UPGRADING TO ADOBE® LIVECYCLE® ES3 FOR WEBSPHERE®

Legal notices

For legal notices, see http://help.adobe.com/en_US/legalnotices/index.html.

Contents

Chapter 1: About This Document
1.1 Who should read this document? 1
1.2 Conventions used in this document 1
1.3 Additional information 2

Chapter 2: Introduction to upgrade
2.1 About installing, configuring, and deploying LiveCycle 3
2.2 About upgrading 3
2.3 Selecting tasks for upgrading, configuring, and deploying LiveCycle ES3 4
2.4 Installation, upgrade, and deployment checklist 4

Chapter 3: Installing LiveCycle ES3 modules
3.1 Before you begin 5
3.2 Installation considerations 6
3.3 Installing LiveCycle 8
3.4 Preparing the Connectors for ECM for upgrade 9
3.5 Preparing to run Configuration Manager for upgrade 10
3.6 Next steps 10

Chapter 4: Configuring LiveCycle ES3 for Deployment
4.1 Considerations when configuring and deploying LiveCycle 11
4.2 LiveCycle ES3 pre-configuration tasks for upgrade 13
4.3 Configuring and deploying LiveCycle 13

Chapter 5: Post-deployment tasks
5.1 General tasks 22
5.2 Accessing module web applications 24
5.3 Configuring PDF Generator 26
5.4 Final setup for Rights Management 34
5.5 Configuring LDAP access 35
5.6 Enabling FIPS mode 36
5.7 Configuring HTML digital signature 36
5.8 Configuring the Document Management service 37
5.9 Configuring SharePoint client access 37
5.10 Configure CSIv2 inbound transport 38
5.11 Enabling CIFS in IPv6 mode 38
5.12 Enable ICEBrowser based HTML to PDF Conversions 39
5.13 Configuring Connector for EMC Documentum 39
5.14 Configuring the Connector for IBM Content Manager 43
5.15 Configuring the Connector for IBM FileNet 46

Chapter 6: Appendix - Install Command Line Interface
6.1 Overview 51
6.2 Install LiveCycle 51

6.3 Error logs 52
6.4 Uninstalling LiveCycle in console mode 53

Chapter 7: Appendix - Configuration Manager Command Line Interface
7.1 Order of operations 54
7.2 Command Line Interface property file 55
7.3 Upgrading LiveCycle Commands 55
7.4 General configuration properties 62
7.5 Examples Usage 78
7.6 Configuration Manager CLI Logs 78
7.7 Next steps 78

Chapter 8: Appendix - Configuring the Connector for Microsoft SharePoint on the SharePoint Server
8.1 Installation and configuration 79
8.2 Installation and configuration on the SharePoint server 2007 80
8.3 Installation and configuration on the SharePoint server 2010 81

Chapter 1: About This Document

LiveCycle is an enterprise server platform that helps you automate and streamline business processes. LiveCycle comprises the following components:

- J2EE-based Foundation provides server capabilities and runtime environment
- Tools to design, develop, and test LiveCycle Applications
- Modules and Services are deployed on LiveCycle Server and provide functional services

For more information about the LiveCycle architecture and capabilities, see LiveCycle Overview.

This document is part of a larger documentation set available at LiveCycle Documentation page. It is advised that you start with the preparing guide and then move on to installation and configuration guide depending on whether you are performing a fresh installation (single server or cluster setup) or upgrading your existing LiveCycle deployment. For Turnkey deployment, which is only for evaluation purposes, see Installing and Deploying LiveCycle using JBoss Turnkey.

1.1 Who should read this document?

This guide provides information for administrators or developers who are responsible for installing, upgrading, configuring, administering, or deploying LiveCycle components. The information provided is based on the assumption that anyone reading this guide is familiar with J2EE application servers, operating systems, database servers, and web environments.

1.2 Conventions used in this document

The installation and configuration documentation for LiveCycle uses the following naming conventions for common file paths.

Name	Default value	Description
[LiveCycle root]	Windows: C:\Adobe\Adobe LiveCycle ES3 AIX, Linux, and Solaris: opt/adobe/adobe_livecycle_es3	The installation directory that is used for all LiveCycle modules. The installation directory contains subdirectories for LiveCycle Configuration Manager. This directory also includes directories related to the LiveCycle SDK and third-party products.

Name	Default value	Description
[appserver root]	WebSphere on Windows: C:\Program Files\IBM\WebSphere\AppServer\ WebSphere on Linux and Solaris: /opt/IBM/WebSphere/AppServer/ WebSphere on AIX: /usr/IBM/WebSphere/AppServer	The home directory of the application server that runs the services that are part of LiveCycle.
[server name]	server1	The name of the server configured on your application server.
[dbserver root]	Depends on the database type and your specification during installation.	The location where the LiveCycle database server is installed.

Most of the information about directory locations in this guide is cross-platform (all file names and paths are case-sensitive on non-Windows operating systems). Any platform-specific information is indicated as required.

1.3 Additional information

The resources in this table can help you learn more about LiveCycle.

For information about	See
General information about LiveCycle and the modules	LiveCycle Overview
LiveCycle modules	LiveCycle Modules
Other services and products that integrate with LiveCycle	Adobe Developer Connection
Installing Adobe® LiveCycle® Workbench 10	Installing Adobe LiveCycle Workbench 10
LiveCycle ES3 Upgrade Checklist and Planning	LiveCycle ES3 Upgrade Checklist and Planning
Upgrading to LiveCycle ES3 from a previous version.	Preparing to Upgrade to LiveCycle ES3 Upgrading to LiveCycle for WebSphere
Troubleshooting LiveCycle	Troubleshooting LiveCycle
Performing administrative tasks for LiveCycle	LiveCycle Administration Help
All the documentation available for LiveCycle	LiveCycle documentation
LiveCycle release information and last-minute changes that occur to the product	LiveCycle Release Notes
Patch updates, technical notes, and additional information about this product version	Adobe Enterprise Support

Chapter 2: Introduction to upgrade

2.1 About installing, configuring, and deploying LiveCycle

Most of the work involved in upgrading from previous versions of LiveCycle to LiveCycle ES3 is done by Configuration Manager. The tasks that are specific to upgrade are integrated seamlessly into the configuration and deployment process.

Installing, configuring, and deploying LiveCycle involves the following processes:

Installing: You install LiveCycle by running the installation program. Installing LiveCycle places all the required files onto your computer, within one installation directory structure. The default installation directory is C:\Adobe\Adobe LiveCycle ES3 (Windows) or /adobe/adobe_livecycle_es3 (Linux or UNIX); however, you can install the files to a different directory.

Configuring and assembling: Configuring LiveCycle modifies a variety of settings that determine how LiveCycle works. Assembling the product places all the installed components into several deployable EAR and JAR files according to your configuration instructions. Configure and assemble the components for deployment by running Configuration Manager.

Configuring the application server: You can choose to let Configuration Manager configure the application server. You already performed some configuration tasks when you prepared the environment for upgrading; however, you still have a few tasks to do after LiveCycle is installed, such as configuring Java™ Virtual Machine (JVM™) arguments, configuring the data source connections, and setting some time-out values.

Deploying: Deploying the product involves deploying the assembled EAR files and supporting files to the application server on which you plan to run your LiveCycle. If you configured and assembled multiple modules, the deployable components are packaged within the deployable EAR files. Components and LiveCycle archive files (LCAs) are packaged as JAR files. Configuration Manager automatically deploys the EAR files, components, and archive files to the application server.

2.2 About upgrading

When you choose the upgrade option in Configuration Manager, Configuration Manager performs upgrading tasks such as migrating essential data from your existing LiveCycle configuration, and migrating security credentials. The upgrade process also provides backward-compatibility support for the upgraded version of LiveCycle.

2.2.1 How the LiveCycle upgrade works

Upgrading to LiveCycle ES3 from modules of LiveCycle ES Update 1 or LiveCycle ES2 involves these tasks:

1. Preparing your environment for upgrade.
2. Installing LiveCycle product files.
3. Running Configuration Manager to initiate the configuration, upgrading, and deployment process.
4. Migrating essential existing LiveCycle data.

2.2.2 Post-deployment upgrade tasks

Some manual steps are required after you complete the upgrade and deployment process to ensure that your previous properties are retained and the client applications are fully migrated and continue to run with LiveCycle.

2.3 Selecting tasks for upgrading, configuring, and deploying LiveCycle ES3

After you install LiveCycle ES3, you can run Configuration Manager to perform a variety of tasks. The first task you choose is to upgrade from a previous version of LiveCycle to LiveCycle ES3. Then you can select the following tasks for Configuration Manager to perform in addition to the upgrade:

- Configure LiveCycle modules in EAR files, to deploy to the application server
- Configure application server properties to support LiveCycle
- Validate application server configuration
- Deploy LiveCycle EAR files
- Initialize the LiveCycle database
- Deploy LiveCycle components
- Validate the LiveCycle component deployment
- Configure LiveCycle components
- (Optional) Import the LiveCycle Samples

Note: *You must initialize your existing database for use with LiveCycle .This step does not harm existing data in any way.*

2.4 Installation, upgrade, and deployment checklist

You can use the Upgrade Checklist and Planning guide to ensure that you have all the information required to upgrade to LiveCycle ES3. Use the checklist to also verify if the upgrade process installed LiveCycle correctly and if all the components/modules are working.

Chapter 3: Installing LiveCycle ES3 modules

3.1 Before you begin

3.1.1 Installation overview

Before you install the modules, ensure that your environment includes the software and hardware that is required to run LiveCycle. You should also understand the installation options and have the environment prepared as required. For more information, see the Preparing to Install (Singler Server or Server Cluster) or Preparing to Upgrade guide. The complete LiveCycle documentation is available at http://www.adobe.com/go/learn_lc_documentation_10.

If you are upgrading, before you run the LiveCycle installation and configuration, you must back up your existing LiveCycle data. If you are moving to a new database, prepare the database as described in the Preparing to Install LiveCycle guide and then migrate your data to the new database using it's backup/restore/migration utility. If you are moving to a new operating system or application server, review the configuration information in the Preparing to Install LiveCycle guide.

LiveCycle also provides a command line interface (CLI) for the installation program. See "Appendix - Install Command Line Interface" on page 51 for instructions on using the CLI. There is also a CLI for Configuration Manager. See "Appendix - Configuration Manager Command Line Interface" on page 54. These CLIs are intended to be used by advanced users of LiveCycle, in server environments that do not support the use of the graphical user interface of the installation program or of Configuration Manager, or for users who wish to implement batch (non-interactive) installation capabilities.

3.1.2 Checking the installer

Observe the following best practices with the installer files before you begin the installation process.

Check the DVD installation media

Ensure that the installation media that you received is not damaged. If you copy the installation media contents to the hard disk of your computer where you are installing LiveCycle, ensure that you copy the entire DVD contents on to the hard disk. To avoid installation errors, do not copy the DVD install image to a directory path that exceeds the Windows maximum path length limit.

Install LiveCycle either by using a local copy of the installation files or directly from the DVD. The installation could fail when LiveCycle is installed over the network.

Check the downloaded files

If you downloaded the installer from the Adobe web site, verify the integrity of the installer file using the MD5 checksum. Do one of the following to calculate and compare the MD5 checksum of the downloaded file with the checksum published on the Adobe download web page:

- **Linux:** Use the `md5sum` command
- **Solaris:** Use the `digest` command
- **Windows:** Use a tool such as WinMD5

- **AIX:** Use the `md5sum` command

Expand the downloaded archive files

If you downloaded the ESD from the Adobe web site, extract the entire lces_server_10_0_2_websphere_all_win.zip (Windows) or lces_server_10_0_2_websphere_all_unix.tar.gz (AIX, Linux, or Solaris) archive file to your computer. For Solaris, use the `gunzip` command to extract the .gz file.

Note: *Be sure to keep the directory hierarchy unchanged from the original ESD file.*

Note: *The DVD installation media and downloaded ESD include CRX 2.3, a content repository based on JCR 2.0 technology, in the \CRX directory. You can use CRX 2.3 as a data storage system. The terms of usage are governed by LiveCycle ES3 Supplemental Terms and Conditions. For information about using CRX 2.3, see http://dev.day.com/docs/en/crx/current.html.*

3.2 Installation considerations

3.2.1 Installation paths

To successfully install, you need read, write, and execute permissions on the installation directory. The following installation directories are the defaults; however, you can specify a different directory as required:

- (Windows) C:\Adobe\Adobe LiveCycle ES3
- (AIX, Linux, or Solaris) /adobe/adobe_livecycle_es3

If the LiveCycle installation path contains international characters and the UTF-8 locale is not set on the system, LiveCycle does not recognize the fonts directory within the internationalized *[LiveCycle root]*. To avoid this issue, create a new fonts directory with the UTF-8 locale set and then run the Configuration Manager with UTF-8 locale, by adding the `-Dfile.encoding=utf8` argument in the ConfigurationManager.bat or ConfigurationManager.sh script.

Important: *When installing LiveCycle, do not use double byte or extended latin characters (such as àâçéèêëîïôùûÄÖßÜ) in the installation path.*

When you are installing the modules on UNIX-based systems, you must be logged in as the root user to successfully install the modules to the default location, which is opt/adobe/adobe_livecycle_es3. If you are logged in as a non-root user, change the installation directory to one that you have permissions (read-write-execute privileges) for. For example, you can change the directory to /home/*[username]*/adobe/adobe_livecycle_es3.

Note: *On a UNIX-like system, when you copy/download files from the source (installation media), install.bin might lose the executable permissions. Ensure that you restore the write-execute permissions after copying/downloading the files.*

On Windows, you must have administrator privileges to install LiveCycle.

When you run the LiveCycle installer, you should run it as the same user that installed WebSphere Application Server.

The Correspondence Management Solution is not supported on JBoss 4.2.1. So, if you plan to use Correspondence Management Solution on an upgraded version of LiveCycle, install higher version of JBoss. .

3.2.2 Temporary directories

Temporary files are generated in the temp directory. In certain instances, the generated temporary files may remain after the installer is closed. You can remove these files manually.

The location for the temporary directory is specified while configuring and deploying LiveCycle using the Configuration Manager.

Important: *Ensure that the temporary directory for your operating system meets the minimum requirements as outlined in Temporary directory section of Preparing to Upgrade to LiveCycle guide.*

When installing on Linux, the installation program uses the logged-in user's home directory as a temporary directory for storing files. As a result, messages such as the following text may appear in the console:

```
WARNING: could not delete temporary file /home/<username>/ismp001/1556006
```

When you complete the installation, you must manually delete the temporary files from the following directories:

- (Windows) TMP or TEMP path as set in the environment variables
- (AIX, Linux, or Solaris) Logged-in user's home directory

On UNIX-based systems, a non-root user can use the following directory as the temporary directory:

- (Linux) /var/tmp or /usr/tmp
- (AIX) /tmp or /usr/tmp
- (Solaris) /var/tmp or /usr/tmp

3.2.3 Installing on a Windows staging platform for Linux or UNIX

LiveCycle can be installed and configured on Windows for deployment on a Linux or UNIX platform. You can use this functionality for installing on a locked-down Linux or UNIX environment. A locked-down environment does not have a graphical user interface installed. For the Linux or UNIX platform, the installation program installs binaries that are used by Configuration Manager to configure the product.

The computer running Windows can then be used as a staging location for the deployable objects, which can be copied to a Linux or UNIX computer for deployment to the application server. The application server on the Windows-based computer, and the Linux or UNIX target computer on which you want to install LiveCycle must be the same.

3.2.4 Configuring the JAVA_HOME environment variable

The JAVA_HOME environment variable must point to the Java SDK for your application server as outlined in the preparing guide. See Preparing to Install LiveCycle (Single Server) or Preparing to Install LiveCycle (Server Cluster) for more information

3.2.5 General installation notes

- On Windows, improve the speed of installation by disabling any on-access virus scanning software during installation.
- If you are installing on UNIX-based systems and are not installing directly from a release DVD, set executable permissions on the installation file.
- To avoid permission issues during deployment, ensure that you run the LiveCycle installer and Configuration Manager as the same user who will run the application server.
- If you are installing on UNIX-based computers, the installation directory you specify should not contain any spaces.
- Ensure that the JAVA_HOME environment variable points to *[appserver root]*/java/.

- When configuring WebSphere on Windows, make sure that Configuration Manager is running using the appropriate JDK. WebSphere installations typically use the IBM JDK. If WebSphere is not using the IBM JDK, re-launch Configuration Manager using the *[LiveCycle root]*/configurationManager/bin/ConfigurationManager.bat script.

  Note: *Do not use [LiveCycle root]/configurationManager/bin/ConfigurationManager.exe.*

- If errors occur during installation, the installation program creates the install.log file, which contains the error messages. This log file is created in the *[LiveCycle root]*/log directory.

3.3 Installing LiveCycle

1 Start the installation program:

   - (Windows) Navigate to the \server\Disk1\InstData\Windows_64\VM directory on the installation media or folder on your hard disk where you copied the installer. Right-click the install.exe file and select Run as administrator.
   - (Non-Windows) Navigate to the appropriate directory, and from a command prompt, type `./install.bin`.
     - (AIX) /server/Disk1/InstData/AIX/VM
     - (Linux) /server/Disk1/InstData/Linux/NoVM
     - (Solaris) /server/Disk1/InstData/Solaris/NoVM

2 When prompted, select the language for the installation to use and click **OK**.

3 On the Introduction screen, click **Next**.

4 If you have a previous version of LiveCycle ES Update 1 or LiveCycle ES2 installed on the computer where you are running the installer, the Preparation for Upgrade screen appears.

   Note: *If you are performing an out-of-place upgrade on a new machine, this screen is not shown.*

   - **Prepare to upgrade existing installation to Adobe LiveCycle ES3:**

     Select this option if you are performing an in-place upgrade, or an out-of-place upgrade on the same computer without changing the operating system. The installation program prepares the data from your existing LiveCycle installation for an upgrade to LiveCycle.

   - **Install Adobe LiveCycle ES3:** Installs LiveCycle afresh.

   Select **Next** to continue.

5 On the Choose Install Folder screen, accept the default directory or click **Choose** and navigate to the directory where you intend to install LiveCycle, and then click **Next**. If you type the name of a directory that does not exist, it is created for you.

   Click Restore Default Folder to restore the default directory path.

6 On the Choose Installation Type screen, select **Custom > Manual**, and click **Next**.

   This screen appears if you are performing an out-of-place upgrade on a new computer.

7 **(Windows only)** On the Manual Installation Options screen, select the target deployment option and click **Next**:

   - **Windows (Local):** Select this option if you are installing and deploying LiveCycle on the local server.

- **Staged (Installed on Windows, targeting remote systems):** Select this option if you plan to use Windows as a staging platform for your deployment and then select the target operating system on the remote server. You can select a UNIX operating system as the target for deployment even if you are installing on Windows. (See "3.2.3 Installing on a Windows staging platform for Linux or UNIX" on page 7.)

8 Read the Adobe LiveCycle ES3 License Agreement, select **I accept** to accept the terms of the license agreement and then click **Next**. If you do not accept the license agreement, you cannot continue.

9 On the Pre-Installation Summary screen, review the details and click **Install**. The installation program displays the progress of the installation.

10 Review the Release Notes information and click **Next**.

11 Review the details on the Install Complete screen.

12 The **Start Configuration Manager** checkbox is selected by default. Click **Done** to run the Configuration Manager.

If you are upgrading Connectors for ECM, deselect **Start Configuration Manager**, click **Done**, and go to "3.4 Preparing the Connectors for ECM for upgrade" on page 9.

