solutions ILM extension

The DAR file installs these objects:

- dm\_type sap\_ilm\_document: This object derives from dm\_document. The attributes for this object are:
  - al\_object\_type: string(10)
  - al\_obj\_id: string(50)
  - al\_crep\_id: string(2)
  - al\_doc\_type: string(10)
  - al\_store\_date: dm\_time
  - al\_doc\_class: string(20)
  - al\_mime\_type: string(128)
  - al\_table: string(5)
- dm\_type sap\_ilm\_folder: This object derives from dm\_folder with the attribute origin: string(16).
- BOF module: This module implements the WebDAV namespace extension interface.

## 2.8.5 Creating default objects for Documentum Archive Services for SAP Solutions ILM extension WebDAV customization using ConfigSAPILM tool

The Java configuration application is a CLI command that must be run to enable SAP ILM WebDav.

### Prerequisite

- Enable the Foundation Java API instance that was to execute configSAPILM tool as a privileged client from the Documentum Administrator.
- Check if JDK 17 or 21 is used.

If JDK 17 or 21 is used, before running configSAPILM tool, make sure to set the JAVA\_TOOL\_OPTIONS using the following command:

```
set JAVA_TOOL_OPTIONS= --add-opens=java.base/java.lang=ALL-UNNAMED  
--add-opens=java.base/java.lang.invoke=ALL-UNNAMED --add-exports=
```

```
java.base/sun.security.provider=ALL-UNNAMED --add-exports=java.base/
sun.security.pkcs=ALL-UNNAMED --add-exports=java.base/sun.security.
x509=ALL-UNNAMED --add-exports=java.base/sun.security.util=ALL-UNNAMED
--add-exports=java.base/sun.security.tools.keytool=ALL-UNNAMED
```

- To create RPS policies, the specified user must be configured as an RPS Retention Manager (`dm_group: dmc_rps_retentionmanager`) with the privileges to create a user.

### To create the RPS policies:

1. In the command line, type the following command:

```
PATH_TO_WEB_INF/lib/dfc.jar;<PATH_TO_WEB_INF>\classes; PATH_TO_
CONFIGJAR\ConfigSAPILM.jar;PATH_TO_WEB_INF/lib/IDmcPolicyEngine.
jar;<PATH_TO_WEB_INF>/lib\IDmcRps.jar;PATH_TO_WEB_INF/lib\
IDmcRpsModules.jar;PATH_TO_WEB_INF/lib\DMcPolicyEngine.jar;PATH_TO_-
WEB_INF/lib\DMcRecords.jar;PATH_TO_WEB_INF/lib\DMcRps.jar" com.
documentum.ei.tools.ConfigSAPILM docbaseuser passworddocbase [domain]
```

Where:

`<PATH_TO_CONFIGJAR>` is the full path of the directory containing the file `ConfigSAPILM.jar`.

`<PATH_TO_WEBAPP_LIB>` is the full path to the WEBINF directory of the WebDAV web application.

For example, `PATH_TO_WEBAPP_LIB =C:/tomcat/webapps/dmwebdav/WEB-INF`

2. If errors appear during the execution of configSAPILM tool, navigate to privileged clients and ensure that the Foundation Java API instance is registered as privileged. Make sure to complete the configSAPILM tool execution without errors.



**Note:** If you execute configSAPILM tool with a Foundation Java API instance without privileged clientship, a null pointer exception is displayed. If there is any null pointer exception while executing configSAPILM tool, do the following:

- Open RPSA and navigate to contacts.
- Edit the contact `sap_ilm_group`.
- If the field `user` is empty, add user `sap_ilm_user` from the list.
- Execute the configSAPILM tool again.

The configuration performs the following actions:

- Creates a `dm_user` object `sap_ilm_user`:
  - Initial password is set to `1Lmus3r`
- Creates a `dm_group` object `sap_ilm_group`.

- Adds `sap_ilm_user` to the `dm_group - dmc_rps_retentionmanager` and `sap_ilm_group`.
- Creates an RPS Contact object that maps to the `sap_ilm_group` object.
- Creates an RPS Authority object that maps to the created Contact.
- Creates two RPS Condition Objects. The Authority is set to the created Authority object:
  - `expiration_date` in the category SAPILM
- Two policies `sap_container` and `sap_non_container` are created. Even the RPS users are required to run configSAPILM tool to use SAP ILM capabilities, to pre-create these policies.

## 2.8.6 DmSapILM.properties customization

Parameter	Description
<code>Version</code>	Indicates WebDav version (for example, 1.0).
<code>SAPILM.admin.user</code>	SAP ILM Admin user id (for example, <code>&lt;user&gt;</code> ).
<code>SAPILM.admin.password</code>	SAP ILM Admin password in encrypted format (for example, <code>&lt;password&gt;</code> ). Use Foundation Java API utility for encryption.
<code>CenteraRetentionAttribute</code>	Indicates Centera retention policy, (for example, true or false), it is same as <code>i_retain_until</code> attribute value.
<code>forceEmptyCollectionDelete</code>	To delete an empty collection forcibly from WebDav (for example, true or false).

Parameter	Description
<code>SAPILM.admin.runHybrid</code>	<ul style="list-style-type: none"> <li>• It is recommended to set the <code>SAPILM.admin.runHybrid</code> property to <code>false</code>.</li> <li>• To handle high scalability and huge volume of RPS requests, use the RM/RPS 16.7 Asynchronous capabilities. For more information, see <i>OpenText Documentum Content Management - Records Client User Guide (EDCRM250400-UGD)</i>.</li> <li>• In addition to RPS asynchronous capabilities, use the following properties for asynchronous processing of Retention Policy Application at the <i>DM Webdav</i> server layer: <ul style="list-style-type: none"> <li>– <code>SAPILM.admin.runHybrid</code></li> <li>– <code>SAPILM.admin.timeInMsForProppatchStart</code></li> </ul> </li> <li>• If the <code>SAPILM.admin.runHybrid</code> property is set to <code>true</code>, then the Proppatch requests is applied in an asynchronous manner with a delay as specified in property <code>SAPILM.admin.timeInMsForProppatchStart</code> (for example, <code>SAPILM.admin.runHybrid=false</code>).</li> </ul>
<code>SAPILM.admin.timeInMsForProppatchStart</code>	<p>It is a time interval in Ms(Milli Second) based on which the Retention Policy Application request is launched. This property is applicable only when the <code>SAPILM.admin.runHybrid</code> property is set to true. This time in millisecond should be arrived based on the system configuration used to run the Proppatch requests (for example, :10000 in milliseconds).</p>

### 2.8.7 Centera integration with ILM

It is expected that most customers who use the SAP ILM solution will do so to store their data on Centera. The SAP ILM WebDAV component and the RPS layer are fully integrated with the Content Services for Centera (CSEC). When used with an Centera, all ILM-related settings sent from SAP are forwarded through RPS to CSEC, subsequently enforcing protection on the hardware layer.

**To configure the RPS, CSEC, and Documentum CM Server:**

1. Adjust the storage settings for the `sap_ilm_document` type in the Documentum Administrator.

2. Create a Centera store with an attribute name, for example, `i_retain_until`, as the retention attribute name.



**Note:** While creating the Centera Store, make sure that the Event based retention option is checked and the Application provides Retention option is unchecked.

3. Once you have created the new store, set the default store property of the type `sap_ilm_document` to the newly created store object.
4. Assign this storage as default store for the type `sap_ilm_document`.
5. Edit the `DmSapILM.properties` file of DM WebDav as follows:

```
add CenteraRetentionAttribute=<Boolean value configured for centera store>
```

For example:

```
CenteraRetentionAttribute=true
```

### 2.8.8 To verify details of clips stored on Centera



**Note:** This is applicable if Centera is used for storing content and ensuring its retention.

#### In order to verify the details about any document that is archived into Centera:

1. Find out the `r_object_id` of the document using Documentum Administrator.
2. Open apitester, either from Documentum Administrator or IAPI:
 

```
1 Execute fetch,c,<<r_object_id>>
2 Execute getpath,c,1
```
3. A long hexadecimal string  
`7INF9TV6J4M7VeEONRNE2D3FGEBG4140SGV1B50IA03BRRPRJIVI5` is shown. It is the Centera clip ID.
4. Use Centera APIs, JCASScript for connecting to Centera pool directly.
5. Go to the command prompt, execute `java -jar JCASScript.jar`.
6. Open pool by executing command `po <<ip_address>>?<<pea file absolute path>>`, where `ip_address` is the IP address of Centera cluster and `pea file absolute path` is the complete path to .pea file
7. Open the clip by executing command `co <<clip_id>>`. It displays the clip details.
8. Use the clip command `crv` to list the contents.

## 2.9 Installing PrintList Transformation Filters

This section describes the Documentum Archive Services for SAP Solutions PrintList Transformation Filters.



**Note:** PrintList transformation filters require appropriate licensing and can be configured only through the Documentum Archive Services for SAP Solutions WebAdmin tool.