Note: *To run Configuration Manager later, deselect the* ***Start Configuration Manager*** *option before you click* ***Done****. You can start Configuration Manager later using the appropriate script in the [LiveCycle root]/configurationManager/bin directory. See the Configuring LiveCycle For Deployment chapter in this guide.*

3.4 Preparing the Connectors for ECM for upgrade

To upgrade your connectors for ECM to LiveCycle ES3 from LiveCycle ES Update 1 or LiveCycle ES2, configure the application server system after you install LiveCycle ES3 and before you start Configuration Manager to complete the upgrade process.

There are two ways you can upgrade to LiveCycle:

- **In place:** On the existing application server hosting LiveCycle ES Update 1 or LiveCycle ES2.
- **Out of place:** On a newer version of the existing application server or on another physical computer.

3.4.1 Configure the Connectors for ECM for an out-of-place upgrade

This task is required for an out-of-place upgrade if you are moving to a new computer or a new application server instance.

Note: *If you are not upgrading on a new computer, skip to step 2.*

1 **(Out-of-place upgrade to a new computer only)** Install the client for your ECM repository on the LiveCycle server, that hosts the new application server.

2 Perform all settings related to Connectors for ECM (except for Administration Console settings) on the new application server prior to beginning the upgrade. See "5.13 Configuring Connector for EMC Documentum" on page 39, "5.15 Configuring the Connector for IBM FileNet" on page 46, or "5.14 Configuring the Connector for IBM Content Manager" on page 43 as appropriate for your configuration.

3 Navigate to the *[appserver root]*/profiles/*[profile name]* directory on your current LiveCycle server and copy the adobe-component-ext.properties file to the *[appserver root]/profiles/[profile name]* directory directory on the target server.

4 Restart the application server.

Important: *For LiveCycle ES Update 1 or LiveCycle ES2 - Connector for EMC Documentum or Connector for IBM FileNet, the default repository must be set to LiveCycle ES Update 1 or LiveCycle ES2 Native Repository Provider otherwise the upgrade deployment will fail. If you have configured the ECM repository provider as the default repository for either of these connectors, open the Administration Console and navigate to* ***Services*** *>* ***LiveCycle [connector type]*** *>* ***Configuration Settings****. Select the* ***LiveCycle Repository Provider*** *option and then click* ***Save****.*

You can now continue to run Configuration Manager to upgrade to LiveCycle ES3. (See Next steps.)

3.5 Preparing to run Configuration Manager for upgrade

For a complete list of analyses and tasks to be performed prior to running Configuration Manager, see the Pre-upgrade Analyses section in the LiveCycle Upgrade Checklist and Planning guide.

3.6 Next steps

You must now configure LiveCycle for deployment. You can also choose to run Configuration Manager later by using the ConfigurationManager.bat or ConfigurationManager.sh file located in *[LiveCycle root]*\configurationManager\bin.

Chapter 4: Configuring LiveCycle ES3 for Deployment

4.1 Considerations when configuring and deploying LiveCycle

4.1.1 General Considerations

- You can override the default font for the Configuration Manager by adding the following JVM argument in `[LiveCycle root]\ConfigurationManager\Bin\ConfigurationManager.bat` (Windows) or `[LiveCycle root]\ConfigurationManager\Bin\ConfigurationManager.sh` (Linux, UNIX):

  ```
  -Dlcm.font.override=<FONT_FAMILY _NAME>
  ```

  For example:

  ```
  -Dlcm.font.override=SansSerif
  ```

  Restart the Configuration Manager after adding the JVM argument.

- Run Configuration Manager with the UTF-8 locale if you want to specify a content storage root directory having international characters.
- During configuration, you must provide the location of the JDBC drivers for your database. The Oracle, SQL Server, and DB2 drivers are in the *[LiveCycle root]*/lib/db/*[database]* directory.
- Temporary directory: Do not specify a shared network directory as your temporary directory on cluster configurations. It is recommended to use local directory as a temporary directory.
- For upgrades on the same operating system as your existing LiveCycle installation, you can specify the existing GDS location in the Configuration Manager. If you choose to change the directory, copy the contents of the existing GDS directory to the new location before you perform the Configure LiveCycle ES3 (4 of 5) step in Configuration Manager. For more information, see Preparing to Upgrade to LiveCycle guide.

4.1.2 CLI versus GUI versions of Configuration Manager

This section describes the GUI version of Configuration Manager. For instructions about using the command line interface (CLI) version of Configuration Manager, see "Appendix - Configuration Manager Command Line Interface" on page 54.

LiveCycle configuration task	Configuration Manager GUI	Configuration Manager CLI	Manual
Configure LiveCycle	Yes	Yes	No
Configure application server Only WebLogic and WebSphere application servers can be configured using Configuration Manager.	Yes	Yes	Yes
Validate application server configuration Only WebLogic and WebSphere application server configurations can be validated using Configuration Manager.	Yes	Yes	Yes

LiveCycle configuration task	Configuration Manager GUI	Configuration Manager CLI	Manual
Deploy LiveCycle EARs LiveCycle EARs can be deployed only on WebLogic and WebSphere application servers using Configuration Manager.	Yes	Yes	Yes
Initialize LiveCycle database	Yes	Yes	No
Validate LiveCycle Server connection	Yes	Yes	No
Deploy LiveCycle components	Yes	Yes	No
Validate LiveCycle component deployment	Yes	Yes	Yes
Configure LiveCycle components	Yes	Yes	Yes
Import Samples	Yes	No	Yes

4.1.3 Considerations for WebSphere application server

- Configuration Manager does not support deployment or undeployment of EAR files with custom file names. If your EAR files use a custom file name, you must manually deploy and undeploy them to the application server.
- If you are using the same application server instance for your upgraded LiveCycle environment, you must first manually undeploy the existing LiveCycle EAR files from the application server instance.
- If you are deploying components to WebSphere on a localized instance of the Windows operating system, the Configuration Manager deployment process reaches approximately 7% completion and then adobe-livecycle-websphere.ear fails to deploy. You must perform additional steps described in the Miscellaneous Errors section of the adobe-livecycle-websphere.ear fails to deploy article.
- If you are installing in a distributed environment to a secured server, you will encounter SSL handshake exceptions when running Configuration Manager. To avoid this error, run the following executable file before running Configuration Manager: *[appserver root]*/bin/retrieveSigners.bat. The retrieveSigners utility retrieves the certificates from the WebSphere Deployment Manager server and adds them to the local server's trust store. See the article Retrieving signers using the retrieveSigners utility at the client available from the IBM Information Center.
- Some Configuration Manager screens require you to provide the SOAP port of the application server or the deployment manager. For more information on how to determine SOAP ports of your WebSphere application server, see this blog.
- If you are configuring a remote application server, ensure that an application server is also installed on the same computer as Configuration Manager so that Configuration Manager can use the application server library files.
- You can determine the JNDI port number by logging in to WebSphere Administrative Console. On WebSphere admin console, click Servers > Server Types > WebSphere application servers > [server name] > Communications > Ports. You will need to provide the value for BOOTSTRAP_ADDRESS when you configure the application server using Configuration Manager.

4.1.4 Set the date, time, and time zone

Setting the date, time, and time zone on all servers connected to your LiveCycle environment will ensure that time-dependent modules, such as Adobe® LiveCycle® Digital Signatures 10 and Reader Extensions 10, function correctly. For example, if a signature appears to have been created in the future, it will not validate.

Servers that require synchronization are database servers, LDAP servers, HTTP servers and J2EE servers.

4.2 LiveCycle ES3 pre-configuration tasks for upgrade

1 If you did not start Configuration Manager automatically from the installation program, navigate to the *[LiveCycle root]*/configurationManager/bin directory and run the ConfigurationManager.bat/sh script.

2 If prompted, select a language and click **OK.**

3 If you are prompted to use existing Configuration Data, click **OK**.

4 On the Welcome screen, click **Next**.

5 Select either **Upgrade from LiveCycle ES Update1** or **Upgrade from LiveCycle ES2 or ES2.5** on the Upgrade Task Selection screen and click **Next** to continue.

6 On Correspondence Management Solution Selection screen, **Correspondence Management Solution 10.0.2** option is selected by default. With this option selected, you will be presented with the configuration screens to configure Correspondence Management Solution.

Click **Next** to continue.

7 On the Modules screen, select the LiveCycle ES3 modules you plan to configure and deploy and then click **Next**.

Note: *You must install and deploy as many or more modules than those on your existing LiveCycle system.*

8 On the Task Selection screen, select all the tasks you want to perform and click **Next**.

Note: *You must select the Initialize LiveCycle Database option when you are upgrading.*

For an upgrade install, make sure that you perform all the tasks sequentially without skipping any, to avoid upgrade issues.

9 On the In-place vs Out-of-place Upgrade screen, review the information provided and ensure that you have performed all the appropriate prerequisites and then click **Next**.

10 On the Pre-upgrade Steps and Pre-upgrade Steps Contd screens, review the requirements and perform all tasks relevant to your environment, and then click **Next**.

11 **(Out-of-place upgrade on the same computer only)** Shutdown Previous LiveCycle screen indicates that you must shut down your existing LiveCycle application server and then click **Next**.

4.3 Configuring and deploying LiveCycle

Note: *If you plan to install Correspondence Management Solution, ensure that you have run the Correspondence Management Solution installer before running the Configuration Manager. For more information, see Installing Correspondence Management Solution.*

Configuring LiveCycle

1 On the Configure LiveCycle ES3 (1 of 5) screen, click **Configure** and click **Next** when done.

2 On the Configure LiveCycle ES3 (2 of 5) screen, click **Next** to accept the default directory locations, or click **Browse** to navigate to and change the directories that LiveCycle will use to access fonts, and then click **Next**.

Note: *Your right to use fonts provided by parties other than Adobe is governed by the license agreements provided to you by such parties with those fonts, and is not covered under your license to use Adobe software. Adobe recommends that you review and ensure that you are in compliance with all applicable non-Adobe license agreements before using non-Adobe fonts with Adobe software, particularly with respect to use of fonts in a server environment.*

3 Click **Browse** on the Configure LiveCycle ES3 (3 of 5) screen to specify the **Location of the temporary directory.**

Note: *If you do not specify the temporary directory, the default system-configured temp location is used.*

4 On the Configure LiveCycle ES3 (4 of 5) screen, click **Browse** to specify the path for the Global Document Storage (GDS) directory.

Note: *Point to the existing GDS directory or copy its contents to the newly specified location.*

5 On the Configure Persistent Document Storage (5 of 5) screen, select the option for persistent document storage in addition to the GDS directory. Select one of the following:

- **Use GDS**: Use the file system-based GDS for all persistent document storage. This option provides the best performance, and a single location for GDS.
- **Use database**: Use the LiveCycle database for storing the persistent documents and long-lived artifacts. However, the file-system based GDS is also required. Using the database simplifies backup and restore procedures.

Click **Configure** to configure the LiveCycle EARs with this directory information and, after the configuration is complete, click **Next**.

Configuring Content Services (Deprecated)

1 On the Content Services ES3 Configuration screen, select the deploy type and specify the content storage root directory. The default path is *[LiveCycle root]*/lccs_data.

Note: *To upgrade correctly, the Content storage root directory location must either point to the location of Content storage root directory in the previous installation of LiveCycle, or must point to the new location where you have copied the content from your previous installation.*

In WebSphere Shared Library Location (myfaces libs), specify the folder in which Configuration Manager will add the myfaces jar files required for Content Services. By default, a directory, myfaces1_1 is created under [*LiveCycle* root]\lib on the machine running Configuration Manager.

To configure Content Services to use CIFS and FTP file servers, select **Configure File Servers**.

To configure advanced settings, such as disk usage quota and email server settings, select **Advanced Settings**.

Note: *The location of myfaces libs can either be shared among nodes or be local to each node. In the latter case, this location should be at the exact same path for all the nodes. Further, you need to manually replicate the contents of this directory from a node running Configuration Manager to corresponding locations on nodes where you don't plan to run Configuration Manager.*

Note: *If you are installing LiveCycle on a remote server, you must create the same directory structure ([LiveCycle root]\lib) in the remote server, and copy the myfaces1_1 directory to the remote server.*

Note: *If you change the default location of the Content Storage Root directory during configuration, you must make note of the new location because no user interface is available to verify or change this location.*

Click **Next**.

2 On the Content Services File Server Configuration screen *(appears only if you selected Configure File Servers option on the Content Services Configuration screen)*, you can configure Content Services to use CIFS and FTP servers. For more information, press F1. Click **Next**.

Note: *To enable CIFS on an IPv6 implementation of LiveCycle, you must edit the contentservices.war file after the configuration of the EAR files is completed. Update the EAR file and then proceed to the next step in Configuration Manager. See "5.11.1 Edit the contentservices.war file" on page 38.*

Note: *In addition to these steps in Configuration Manager, you must complete other manual configuration steps for Windows Server 2003 and Windows Server 2008. See the Server configuration for enabling CIFS section in the preparing guides for install, cluster, or upgrade, as applicable. The complete LiveCycle documentation is available at LiveCycle documentation website.*

3 On the Content Services Advanced Settings Configuration screen *(appears only if you selected Advanced Settings option on the Content Services Configuration screen)*, specify the settings that you want to configure and click **Next**. For more information, press F1.

4 On the Content Services Module Configuration screen, select the AMPs to merge, and then click **Configure**. You can also choose to package custom AMPs. After the configuration is complete, click **Next**. See Alfresco documentation for more information.

Note: *If you want to enable SharePoint clients to migrate to Alfresco CMS, you must add the SharePoint AMP: [LiveCycle root]\sdk\misc\ContentServices\adobe-vti-module.amp*

After you add this file, follow the steps detailed in "5.9 Configuring SharePoint client access" on page 37.

Configuring Acrobat for PDF Generator

❖ **(Windows only)** On the Configure Acrobat For LiveCycle PDF Generator screen, click **Configure** to run the script that will configure Adobe Acrobat and required environment settings. Click **Next** when complete.

Note: *This screen will perform the desired configuration only when Configuration Manager is running locally. You must have Adobe Acrobat X already installed or this step will fail.*

LiveCycle Configuration Summary

❖ On the Configure LiveCycle ES3 Summary screen, click **Next**. Configured archives are placed in the *[LiveCycle root]*/configurationManager/export directory.

Configure Correspondence Management Solution

Important: *If you are installing Correspondence Management Solution on a non-Windows machine, ensure that you set the* ***ulimit (Open Files, -n)*** *parameter to* ***8192****. Otherwise, the configuration on this steps might fail with an error.*

In **Correspondence Management Solution Configuration** screen, specify the path to the content repository for Correspondence Management Solution and click **Configure** to create the required repository files at the specified location.

Note: (Non-turnkey custom mode only) *If your LiveCycle server is running remotely, select* ***Server is running on remote host****, and specify the path to the content repository on the remote host.*

It configures the Correspondence Management Solution to bundle within the LiveCycle Core EAR file.

Click **Next** to continue.

(Turnkey mode only) *A backup (adobe-jboss-core-ear.orig) for the original LiveCycle Core EAR file is taken in the [LiveCycle root]\deploy folder. You can restore the EAR file in case you want to run the set up again without Correspondence Management Solution.*

Correspondence Management Solution Configuration Summary

❖ For a remote deployment, copy the content from the [*LiveCycle root*]/configurationManager/export/crx-quickstart/ directory to the location on the remote host you specified on the Correspondence Management Solution Configuration screen.

Note: *In case of clustered deployment, you must copy the content from the [LiveCycle root]/configurationManager/export/crx-quickstart/ directory to the specified location on all cluster node hosts.*

Configuring your application server and database

1 On the LiveCycle Database screen, provide the information about the instance of LiveCycle database, so that Configuration Manager can connect to it.

Click **Verify Connection** to ensure that the information is valid and Configuration Manager can connect to the database, and then click **Next** to continue.

Note: *The following information applies to the database LiveCycle will connect to. This can be either your existing LiveCycle database (if supported), or a new one that you have already configured and migrated the existing LiveCycle data to. (See Preparing to Upgrade to LiveCycle).*

Note: *Ensure that the JDBC driver points to the correct database driver located inside* `[LiveCycle root]/lib/db/<database>` *directory. If you are upgrading on a machine with a previous version of LiveCycle installation and are reusing the old configuration data, then the JDBC driver is pre-populated with the old incompatible driver jar from the previous installation. Select any other database in the Database Type list and re-select the desired database.*

2 On the Application Server Configuration Details screen, provide the information for the fields (all fields are mandatory) and then click **Verify Server Connection**. When the verification has completed successfully, click **Next**.

Note: *If WebSphere Administrative Security is off, User Name and Password fields can be left blank.*

Note: *When using WebSphere Cluster or WebSphere Network Deployment server to configure a standalone WebSphere Application server, enter the port number of the deployment manager in the SOAP Port field.*

3 On the Application Server Configuration Selection screen, select the tasks for Configuration Manager to perform, and click **Next**.

4 On the Server Settings Configuration screen *(appears only if Configure Server Settings was selected)*, provide the information for the fields, and then click **Next**.

Note: *LCM does not configure configure* `-Dadobe.cache.multicast-address` *and* `-Dadobe.cache.bind-address` *jvm arguments. You may need to configure these arguments manually. See Modifying the JVM properties section for more details.*

5 On the Datasource Configuration screen *(appears only if Configure Datasource option is selected)*, provide the information for the fields and then click **Test Database Connection**. When the connection is tested successfully, click **Next**.

You can choose to manually configure data sources rather than allowing Configuration Manager to configure them for you. To override automatic data source configuration, select **Manually configure data source in the WebSphere Administrative Console now before continuing**, at the bottom of the screen.

Without exiting Configuration Manager, go to the application server administration console, and configure data sources as described in Configuring the LiveCycle database connectivity in Installing LiveCycle for WebSphere Server Guide.

Note: *By default, Configuration Manager creates datasources at node level. To set the datasource at the server level, see how to create a JDBC provider for your database in Appendix - Manually Configuring WebSphere in the Installing and Deploying LiveCycle for WebSphere guide.*

6 On the Application Server Configuration screen, click **Configure**. When the process is completed, click **Next**.

7 On the Application Server Configuration Validation screen, select the tasks for validating and then click **Validate** and select Yes on prompt to deploy adobe-lcm-lcmvalidator.ear. When the process is completed, click **Next**.

Choose installation verification sample (IVS) EAR files

❖ (**Forms, Output, and Assembler only**) On the LiveCycle Installation Verification Sample (IVS) EAR files screen, you can install three service-specific sample applications. Select **Include IVS EARs in deployment set** and click **Next** to install these sample files.

`adobe-output-ivs-jboss.ear` and `adobe-forms-ivs-jboss.ear` appears only if you selected respective modules in Modules screen.

Note: *Do not deploy the IVS EAR files to a production environment.*

Deploying LiveCycle EARs

1 **(In-place upgrade only)** On the Undeploy LiveCycle ES3 EARs from the application server screen, review the information, perform the required task, and then click **Next**.

2 On the Deploy LiveCycle ES3 EARs screen, select the EAR files to deploy, and then click **Deploy**. This operation may take several minutes to complete. When the deployment has completed successfully, click **Next**.

Note: (WebSphere only) *When Configuration Manager has started the execution of the IBM WebSphere® JACL deployment scripts, you cannot stop the deployment even if you exit or cancel Configuration Manager prior to deployment completion. No user action is required because the product EARs will be successfully deployed.*

By default, Configuration Manager deploys the EAR files to the WebSphere default virtual host, `default_host`. To deploy the EAR files to a different virtual host, select the target host from the Virtual Host list.

To connect to the application server using a secure port while running Configuration Manager, do the following tasks:

a Add the crypto.jar file provided by IBM to the LiveCycle Configuration Manager path.

b Set the following JVM argument to disable hostname verification:

```
ssl.disable.url.hostname.verification.CWPKI0027I=CWPKI0027I
```

You can connect to the application server using this workaround only if you are using the default HTTPS port.