### 2.9.1 On-demand rendering compared with stored rendering

If you are planning to use Documentum Archive Services for SAP Solutions to archive reports (SAP Print lists), it is possible to render the SAP proprietary PrintList format (ALF) into text, HTML, and PDF renditions. There are two ways to achieve this:

- Configure the archive to generate the desired renditions when the PrintList is stored.
- Configure the Documentum CM Server to generate a desired rendition when a PrintList is viewed, for example, on-demand.

Using on-demand rendering reduces the initial storage requirements needed to store reports and renditions. However, performance is reduced when viewing a report, because on-the-fly rendering occurs. On-the-fly renditions are stored in the OpenText Documentum CM repository for future use.

Stored rendering refers to the usage of built-in filters to generate desired document renditions when a PrintList is archived in the repository, as described in *OpenText Documentum Archive Services for SAP Solutions - Administration Guide (EDCCOSAPAR250400-AGD)*.

### 2.9.2 Configuring Documentum CM Server for on-demand rendering

**To configure Documentum CM Server to render ALF reports into HTML, PDF, or TXT formats:**

1. Copy the transformation executable onto Documentum CM Server:
  - a. On the installation media, locate the transformation executable:  
For Windows installations, this file is called `alf2html.exe`.
  - b. Copy this file into the Documentum CM Server bin directory (for example: `\Documentum\Product\6.0\bin`).
2. Copy the transformation scripts onto Documentum CM Server:
  - a. On the installation media, locate the transformation scripts:

For Windows installations, these are called `convert_alf2pdf.bat`, `convert_alf2crtext.bat`, and `convert_alf2html.bat`.

- b. Copy these scripts into the Documentum CM Server Script Convert Directory (for example: `\Documentum\Product\6.0\Convert\Scripts`).
3. Update the convert table:

The Documentum CM Server Script Convert Directory (for example: `\Documentum\Product\6.0\Convert\Scripts`) contains a file called `convert.tbl`.

Using a text editor, append entries to this table to add the ALF transformations:

#
# Converts SAP Printlists into open formats
#
alf2crtext      sap_printlist      T_t.crtext .
alf2html      sap_printlist      T_t.html .
alf2pdf      sap_printlist      T_t.pdf .

4. Save your changes and close the file.

The settings will now take effect. It is not necessary to restart/reinitialize the Documentum CM Server.



## Chapter 3

# Upgrading Documentum Archive Services for SAP Solutions

Before upgrading Documentum Archive Services for SAP Solutions, depending on existing infrastructure and your needs, you need to determine how you want to deploy the application in your enterprise.



**Note:** To upgrade to the latest version of Documentum Archive Services for SAP Solutions, you need to have 24.4 version or later.

## 3.1 Upgrading from Documentum Archive Services for SAP Solutions 5.3 SPx

You can upgrade directly from Documentum Archive Services for SAP Solutions 5.3 SPx to Documentum Archive Services for SAP Solutions 24.2 version. The upgrade steps involve:

- Uninstalling the previous versions of Documentum Archive Services for SAP Solutions. Use the standard uninstall procedure as recommended by the respective application server, as described in “[Uninstalling Archive Services for SAP solutions](#)” on page 59.
- Installing the Documentum Archive Services for SAP Solutions server software as described in “[Installing Documentum Archive Services for SAP solutions](#)” on page 11.

## 3.2 Upgrading from Documentum Archive Services for SAP Solutions 6.0, 6.0 SP1

You can upgrade directly from Documentum Archive Services for SAP Solutions 6.0 and 6.0 SP1 to Documentum Archive Services for SAP Solutions 24.2 version:

1. Ensure that the application server on which Documentum Archive Services for SAP Solutions is installed is stopped.
2. Stop the Documentum Content Services for SAP Solutions service if installed.
3. Delete the dependency and BOF modules that were installed by Documentum Content Services for SAP Solutions 6.0 or 6.0 SP1 docapp at /System/Modules by logging into the repository using Documentum Administrator:
  - a. Execute the following query:

```
- select * from dmc_java_library where object_name='dmei_core_lib'
```

```
- select * from dmc_java_library where object_name='dmei_doclink_lib'  
- select * from dmc_java_library where object_name='hvps_lib'
```

 **Note:** Record the r\_object\_id of the preceding folders.

- b. Execute the following query to remove any dependencies:  

```
- delete dm_relation objects where parent_id='<r_object_id>' for each  
of the folder in step 3.a
```
  - c. Delete the three folders listed in **step 3.a** manually, or by executing the following DQL:  

```
- delete dmc_java_library objects where object_name='<folder_name>'
```
-  **Note:** If deleting manually, all subfolders and their files must be deleted first.
4. Install Enterprise\_Integrations\_Core.dar and the assap.war as directed in this guide.

### 3.3 Upgrading from Documentum Archive Services for SAP Solutions latest version of service packs

#### To upgrade to the latest version of service packs:

1. Stop the application server running assap.war, delete the assap.war, and replace with new assap.war.
2. Install the latest version of Documentum Archive Services for SAP Solutions by following the standard installation procedure. Ensure the Enterprise\_Integrations\_Core.dar file is installed on global repository as well as on the repository being used for Documentum Archive Services for SAP Solutions.
3. For integration of Documentum Archive Services for SAP Solutions Information Lifecycle Manager (Documentum Archive Services for SAP Solutions ILM) with Centera, the DmSapILM.properties file has to be edited after you upgrade the service pack.

 **Note:** Make sure that the version of Documentum Composer used to install the DAR files matches the version of the Documentum Archive Services for SAP Solutions Service Pack being installed.

## 3.4 Additional steps to upgrade Archive Services for SAP solutions

Upgrade of Archive Services for SAP Solutions from 5.3 SPx to 6.0 and later, or 6.5 and later does not work as expected. To resolve this issue, an upgrade from 5.3 SPx to 6.0 and later, or 6.5 and later requires 5.3 SPx to be uninstalled first. The 5.3 SPx Documentum Archive Services for SAP Solutions installer on Tomcat web server appends additional lines to the catalina.bat or catalina.sh (in case of Linux environments) files. The following lines must be removed manually:

```
rem ----- The next two lines were added by a Documentum installer  
- please do not remove this comment -----  
  
set CATALINA_OPTS=%CATALINA_OPTS% -Djava.library.path=  
"C:\Program Files\Documentum\shared" -Xms256m -Xmx256m -verbose:gc  
  
set CLASSPATH=C:\Program Files\Documentum\shared\DMcRecords.jar;  
C:\Program Files\Documentum\shared\messageArchive.jar;  
C:\Program Files\Documentum\shared\messageService.jar;  
C:\Program Files\Documentum\shared\bpoutil.jar;  
C:\Program Files\Documentum\shared\ctsTransformImpl.jar;  
C:\Program Files\Documentum\shared\ctsTransform.jar;  
C:\Program Files\Documentum\shared\collaboration.jar;  
C:\Program Files\Documentum\shared\ci.jar;  
C:\Program Files\Documentum\shared\castor-0.9.5.2.jar;  
C:\Program Files\Documentum\shared\commons-jxpath-1.2.jar;  
C:\Program Files\Documentum\shared\XformsCommon.jar;  
C:\Program Files\Documentum\shared\xforms.jar;  
C:\Program Files\Documentum\shared\subscription.jar;  
C:\Program Files\Documentum\shared\workflow.jar;  
C:\Program Files\Documentum\shared\xml-apis.jar;  
C:\Program Files\Documentum\shared\xalan.jar;  
C:\Program Files\Documentum\shared\log4j.jar;  
C:\Program Files\Documentum\shared\bsf.jar;  
C:\Program Files\Documentum\shared\All-MB.jar;  
C:\Program Files\Documentum\shared\xtrim-api.jar;  
C:\Program Files\Documentum\shared\dfcbase.jar;  
C:\Program Files\Documentum\shared\dfc.jar;  
C:\Documentum\config;%CLASSPATH%
```

For an upgrade on other application servers, you must remove any references to Foundation Java API 5.3 SPx in the startup scripts accordingly.

## 3.5 Post-upgrade task

### **3.5.1 Licensing Documentum Archive Services for SAP Solutions**

OpenText Documentum CM uses OpenText Directory Services (OTDS) to apply licenses for all the OpenText Documentum CM components. For more information about procuring the license file and configuring OTDS and license, see *OpenText Documentum Content Management - On-Premises Upgrade and Migration Guide (EDCCS250400-UMD)*.

# Chapter 4

## Testing the installation

Use the information in this chapter to test the Documentum Archive Services for SAP Solutions installation.

Complete information about the functions included in this chapter is in *OpenText Documentum Archive Services for SAP Solutions - Administration Guide* (EDCCOSAPAR250400-AGD) and *OpenText Documentum Archive Services for SAP Solutions - User Guide* (EDCCOSAPAR250400-UGD).

### 4.1 Logging in to WebAdmin through Documentum Administrator

Log in to Documentum Administrator before using WebAdmin to configure Documentum Archive Services for SAP Solutions.



**Note:** The *OpenText Documentum Content Management - Administrator User Guide* (EDCAC250400-UGD) has complete information about using Documentum Administrator.