Initializing LiveCycle database

1 On the LiveCycle ES3 Database Initialization screen, verify that the hostname and port number provided for your application server is correct and then click **Initialize**. The database initialization task creates tables in the database, adds default data to the tables, and creates basic roles in the database. When the initialization has completed successfully, click **Next**. Restart the application server manually when you are prompted to do so.

Note: *Do not skip this step or the upgrade will fail. This process does not harm the existing data in any way.*

2 On the LiveCycle ES3 Information screen, enter **LiveCycle ES3 User ID** and **Password** whose default values are *administrator* and *password* respectively.

As you are upgrading to LiveCycle, enter the administrator password of your previous LiveCycle installation.

Click **Verify Server Connection**, and when complete, click **Next**.

Note: *The server information that appears on this screen represents default values for the deployment.*

Verifying the server connection helps narrow troubleshooting in case failures occur in the deployment or validation. If the connection test passes but deployment or validation fails in the next few steps, connectivity issues can be eliminated from the troubleshooting process.

LiveCycle Server JNDI information

❖ On the LiveCycle ES3 JNDI Information screen, enter the host name and port number for the JNDI server. Click **Verify Server Connection** to ensure that Configuration Manager can connect to the JNDI server. Click **Next** to continue.

Perform critical tasks before deployment

❖ Click **Start** to allow Configuration Manager to perform critical tasks before deploying LiveCycle components and when finished, click **Next**.

Session ID Migration Errors

View and fix the errors that were encountered while migrating session IDs from you old instance of LiveCycle, and then click Next. It is important to fix these errors else you may encounter some failed workflow invocations post-upgrade.

Deploying Central Migration Bridge Service

❖ On the Central Migration Bridge Service Deployment Configuration screen, if applicable, select the **Include Central Migration Bridge Service** in deployment option and then click **Next**.

Deploying LiveCycle components

1 On the LiveCycle ES3 Component Deployment screen, click **Deploy**. The components that are deployed at this time are Java archive files that plug into the service container that is part of LiveCycle for purposes of deploying, orchestrating, and executing services. When the deployment has completed successfully, click **Next**.

2 On the LiveCycle Component Deployment Validation screen, click **Validate**. Click **View Progress Log** to view the validation progress and, when the validation has completed successfully, click **Next**.

Configuring ECM Connectors

Important: *Skip to Step 3 if you are upgrading to LiveCycle ES3 from LiveCycle ES2, which was upgraded from LiveCycle ES or LiveCycle ES Update 1 and you had performed steps 1 and 2. If you have not completed the steps 1 and 2 during the previous upgrade then you should perform steps 1 and 2 now.*

1 **(Connectors for ECM)** On the Migrate ECM form templates screen, do one of the following tasks and then click **Start**:

- Select **Skip Form Template Import** and click **Next** to continue configuring LiveCycle without importing your form templates. You can run Configuration Manager again to import the templates after you configure your LiveCycle environment.
- Deselect **Skip Form Template Import** and click **Start** to have Configuration Manager run a query that gets the form template information that exist in the ECM Connectors' repository. Configuration Manager then returns the results on the subsequent screen, where you can select individual templates to import.

2 **(Connectors for ECM if Skip Form Template Import deselected only)** On the Migrate ECM form templates (Contd) screen, do the following optional tasks and then click **Next**:

- Deselect the LiveCycle form templates if you do not wish to migrate from your existing LiveCycle environment.
- In the Add additional form paths to migrate box, type the path to your custom form templates directory, or click **Browse** to locate it and then click **Add**. Include the object store name or repository name (according to your ECM) as follows:

  (IBM FileNet) /<ObjectStoreName>/<FormTemplatePath>

  (EMC Documentum) /<DocbaseName>/<FormTemplatePath>

Note: *During data migration, your existing LiveCycle form templates are not deleted from the ECM repository but are copied to the LiveCycle repository. Any form templates deselected at this time can be migrated later by running Configuration Manager again.*

3 On the Migrate Data Essential to LiveCycle ES3 Operation screen, click **Start** and, when the migration is complete, click **Next**.

Configuring LiveCycle components

❖ On the Configure LiveCycle ES3 Components screen, select the tasks to run with Configuration Manager, and click **Next**.

Note: *If you are upgrading any Connectors for ECM module, do not select them on this screen. Only include them if you are licensing them for the first time in LiveCycle and proceed with the following steps as appropriate.*

Adobe® LiveCycle® 10 Connector for EMC® Documentum®

1 On the Specify Client for EMC Documentum screen, select **Configure Connector for EMC Documentum Content Server**, and specify the following settings. Enter the details, click **Verify**, and when complete, click **Next** to continue.

- **Choose EMC Documentum Client Version:** Select the client version to use with the EMC Documentum Content Server.
- **EMC Documentum Client Installation Directory Path:** Click **Browse** to select the directory path.

  Note: *Configure Documentum 6.7 manually, LCM does not contains support for Documentum 6.7.*

2 On the Specify EMC Documentum Content Server Settings screen, enter the EMC Documentum Server details, and then click **Next**. Press F1 for information about the details you need to enter.

3 On the Configure Connector for EMC Documentum screen, click **Configure Documentum Connector**. When completed, click **Next**.

4 On the Required Manual Configurations for Connector for EMC Documentum screen, review and perform the manual steps listed and then click **Next**.

Adobe® LiveCycle® 10 Connector for IBM® Content Manager

1 On the Specify Client for IBM Content Manager screen, select **Configure Connector for IBM Content Manager**, and enter a value for the IBM Content Manager Client Installation Directory Path. Click **Verify** and when complete, click **Next** to continue.

2 On the Specify IBM Content Manager Server Settings screen, enter the details of the IBM Content Manager Server, and click **Next**.

3 On the Configure Connector for IBM Content Manager screen, click **Configure IBM Content Manager Connector**. When complete, click **Next**.

4 On the Required Manual Configurations for Connector for IBM Content Manager screen, review and perform the manual steps listed and then click **Next**.

Adobe® LiveCycle® 10 Connector for IBM® FileNet

1 On the Specify Client for IBM FileNet screen, select **Configure Client for IBM FileNet Content Manager**, and specify the following settings.

- **Choose IBM FileNet Client Version:** Select the client version that you want to use with the IBM FileNet Content Server.
- **IBM FileNet Client Installation Directory Path:** Click **Browse** to select the directory path.

Click **Verify**, and when complete, click **Next** to continue.

2 On the Specify IBM FileNet Content Server Settings screen, enter the required details, and click **Next**. Press F1 for more information.

3 On the Specify Client for IBM FileNet Process Engine screen, enter the required details, and click **Verify**. When complete, click **Next**.

4 On the Specify IBM FileNet Process Engine Server Settings screen, enter the required details and click **Next**. Press F1 for more information.

5 On the Configure Connector for IBM FileNet screen, click **Configure FileNet Connector**. When complete, click **Next**.

6 On the Required Manual Configurations for Connector for IBM FileNet screen, review and perform the manual steps listed and then click **Next**.

Adobe® LiveCycle® 10 Connector for Microsoft® SharePoint®

On the Configure Adobe LiveCycle ES3 Connector for Microsoft SharePoint screen, do one of the following tasks:

- Deselect the **Configure Adobe LiveCycle ES3 Connector for Microsoft SharePoint** option to manually configure Microsoft Sharepoint later, and then click **Next**.
- Leave the **Configure Adobe LiveCycle ES3 Connector for Microsoft SharePoint** option selected. Enter the required values, and then click Configure SharePoint Connector. When complete, click **Next**.

  Note: *You can skip this step if you want to configure the Connector for Microsoft SharePoint later using Administration Console.*

Configuring LiveCycle Server for native file conversions

❖ **(PDF Generator only)** On the **Admin user credentials for native PDF conversions** screen, enter the user name and password of a user with administrative privileges on the server computer, and then click **Add user.**

If you are upgrading from LiveCycle ES2, the Administrator User is pre-populated on the screen. You can continue to use the same credentials or replace it.

Note: *You must add at least one administrative user for Windows 2008 Server. On Windows 2008 Server, User Account Control (UAC) must be disabled for the users you add. To disable UAC, click* ***Control Panel*** *>* ***User Accounts*** *>* ***Turn User Account Control on or off*** *and deselect Use User Account Control (UAC) to help protect your computer, then click* ***OK****. Restart the computer to apply these changes.*

System readiness test for PDF Generator

❖ On the **Adobe LiveCycle PDF Generator System Readiness Test** screen, click **Start** to validate if the system has been appropriately configured for PDF Generator. Review the System Readiness Tool Report and click **Next.** Note that the system readiness test fails if LiveCycle is deployed on a remote machine.

Configuring LiveCycle Reader Extensions

1 On the Default Reader Extensions Credential screen, verify that the alias for the default Reader Extensions credential is correct and then click **Next**.

Note: *This screen comes only when you are upgrading from LiveCycle ES Update 1 to LiveCycle ES3. If no credential was configured with your previous installation of LiveCycle ES Update 1, then the following screen appears instead.*

2 On the Reader Extensions Credential Configuration screen, specify the details that are associated with the Reader Extensions credential that activates the module services.

Note: *You can skip this step at this time by selecting* ***Configure later using LiveCycle ES3 Administration Console****. You can configure the Reader Extensions credential by using Administration Console after you complete the deployment. (After logging in to Administration Console, click* ***Home*** *>* ***Settings*** *>* ***Trust Store Management*** *>* ***Local Credentials****.)*

Click **Configure** and then click **Next**.

Configure Correspondence Management Solution

❖ On **Configure Correspondence Management Solution Deployment** screen, specify the User ID and password, and click **Configure** to package modified web applications and copy them to the LiveCycle EAR.

When the configuration is complete, click **Next**.

Importing LiveCycle samples, Summary, and Next Steps

1 (Optional) On the LiveCycle ES3 Samples Import screen, click **Import**. When the import has completed successfully, click **Next** or select **Skip LiveCycle ES3 Samples Import** and then click **Next** to import the samples at a later time.

Important: *Do not import the LiveCycle Samples in a production environment. These samples create users with default passwords, which may be a security concern for your production environment.*

2 Server restart required screen requires you to restart your application server for some configurations to take effect. When finished, click **Next**.

3 Review the Configuration Manager task summary list and choose the appropriate options:

- Select Launch Next Steps to view information about LiveCycle users and administrative interfaces to launch an html page containing step-by-step instructions to start and use LiveCycle.

Click **Finish** to exit the Configuration Manager

Chapter 5: Post-deployment tasks

5.1 General tasks

As part of upgrade preparation, we stopped the scheduler service (of LiveCycle ES Update 1) or put the server in maintenance mode (of LiveCycle ES2) before starting the upgrade process. Hence, we must start the scheduler service or disable the maintenance mode of the upgraded LiveCycle Server before performing any other post-deployment tasks

5.1.1 Check whether LiveCycle is running in maintenance mode

In a web browser, enter:

```
http://[hostname]:[port]/dsc/servlet/DSCStartupServlet?maintenanceMode=isPaused&user=[administrator username]&password=[password]
```

The status is displayed in the browser window. A status of "true" indicates that the server is running in maintenance mode, and "false" indicates that the server is not in maintenance mode.

Note: *Returns "true" only if you had put the LiveCycle ES2 system in maintenance mode before upgrade.*

5.1.2 Turn off maintenance mode

Note: *Applicable only if you had put the LiveCycle ES2 system in maintenance mode before upgrade.*

In a web browser, enter:

```
http://[hostname]:[port]/dsc/servlet/DSCStartupServlet?maintenanceMode=resume&user=[administrator username]&password=[password]
```

A "now running" message is displayed in the browser window.

See Running LiveCycle in maintenance mode section in Administration Help for more information about maintenance mode.

5.1.3 Restart Scheduler Service:

Note: *Applicable only if you had stopped the SchedulerService of LiveCycle ES Update 1 system before upgrade.*

1. After the upgrade is complete, log in to Workbench 10 and click **Window > Show View > Components**
2. Scroll to the **SchedulerService**, right click on it and select **Start Component**.
3. Log out of Workbench 10

5.1.4 Perform a system image backup

After LiveCycle is installed and deployed into production areas and before the system is live, it is recommended that you perform a system image backup of the servers on which LiveCycle is implemented.

The LiveCycle database, GDS directory, content storage root directory (deprecated), and application servers must be part of this backup. This is a complete system backup that you can use to restore the contents of your computer if your hard drive or entire computer stops working. See the LiveCycle Backup and Recovery topic in Administration Help .

5.1.5 Restart the application server

When you first deploy LiveCycle, the server is in a deployment mode in which most modules are in memory. As a result, the memory consumption is high and the server is not in a typical production state. You must restart the application server to get the server back into a clean state.

5.1.6 Verify the deployment

You can verify the deployment by logging in to Administration Console. If you log in successfully, then LiveCycle is running on the application server and the default user is created in the database.

You can review the application server log files to ensure that components were deployed correctly or to determine the cause of any deployment issues you may encounter.

5.1.6.1 Accessing Administration Console

Administration Console is the web-based portal for accessing a variety of configuration pages where you can set run-time properties that control the way LiveCycle operates. When you log in to Administration Console, you can access User Management, Watched Folder, and Email client configuration, and administrative configuration options for other services. Administration Console also provides access to Applications and Services, which administrators use for managing archives and deploying services to a production environment.

The default user name and password for logging in is *administrator* and *password*. After you log in the first time, access User Management and change the password.

If you have upgraded, the user name and password remain the same as when they were set by the administrator when LiveCycle ES Update 1 or LiveCycle ES2 was configured.

Before you access Administration Console, LiveCycle must be deployed and running on your application server.

For information about using Administration Console, see Administration Help.

1 Type the following URL in a web browser:

`http://[hostname]:[port]/adminui`

For example: `http://localhost:9080/adminui`

2 If you have upgraded to LiveCycle, enter the same administrator user name and password as that of your previous LiveCycle installation. In case of a fresh installation, enter the default user name and password.

3 After you log in, click **Services** to access the service administration pages or click **Settings** to access the pages on which you can administer settings for different modules.

5.1.6.2 Change default password

LiveCycle creates one or more default users during the installation. The password for these users is in the product documentation and is publicly available. You must change this default password, depending on your security requirements.

The LiveCycle administrator user password is set to “password” by default. You must change it in Administration Console > Settings > User Management.

5.1.6.3 View the log files

Events, such as run-time or startup errors, are recorded to the application server log files. If you have problems deploying to the application server, you can use the log files to help you find the problem. You can open the log files by using any text editor.

The following log files are located in the *[appserver root]*/profiles/*[profilename]*/logs/*[server name]* directory:

- SystemErr.log
- SystemOut.log
- startServer.log

Note: *Each time LiveCycle starts, the following error appears in the log:*

```
FacesConfigur E org.apache.myfaces.config.FacesConfigurator configureRenderKits failed to
configure class com.adobe.framework.jsf.renderkit.SecureInputRenderer
java.lang.ClassCastException
```

This error occurs due to a different version of the IBM JSF engine expected by WebSphere. This is a known issue and this error can be safely ignored.

5.2 Accessing module web applications

After LiveCycle is deployed, you can access the web applications that are associated with the following modules:

- Reader Extensions
- Adobe® LiveCycle® Workspace 10
- Content Services
- Adobe® LiveCycle® Rights Management 10

After accessing the web applications by using the default administrator permissions to ensure that they are accessible, you can create additional users and roles so that others can log in and use the applications. (See Administration Help.)

5.2.1 Access the Reader Extensions web application

Note: *You must apply a Reader Extensions credential and apply the user roles for a new user. (See "Configuring credentials for use with Reader Extensions" in LiveCycle Administration Help.)*

1 Open a web browser and enter this URL:

```
http://[hostname]:[port]/ReaderExtensions
```

2 Log in using the user name and password for LiveCycle.

Note: *You must have administrator or superuser privileges to log in. To allow other users to access the Reader Extensions web application, you must create the users in User Management and grant them the Reader Extensions Web Application role.*

5.2.2 Access Workspace

1 Open a web browser and enter this URL:

```
http://[hostname]:[port]/workspace
```

2 Log in using the user name and password for LiveCycle.

5.2.3 Access the Content Services web application

Note: *You must apply the Contentspace Administrator or Contentspace User roles for a new user to login to this web application. To do this, you must create the users in User Management and grant them the appropriate role.*

1 Open a web browser and enter this URL:

```
http://[hostname]:[port]/contentspace
```

2 Log in using the user name and password for LiveCycle.

5.2.4 Access Rights Management

You must create a user with the Rights Management End User role in User Management and log in to the Rights Management administrator or end-user applications by using the login information that is associated with that user.

Note: *The default administrator user cannot access the Rights Management end-user web application but you can add the appropriate role to its profile. You can create a new user or modify an existing user through Administration Console.*

Repackaging the client application JAR files when upgrading to LiveCycle

In order to run LiveCycle ES Update 1 Java client applications after upgrade, you must replace the existing adobe-rightsmanagement-client.jar and adobe-livecycle-client.jar files with the LiveCycle ES3 version and recompile your applications.

Note: *Failure to update your client applications will result in the following exception:*

```
com.adobe.edc.common.dto.AuditSpec; local class incompatible: stream classdesc
serialVersionUID = -6839645748622739902, local class serialVersionUID = -7778215071249017043
```

Access the Rights Management end-user web application

❖ Open a web browser and enter this URL:

```
http://[hostname]:[port]/edc/Login.do
```

Access the Rights Management administration web application

1 Open a web browser and enter this URL:

```
http://[hostname]:[port]/adminui
```

2 Click **Services** > **LiveCycle Rights Management ES3**.

For information about setting up users and roles, see Administration Help.

Assign the Rights Management End User role

1 Log in to Administration Console. (See "5.1.6.1 Accessing Administration Console" on page 23.)

2 Click **Settings** > **User Management** > **Users and Groups**.

3 In the **Find** box, type `all` and, in the **In** list, select **Groups**.

4 Click **Find** and, for the required domains, click **All Principals** in the list that appears.

5 Click the **Role Assignments** tab and click **Find Roles**.

6 In the list of roles, select the check box next to **Rights Management End User**.

7 Click **OK** and then click **Save**.

5.2.5 Accessing User Management

By using User Management, administrators can maintain a database of all users and groups, synchronized with one or more third-party user directories. User Management provides authentication, authorization, and user management for LiveCycle modules, including Reader Extensions, Workspace, Rights Management, Adobe® LiveCycle® Process Management 10, Adobe® LiveCycle® Forms 10, PDF Generator, and Content Services.

1 Log in to Administration Console.

2 On the home page, click **Settings** > **User Management**.

*Note: For information about configuring users with User Management, click **User Management Help** in the upper-right corner of the User Management page.*

5.3 Configuring PDF Generator

If you installed PDF Generator as part of your LiveCycle, complete the following tasks:

5.3.1 Environment variables

If you installed the PDF Generator module and configured it to convert files to PDF, for some file formats, you must manually set an environment variable that contains the absolute path of the executable that is used to start the corresponding application. The table below lists the environment variables for the native applications that you have installed.

Note: All environment variables and respective paths are case-sensitive.

Application	Environment variable	Example
Adobe Acrobat	`Acrobat_PATH`	`C:\Program Files (x86)\Adobe\Acrobat 10.0\Acrobat\Acrobat.exe`
Adobe FrameMaker®	`FrameMaker_PATH`	`C:\Program Files (x86)\Adobe\FrameMaker7.1\FrameMaker.exe`
Notepad	`Notepad_PATH`	`C:\WINDOWS\notepad.exe` You can leave the `Notepad_PATH` variable blank.
OpenOffice	`OpenOffice_PATH`	`C:\Program Files (x86)\OpenOffice.org 3`
Adobe PageMaker®	`PageMaker_PATH`	`C:\Program Files (x86)\Adobe\PageMaker 7.0\PageMaker.exe`
WordPerfect	`WordPerfect_PATH`	`C:\Program Files (x86)\WordPerfect Office 12\Programs\wpwin12.exe`
Adobe Photoshop®	`Photoshop_PATH`	`C:\Program Files (x86)\Adobe\Adobe Photoshop CS4\Photoshop.exe`

Note: The environment variable `OpenOffice_PATH` is set to the installation folder instead of the path to the executable.