#### To connect to WebAdmin through Documentum Administrator:

1. Start a web browser on a client machine.
2. Connect to the following web address, where host is the host where Documentum Administrator is installed and portnumber is a port number provided during application server installation:

```
http://host:portnumber/da/
```

3. Type your login name and password on the **Documentum Administrator Login** page.
4. Choose a repository from the list box.  
If you change the repository, retype your password.
5. In the **Location** list (if available), select the location on your organization network from which you are accessing Documentum Administrator.

This allows you to access content from the nearest storage area in the network. Depending on your organization setup, this location might be a fixed value.

6. To view additional options, click **More Options**:
  - To connect to the repository using a particular server, choose that server from the Server list box.

The default is **Any Running Server**.

- If the repository is running in domain-required mode, type the domain name.
- To set the session locale to another language, choose the language from the list box.



**Note:** Do not click the **Additional Accessibility Options** link on the login page. Documentum Administrator does not support the accessibility options.

- To change your password in a repository, click **Change Password**, select a repository, and type your old and new passwords, and then click **Change Password**.

7. Click **Login**.

The **System Information** page appears with information about the system.

The *OpenText Documentum Content Management - Administrator User Guide (EDCAC250400-UGD)* has complete information about using Documentum Administrator and logging in to repositories available in Documentum Administrator.

## 4.2 Configuring HTTP repositories for archive linking

1. Connect to WebAdmin, as described in “[Logging in to WebAdmin through Documentum Administrator](#)” on page 47.

2. Click to expand the **ArchiveLink** subnode and select the **Repositories** subnode. The **Repositories** screen appears.

3. Select **File > New > Repository** from the menu at the top of the **Repository** screen.

The **New Repository** screen appears.

4. Type the connection information for the new repository, as follows:

**Repository Name:** Name of the new repository.

**User Name:** User name associated with the user who has created the repositories. For example, an administrator.

**User Password:** User password associated with the user name of the user of the new repository.

**Domain:** Domain in which the new repository resides.



**Note:** Click **Test Connection** to test the information.

5. Type the connection information for the global repository associated with the new repository, as follows:

**User Name:** User name associated with the user of the global repository (install owner).

**User Password:** User password associated with the user name of the user of the global repository.

**Domain:** Domain in which the global repository resides.

6. Click **OK** to save the new repository configuration.

## 4.3 Creating an archive in WebAdmin

Use WebAdmin to view an archive.



**Note:** The *OpenText Documentum Archive Services for SAP Solutions - Administration Guide* (EDCCOSAPAR250400-AGD) has complete information about creating, viewing, and editing archives using WebAdmin.

1. Connect to WebAdmin, as described in “[Logging in to WebAdmin through Documentum Administrator](#)” on page 47.
2. Click to expand the **ArchiveLink** subnode and select the **Archive** subnode.  
The **Archive** screen appears.
3. Select **File > New > Archive** from the menu at the top of the **Archive** screen.  
The **New Archive** screen appears.
4. Type the archive name in the **Archive Name** field.  
You can use up to 30 character long names for archives when supported by SAP.
5. The following parameters can be configured.

**Table 4-1: Parameters in archives configuration page**

Field name	Description
Archive ID	Name of the SAP archive, as defined in section 2.2 “oac0 – Defining a logical ArchiveID” in <i>OpenText Documentum Archive Services for SAP Solutions - Configuration Guide</i> (EDCCOSAPAR250400-CGD).
SAP Document Type	Set to NONE (HTTP provided).
Documentum Type	Specifies the Documentum document type, as defined in section 4.2.2 “Configuring the repository Document Type” in <i>OpenText Documentum Archive Services for SAP Solutions - Administration Guide</i> (EDCCOSAPAR250400-AGD).
Workflow	Set to No Workflow.

Field name	Description
Attribute Map	<p>The attribute map is used to define the OpenText Documentum CM attributes of an archived document.</p> <p>There is a special attribute FOLDER that can be configured. To specify the folder path, use the following format: "FOLDER= /SAP/Archive/AA".</p> <p>In the Attribute map, you can also set the following attributes:</p> <ul style="list-style-type: none"> <li>• a_storage_type</li> <li>• a_retention_date</li> </ul> <p> <b>Note:</b> For more information, see section 6.3 "Setting Centera-related attributes in Documentum Archive Services for SAP Solutions" in <i>OpenText Documentum Archive Services for SAP Solutions - Administration Guide</i> (EDCCOSAPAR250400-AGD).</p>
Filtering	<p>Used to define a custom filter.</p> <p>Used to define the output:</p> <ul style="list-style-type: none"> <li>• Text</li> <li>• PDF</li> <li>• HTML</li> </ul>



**Note:** The aim of this exercise is to test if the installation has been successful; therefore, if an existing archive is available for reuse, it is not necessary to create a new archive for testing purposes. However, if you want, you may create a new archive or reuse any ArchiveID that has been created previously, as described in *OpenText Documentum Archive Services for SAP Solutions - Administration Guide* (EDCCOSAPAR250400-AGD).