You do not need to set up the paths for Microsoft Office applications such as Word, PowerPoint, Excel, Visio, and Project, or for AutoCAD. The Generate PDF service starts these applications automatically if they are installed on the server.

Create a new Windows environment variable

1 Select **Start** > **Control Panel** > **System**.

2 Click the **Advanced** tab and click **Environment Variables**.

3 In the System variables section, click **New.**

4 Enter the environment variable name you need to set (for example, enter `Photoshop_PATH`). This folder is the one that contains the executable file. For example, type the following path:

```
D:\Program Files\Adobe\Adobe Photoshop CS4\Photoshop.exe
```

Set the PATH variables on Linux or UNIX (OpenOffice only)

Execute the following command:

```
export OpenOffice_PATH=/opt/openoffice.org3
```

5.3.2 Configuring the application server to use HTTP proxy server

If the computer that LiveCycle is running on uses proxy settings to access external web sites, the application server should be started with the following values set as Java virtual machine (JVM) arguments:

```
-Dhttp.proxyHost=[server host]
-Dhttp.proxyPort=[server port]
```

Complete the following procedure to start your application server with HTTP proxy host setting.

1 In the WebSphere Administrative Console navigation tree, Log in to WebSphere Administrative Console, click Servers > Server Types > WebSphere application servers, and then click the name of the server instance to configure (for example, server1)

2 Under Server Infrastructure, click **Java and Process Management** > **Process Definition.**

3 Under Additional Properties, click **Java Virtual Machine** > **Custom Properties**.

4 Click **New** and, in the **Name** box, type `http.proxyHost`.

5 In the **Value** box, type the host name or IP address of your HTTP proxy server and then click **OK**.

6 Click **New** and, in the **Name** box, type `http.proxyPort`.

7 In the **Value** box, type the port number of your HTTP proxy server and then click **OK**.

8 In the **Messages** box, click **Save directly to master configuration**.

9 Restart all WebSphere server instances.

5.3.3 Setting the Adobe PDF Printer as the default printer

You must set the Adobe PDF Printer to be the default printer on the server. If the Adobe PDF Printer is not set as the default, PDF Generator cannot convert files successfully.

Set the default printer

1 Select **Start** > **Printers and Faxes**.

2 In the Printers and Faxes window, right-click **Adobe PDF** and select **Set as Default Printer**.

5.3.4 Configuring Acrobat Professional (Windows-based Computers Only)

Note: *This procedure is required only if you upgraded to or installed Acrobat after you completed the LiveCycle installation. Upgrading Acrobat can be completed after you run Configuration Manager and deploy LiveCycle to the application server. Acrobat Professional root directory is designated as [Acrobat root]. Typically, the root directory is C:\Program Files\Adobe\Acrobat 10.0\Acrobat.*

Configure Acrobat for use with PDF Generator

1 If an earlier version of Acrobat is installed, uninstall it by using Add or Remove Programs in the Windows Control Panel.

2 Install Acrobat X Pro by running the installer.

3 Navigate to the additional\scripts folder on the LiveCycle installation media.

4 Run the following batch file.

```
Acrobat_for_PDFG_Configuration.bat [LiveCycle root]/pdfg_config
```

5 Open Acrobat and select **Help** > **Check for updates** > **Preferences**.

6 Deselect **Automatically check for Adobe updates**.

Validate the Acrobat installation

1 Navigate to a PDF file on your system and double-click it to open it in Acrobat. If the PDF file opens successfully, Acrobat is installed correctly.

2 If the PDF file does not open correctly, uninstall Acrobat and reinstall it.

Note: *Ensure that you dismiss all the Acrobat dialog boxes that are displayed after the Acrobat installation is completed and disable the automatic updates for Acrobat. Set the* `Acrobat_PATH` *environment variable to point to Acrobat.exe (For example, C:\Program Files\Adobe\Acrobat 10.0\Acrobat\Acrobat.exe).*

Configure native application support

1 Install and validate Acrobat as described in the previous procedure.

2 Set Adobe PDF printer as the default printer.

5.3.5 Configuring user accounts for multi-threaded file conversions

By default, PDF Generator can convert only one OpenOffice, Microsoft Word, or PowerPoint document at a time. If you enable multi-threaded conversions, PDF Generator can convert more than one of the documents concurrently by launching multiple instances of OpenOffice or PDFMaker (which is used to perform the Word and PowerPoint conversions).

Note: *Only Microsoft Word 2007 and Microsoft PowerPoint 2007 are supported with multi-threaded file conversions. Microsoft Excel 2003 or 2007 versions are not supported.*

If you need to enable multi-threaded file conversion, you must first perform the tasks outlined in the "Enabling multi-threaded file conversions" section of the Preparing to Install or Upgrade guide available on the LiveCycle documentation.

For Linux and Solaris users, you must create users and configure the system to remove the password prompts. The following section outlines the method to create a user and perform additional configurations.

5.3.5.1 Add user account

1 In Administration Console, click **Services** > **LiveCycle PDF Generator ES3** > **User Accounts.**

2 Click **Add** and enter the user name and password of a user who has administrative privileges on the LiveCycle Server. If you are configuring users for OpenOffice, dismiss the initial OpenOffice activation dialogs.

Note: *If you are configuring users for OpenOffice, the number of instances of OpenOffice cannot be greater than number of user accounts specified in this step.*

3 Restart the LiveCycle Server.

5.3.5.2 Additional configuration required for OpenOffice on Linux or Solaris

1 Add user accounts as described above.

2 Add entries for additional users (other than the administrator who runs the LiveCycle Server in the `/etc/sudoers` file. For example, if you are running LiveCycle as a user named `lcadm` on a server named `myhost`, and you want to impersonate user1 and user2, add the following entries to /etc/sudoers:

```
lcadm myhost=(user1) NOPASSWD: ALL
lcadm myhost=(user2) NOPASSWD: ALL
```

This configuration enables `lcadm` to run any command on host 'myhost' as 'user1' or 'user2' without prompting for password.

3 Allow all the users that you added via Add a user account to make connections to the LiveCycle Server. For example, to allow a local user named user1 the permission of making the connection to the LiveCycle Server, use the following command:

```
xhost +local:user1@
```

For more details, refer to xhost command documentation.

4 Restart the server.

5.3.6 Installing East Asian characters in Windows Server 2003

When HTML files are converted to PDF by using PDF Generator, some East Asian languages, such as Japanese, Korean, and Chinese, and also right-to-left languages, such as Arabic, Armenian, Georgian, Hebrew, Indic, Thai, and Vietnamese, may not be displayed in the PDF file.

To ensure that these languages are displayed in Windows Server 2003, appropriate fonts must be present on the client and server.

Install East Asian characters in Windows Server 2003

1 Select **Start** > **Control Panel** and open **Regional and Language Options**.

2 Click the **Languages** tab and select **Install Files for East Asian Languages**.

3 Click the **Advanced** tab and select all the options under Code Page Conversion Tables.

If converted PDF files are still missing fonts, verify that the Arial Unicode MS (TrueType) font (ARIALUNI.TTF) is present in the C:\WINDOWS\Fonts directory.

5.3.7 Adding fonts to PDF Generator

LiveCycle provides a central repository of fonts, which is accessible to all LiveCycle modules. Make the extra fonts available to non-LiveCycle applications on the server so that PDF Generator can use these fonts to create PDF documents that are created with these applications.

Note: *Restart the application server after adding new fonts to the specified fonts folder.*

5.3.7.1 Non-LiveCycle applications

The following list contains non-LiveCycle applications that PDF Generator can use for PDF generation on the server side:

Windows-only Applications

- Microsoft Office Word
- Microsoft Office Excel

- Microsoft Office PowerPoint
- Microsoft Office Project
- Microsoft Office Visio
- Microsoft Office Publisher
- AutoDesk AutoCAD
- Corel WordPerfect
- Adobe Photoshop CS
- Adobe FrameMaker
- Adobe PageMaker
- Adobe Acrobat Professional

Multiplatform applications

- OpenOffice Writer
- OpenOffice Calc
- OpenOffice Draw
- OpenOffice Impress

Note: *In addition to these applications, your list may include additional applications that you added.*

Of the above applications, the OpenOffice Suite (which includes Writer, Calc, Draw, and Impress) is available on Windows, Solaris, and Linux platforms, whereas other applications are available on Windows only.

5.3.7.2 Adding new fonts to Windows applications only

All the Windows-only applications that are mentioned above can access all the fonts that are available in the C:\Windows\Fonts (or equivalent) folder. In addition to C:\Windows\Fonts, each of these applications may have its own private fonts folders.

Therefore, if you plan to add any custom fonts to the LiveCycle fonts repository, ensure that the same fonts are available to the Windows-only applications also by copying these fonts to either C:\Windows\Fonts or to an equivalent folder.

Your custom fonts must be licensed under an agreement that allows you to use them with the applications that have access to these fonts.

5.3.7.3 Adding new fonts to other applications

If you added support for PDF creation in other applications, see the Help for these applications to add new fonts. In Windows, copying your custom fonts to the C:\Windows\Fonts (or equivalent) folder should be sufficient.

5.3.8 Configuring HTML to PDF conversions

The HTML-to-PDF conversion process is designed to use the settings from Acrobat X that override the settings from PDF Generator.

Note: *This configuration is required to enable the HTML-to-PDF conversion process, otherwise this conversion type will fail.*

5.3.8.1 Configure the HTML-to-PDF conversion

1 Install and validate Acrobat as described in "5.3.4 Configuring Acrobat Professional (Windows-based Computers Only)" on page 27.

2 Locate the pdfgen.api file in the *[LiveCycle root]*\plugins\x86_win32 directory and copy it to *[Acrobat root]*\Acrobat\plug_ins directory.

5.3.8.2 Enable support for Unicode fonts in HTML to PDF conversions

Important: *The HTML-to-PDF conversion fails if a zipped input file contains HTML files with double-byte characters in filenames. To avoid this problem, do not use double-byte characters when naming HTML files.*

1 Copy the Unicode font to any of the following directories as appropriate for your system:

- Windows

  [Windows root]\Windows\fonts

  [Windows root]\WINNT\fonts

- UNIX

  /usr/lib/X11/fonts/TrueType

  /usr/openwin/lib/X11/fonts/TrueType

  /usr/share/fonts/default/TrueType

  /usr/X11R6/lib/X11/fonts/ttf

  /usr/X11R6/lib/X11/fonts/truetype

  /usr/X11R6/lib/X11/fonts/TrueType

  /usr/X11R6/lib/X11/fonts/TTF

  /Users/cfqauser/Library/Fonts

  /System/Library/Fonts

  /Library/Fonts

  /Users/ + System.getProperty(<user name>, root) + /Library/Fonts

  System.getProperty(JAVA_HOME) + /lib/fonts

  /usr/share/fonts (Solaris)

Note: *Ensure that the directory /usr/lib/X11/fonts exists. If it does not, create a symbolic link from /usr/share/X11/fonts to /usr/lib/X11/fonts using the* `ln` *command.*

2 Modify the font-name mapping in the cffont.properties file located in the *[LiveCycle root]*/deploy/adobe-generatepdf-dsc.jar file:

- Extract this archive, and locate the cffont.properties file and open it in an editor.
- In the comma-separated list of Java font names, add a map to your Unicode system font for each font type. In the example below, kochi mincho is the name of your Unicode system font.

  ```
  dialog=Arial, Helvetica, kochi mincho

  dialog.bold=Arial Bold, Helvetica-Bold, kochi mincho ...
  ```

- Save and close the properties file, and then repackage and redeploy the `adobe-generatepdf-dsc.jar` file.

Note: *On a Japanese operating system, specify the font mapping in the cffont.properties.ja file as well, which takes precedence over the standard cffont.properties file.*

Fonts in the list are searched from left to right, using the first font found. HTML-to-PDF conversion logs return a list of all the font names that are found in the system. To determine the font name you need to map, add the font to one of the directories above, restart the server, and run a conversion. You can determine from the log files the font name to use for mapping.

To embed the font in the generated PDF files, set the `embedFonts` property in the cffont.properties file to `true` (the default is `false`).

5.3.9 Modify Microsoft Visio default macro settings

When a Microsoft Visio file containing macros is submitted for conversion, the resultant Microsoft Office Visio Security Notice dialog causes the conversion to time out. To successfully convert files that contain macros, the default macro settings in Visio must be changed.

❖ In Visio, click **Tools** > **Trust Center** > **Macro Settings** and select either of the following options and then click **OK**:

- Disable all macros without notification
- Enable all macros

5.3.10 Installing the Network Printer Client

PDF Generator includes an executable file to install the PDF Generator network printer on a client computer. After the installation is complete, a PDF Generator printer is added to the list of existing printers on the client computer. This printer can then be used to send documents for conversion to PDF.

Note: *The Network Printer Client installation wizard available in the Administration Console is supported only on Windows operating system. Ensure that you use a 32-bit JVM to launch the Network Printer Client installation wizard. You will encounter an error if you use a 64-bit JVM.*

If the PDFG Network Printer fails to install on Windows or if you want to install the printer on UNIX or Linux platforms, use the operating system's native Add Printer utility and configure it as described in "5.3.10.2 Configure PDFG Network Printer on Windows using the native Add Printer wizard" on page 33

5.3.10.1 Install the PDF Generator Network Printer Client

Note: *Before installing the PDF Generator network printer client on Windows Server 2008, Ensure that you have the Internet Printing Client feature installed on your Windows Server 2008. For installing the feature, see Windows Server 2008 Help.*

1 Ensure that you successfully installed PDF Generator on your server.

2 Do one of the following:

- From a Windows client computer, enter the following URL in your web browser, where *[host]* is the name of the server where you installed PDF Generator and *[port]* is the application server port used:

  `http://[host]:[port]/pdfg-ipp/install`

- In Administration Console, click **Home > Services > PDF Generator > PDFG Network Printer**. In the **PDFG Network Printer Installation** section, click **Click here** to launch the PDFG Network Printer Installation.

3 On the Configure Internet Port screen, select **Use the specified user account** option, and provide the credentials of a LiveCycle user who has the PDFG Administrator/User role. This user must also have an email address that can be used to receive the converted files. To have this security setting apply to all users on the client computer, select **Use the same security options for all users**, and then click **OK**.

Note: *If the user's password changes, then users will need to reinstall the PDFG Network Printer on their computers. You cannot update the password from Administration Console.*

Upon successful installation, a dialog box appears, indicating that "The Printer Adobe LiveCycle PDF Generator ES3 has been successfully installed."

4 Click **OK**. You will now have a printer named *Adobe LiveCycle PDF Generator ES3*in your list of available printers.

5.3.10.2 Configure PDFG Network Printer on Windows using the native Add Printer wizard

1 Click **Start** > **Printers and Faxes** and double-click **Add Printer**.

2 Click **Next**, select **A network printer, or a printer attached to another computer**, and then click **Next**.

3 Select **Connect to a printer on the internet or on a home or office network** and type the following URL for the PDFG printer, where *[host]* is the server name and *[port]* is the port number where the server is running:

`http://[host]:[port]/pdfg-ipp/printer`

4 On the Configure Internet Port screen, select **Use the specified user account** and provide valid User credentials.

5 In the **Printer Driver Select** box, choose any standard PostScript-based printer driver (for example, HP Color LaserJet PS).

6 Complete the installation by choosing appropriate options (for example, setting this printer as default).

Note: *The user credentials used while adding the printer must have a valid email ID configured in User Management to receive the response.*

7 Configure the email service's sendmail service. Provide a valid SMTP server and authentication information in the service's configuration options.

5.3.10.3 Install and configure the PDF Generator Network Printer Client using Proxy server port forwarding

1 Configure port forwarding on the CC Proxy server on a particular port to the LiveCycle Server, and disable the authentication at proxy server level (because LiveCycle uses its own authentication). If a client connects to this Proxy server on the forwarded port, then all the requests will be forwarded to the LiveCycle Server.

2 Install PDFG Network Printer using the following URL:

`http://[proxy server]:[forwarded port]/pdfg-ipp/install.`

3 Provide the necessary credentials for authentication of the PDFG Network Printer.

4 The PDFG Network Printer will be installed on the client machine which you can use for PDF conversion using the firewall protected LiveCycle Server.

5.3.11 Changing File Block Settings

Change Microsoft Office trust center settings to enable PDFG to convert older versions of Microsoft office documents.

1 Click the **File tab** in any Office 2010 application. Under **Help**, click **Options**; the Options dialog box appears

2 Click **Trust Center**, and then click **Trust Center Settings**.

3 In the **Trust Center settings**, click **File Block Settings**.

4 In the File Type list, uncheck open for the file type that you want to be converted by PDFG.

5.3.12 Watched folder performance parameters

To avoid `java.io.IOException` error messages indicating that not enough disk space is available to perform PDF conversions by using a watched folder, you can modify the settings for PDF Generator in Administration Console.

You must ensure that for WebSphere application server, the maximum transaction time-out and ORB service have the proper values.

Configure transaction time-out

1 Do the following:

- Log in to WebSphere Administrative Console, click **Servers** > **Server Types** > **WebSphere application servers**, and then click the name of the server instance to configure (for example, *server1*).

2 Under Container Settings, click **Container Services > Transaction Service**.

3 Under General Properties, in the **Total transaction lifetime timeout** box, type `300` (or higher).

4 Ensure that the value in the **Maximum transaction timeout** box is greater than or equal to the **Total transaction lifetime timeout**.

5 Click **OK** or **Apply** and then click **Save directly to master configuration**.

Increase the CORBA time-out value

1 Do the following:

- Log in to WebSphere Administrative Console, click **Servers** > **Server Types** > **WebSphere application servers**, and then click the name of the server instance to configure (for example, *server1*).

2 Under Container Settings, click **Container Services > ORB Service**.

3 Under General Properties, in the **Request timeout** box, type `360` and, in the **Locate Request Timeout** box, type `300`.

4 Click **OK** or **Apply** and then click **Save directly to master configuration**.

Set performance parameters for PDF Generator

1 Log in to Administration Console and click **Services** > **Applications and Services** > **Service Management**.

2 In the list of services, navigate to and click **PDFGConfigService**, and then set the following values:

- **PDFG Cleanup Scan Seconds**: 1800
- **Job Expiration Seconds**: 6000
- **Server Conversion Timeout**: Change the default of 270 to a higher value, such as 450.

3 Click **Save** and restart the server.

5.4 Final setup for Rights Management

Rights Management requires the application server to be configured to use SSL. (See Administration Help.)

5.5 Configuring LDAP access

When upgrading, use the following procedure as a guideline when configuring User Management to support authentication using LDAP.

If you configured LDAP with LiveCycle ES Update 1 or LiveCycle ES2, those settings are migrated during the upgrade process, and you do not need to perform the steps in this section. If you did not previously configure LDAP, you can use the following procedure as a guideline when configuring User Management to support authentication using LDAP.

5.5.1 Configure User Management (Local Domain)

1 Open a web browser, navigate to http://*[host]*:*[port]*/adminui, and log in. (See "5.1.6.1 Accessing Administration Console" on page 23 .)

2 Click **Settings** > **User Management** > **Domain Management**, and then click **New Local Domain**.

3 In the appropriate boxes, enter the domain ID and name. (See "Adding local domains" in Administration help.)

4 (Optional) Disable account locking by deselecting the **Enable Account Locking** option.

5 Click **OK**.

5.5.2 Configure User Management with LDAP (Enterprise Domain)

1 Open a web browser, navigate to http://*[host]*:*[port]*/adminui and log in. (See "5.1.6.1 Accessing Administration Console" on page 23.)

2 Click **Settings** > **User Management** > **Domain Management**, and then click **New Enterprise Domain**.

3 In the **ID** box, type a unique identifier for the domain and, in the **Name** box, type a descriptive name for the domain.

Note: *When using DB2 for your LiveCycle database, the maximum permitted length of the ID is 100 single-byte (ASCII) characters or 50 double-byte characters or 25 four-byte characters. (See "Adding enterprise domains" in Administration Help.)*

4 Click **Add Authentication** and, in the **Authentication Provider** list, select **LDAP**.

5 Click **OK**.

6 Click **Add Directory** and, in the **Profile Name** box, type a name for your LDAP profile.

7 Click **Next**.

8 Specify values in the **Server**, **Port**, **SSL**, and **Binding** boxes, and in the **Populate Page with** box, select a directory settings option such as **Default Sun ONE values**. Also, specify values in the **Name** and **Password** box that would be used to connect to the LDAP database when anonymous access is not enabled. (See "Directory settings" in Administration Help.)

9 (Optional) Test your configuration:

- Click **Test**. The screen displays a message indicating either a successful server test or any configuration errors that exist.

10 Click **Next** and configure the **User Settings** as required. (See "Directory settings" in Administration Help.)

11 (Optional) Test your configuration:

- Click **Test**.

- In the Search Filter box, verify the search filter or specify a new search filter, and then click **Submit**. The screen displays a list of entries that match the search criteria.
- Click **Close** to return to the User Settings screen.

12 Click **Next** configure the **Group Settings** as required. (See "Directory settings" in Administration Help.)

13 (Optional) Test your configuration:

- Click **Test**.
- In the Search Filter box, verify the search filter or specify a new search filter, and then click **Submit**. The screen displays a list of entries that match the search criteria.
- Click **Close** to return to the Group Settings screen.

14 Click **Finish** to exit the New Directory page and then click **OK** to exit.

5.6 Enabling FIPS mode

LiveCycle provides a FIPS mode to restrict data protection to Federal Information Processing Standard (FIPS) 140-2 approved algorithms using the RSA BSAFE Crypto-C 2.1 encryption module.

If you did not enable this option by using Configuration Manager during LiveCycle configuration or if you enable it but want to turn it off, you can change this setting through Administration Console.

Modifying FIPS mode requires you to restart the server.

FIPS mode does not support Acrobat versions earlier than 7.0. If FIPS mode is enabled and the Encrypt With Password and Remove Password processes include the Acrobat 5 setting, the process fails.

In general, when FIPS is enabled, the Assembler service does not apply password encryption to any document. If this is attempted, a `FIPSModeException` is thrown, indicating that "Password encryption is not permitted in FIPS mode." Additionally, the `PDFsFromBookmarks` element is not supported in FIPS mode when the base document is password-encrypted.

Turn FIPS mode on or off

1 Log in to Administration Console.

2 Click **Settings** > **Core System Settings** > **Configurations**.

3 Select **Enable FIPS** to enable FIPS mode or deselect it to disable FIPS mode.

4 Click **OK** and restart the application server.

Note: *LiveCycle software does not validate code to ensure FIPS compatibility. It provides a FIPS operation mode so that FIPS-approved algorithms are used for cryptographic services from the FIPS-approved libraries (RSA).*

5.7 Configuring HTML digital signature

To use the HTML digital signature feature of Forms, complete the following procedure.

1 Manually deploy the *[LiveCycle root]*/deploy/adobe-forms-ds.ear file to your application server.

2 Log in to Administration Console and click **Services** > **LiveCycle Forms ES3**.

3 Select **HTML Digital Signature Enabled** and then click **Save**.

5.8 Configuring the Document Management service

If you installed Content Services and your application server is running on a non-default port, modify the port that the Document Management service uses.

Important: *If you performed an out-of-place upgrade to a new machine, you may have to change the host and http port for Document Management Service after upgrading the system.*

Modify the port

1. Log in to Administration Console and click **Services** > **Applications and Services** > **Service Management**.
2. In the list, select **DocumentManagementService**.
3. On the **Configuration** tab, in the **HTTP Port** box, specify the port number you are using and then click **Save**.
4. In the **External Public Url** box provide load balancer url and then click save.

5.9 Configuring SharePoint client access

You can configure Microsoft SharePoint clients to access content services from LiveCycle. For this, you should add the SharePoint Alfresco Module Package using Configuration Manager. The SharePoint AMP file (`adobe-vti-module.amp`) is available in *[LiveCycle root]*\sdk\misc\ContentServices folder.

After you add the SharePoint AMP, perform the following steps:

5.9.1 Obtain and edit the share.war file

Alfresco CMS uses the file share.war to connect with Content Services. You should modify the share.war file to enable SharePoint clients to access Content Services.

1. Obtain the share.war from the Alfresco installation. See your Alfresco documentation for more details.
2. Copy the file share.war to a directory in your file system.
3. Use a file archive utility such as WinRar to open the share.war file.
4. From the file archive utility window, extract the file `WEB-INF/classes/alfresco/webscript-framework-config.xml` and open it using a text editor.
5. Locate the line

   `<endpoint-url>http://[hostname]:[port]/alfresco/s</endpoint-url>`

   and change it to

   `<endpoint-url>http://[hostname]:[port]/contentspace/s</endpoint-url>`
6. Save and close the file.

5.9.2 Deploy the share.war file

1. Open the archive file `adobe-contentservices.ear` using an archive utility such as WinRar from the location appropriate to your application server.
   - *[appserver root]*\profiles*[profile name]*\installedApps\<cell name>\

2 Add the updated share.war file to the adobe-contentservices.ear archive that is opened in the archive utility window.

3 From the file archive utility window, extract the file `application.xml` to a folder in the local file system, and open it using a text editor. This file is in the `adobe-contentservices.ear\META-INF` directory.

4 Add the following lines under the `<application >` tag:

```
<module id="Share">
    <web>
        <web-uri>share.war</web-uri>
        <context-root>/share</context-root>
    </web>
</module>
```

5 Copy the updated application.xml file back to the adobe-contentservices.ear archive.

6 Save and close the archive.

7 Deploy the updated EAR file.

Note: *You must deploy the updated EAR file manually using the administration console of your application server.*

5.10 Configure CSIv2 inbound transport

On the default Global Security enabled installation of IBM WebSphere, CSIv2 inbound transport option is set to SSL-required. This configuration causes Output and Forms components to fail. Ensure that you change CSIv2 inbound transport option to SSL-Supported: To change the option:

1 Log in to IBM WebSphere Administration Console.

2 Expand **Security**, and then click **Global security**.

3 In the Authentication section, expand **RMI/IIOP security**, and then click **CSIv2 inbound communications**

4 In CSIv2 Transport Layer section, set value of **Transport** to **SSL-Supported**.

5 Click **Apply**.

5.11 Enabling CIFS in IPv6 mode

If you want to enable CIFS for Content Services on an IPv6 implementation, you must explicitly add an additional IPv6 address to the machine that hosts LiveCycle. This IPv6 address should be a static IP address that resides in the same subnet as the clients. You need to do the following tasks after you configure LiveCycle using Configuration Manager. Typically, you should pause the Configuration Manager after the EAR file configuration and then edit the EAR file.

After you have edited the EAR file, you can go back to the Configuration Manager to deploy the updated EAR file along with other selected EAR files.

5.11.1 Edit the contentservices.war file

1 Navigate to *[LiveCycle root]*\configurationManager\export directory.

2 Use a file archive utility such as WinRar to open the adobe-contentservices.ear file.

3 From the file archive utility window, extract the file `contentservices.war\WEB-INF\classes\alfresco\extension\file-servers-custom.xml` and open it using a text editor.

4 Locate the following line and change it by adding `ipv6="enabled"` :

```
<tcpipSMB platforms="linux,solaris,macosx,windows,AIX"/>
```

to

```
<tcpipSMB platforms="linux,solaris,macosx,windows,AIX" ipv6="enabled"/>
```

5 Save and close the file.

6 From the file archive utility window, extract the file *`contentservices.war\WEB-INF\classes\alfresco\file-servers.properties`* and open it using a text editor.

7 Locate the line `cifs.ipv6=disabled` and replace it with `cifs.ipv6=enabled`.

8 Save and close the file.

9 Copy the updated file-servers-custom.xml file into the archive under `contentservices.war\WEB-INF\classes\alfresco\extension\`.

10 Copy the updated file-servers.properties file into the archive under `contentservices.war\WEB-INF\classes\alfresco\`.

11 Save the contentservices.war file.

Note: *After you update the EAR files, you should use the Configuration Manager to deploy the updated EAR file.*

5.12 Enable ICEBrowser based HTML to PDF Conversions

LiveCycle ES3 supports ICEBrowser based HTML to PDF conversions. By default, ICEBrowser based HTML to PDF conversion is disabled. To enable ICEBrowser based HTML to PDF conversion, configure `GeneratePDFService` from LiveCycle Administration Console.

To configure GeneratePDFService:

1 Open LiveCycle Adminisration Console.

2 Navigate to **Home > Services > Applications and Services > Service Management** .

3 Select and open **GeneratePDFService** from the list of services.

4 In the Configuration tab, set **Use Acrobat WebCapture (Windows Only)** to false.

5 Set **Use ICEBrowser based HTML to PDF** to **true**.

6 Click **Save**.

5.13 Configuring Connector for EMC Documentum

Note: *LiveCycle supports EMC Documentum, versions 6.0 and 6.5 only. Make sure your ECM is upgraded accordingly.*

If you installed Connector for EMC Documentum as part of your LiveCycle, complete the following procedure to configure the service to connect to the Documentum repository.

Configure Connector for EMC Documentum

1 Locate the adobe-component-ext.properties file in the *[appserver root]*/profiles/[profile name] folder (if the file does not exist, create it).

2 Add a new system property that provides the following Documentum Foundation Classes JAR files:

- dfc.jar
- aspectjrt.jar
- log4j.jar
- jaxb-api.jar
- (For Connector for EMC Documentum 6.5 only)
  - configservice-impl.jar,
  - configservice-api.jar

The new system property should take on this form:

```
[component id].ext=[JAR files and/or folders]
```

For example, using default Content Server and Documentum Foundation Classes installations, add to the file one of the following system properties on a new line, with no line breaks, and end the line with a carriage return:

- Connector for EMC Documentum 6.0 only:

```
com.adobe.livecycle.ConnectorforEMCDocumentum.ext=
C:/Program Files/Documentum/Shared/dfc.jar,
C:/Program Files/Documentum/Shared/aspectjrt.jar,
C:/Program Files/Documentum/Shared/log4j.jar
C:/Program Files/Documentum/Shared/jaxb-api.jar
```

- Connector for EMC Documentum 6.5 only:

```
com.adobe.livecycle.ConnectorforEMCDocumentum.ext=
C:/Program Files/Documentum/Shared/dfc.jar,
C:/ProgramFiles/Documentum/Shared/aspectjrt.jar,
C:/Program Files/Documentum/Shared/log4j.jar,
C:/Program Files/Documentum/Shared/jaxb-api.jar,
C:/Program Files/Documentum/Shared/configservice-impl.jar,
C:/Program Files/Documentum/Shared/configservice-api.jar
```

Note: *The above text contains formatting characters for line breaks. If you copy and paste this text, you must remove the formatting characters.*

3 (Connector for EMC Documentum 6.0 only) Delete the dfc.keystore file located in the C:\Documentum\config directory.

Note: *This step is required due to incompatible JDK requirements for WebSphere and Documentum Foundation Classes of EMC Documentum 6.0.*

4 Open a web browser and enter this URL:

```
http://[host]:[port]/adminui
```

5 Log in using the default user name and password:

User name: administrator

Password: password

6 Navigate to **Services** > **LiveCycle ES3 Connector for EMC Documentum** > **Configuration Settings** and perform these tasks:

- Type all the required Documentum repository information.
- To use Documentum as your repository provider, under Repository Service Provider Information, select **EMC Documentum Repository Provider**, and then click **Save**. For more information, click the Help link in the upper-right corner of the page in the Administration Help.

7 (Optional) Navigate to **Services** > **LiveCycle ES3 Connector for EMC Documentum** > **Repository Credentials Settings**, click **Add**, specify the Docbase information, and then click **Save**. (For more information, click **Help** in the upper-right corner.)

8 If the application server is not currently running, start the server. Otherwise, stop and then restart the server.

9 Open a web browser and enter this URL.

```
http://[host]:[port]/adminui
```

10 Log in using the default user name and password:

User name: administrator

Password: password

11 Navigate to **Services** > **Applications and Services** > **Service Management** and select these services:

- EMCDocumentumAuthProviderService
- EMCDocumentumContentRepositoryConnector
- EMCDocumentumRepositoryProvider

12 Click **Start**. If any of the services do not start correctly, check the settings you completed earlier.

13 Do one of the following tasks:

- To use the Documentum Authorization service (EMCDocumentumAuthProviderService) to display content from a Documentum repository in the Resources view of Workbench, continue with this procedure. Using the Documentum Authorization service overrides the default LiveCycle authorization and must be configured to log in to Workbench using Documentum credentials.
- To use the LiveCycle repository, log in to Workbench by using the LiveCycle super administrator credentials (by default, *administrator* and *password*).

You have now completed the required steps for this procedure. Use the credentials provided in step 19 for accessing the default repository in this case and use the default LiveCycle authorization service.

14 Enable the Remoting and EJB endpoints by doing these tasks:

- Log in to Administration Console and click **Home > Services > Application and Services > Service Management**.
- Filter the category *Connector for EMC Documentum a*nd click **EMC DocumentumContentRepositoryConnector:1.0.**
- Select the disabled endpoints and enable them.

15 Restart the application server.

16 Log in to Administration Console and click **Settings** > **User Management** > **Domain Management**.

17 Click **New Enterprise Domain**, and type a domain ID and name. The domain ID is the unique identifier for the domain. The name is a descriptive name for the domain.

Note: (WebLogic and WebSphere only) *When using DB2 for your LiveCycle database, the maximum permitted length of the ID is 100 single-byte (ASCII) characters or 50 double-byte characters or 25 four-byte characters. (See "Adding enterprise domains" in Administration Help.)*

18 Add a custom authentication provider:

- Click **Add Authentication**.
- In the Authentication Provider list, select **Custom**.
- Select **EMCDocumentumAuthProvider** and then click **OK**.

19 Add an LDAP authentication provider:

- Click **Add Authentication**.
- In the Authentication Provider list, select **LDAP**, and then click **OK**.

20 Add an LDAP directory:

- Click **Add Directory**.
- In the Profile Name box, type a unique name, and then click **Next**.
- Specify values for the **Server**, **Port**, **SSL**, **Binding**, and **Populate page with** options. If you select User for the Binding option, you must also specify values for the **Name** and **Password** fields.
- (Optional) Select **Retrieve Base DN** to retrieve base domain names, as required.
- Click **Next**, configure the user settings, click **Next**, configure group settings, as required, and then click **Next**.

  For details about the settings, click **User Management Help** in the upper-right corner of the page.

21 Click **OK** to exit the Add Directory page and then click OK again.

22 Select the new enterprise domain and click **Sync Now**. Depending on the number of users and groups in your LDAP network and the speed on your connection, the synchronization process may take several minutes.

(Optional) To verify the status of the synchronization, click **Refresh** and view the status in the Current Sync State column.

23 Navigate to **Settings > User Management > Users and Groups**.

24 Search for users that were synchronized from LDAP and perform these tasks:

- Select one or more users and click **Assign Role**.
- Select one or more LiveCycle roles and click **OK**.
- Click **OK** a second time to confirm the role assignment.

  Repeat this step for all users that you assign roles to. For more information, click **User Management Help** in the upper-right corner of the page.

25 Start Workbench and log in by using the credentials for the Documentum repository:

Username: [*username*]@[*repository_name*]

Password: [*password*]

After you log in, the Documentum repository appears in the Resources view within Workbench. If you do not log in using the *username@repository_name*, Workbench attempts to log in to the default repository.

26 (Optional) To install the LiveCycle Samples for Connector for EMC Documentum, create a Documentum repository named Samples, and then install the samples in that repository.

After you configure the Connector for EMC Documentum service, see *LiveCycle Administration Help* for information about configuring Workbench with your Documentum repository.

5.13.1 Add support for multiple connection brokers

LiveCycle Configuration Manager supports configuring only one connection broker. Use LiveCycle Administrator Console to add support for multiple connection brokers:

1. Open LiveCycle Administrator Console.
2. Navigate to Home > Services > LiveCycle ES3 Connector for EMC Documentum > Configuration Settings.
3. In the **Connection broker Host Name or IP Address,** enter comma seperated list of hostnames of different connection brokers. For example, host1, host2, host3.
4. In the **Port Number of Connection broker**, enter comma seperated list of the ports of corresponding connection brokers. For example, 1489, 1491, 1489.
5. Click **Save**.

5.14 Configuring the Connector for IBM Content Manager

Note: *LiveCycle supports IBM Content Manager, version 8.4 only. Make sure your ECM is upgraded accordingly.*

If you installed the Connector for IBM Content Manager as part of your LiveCycle, complete the following procedure to configure the service to connect to the IBM Content Manager datastore.

Configure Connector for IBM Content Manager

1. Locate the adobe-component-ext.properties file in the *[appserver root]*/profiles/[profile name] folder. If the file does not exist, create it.
2. Add a new system property that provides the location of the following IBM II4C JAR files:
   - cmb81.jar
   - cmbcm81.jar
   - cmbicm81.jar
   - cmblog4j81.jar
   - cmbsdk81.jar
   - cmbutil81.jar
   - cmbutilicm81.jar
   - cmbview81.jar
   - cmbwas81.jar
   - cmbwcm81.jar
   - cmgmt

   Note: *cmgmt is not a JAR file. On Windows, by default, this folder is at* `C:/Program Files/IBM/db2cmv8/`.

   - common.jar
   - db2jcc.jar

- db2jcc_license_cisuz.jar
- db2jcc_license_cu.jar
- ecore.jar
- ibmjgssprovider.jar
- ibmjsseprovider2.jar
- ibmpkcs.jar
- icmrm81.jar
- jcache.jar
- log4j-1.2.8.jar
- xerces.jar
- xml.jar
- xsd.jar

The new system property looks similar to the following:

```
[component id].ext=[JAR files and/or folders]
```

For example, using a default DB2 Universal Database Client and II4C installation, in the file, add the following system property on a new line, with no line breaks, and end the line with a carriage return:

```
C:/Program Files/IBM/db2cmv8/cmgmt,
C:/Program Files/IBM/db2cmv8/java/jre/lib/ibmjsseprovider2.jar,
C:/Program Files/IBM/db2cmv8/java/jre/lib/ibmjgssprovider.jar,
C:/Program Files/IBM/db2cmv8/java/jre/lib/ibmpkcs.jar,
C:/Program Files/IBM/db2cmv8/java/jre/lib/xml.jar,
C:/Program Files/IBM/db2cmv8/lib/cmbview81.jar,
C:/Program Files/IBM/db2cmv8/lib/cmb81.jar,
C:/Program Files/IBM/db2cmv8/lib/cmbcm81.jar,
C:/Program Files/IBM/db2cmv8/lib/xsd.jar,
C:/Program Files/IBM/db2cmv8/lib/common.jar,
C:/Program Files/IBM/db2cmv8/lib/ecore.jar,
C:/Program Files/IBM/db2cmv8/lib/cmbicm81.jar,
C:/Program Files/IBM/db2cmv8/lib/cmbwcm81.jar,
C:/Program Files/IBM/db2cmv8/lib/jcache.jar,
C:/Program Files/IBM/db2cmv8/lib/cmbutil81.jar,
C:/Program Files/IBM/db2cmv8/lib/cmbutilicm81.jar,
C:/Program Files/IBM/db2cmv8/lib/icmrm81.jar,
C:/Program Files/IBM/db2cmv8/lib/db2jcc.jar,
C:/Program Files/IBM/db2cmv8/lib/db2jcc_license_cu.jar,
C:/Program Files/IBM/db2cmv8/lib/db2jcc_license_cisuz.jar,
C:/Program Files/IBM/db2cmv8/lib/xerces.jar,
C:/Program Files/IBM/db2cmv8/lib/cmblog4j81.jar,
C:/Program Files/IBM/db2cmv8/lib/log4j-1.2.8.jar,
C:/Program Files/IBM/db2cmv8/lib/cmbsdk81.jar,
C:/Program Files/IBM/db2cmv8/lib/cmbwas81.jar
```

3 If the application server is not currently running, start the server; otherwise, stop and then restart the server.

You can now connect to the IBM Content Manager datastore from the IBMCMConnectorService Property Sheets by using the Use User Credentials as the login mode.