## 4.4 Defining a logical Archiveld in SAP

Logical ArchiveIDs are created in SAP using the SAP GUI. The name of the logical ArchiveID must be the same as the ArchiveID viewed using WebAdmin, as described in "[Creating an archive in WebAdmin](#)" on page 49.

### To define a logical Archiveld 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 Documentum Server).

3. In the **Display Content Repositories: Detail** page, click the **Display/Change** icon.  
The **Copy as** button is now enabled.
4. Click **Copy as**.
5. Edit the **Content Rep.** field so that it is the same as the ArchiveID created using WebAdmin.
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:** You are recommended to type the IP address of your system in this field.

8. In the **HTTP Script** field, type the following:  
`<Archive Services Virtual Directory>/archivelink/<name-of-repository>`
9. To save the logical ArchiveID configuration, select **Content Repository > Save**.

## 4.5 Testing the connection between SAP and Documentum Archive Services for SAP Solutions

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 Documentum Server).
3. In the **Display Content Repositories: Detail** page, click **Test connection**.  
An information message appears at the bottom of the page, indicating that the connection test has been successful.

## 4.6 Creating a Document Type in SAP

**To fully test the archival and retrieval cycle, configure a simple Print List:**

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. From the list, select any item with the ObjectType **SOOD**.

4. Click the **Copy As** icon and execute.
5. In the page that appears, type any piece of text starting with the alphabet Z in the **Document type** field.

Thus, Z<Your Text> will be the document type.
6. In the **Storage system** field, type the name of the logical ArchiveID that you created earlier in “[Defining a logical ArchiveID in SAP](#)” on page 50, where the documents will be archived.
7. Save your changes.

## 4.7 Archiving a PrintList

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, click **Archive only**.



**Note:** Whenever you edit a parameter in this dialog box, we recommend that you 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. Set the **Object Type** to **SOOD**.
8. In the **Document Type** field, type the document type you created earlier in “[Creating a Document Type in SAP](#)” on page 51, and execute it.
9. Type additional information in the **Information** field.  
This label may be anything you want; for example, your initials.
10. Optionally, type a description of the Print List in the **Text** field.
11. In the **Parameter name** column, select **General attributes > Time of printing**.
12. From the **Time of print** list box, click **Print out immediately**.
13. Click **Continue** in the **Spool Request Attributes** dialog box.
14. Click **Continue** in the **Print Screen List** dialog box.

15. To view the status of the document in the storage 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.

The section 2.6 “oaat – Scheduling jobs” in *OpenText Documentum Archive Services for SAP Solutions - Configuration Guide (EDCCOSAPAR250400-CGD)* contains information about configuring the ArchiveLink scheduler.

16. 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.

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

The **Archiving request** window opens.

Verify that the details are correct.

18. 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.

## 4.8 Viewing a PrintList

1. Connect to WebAdmin, as described in “[Logging in to WebAdmin through Documentum Administrator](#)” on page 47.

2. Click to expand the **ArchiveLink** subnode and select the **Archive** subnode.

The **Archive** screen appears.

3. Select an archive in the **Archive** screen.

4. Right-click the archive and select **Properties** from the menu.

The **Properties** screen appears.

5. Note the ArchiveID of the selected archive.

6. Execute the following transaction in SAP in the transaction code field:

oadd

7. In the **ArchiveLink: Hit List for Stored Print Lists** page for a particular item, 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 has the ArchiveID of the Print List in OpenText Documentum CM.

## Chapter 5

# Troubleshooting installation issues

This chapter discusses commonly encountered issues in Documentum Archive Services for SAP Solutions and how you can resolve them.

## 5.1 High levels of logging

You may encounter high levels of logging if the logging parameter for Archive Services has been set as *DEBUG* or *WARN*. By default, this parameter is set as *WARN*. If you had set the logging parameter as *DEBUG*, Archive Services documents log each and every request; in a production environment, this can translate into a extremely high logging levels. This causes the following problems:

- Because Archive Services writes each and every request to a log, this uses enormous storage space in a production environment.
- High levels of logging penalize the performance of the host in a production environment.

When the logging level is set to *DEBUG*, Archive Services writes certain parameters of each request to memory. With each request, the amount of memory used by Archive Services increases incrementally. This leads to a performance penalty.