You have now completed the required steps for this procedure.

(Optional) If you want to connect to IBM Content Manager datastore from IBMCMConnectorService Property Sheets by using the Use Credentials From Process Context as the login mode, complete the following procedure.

Connect using Use Credentials from process context login mode

1 Open a web browser and enter this URL:

http://*[host]*:*[port]*/adminui

2 Log in using the super administrator credentials. Default values set during installation are:

User name:*administrator*

Password:*password*

3 Click **Services** > **LiveCycle ES3 Connector for IBM Content Manager**

4 Type all of the required repository information and click **Save**. For more information about the IBM Content Manager repository information, click the **Help** link in the upper-right corner of the page.

5 Do one of these tasks:

- To use the IBM Content Manager Authorization service IBMCMAuthProvider to use content from an IBM Content Manager datastore, in the Processes view of Workbench, continue with this procedure. Using the IBM Content Manager Authorization service overrides the default LiveCycle authorization and must be configured to log in to Workbench by using IBM Content Manager credentials.
- To use the System Credentials provided in step 4 to use content from an IBM Content Manager datastore, in the Processes view of Workbench, log in to Workbench by using the LiveCycle super administrator credentials (by default, *administrator* and *password*). You have now completed the required steps for this procedure. The System Credentials that are provided in step 4 use the default LiveCycle authorization service for accessing the default repository in this case.

6 Log in to the Administration Console, and click **Settings** > **User Management** > **Domain Management**.

7 Click **New Enterprise Domain** and type a domain ID and name. The domain ID is the unique identifier for the domain. The name is a descriptive name for the domain.

Note: *When using DB2 for your LiveCycle database, the maximum permitted length of the ID is 100 single-byte (ASCII) characters or 50 double-byte characters or 25 four-byte characters. (See "Adding enterprise domains" in LiveCycle Administration Help.)*

8 Add a custom authentication provider:

- Click **Add Authentication**.
- In the **Authentication Provider** list, select **Custom**, and then select **IBMCMAuthProviderService** and click **OK**.

9 Add an LDAP authentication provider:

- Click **Add Authentication**.
- In the **Authentication Provider** list, select **LDAP** and then click **OK**.

10 Add an LDAP directory:

- Click **Add Directory**.
- In the **Profile Name** box, type a unique name, and then click **Next**.
- Specify values for the **Server**, **Port**, **SSL**, **Binding**, and **Populate page with** options. If you select **User** for the **Binding** option, you must also specify values for the **Name** and **Password** fields. (Optional) Select **Retrieve Base DN** to retrieve base domain names, as required. When finished, click **Next**.
- Configure the user settings, click **Next**, configure group settings as required, and then click **Next**.

For details about the above settings, click the **Help** link in the upper-right corner of the page.

11 Click **OK** to exit the Add Directory page and click **OK** again.

12 Select the new enterprise domain and click **Sync Now**. Depending on the number of users and groups in your LDAP network and the speed on your connection, the synchronization process may take several minutes.

13 To verify the status of the synchronization, click **Refresh** and view the status in the **Current Sync State** column.

14 Navigate to **Settings** > **User Management** > **Users and Groups**.

15 Search for users that were synchronized from LDAP and do these tasks:

- Select one or more users and click **Assign Role**.
- Select one or more LiveCycle roles and click **OK**.
- Click **OK** a second time to confirm the role assignment.

Repeat this step for all users that you want to assign roles to. For more information, click the **Help** link in the upper-right corner of the page.

16 Start Workbench and log in using the following credentials for IBM Content Manager datastore:

Username:*[username]@[repository_name]*

Password: *[password]*

The IBM Content Manager datastore can now be used in the Processes view within Workbench when the login mode for IBMCMConnectorService orchestrable components is selected as **Use Credentials from process context.**

5.15 Configuring the Connector for IBM FileNet

LiveCycle supports IBM FileNet, versions 4.0, 4.5, and 5.0 only. Make sure your ECM is upgraded accordingly.

If you installed Connector for IBM FileNet as part of your LiveCycle, you must configure the service to connect to the FileNet object store.

Complete the following procedure to configure Connector for IBM FileNet.

Configure Connector for IBM FileNet using FileNet 4.x and CEWS transport

1 Log in to WebSphere Administrative Console, click **Servers > Server Types > WebSphere application servers**, and then click the name of the server instance to configure (for example, server1).

2 Under Server Infrastructure, click **Java and Process Management** > **Process Definition**.

3 Under Additional Properties, click **Java Virtual Machine**.

4 (**Only for FileNet 4.x**) Under Generic JVM arguments, add the location of the FileNet Configuration files as a Java option to the application server start command.

```
-Dwasp.location= <configuration files location>
```

For example, using a default FileNet Application Engine installation on a Windows operating system, add this Java option:

```
-Dwasp.location=C:/Progra~1/FileNet/AE/CE_API/wsi
```

5 Click **Apply** and then click **Save to Master Configuration**.

6 Locate the adobe-component-ext.properties file in the *[appserver root]*/profiles/[profile name] folder (if the file does not exist, create it).

7 Add a new system property that provides the location of these FileNet Application Engine JAR files:

For Filenet 4.x add following JAR files.

- javaapi.jar
- log4j-1.2.13.jar
- soap.jar
- wasp.jar
- builtin_serialization.jar (FileNet 4.0 only)
- wsdl_api.jar
- jaxm.jar
- jaxrpc.jar
- saaj.jar
- jetty.jar
- runner.jar
- p8cjares.jar
- Jace.jar
- (optional) pe.jar

Note: *Add the pe.jar file only if your deployment uses the IBMFileNetProcessEngineConnector service. The new system property should reflect this structure:*

```
[component id].ext=[JAR files and/or folders]
```

Note: *Do not overwrite the existing contents of the properties file. Simply append the new system property to the contents.*

For example, using a default FileNet Application Engine installation on a Windows operating system, add the following system property on a new line with no line breaks and end the line with a carriage return:

Note: *The following text contains formatting characters for line breaks. If you copy this text to a location outside this document, remove the formatting characters when you paste it to the new location.*

```
com.adobe.livecycle.ConnectorforIBMFileNet.ext=
C:/Program Files/FileNet/AE/CE_API/lib2/javaapi.jar,
C:/Program Files/FileNet/AE/CE_API/lib2/log4j-1.2.13.jar
```

8 (FileNet Process Engine Connector only) Configure the connection properties for the process engine as follows:

- Using a text editor, create a file with the following content as a single line and end the line with a carriage return:

  ```
  RemoteServerUrl = cemp:http://[contentserver_IP]:[contentengine_port]/ wsi/FNCEWS40DIME/
  ```

- Save the file as WcmApiConfig.properties in a separate folder, and add the location of the folder that contains the WcmApiConfig.properties file to the adobe-component-ext.properties file.

  For example, if you save the file as c:/pe_config/WcmApiConfig.properties, add the path c:/pe_config to the adobe-component-ext.properties file.

  Note: *The filename is case-sensitive.*

9 Locate the file wsjaas.conf and add the following lines:

```
FileNetP8 {com.filenet.api.util.WSILoginModule required;};
FileNetP8WSI {com.filenet.api.util.WSILoginModule required;};
FileNetP8Engine
    {com.ibm.ws.security.common.auth.module.proxy.WSLoginModuleProxy
    required delegate=com.ibm.ws.security.common.auth.module.
    WSLoginModuleImpl;};
FileNetP8Server
    {com.ibm.ws.security.common.auth.module.proxy.WSLoginModuleProxy
    required delegate=com.ibm.ws.security.common.auth.module.
    WSLoginModuleImpl;};
FileNetP8KerberosService
    {com.ibm.ws.security.common.auth.module.proxy.WSLoginModuleProxy
    required delegate=com.filenet.engine.authentication.kerberos.login.
    KrbServiceLoginModule;
    com.ibm.ws.security.common.auth.module.proxy.WSLoginModuleProxy required
    delegate=com.ibm.ws.security.server.lm.ltpaLoginModule;
    com.ibm.ws.security.common.auth.module.proxy.WSLoginModuleProxy required
    delegate=com.ibm.ws.security.server.lm.
    wsMapDefaultInboundLoginModule;};
```

Note: *By default, the wsjaas.conf file is located in the folder [appserver root]/profiles/[profile name]/properties/.*

10 If the application server is not currently running, start the server. Otherwise, stop and then restart the server.

11 (*Applicable only if IBM FileNet and LiveCycle are installed on the same WebSphere application server*) Verify that these settings have been implemented correctly in the WebSphere Administrative Console by doing the following:

- In the WebSphere Administrative Console navigation tree, click **Security > Global security.**
- Under Authentication, click **Java Authentication and Authorization Service > Application logins**.
- Click the **FileNetP8** application login, and then click **JAAS login modules**.

  If the values on this page do not match the following, modify them:

  Module class name: "com.filenet.api.util.WSILoginModule"

  Authentication Strategy: REQUIRED

  Module Order: 1

  Click **OK** or **Apply**, and then click **Save directly to master configuration**.

12 Open a web browser and enter this URL:

```
http://[host]:[port]/adminui
```

13 Log in using the default user name and password:

User name: administrator

Password: password

14 Click **Services** > **LiveCycle ES3 Connector for IBM FileNet**.

15 Provide all of the required FileNet repository information and, under Repository Service Provider Information, select **IBM FileNet Repository Provider**.

If your deployment uses the optional process engine service, under Process Engine Settings, select **Use Process Engine Connector Service** and specify the process engine settings. For more information, click the **Help** link in the upper-right corner of the page.

Note: *The credentials that you provide in this step are validated later when you start the IBM FileNet repository services. If the credentials are not valid, an error is thrown and the services will not start.*

16 Click **Save** and navigate to **Services** > **Applications and Services** > **Service Management**.

17 Select the check box next to **IBMFileNetProcessEngineConnector** (if configured) and then click **Start.**

18 Do one of the following tasks:

- To use the FileNet Authorization service (IBMFileNetAuthProviderService) to display content from a FileNet object store in the Resources view of Workbench, continue with this procedure. Using the FileNet Authorization service overrides the default LiveCycle authorization and must be configured to log in to Workbench by using FileNet credentials.
- To use the LiveCycle repository, log in to Workbench by using the LiveCycle super administrator credentials (by default, *administrator* and *password*). The credentials provided in step 16 use the default LiveCycle authorization service for accessing the default repository in this case.

19 Enable the Remoting and EJB endpoints by doing these tasks:

- Log in to Administration Console and click **Home > Services > Application and Services > Service Management**.
- Filter the category *Connector for IBM FileNet* and click **IBMFileNetContentRepositoryConnector:1.0.**
- Select the disabled endpoints and enable them.

20 Restart your application server.

21 Log in to Administration Console and click **Settings** > **User Management** > **Domain Management**.

22 Click **New Enterprise Domain** and then type a domain ID and name. The domain ID is the unique identifier for the domain. The name is a descriptive name for the domain.

When using DB2 for your LiveCycle database, the maximum permitted length of the ID is 100 single-byte (ASCII) characters or 50 double-byte characters or 25 four-byte characters. (See “Adding enterprise domains” in Administration Help.)

23 Add a custom authentication provider:

- Click **Add Authentication**.
- In the **Authentication Provider** list, select **Custom**.
- Select **IBMFileNetAuthProviderService** and then click **OK**.

24 Add an LDAP authentication provider:

- Click **Add Authentication**.
- In the **Authentication Provider** list, select **LDAP** and then click **OK**.

25 Add an LDAP directory:

- Click **Add Directory** and, in the **Profile Name** box, type a unique name, and then click **Next**.
- Specify values for the **Server**, **Port**, **SSL**, **Binding**, and **Populate page with** options. If you select **User** for the **Binding** option, you must also specify values for the **Name** and **Password** fields.
- (Optional) Select **Retrieve Base DN** to retrieve base domain names, as required. When finished, click **Next**.
- Configure the user settings, click **Next**, configure group settings as required, and then click **Next**.

  For details about the settings, click **Help** link in the upper-right corner of the page.

26 Click **OK** to exit the Add Directory page, and then click **OK** again.

27 Select the new enterprise domain and click **Sync Now**. Depending on the number of users and groups in your LDAP network and the speed on your connection, the synchronization process may take several minutes.

(Optional) To verify the status of the synchronization, click **Refresh** and view the status in the **Current Sync State** column.

28 Navigate to **Settings** > **User Management** > **Users and Groups**.

29 Search for users that were synchronized from LDAP and perform these tasks:

- Select one or more users and click **Assign Role**.
- Select one or more LiveCycle roles and click **OK**.
- Click **OK** a second time to confirm the role assignment.

Repeat this step for all users you want to assign roles to. For more information, click the **Help** link in the upper-right corner of the page.

30 Start Workbench and log in using the following credentials for the IBM FileNet repository:

User name:*[username]@[repository_name]*

Password: *[password]*

The FileNet object store should now be visible in the Resources view within Workbench. If you do not log in using the *username@repository name*, Workbench attempts to log in to the default repository specified in step 16.

31 (Optional) If you intend to install the LiveCycle Samples for Connector for IBM FileNet, create a FileNet object store named *Samples* and install the samples in that object store.

After you configure Connector for IBM FileNet, it is recommended that you see LiveCycle Administration Help for information about configuring Workbench functions properly with your FileNet repository.

Chapter 6: Appendix - Install Command Line Interface

6.1 Overview

LiveCycle provides a command line interface (CLI) for the installation program. The CLI is intended to be used by advanced users of LiveCycle or in server environments which do not support the use of the Graphical User Interface (GUI) of the installation program. The CLI runs in console mode with one interactive session for all install operations.

Before you install the modules using the CLI install option, ensure that you have prepared your environment required to run LiveCycle according to the Preparing guide for fresh single server installation, cluster setup, or upgrade, as appropriate. The completed LiveCycle documentation is available at http://www.adobe.com/go/learn_lc_documentation_10.

For an overview of the installation process, see "3.1 Before you begin" on page 5.

After you start the installation process, follow the on-screen instructions to choose your installation options. Respond to each prompt to proceed to the next step in the installation.

Note: *If you want to change a choice that you made on a previous step, type* `back`*. You can cancel the installation at any time by typing* `quit`*.*

6.2 Install LiveCycle

1 Open a command prompt and navigate to the folder in the installation media or your hard disk that contains the installer executable:

- (Windows) server\Disk1\InstData\Windows_64\VM
- (Linux) server/Disk1/InstData/Linux/NoVM
- (Solaris) server/Disk1/InstData/Solaris/NoVM
- (AIX) server/Disk1/InstData/AIX/VM

2 Open a command prompt and run the following command:

- (Windows) `install.exe -i console`
- (Non-Windows) `./install.bin -i console`

  Note: *Entering the command without the* `-i console` *option launches the GUI-based installer.*

3 Respond to the prompts as described in the following table:

Prompt	Description
Choose Locale	Select the locale for the installation to use by entering a value between 1 and 3. You can select the default value by pressing **Enter**. The options are Deutsch, English, and Français. English is the default language.
Upgrade Installation	Select the installation option and press **Enter**. The options are Perform Update or Skip Update. If the installer detects a previous LiveCycle installation, you can choose to upgrade the installation. The upgrade installation will use information from the existing install to help in the current installation.
Choose Install Folder	On the Destination screen, press **Enter** to accept the default directory or type the new installation directory location. Default install folders are: (Windows): C:\Adobe\Adobe LiveCycle ES3 (Non-Windows): opt/adobe/adobe_livecycle_es3 Do not use accented characters in the directory name. Otherwise, the CLI will ignore the accents and create a directory after modifying the accented characters.
LiveCycle Server License Agreement	Press **Enter** to read through the pages of the license agreement. If you agree to the agreement, type `Y` and press **Enter**.
Pre-Installation Summary	Review the installation choices you have made and press **Enter** to continue installation with the choices you have made. Type `back` to go back to previous steps and change any of the settings.
Ready To Install	Installer displays the installation directory. Press **Enter** to start the installation process.
Installing	During the installation process, the progress bar advances to indicate the progress of installation.
Configuration Manager	Press **Enter** to complete the installation of LiveCycle. You can run the Configuration Manager in GUI mode by invoking the following script: (Windows): `C:\Adobe\Adobe LiveCycle ES3\configurationManager\bin\ConfigurationManager.bat` (Non-Windows): `opt/adobe/adobe_livecycle_es3/configurationManager/bin/ConfigurationManager.sh`
Installation Complete	The installation completion screen displays the status and the location of install. Press **Enter** to exit the installer.

6.3 Error logs

If an error occurs, you can review the install.log in the log directory of your installation:

- (Windows) *[LiveCycle root]*\log
- (AIX, Linux, Solaris) *[LiveCycle root]*/log

6.4 Uninstalling LiveCycle in console mode

Note: *If you had installed LiveCycle using the command line option, you can uninstall LiveCycle ES3 only by running the uninstaller from the command line. If you want a silent uninstallation, omit the "-i console" flag.*

1 Open a command prompt, and navigate to the directory which contains the uninstall script:

Note: *On UNIX systems, you should manually navigate to the directory that contains the uninstall script because the directory name contains spaces.*

- (Windows) `cd C:\Adobe\Adobe LiveCycle ES3\Uninstall_Adobe LiveCycle ES3`
- (UNIX-like systems) `cd opt/adobe/adobe livecycle es3/Uninstall_Adobe_livecycle ES3`

2 Type the following command at the prompt and press Enter:

- (Windows) `Uninstall Adobe LiveCycle ES3 -i console`
- (AIX) `./Uninstall_adobe_livecycle_ES3 -i console`
- (Linux, Solaris) `./Uninstall Adobe Livecycle ES3 -i console`

3 Follow the on-screen instructions.

Prompt	Description
Uninstall LiveCycle ES3	Press **Enter** to continue uninstallation. Enter **quit** to close the uninstall program.
Uninstalling... Uninstall Complete	After the uninstallation starts, the rest of the uninstallation process is completed and the cursor returns to the prompt. Note that some items may not be removed. Also, any folder created after installing LiveCycle are not removed. You must remove these files and folders manually.

Chapter 7: Appendix - Configuration Manager Command Line Interface

LiveCycle provides a Command Line Interface (CLI) for the Configuration Manager. The CLI is intended to be used by advanced users of LiveCycle, for example in server environments which do not support the use of the Graphical User Interface (GUI) of the Configuration Manager.

7.1 Order of operations

The Configuration Manager CLI must follow the same order of operations as the GUI version of the Configuration Manager. Ensure that you use the CLI operations in this order:

1 Shut down the JBoss application server (Upgrade Turnkey only)

2 Migrate the GDS directory contents. (Upgrade Turnkey only)

3 Migrate the custom datasources. (Upgrade Turnkey only)

4 Configure LiveCycle.

5 Update LiveCycle core settings.

6 Configure Content Services.

7 Migrate existing turnkey database (Upgrade Turnkey only).

8 Validate application server topology.

9 Validate the database connectivity.

10 Configure the application server.

11 Validate the application server configurations.

12 Deploy LiveCycle.

13 Initialize LiveCycle.

14 Validate LiveCycle.

15 Perform critical tasks before component deployment.

16 Deploy the LiveCycle modules.

17 Validate the LiveCycle module deployment.

18 Retrieve the LiveCycle ES Update 1 or LiveCycle ES2 form templates to migrate to LiveCycle.

19 Migrate Data Essential to LiveCycle

20 Post deployment configurations.

21 Check system readiness for PDF Generator.

22 Add administrator user for PDF Generator.

23 Configure Connector for IBM Content Manager.

24 Configure Connector for IBM FileNet.

25 Configure Connector for EMC Documentum.

26 Configure Connector for SharePoint.

27 Configure Correspondance Mangement.

Important: *You must restart your application server after you complete Configuration Manager CLI operations.*

7.2 Command Line Interface property file

The Configuration Manager CLI requires two property files containing the defined properties for your LiveCycle environment. The templates for the properties files, cli_propertyFile_template.txt and cli_propertyFile_upgrade_template.txt, are located in the *[LiveCycle root]*/configurationManager/bin folder.

- cli_propertyFile_template.txt file that contains properties that apply to LiveCycle installation and configuration scenarios, in general.
- cli_propertyFile_upgrade_template.txt file that contains properties specific to upgrading tasks. Both are required for upgrading from a previous version of LiveCycle.

You must create copies of these files and edit the values. You can customize this file based on the Configuration Manager operations you intend to use. The following section describes the properties and values required.

You should create the property file according to your installation. Use one of the following methods.

- Create a property file and populate the values according to your installation and configuration scenarios.
- Copy the property file cli_propertyFile_template.txt to use them as cli_propertyFileupgrade_template.txt template and edit the values based on the Configuration Manager operations you intend to use.
- Use the GUI of the Configuration Manager and then use the property file created by the GUI version as the CLI version property file. When you run the *[LiveCycle root]*/configurationManager/bin/ConfigurationManager.bat file, the userValuesForCLI.properties file is created in the *[LiveCycle root]*/configurationManager/config directory. You can use this file as input for the Configuration Manager CLI.

  Note: *In the CLI properties file, you must use the escape character (\) for Windows paths directory separator (\). For example, if the Fonts folder to be mentioned is C:\Windows\Fonts, in the Configuration Manager CLI script, you should enter it as* `C:\\Windows\\Fonts`.

7.3 Upgrading LiveCycle Commands

7.3.1 (Turnkey and Partial Turnkey only) Shutdown command for LiveCycle ES Update 1 or LiveCycle ES2 JBoss

Note: *This command would run only if your existing LiveCycle ES3 Turnkey installation and your LiveCycle Turnkey installation coexist on the same machine and you have chosen to perform an upgrade installation while installing LiveCycle ES3 in Turnkey mode.*

The `upgrade-shutdownPreviousJboss` command shuts down the JBoss service installed with your previous LiveCycle turnkey or partial turnkey installation and sets the service run mode to 'manual'.

This command requires no properties.

7.3.2 (Turnkey and Partial Turnkey only) Migrate LiveCycle GDS command

Note: *This command would run only if your existing LiveCycle ES3 Turnkey installation and your LiveCycle Turnkey installation coexist on the same machine and you have chosen to perform an upgrade installation while installing LiveCycle ES3 in Turnkey mode.*

The `upgrade-migrateGDS` command migrates the Global Document Storage (GDS) directory contents from default LiveCycle GDS location to the default LiveCycle GDS location.

This command works only for turnkey or partial turnkey installations, and when the default GDS is being used. If a custom GDS is being used, the contents need to be manually migrated. This command also migrates the Connectors for ECM properties file from the LiveCycle JBoss bin directory to the new JBoss location.

This command requires no input properties.

7.3.3 (Turnkey and Partial Turnkey only) Migrate LiveCycle datasources command

Note: *This command would run only if your existing LiveCycle ES3 Turnkey installation and your LiveCycle Turnkey installation coexist on the same machine and you have chosen to perform an upgrade installation while installing LiveCycle ES3 in Turnkey mode.*

The `upgrade-migrateDataSources` command migrates the custom datasource definitions that might have been added to the adobe-ds.xml or <database>-ds.xml datasource files in the JBoss /server/<profile name>/deploy directory. If no custom datasources are defined, skip this command.

The following properties are available for the `upgrade-migrateDataSources` command.

Property	Description	Required	Can be empty
adobeDSDatasourcesToMigrate	A comma separated list of the JNDI_NAME of custom datasources that need to be migrated from the LiveCycle adobe-ds.xml file	No	Yes
mysqlDSDatasourcesToMigrate	A comma separated list of the JNDI_NAME of custom datasources that need to be migrated from LiveCycle <database>-ds.xml file.	No	Yes

Note: *The `mysqlDSDatasourcesToMigrate` property refers to any LiveCycle database that you may have installed, and not just a MySQL database.*

7.3.4 Update LiveCycle core settings command

The `upgrade-configureCoreSettings` command updates various core settings for LiveCycle. For example, if in your previous LiveCycle system you had the Global Document Storage (GDS) directory set at *`C:\LC\GDS`* and in LiveCycle ES3 you plan to set it to *`E:\DS\GDS`*, then the new location is not updated in the database unless this CLI command is executed. Other core settings that can be updated in the same manner are: Adobe server fonts directory, Customer fonts directory, System fonts directory, Enable FIPS, LiveCycle temp directory, LiveCycle global document storage directory.The following properties are available for the `upgrade-configureCoreSettings` command.

Property	Description	Required	Can be empty
prevLCVersion	The version of LiveCycle from which upgrade is being performed. Valid values are 821 or 9x.	Yes	No
excludedSolutionComponents	Comma separated list of modules not being upgraded/installed. This is equivalent to deselecting installed/licensed solution components in the Configuration Manager GUI.	No	Yes

7.3.5 (Turnkey Only) Migrate existing turnkey database command

The `upgrade-migrateTurnkeyDatabase` command is used to migrate data from 'adobe' schema of a previous LiveCycle ES3 Turnkey MySQL installation to 'adobe' schema of LiveCycle ES3 Turnkey MySQL installation. Before you run this command, make sure that both the MySQL services are running and are accessible. Also, both the MySQL services should be running on different ports.The following properties are available for the `upgrade-migrateTurnkeyDatabase` command.

Note: *This command would run only if your existing LiveCycle ES3 Turnkey installation and your LiveCycle ES3 Turnkey installation coexist on the same machine and you'd chosen to perform an upgrade installation while installing LiveCycle ES3 Turnkey.*

Property	Description	Required	Can be empty
lcDatabaseHostName	Hostname for LiveCycle turnkey database.	Yes	No
lcDatabaseName	Database name for LiveCycle turnkey database. Default is adobe.	Yes	No
lcDatabaseUserName	Username for accessing LiveCycle turnkey database.	Yes	No
lcDatabaseUserPassword	Password for accessing LiveCycle turnkey database. If you don't provide a password in the file, you will prompted to provide it on command line	No	Yes
lcDatabaseDriverFile	Path to driver file for LiveCycle turnkey database.	Yes	No
lcDatabasePortNumber	Port used by LiveCycle turnkey database.	Yes	No
lcDatabaseType	Type of database configured for LiveCycle turnkey database. Default is mysql.	Yes	No

Property	Description	Required	Can be empty
lcPrevDatabaseHostName	Hostname for previous LiveCycle turnkey database.	Yes	No
lcPrevDatabaseName	Database name for previous LiveCycle turnkey database. Default is adobe.	Yes	No
lcPrevDatabaseUserName	Username for accessing previous LiveCycle turnkey database.	Yes	No
lcPrevDatabaseUserPassword	Password for accessing previous LiveCycle turnkey database. If you don't provide a password in the file, you will prompted to provide it on command line	No	Yes
lcPrevDatabaseDriverFile	Path to driver file for previous LiveCycle turnkey database.	Yes	No
lcPrevDatabasePortNumber	The port used by previous LiveCycle turnkey database.	Yes	No
lcPrevDatabaseType	Type of database configured for previous LiveCycle turnkey database. Default is mysql.	Yes	No

7.3.6 Perform critical tasks before component deployment command

The `upgrade-configurePreDeploy` command is used to execute plug-ins to upgrade the components of your previous LiveCycle installation, and make them compatible with LiveCycle, before these components are actually deployed on the LiveCycle Server.The following properties are available for the `upgrade-configurePreDeploy` command.

Property	Description	Required	Can be empty
prevLCVersion	The version of LiveCycle being upgraded. Valid values are 821 or 9x	Yes	No
excludedSolutionComponents	Comma separated list of components not being installed. This is equivalent to deselecting installed/licensed solution components in the Configuration Manager GUI.	No	Yes

7.3.7 Retrieve the ECM form templates to migrate command

The `upgrade-getFormTemplatesToMigrate` command can be used to retrieve a list of form templates that can be migrated from ECM repositories to the LiveCycle Native repository.

Use of the ECM repository for storing form templates is being deprecated, therefore this migration is required.

Once the list is obtained, use the `upgrade-configurePostDeploy` command to actually migrate the templates from the list. You can skip this command and set the `skipFormTemplatesImport` property to true in the `upgrade-configurePostDeploy` command to skip migration of form templates

The following properties are available for the `upgrade-getFormTemplatesToMigrate` command.

Property	Description	Required	Can be empty
prevLCVersion	The version of LiveCycle being upgraded. Valid values are 821 or 9x .	Yes	No
excludedSolutionComponents	Comma separated list of LiveCycle components not being installed. This is equivalent to deselecting installed/licensed solution components in the GUI.	No	Yes

LiveCycle Host and Authorization information

Property	**Description**	**Required**	**Can be empty**
LCHost	Hostname of the LiveCycle Server.	Yes	No
LCPort	Port number on which LiveCycle application server is configured.	Yes	No
lcJndiPort	JNDI port corresponding to LiveCycle application server.	Yes	No
localServer.appServerRootDir	This is used to access appserver client JAR files. (Local application server root directory required for WebLogic and WebSphere only)	Yes	Yes
LCAdminUserID	Username of LiveCycle administrator user	Yes	No
LCAdminPassword	Password for administrator user. If you don't provide a password in the file, you will prompted to provide it on command line	No	Yes

LiveCycle Database information

Property	Description	Required	Can be empty
lcDatabaseType	Type of database configured for LiveCycle. Values can be `mysql`, `db2`, `oracle`, or `sqlserver`	Yes	No
lcDatabaseHostName	Hostname for the LiveCycle database.	Yes	No
lcDatabasePortNumber	The port number for the LiveCycle database.	Yes	No
lcDatabaseDriverFile	Path to driver file for the database.	Yes	No

lcDatabaseUserName	Username for accessing the database.	Yes	No
lcDatabaseName	Database name.	Yes	No
lcDatabaseUserPassword	Password for accessing database. If you don't provide a password in the file, you will prompted to provide it on command line	No	Yes

ECM Form template Migration properties

Property	Description	Required	Can be empty
documentumFormTemplatesFile	A file to which the list of form templates that can be migrated from ECM Documentum will be written. This file can be used as a input to `upgrade-configurePostDeploy` command later.	No	Yes
filenetFormTemplatesFile	A file to which the list of form templates that can be migrated from IBM FileNet will be written. This file can be used as input to `upgrade-configurePostDeploy` command later.	No	Yes

7.3.8 Post-deployment Configuration command

The `upgrade-configurePostDeploy` command does the actual upgrade of the system and is run after LiveCycle EAR files and modules have been deployed.

The following properties are available for the `upgrade-configurePostDeploy` command:

Property	Description	Required	Can be empty
prevLCVersion	The version of LiveCycle being upgraded. Valid values are 821 or 9x .	Yes	No
excludedSolutionComponents	Comma separated list of LiveCycle components not being installed. This is equivalent to deselecting installed/licensed solution components in the GUI.	No	Yes
jboss.clientjar.location	The location of the jbossall-client.jar file (JBoss only)	Yes	Yes

LiveCycle Host and Authorization information

Property	**Description**	**Required**	**Can be empty**
LCHost	Hostname of the LiveCycle Server.	Yes	No
LCPort	Port number on which LiveCycle application server is configured.	Yes	No
lcJndiPort	JNDI port corresponding to LiveCycle application server.	Yes	No

Property	Description	Required	Can be empty
localServer.appServerRootDir	This is used to access appserver client JAR files. (Local application server root directory required for WebLogic and WebSphere only)	Yes	Yes
LCAdminUserID	Username of LiveCycle administrator user	Yes	No
LCAdminPassword	Password for administrator user. If you don't provide a password in the file, you will prompted to provide it on command line	No	Yes

LiveCycle Database information

Property	Description	Required	Can be empty
lcDatabaseType	Type of database configured for LiveCycle. Values can be `mysql`, `db2`, `oracle`, or `sqlserver`	Yes	No
lcDatabaseHostName	Hostname for the LiveCycle database.	Yes	No
lcDatabasePortNumber	The port number for the LiveCycle database.	Yes	No
lcDatabaseDriverFile	Path to driver file for the LiveCycle database.	Yes	No
lcDatabaseUserName	Username for accessing the LiveCycle database.	Yes	No
lcDatabaseName	LiveCycle database name. Default is `adobe`.	Yes	No
lcDatabaseUserPassword	Password for accessing database. If you don't provide a password in the file, you will prompted to provide it on command line	No	Yes

ECM Form template Migration properties

Property	Description	Required	Can be empty
skipFormTemplatesImport	Whether to import form templates from ECM repositories to LiveCycle native repository or skip this step. If set to `false`, the template files (see the next two properties) containing a list of template names to migrate should be provided.	No	Yes
documentumFormTemplatesFile	File containing a list of form templates to migrate from EMC Documentum repository to LiveCycle Native repository. This file is generated using the `upgrade-getFormTemplatesToMigrate` command.	No	Yes
filenetFormTemplatesFile	File containing a list of form templates to be migrated from IBM FileNet repository to LiveCycle Native repository. This file is generated using the `upgrade-getFormTemplatesToMigrate` command.	No	Yes

7.4 General configuration properties

7.4.1 Common properties

Common properties are:

WebLogic and WebSphere specific properties: Required for the Configure the Application Server, Deploy LiveCycle, Validate Application Server Topology and Validate Application Server Configurations operations.

LiveCycle Server specific properties: Required for the Initialize LiveCycle and Deploy LiveCycle Components operations.

These properties are required for the following operations:

- Initialize LiveCycle
- Deploy LiveCycle components.

Property	Values	Description
targetServer.topologyType	server or cluster	The type of application server topology for which you are deploying LiveCycle.
targetServer.name	String	The name assigned to the application server/admin server node or cluster.
targetServer.adminHost	String Default is *localhost*	The hostname of the server where the application server is installed.
targetServer.adminPort	Integer	The port number the admin server uses to listen for SOAP requests.
targetServer.adminUserID	String	The administrative user ID to use when accessing the application server.
localServer.appServerRootDir	Default: (Windows) C:\Program Files\IBM\WebSphere\AppServer (Linux, Solaris) /opt/IBM/WebSphere/AppServer (AIX) /usr/IBM/WebSphere/AppServer	The root directory of the application server instance that you are configuring locally (on which you plan to deploy LiveCycle or that you will use to communicate with a remote server on which you plan to deploy LiveCycle).
LiveCycle Server specific properties		
LCHost	String	The hostname of the server where LiveCycle will be deployed.

Property	Values	Description
LCPort	Integer	The web port number where LiveCycle will be deployed.
excludedSolutionComponents	String. Values include: ALC-LFS-Forms, ALC-LFS-ConnectorEMCDocumentum, ALC-LFS-ConnectorIBMFileNet, ALC-LFS-ConnectorIBMContentManager, ALC-LFS-DigitalSignatures, ALC-LFS-DataCapture, ALC-LFS-Output, ALC-LFS-PDFGenerator, ALC-LFS-ProcessManagement, ALC-LFS-ReaderExtensions, ALC-LFS-RightsManagement	(Optional) List the LiveCycle modules you do not want to configure. Specify the excluded modules in a comma separated list.
excludedSolution	ALC-SA-CorrespondenceManagement	You can include or exclude Correspondence Management Solution by specifying this property.

7.4.2 Configure LiveCycle properties

These properties only apply to the configure LiveCycle operation.

Property	Values	Description
AdobeFontsDir	String	Location of the Adobe server fonts directory. This path must be accessible from the server being deployed to.
customerFontsDir	String	Location of the customer fonts directory. This path must be accessible from the server being deployed to.
systemFontsDir	String	Location of the system fonts directory. This path must be accessible from the server being deployed to.
LCTempDir	String	Location of the temporary directory. This path must be accessible from the server being deployed to.

Property	Values	Description
LCGlobalDocStorageDir	String	The global document storage root directory. Specify a path to an NFS shared directory used to store long-lived documents and to share them among all cluster nodes. Specify this property only when deploying LiveCycle components in a clustered environment. This path must be accessible from the server being deployed to.
EnableDocumentDBStorage	true or false Default: false	Enables or disables document storage in database for persistent documents. Even if you enable document storage in database, you will need the file system directory for GDS.
Content Services **Note**: The following properties are specified in the `cli_propertyFile_content_services_template.txt` file.		
contentServices.rootDir	String	*[Content Services only]* Specify the root directory used by Content Services. If LiveCycle is in clustered environment, this directory must be a location shared by all nodes in a cluster with the same path across all nodes.
contentServices.indexesDir	String	*[Content Services only]* Specify the indexes directory used by Content Services. This directory is unique for each cluster node and must have the same name and location on all nodes. For example, `contentServices.indexesDir=C:\\Adobe\\Adobe LiveCycle ES3\\lccs_indexes`
contentServices.topology	String. Specify either SERVER or CLUSTER. Default: SERVER	*[Content Services only]* SERVER for single node, CLUSTER for a cluster configuration.
contentServices.cifs.enable	true or false Default: false	*[Content Services only]* Enables or disables CIFS.
contentServices.cifs.servername	String	*[Content Services only]* Server name of the CIFS server.
contentServices.cifs.implementation	String. Specify one of the following: • NetBIOS • PureJava	*[Content Services only]* Specifies how Content Services connects to the CIFS server.
contentServices.cifs.dllpath	String. Specify the path from where the NetBIOS DLL will be copied.	*[Content Services only]* Path where NetBios DLL will be copied. Required if "contentServices.cifs.implementation=NetBIOS" . This path must be present in the environment.
contentServices.cifs.alternateIP	Numeric	*[Content Services only]* Alternate IP Address of the CIFS Server. It should be static IP and it is required field if "contentServices.cifs.implementation=PureJava ".