### To change the logging level:

1. Open the `log4j2.properties` file.

In Windows, this file is usually available in the following location:

```
<Tomcat-Installation-Directory>\webapps\<Archive Services-Virtual-Directory>
\WEB-INF
```

2. Locate the following parameters:

```
#logger.eilog.level=WARN
#logger.eilog.level=INFO
#logger.eilog.level=DEBUG
```



**Note:** Depending on the setting for logging levels in your environment, one of the preceding parameters will not be commented (the hash symbol (#) will not precede the parameter). By default, the logging level is set as *WARN*.

3. Depending on what level of logging you want, do not comment the required logging parameter.

Ensure that the other two parameters are commented.

► **Example 5-1:**

If you want to set the logging level as *INFO*, edit the logging parameters as follows:

```
#logger.eilog.level=WARN  
logger.eilog.level=INFO  
#logger.eilog.level=DEBUG
```



4. Save the file.



**Note:** Setting the logging level as *DEBUG* is necessary only when you need to troubleshoot any issues with Archive Services. In a production environment, the *DEBUG* logging parameter in Archive Services should be commented to turn it off.

## 5.2 Incorrect Tomcat installation

After installing Archive Services, when you connect to WebAdmin for the first time, you might get this JSP error:

```
Unable to find a javac compiler; com.sun.tools.javac.Main is not on the  
classpath.
```

This error message is displayed because you chose the JRE option, and not the J2SE option, in the Tomcat installation wizard.

**To resolve this issue:**

1. Download and install a full J2SE/JDK on a local machine.
2. Copy the tools.jar from the following directory:  

```
<J2SE-Installation-Directory>/lib
```
3. Paste it to the following directory:  

```
<Tomcat-Installation-Directory>/common/lib
```
4. Restart Tomcat.

## 5.3 Performance issues with ACS

The performance of Archive Services for SAP Solutions fetch operations is comparatively low when ACS is enabled as compared to when ACS is disabled, if you set the log level to DEBUG. To improve the performance, set the log level to *WARN* or *INFO*.

## 5.4 JBoss deployment error

When JBoss is deployed in Documentum Archive Services for SAP Solutions, it fails with the following error:

```
java.lang.NoSuchFieldError: EMPTY_BYTE_ARRAY
```

### To resolve JBoss deployment error:

Add the `jboss-deployment-structure.xml` file in `<ASSAP_HOME>/WEB-INF/` with the following content:

```
<?xml version="1.0" encoding="UTF-8"?>
<jboss-deployment-structure>
  <deployment>
    <exclusions>
      <module name="org.apache.logging.log4j.api"/>
    </exclusions>
  </deployment>
</jboss-deployment-structure>
```

Where `<ASSAP_HOME>` is `\apache-tomcat-9.0.65-assap\webapps\assap`.

## 5.5 ILM acceptance test error

The ILM acceptance tests (MKCOL, PROPPATCH requests) might fail with the following error:

```
com.documentum.fc.client.impl.bof.security.RolePermission" "dmc_rps_
escalated_retmgr.testenv" "propagate
```

### To resolve the ILM acceptance test error:

- In the `<ASSAP_HOME>/dmwebdav/META-INF/` file path, add the `permissions.xml` file, which contains the following content:

```
<permissions xmlns="http://xmlns.jcp.org/xml/ns/javaee" xmlns:xsi="http://
www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/
javaee http://xmlns.jcp.org/xml/ns/javaee/permissions_7.xsd" version="7">
  <permission>
    <class-name>com.documentum.fc.client.impl.bof.security.RolePermission</class-
name>
    <name>*</name>
    <actions>propagate</actions>
  </permission>
</permissions>
```



## Chapter 6

# Uninstalling Archive Services for SAP solutions

Uninstalling Documentum Archive Services for SAP Solutions consists of the high-level tasks and procedures listed in this chapter.

## 6.1 Preparing application servers for Documentum Archive Services for SAP Solutions uninstallation

To prepare application servers for Documentum Archive Services for SAP Solutions uninstallation:

- Close all browser sessions that are running WebAdmin.
- Ensure that the application server is in the correct state:
  - Apache Tomcat must be stopped.
  - Sun Java System Application Server must be running.

## 6.2 Uninstalling Documentum Archive Services for SAP Solutions using Apache Tomcat

1. Stop the Apache Tomcat server.
2. Delete the assap.war file from the <>Tomcat>>/webapps folder.
3. Restart the Apache Tomcat server.



# **Appendix A. Advanced installation option for load balancing**

Documentum Archive Services for SAP Solutions may be installed on a Tomcat server where Apache and Tomcat are configured to use load balancing between multiple Tomcat sessions. This configuration is particularly powerful when used in tandem with multiple Tomcat hosts. Use `mod_jk` as a connector for communications between Apache and Tomcat.

## **A.1 Installing connectors for Apache and Tomcat**

If your installation scenario is based on a load-balancing configuration, in addition to installing Apache, you must download (from the Web) and install `mod_jk`, a plug-in that handles the communication between Apache and Tomcat.

For detailed installation, configuration, and administration instructions, refer to the documentation available in Tomcat website.

## **A.2 Guidelines for configuring Apache and Tomcat for load balancing**

Use the following steps as broad guidelines while configuring Apache and Tomcat for advanced scalability. Detailed information is in the documentation available in the Jakarta project website.

- Obtain the installation file for Tomcat 5.0.28 (or later) from the Web and install.  
Depending on your load-balancing requirement, install Tomcat on two or more hosts.
- Obtain the installation files for Apache from the Web and install.
- Obtain the installation files for `mod_jk`, a plug-in that handles the communication between Apache and Tomcat, from the Web and install.
- In Apache:
  - Edit the Apache configuration file (`httpd.conf`).  
Provide the path to the plug-in (`mod_jk`) in this file.
  - Create a `workers.properties` file. In this file:
    - The number of workers that you create should be equal to the number of Tomcat instances that have been installed.
    - Specify the percentage of load that will be balanced by each worker.
- In each Tomcat instance, edit `server.xml` to disable the stand-alone configuration.

This ensures that each Tomcat instance is a worker that is running to perform Servlet requests coming from Apache.

You now have a working load-balancing configuration using Apache and Tomcat.

## Appendix B. Installing a DAR file using the DAR installer GUI

You can use the DAR Installer GUI to install a DAR file to a repository if you do not want to use the interface within Documentum Composer.



**Note:** The DAR Installer GUI is only supported for Windows environment.

If the repository used for installing the Enterprise\_Integrations\_Core.dar files is not a Global repository, then the Enterprise\_Integrations\_Core.dar files must be installed on both the Global repository and the repository used for Documentum Archive Services for SAP Solutions.

The DAR Installer GUI requires Composer to be installed, but does not launch the full Composer IDE. The DAR Installer GUI is useful in cases where you want to decouple the development of DAR files from the installation of DAR files. It is also useful in situations where installation of DAR files is required as part of a deployment process. When you open the DAR Installer GUI, it creates three folders in your Composer installation directory:

- darinstallerconfig: Contains configuration files for the DAR Installer GUI.
- darinstallerlogs: Default location of the log files.
- darinstallerworkspaces Workspaces that are created and used by the DAR Installer GUI. The DAR Installer GUI does not delete these workspaces automatically, so you occasionally need to clean up this directory. The workspace directories are named in the following format: darinstaller\_workspace\_yyyy-mm-dd-hh-mm-ss.

The DAR Installer requires you to fill in certain values that are marked with an asterisk (\*). All other fields are optional. The following table provides a description of the fields for the DAR Installer Utility.

### To install a DAR file:

1. Download the DAR Installer zip file. You can find the DAR Installer GUI on OpenText My Support. Search for Composer to reach the Documentum Composer download site. Headless Composer GUI is also available within the Documentum CM Server installation at C:\Documentum\product\<release\_version\_number>\install\composer\ComposerHeadless.
2. Unzip the DAR Installer zip file to the root of your Documentum Composer or Headless Composer installation directory.
3. Run darinstaller.exe, which is located in the Documentum Composer root directory, to start the DAR Installer GUI.
4. In the **DAR Details** section, specify values for the fields.
5. In the **Connection Broker Details** section, specify values for **Connection Broker Host** and **Connection Broker Port** and click **Connect**.

6. In the **Repository Details** section, specify values for the fields and click **Install** to install the DAR file to the repository.

You can view the log for the DAR installation by selecting the log file from the **Log File** list box and clicking **Open**.

**Table B-1: DAR Installer fields**

Parameter	Required	Description
DAR	Yes	The absolute file path to the .dar file that you want to install. The file path cannot contain any I18N characters or the installation will fail.
Input file	No	The absolute file path to the install-based parameter file.
Local folder	No	The absolute file path to localized .properties files. If you want to make your application available in other languages, you need to localize the project data such as labels, tabs, and descriptions.
Log file	No	The file to save the log to. If this is not specified, the file defaults to <DAR>.log.
Connection broker host	Yes	The address of the connection broker.
Connection broker port	Yes	The port reserved for the connection broker.
Repository	Yes	The name of the repository that you want to install the DAR file to. Click the <b>Connect</b> button after entering the connection broker host and port to retrieve the available repositories.
User name	Yes	The login name for the repository.
Password	Yes	The password for logging into the repository.
Domain	No	The domain where the repository resides.