Property	Values	Description
contentServices.cifs.WinsOrBrdcast	String. Specify one of the following: • winsServer • broadcast	*[Content Services only]* DNS discovery method. It can be "winsServer" or "broadCast" and it is required field if "contentServices.cifs.implementation=PureJava ".
contentServices.cifs.winsPrmIP	Numeric	*[Content Services only]* Primary WINS Server IP address. It can obtained from `ipconfig /all` command. It is required field if "contentServices.cifs.implementation=PureJava " and "contentServices.cifs.WinsOrBrdcast=winsServer ".
contentServices.cifs.winsSecIP	Numeric	*[Content Services only]* Secondary WINS Server IP address. It can obtained from `ipconfig /all` command. It is required field if "contentServices.cifs.implementation=PureJava " and "contentServices.cifs.WinsOrBrdcast=winsServer ".
contentServices.cifs.brdCastIP	Numeric	*[Content Services only]* Broadcast IP address. It is required field if "contentServices.cifs.implementation=PureJava " and "contentServices.cifs.WinsOrBrdcast=broadCast ".
contentServices.dbType	String	*[Content Services only]* Content Services database type.
contentServices.configureamps.selectedLCAMPs	Comma separated list of strings	*[Content Services only]* File names of Content Services AMPs that need to be installed. For example, `genericservice-action.amp`, `lc-assemble-clipboard-items.amp`
contentServices.configureamps.externalAMPsDir	String	*[Content Services only]* Directory containing the custom AMPs that need to be installed. ***Note**: All AMPs present in this directory will be installed.*
contentServices.ftp.port	NumericDefault : 8021	FTP Port Value for Content Services.
contentServices.ftp.enable	True or False	**True** to enable internal email server settings and **False** to disable
contentServices.email.serverDomain	String	Domain of the internal email server. If email settings are enabled, this is a required field.
contentServices.email.serverPort	NumericDefault: 25	Email Server Port. If email settings are enabled, this is a required field.
contentServices.internalEmailSettings.enable	True or false	**True** to enable internal email server settings and **False** to disable
contentServices.propagateEventsToLC.enable	True or false	**True** to propogate events to LiveCycle and **False** to disable
contentServices.usageQuota	Numeric	If disk quota is enabled, this is a required field.
contentServices.email.serverAllowedSenders	String	These are the senders from whom emails will be accepted.

Property	Values	Description
contentServices.email.serverBlockedSenders	String	These are senders for whom emails will be blocked.
contentServices.email.unknownUsers	String	The username to authenticate when sender address is not recognized.
contentServices.audit.enable	True or false	When selected, application or user interactions with Content Services repository can be recorded.
(WebSphere only) contentServices.myfacesDir	String	Directory where myfaces jars will be copied and used as shared libs

7.4.3 Configure or validate application server properties

7.4.3.1 Configure or Validate WebSphere properties

The Configuration Manager can configure or validate your WebSphere application server as required by LiveCycle.

These properties apply to the following operations:

- Configure Application Server
- Validate Application Server Topology
- Validate Application Server Configurations
- Validate Database Connectivity

7.4.3.2 Application server properties

Property	Values	Description
You must configure the application server-specific properties section. For more information see Common properties		
jvm.initialHeapSize	Default: 256	The initial heap size, in MB, for the JVM.
jvm.maxHeapSize	Default: 1792	The maximum heap size, in MB, for the JVM.
WebLogic and WebSphere Cluster only		
cache.useUDP	true	Set the value to `true` if LiveCycle uses UDP to implement caching. Set to `false` if LiveCycle uses TCP to implement caching.
cache.udp.port	Default: 33456	The port number that the primary computer uses for UDP-based caching communication. Configure only if cache.useUDP=true.
cache.tcpip.primaryhost	String	The host name of the computer where the primary application server is installed. Configure only if cache.useUDP!=true.

Property	Values	Description
cache.tcpip.primaryport	Default: 22345	The port number that the primary application server computer uses for TCP-based caching communication. Configure only if cache.useUDP!=true.
cache.tcpip.secondaryhost	String	The host name of the computer where the secondary application server is installed. Configure only if cache.useUDP!=true.
cache.tcpip.secondaryport	Default: 22345	The port number that the secondary application server computer uses for TCP-based caching communication. Configure only if cache.useUDP!=true.
Datasource configuration		
datasource.dbType	Choose: • oracle • db2 • sqlserver	The type of database configured to use with LiveCycle.
datasource.dbName	String	The name of the database.
datasource.dbHost	String	The host name or IP address of the server where the database is located.
datasource.dbPort	Integer	The database port LiveCycle will use when communicating with the database.
datasource.dbUser	String	The user ID LiveCycle will use when accessing the database.
datasource.dbPassword	String	The password associated with the database user ID.
datasource.target.driverPath	String	JDBC driver in the application server lib directory. This path must be valid and accessible from the server being configured.
datasource.local.driverPath	String	Local JDBC driver. This value is used for testing direct database connection.

7.4.4 Deploy LiveCycle properties

These Deploy LiveCycle properties only apply to the deploy LiveCycle operation.

Property	Values	Description
For more information, see "7.4.1 Common properties" on page 62		
deployment.includeIVS	false	Specifies whether IVS EAR files are included in the deployment. It is recommended not to include IVS EAR files in a production environment.
targetServer.virtualHost	String	Virtual host of your WebSphere application server. The default values are admin_host, default_host, proxy_host.

7.4.5 Initialize LiveCycle properties

These initialize LiveCycle properties only apply to the initialize LiveCycle operation.

Property	Values	Description
For more information, see "7.4.1 Common properties" on page 62		

7.4.6 Deploy LiveCycle Components properties

These properties apply to the following operations:

- Deploy LiveCycle Components
- Validate LiveCycle Component Deployment
- Validate LiveCycle Server.

Property	Values	Description
You must configure the LiveCycle Server Information section. For more information, see Common properties		
LCAdminUserID	String	The user ID to assign to the LiveCycle Administrator user. This User ID is used to login to the Administrator Console.
LCAdminPassword	String	The password to assign to the LiveCycle Administrator user. This password is used to login to the Administrator Console.

7.4.7 Add administrator user for PDF Generator

These properties apply only to the adding administrator user for PDF Generator operation. These properties are present in cli_propertyFile_pdfg_template.txt

Property	Values	Description
LCHost	String	Hostname where LiveCycle Server is installed.
LCPort	Integer	Port number where LiveCycle application server is configured
LCAdminUserID	String	The user ID to assign to the LiveCycle Administrator user. This User ID is used to login to the Administrator Console.

Property	Values	Description
LCAdminPassword	String	The password to assign to the LiveCycle Administrator user. This password is used to login to the Administrator Console.
LCServerMachineAdminUser	String	The user ID of the Administrator user of the Operation System hosting LiveCycle
LCServerMachineAdminUserPasswd	String	The password of the Administrator user of the Operation System hosting LiveCycle

7.4.8 Configure Connector for IBM Content Manager

Note: *The following properties are specified in the cli_propertyFile_ecm_ibmcm_template.txt file.*

Property	Values	Description
LCHost	String	Hostname where LiveCycle Server is installed.
LCPort	Integer	Port number where LiveCycle application server is configured
LCAdminUserID	String	The user ID to assign to the LiveCycle Administrator user. This User ID is used to login to the Administrator Console.
LCAdminPassword	String	The password to assign to the LiveCycle Administrator user. This password is used to login to the Administrator Console.
jndiPortNumber	String	JNDI port corresponding to LiveCycle application server.
jboss.clientjar.location	String	The location of the jbossall-client.jar file (JBoss only)
CDVTopology.appserverrootdir	String	The root directory of the application server instance that you are configuring on a remote server (on which you plan to deploy LiveCycle)
ConfigureIBMCM	true or false	Specify true to configure Connector for IBM Content Manager
IBMCMClientPathDirectory	String	Location of IBM Content Manager client installation directory.
DataStoreName	String	Name of the DataStore of IBM Content Manager Server that you want to connect to
IBMCMUsername	String	The user name assign to the IBM Content Manager Administrator user. This User ID is used to login to the IBM Content Manager.
IBMCMPassword	String	The password to assign to the IBM Content Manager Administrator user. This password is used to login to the IBM Content Manager.
ConnectionString	String	Additional arguments used in the connection string to connect to IBM Content Manager(Optional).

7.4.9 Configure Connector for IBM FileNet

Note: *The following properties are specified in the cli_propertyFile_ecm_filenet_template.txt file.*

Property	Values	Description
LCHost	String	Hostname where LiveCycle Server is installed.
LCPort	Integer	Port number where LiveCycle application server is configured
LCAdminUserID	String	The user ID to assign to the LiveCycle Administrator user. This User ID is used to login to the Administrator Console.
LCAdminPassword	String	The password to assign to the LiveCycle Administrator user. This password is used to login to the Administrator Console.
jndiPortNumber	String	JNDI port corresponding to LiveCycle application server.
jboss.clientjar.location	String	The location of the jbossall-client.jar file (JBoss only)
CDVTopology.appserverrootdir	String	The root directory of the application server instance that you are configuring on a remote server (on which you plan to deploy LiveCycle)
ConfigureFilenetCE	true or false	Specify true to configure Connector for IBM Filenet
FilenetConfigureCEVersion	String	The FileNet client version to configure. Specify FilenetClientVersion4.0 or FilenetClientVersion4.5
FilenetCEClientPathDirectory	String	Location of IBM Filenet Content Manager client installation directory.
ContentEngineName	String	Hostname or IP address of the machine where IBM Filenet Content Engine is installed
ContentEnginePort	String	The port number used by IBM Filenet Content Engine
CredentialProtectionSchema	CLEAR or SYMMETRIC	Specify the level of protection.
EncryptionFileLocation	String	Location of the encryption file. This is required only when you select SYMMETRIC option for CredentialProtectionSchema attribute. Use a forward slash (/) or double backward slashes (\\) as a path seperator.
DefaultObjectStore	String	Name of the ObjectStore for the Connector for IBM Filenet Content Server.
FilenetContentEngineUsername	String	The user ID to connect to the IBM FileNet Content server. The user ID with read-access privileges would be allowed to connect to the Default object Store.
FilenetContentEnginePassword	String	The password to assigned to the IBM FileNet user. This password is used to connect to Default object Store.

Property	Values	Description
ConfigureFilenetPE	true or false	Specify true to configure Connector for IBM FileNet
FilenetPEClientPathDirectory	String	Location of IBM FIleNet client installation directory
FilenetProcessEngineHostname	String	Hostname or IP address of the process router.
FilenetProcessEnginePortNumber	Integer	Port number for IBM FileNet Content Server
FilenetPERouterURLConnectionPoint	String	Name of the process router.
FilenetProcessEngineUsername	String	The user ID to connect to the IBM FileNet Content Server
FilenetProcessEnginePassword	String	The password to connect to the IBM FileNet Content Server

7.4.10 Configure Connector for EMC Documentum

Note: *The following properties are specified in the cli_propertyFile_ecm_documentum_template.txt file.*

Property	Values	Description
LCHost	String	Hostname where LiveCycle Server is installed.
LCPort	Integer	Port number where LiveCycle application server is configured
LCAdminUserID	String	The user ID to assign to the LiveCycle Administrator user. This User ID is used to login to the Administrator Console.
LCAdminPassword	String	The password to assign to the LiveCycle Administrator user. This password is used to login to the Administrator Console.
jndiPortNumber	String	JNDI port corresponding to LiveCycle application server.
jboss.clientjar.location	String	The location of the jbossall-client.jar file (JBoss only)
CDVTopology.appserverrootdir	String	The root directory of the application server instance that you are configuring on a remote server (on which you plan to deploy LiveCycle)
ConfigureDocumentum	true or false	Specify true to configure Connector for EMC Documentum
DocumentumClientVersion	String	The EMC Documentum client version to configure. Specify DocumentumClientVersion6.0 or DocumentumClientVersion6.0
DocumentumClientPathDirectory	String	Location of EMC Docum,entum client installation directory
ConnectionBrokerHostName	String	Hostname or IP address of the EMC Documentum Content Server.
ConnectionBrokerPortNumber	String	Port number for EMC Documentum Content Server

Property	Values	Description
DocumentumUsername	String	The user ID to connect to the EMC Documentum Content Server.
DocumentumPassword	String	The password ID to connect to the EMC Documentum Content Server.
DocumentumDefaultRepositoryName	String	Name of the default repository of MC Documentum Content Server

7.4.11 Configure Connector for Microsoft SharePoint

Note: *The following properties are specified in the cli_propertyFile_ecm_sharepoint_template.txt file.*

Property	Values	Description
LCHost	String	Hostname where LiveCycle Server is installed.
LCPort	Integer	Port number where LiveCycle application server is configured
LCAdminUserID	String	The user ID to assign to the LiveCycle Administrator user. This User ID is used to login to the Administrator Console.
LCAdminPassword	String	The password to assign to the LiveCycle Administrator user. This password is used to login to the Administrator Console.
jndiPortNumber	String	JNDI port corresponding to LiveCycle application server.
jboss.clientjar.location	String	The location of the jbossall-client.jar file (JBoss only)
CDVTopology.appserverrootdir	String	The root directory of the application server instance that you are configuring on a remote server (on which you plan to deploy LiveCycle)
ConfigureSharePoint	true or false	Specify true to configure Connector for Microsoft SharePoint
SharePointServerAddress	String	Hostname or IP address of the Sharepoint Server
SharePointUsername	String	The user ID to connect to the Sharepoint Server
SharePointPassword	String	The password to connect to the Sharepoint Server
SharePointDomain	String	The Domain Name of the Sharepoint Server
SharePointVersion	String	The version of the Microsoft Sharepo installed for LiveCycle.
ConnectionString	String	Additional arguments used in the connection string to connect to the Sharepoint Server(optional

7.4.12 Command Line Interface Usage

Once you have configured your property file, you must navigate to the *[LiveCycle root]*/configurationManager/bin folder.

To view a complete description of the Configuration Manager CLI commands, type: `ConfigurationManagerCLI help <command name>`.

Configure LiveCycle CLI usage

The Configure LiveCycle operation requires the following syntax:

configureLiveCycle -f <*propertyFile*>

Where:

- -f <*propertyFile*>: A property file containing the required arguments. For more information on creating a property file, see Command Line Interface property file.

Extract CRX Bundles in LiveCycle

The Configure CRX Repository requires the following syntax:

extractCRXInstallationContent [- crx_password<password>] -f <*propertyFile*>

Where:

- -f <*propertyFile*>: A property file containing the required arguments. For more information on creating a property file, see Command Line Interface property file.

Configure Correspondence Management

The Configure CRX Repository requires the following syntax:

configureCRXRepository -f <*propertyFile*>

Where:

- -f <*propertyFile*>: A property file containing the required arguments. For more information on creating a property file, see Command Line Interface property file.

7.4.12.1 Configure LiveCycle CLI Usage

The Configure LiveCycle operation requires the following syntax:

configureLiveCycle -f <*propertyFile*>

Where:

- -f <*propertyFile*>: A property file containing the required arguments. For more information on creating a property file, see Command Line Interface property file.

7.4.12.2 Configure Content Services (deprecated) CLI Usage

The Configure Content Services operation requires the following syntax:

configureContentServices -f <propertyFile>

where:

- -f <propertyFile>: A property file containing the required arguments. For more information on creating a property file, see Command Line Interface property file.

  Note: *The Content Services is deprecated and does not appear in the list of selected components. To include Content Services in the list of selected components remove or comment out* `excludedSolutionComponents=ALC-LFS-ContentServices` *property from cli_propertyFile_template.txt file.*

7.4.12.3 Configure the Application Server CLI Usage

The Configure Application Server operation requires the following syntax:

configureApplicationServer *-targetServer_AdminPassword <password>* -f *<propertyFile>* [-skip *<configurationsToSkipList>*]

Where:

- -targetServer_AdminPassword <password>: Allows you to set the Administrator password on the command line. If this argument is present, it will override the targetServer_AdminPassword property in the property file.
- -f *<propertyFile>*: A property file containing the required arguments. For more information on creating a property file, see Command Line Interface property file.
- -skip *<configurationsToSkipList>*: This is an optional parameter which allows you to list the application server components you do not want to configure. Specify the excluded components in a comma separated list. Valid options are Datasource or Core.

7.4.12.4 (WebSphere and Weblogic Only) Deploy LiveCycle CLI Usage

The Deploy LiveCycle operation requires the following syntax:

deployLiveCycle -f *<propertyFile>*

Where:

- -f *<propertyFile>*: A property file containing the required arguments. For more information on creating a property file, see Command Line Interface property file.

  Important: *You must restart your application server after you complete Deploy LiveCycle operation.*

7.4.12.5 Initialize LiveCycle CLI Usage

The initialize LiveCycle operation requires the following syntax:

initializeLiveCycle -f *<propertyFile>*

Where:

- -f *<propertyFile>*: A property file containing the required arguments. For more information on creating a property file, see Command Line Interface property file.

7.4.12.6 Deploy LiveCycle Components CLI Usage

The Deploy LiveCycle Components operation requires the following syntax:

deployLiveCycleComponents -f *<propertyFile> -LCAdminPassword <password>*

Where:

- -f *<propertyFile>*: A property file containing the required arguments. For more information on creating a property file, see Command Line Interface property file.
- -LCAdminPassword <password>: Allows you to set the Admin password on the command line. If this argument is present, it will override the targetServer.adminPassword property in the property file.

7.4.12.7 Validate Application Server Topology CLI Usage

The Validate Application Server Topology operation is optional and requires the following syntax:

validateApplicationServerTopology -f *<propertyFile> -targetServer_AdminPassword <password>*

Where:

- -f <*propertyFile*>: A property file containing the required arguments. For more information on creating a property file, see Command Line Interface property file.
- -targetServer_AdminPassword <password>: Allows you to set the Admin password on the command line. If this argument is present, it will override the targetServer.adminPassword property in the property file.

7.4.12.8 Validate database connectivity CLI Usage

The validate Database Connectivity operation is optional and requires the following syntax:

validateDBConnectivity -f <*propertyFile*> *-datasource_dbPasssword* <*password*>

Where:

- -f <*propertyFile*>: A property file containing the required arguments. For more information on creating a property file, see Command Line Interface property file.
- -datasource_dbPassword <password>: Allows you to set the database user password on the command line. If this argument is present, it will override the datasource.dbPassword property in the property file.

7.4.12.9 Validate Application Server Configurations CLI Usage

The Validate Application Server Configurations operation is optional and requires the following syntax:

validateApplicationServerConfigurations -f <*propertyFile*> *-targetServer_AdminPassword* <*password*>

Where:

- -f <*propertyFile*>: A property file containing the required arguments. For more information on creating a property file, see Command Line Interface property file.
- -targetServer_AdminPassword <password>: Allows you to set the Admin password on the command line. If this argument is present, it will override the targetServer.adminPassword property in the property file.

7.4.12.10 Validate LiveCycle Server CLI Usage

The Validate LiveCycle Server operation is optional and requires the following syntax:

validateLiveCycleServer -f <*propertyFile*> *-LCAdminPassword* <*password*>

Where:

- -f <*propertyFile*>: A property file containing the required arguments. For more information on creating a property file, see Command Line Interface property file.
- -LCAdminPassword <password>: Allows you to set the Admin password on the command line. If this argument is present, it will override the targetServer.adminPassword property in the property file.

7.4.12.11 Validate LiveCycle Component Deployment CLI Usage

The Validate LiveCycle Component Deployment operation is optional and requires the following syntax:

validateLiveCycleComponentDeployment -f <*propertyFile*> *-LCAdminPassword* <*password*>

Where:

- -f <*propertyFile*>: A property file containing the required arguments. For more information on creating a property file, see Command Line Interface property file.

- -LCAdminPassword <password>: Allows you to set the Admin password on the command line. If this argument is present, it will override the targetServer.adminPassword property in the property file.

7.4.12.12 Check system readiness for PDF Generator

The Checking system readiness for PDF Generator operation requires the following syntax:

pdfg-checkSystemReadiness

7.4.12.13 Adding administrator user for PDF Generator

The adding administrator user for PDF Generator operation requires the following syntax:

pdfg-addAdminUser -f <*propertyFile*>

Where:

- -f <*propertyFile*>: A property file containing the required arguments. For more information on creating a property file, see Command Line Interface property file.

7.4.12.14 Configure Connector for IBM Content Manager

The Configure Connector for IBM Content Manager operation is optional and requires the following syntax:

IBMCM-configurationCLI -f <propertyFile>

Where:

- -f <*propertyFile*>: A property file containing the required arguments. For more information on creating a property file, see Command Line Interface property file.

  Important: *Modify the <propertyFile> called cli_propertyFile_ecm_ibmcm_template.txt located in the [LiveCycle root]\configurationManager\bin\ directory.*

Perform the following steps manually to complete the configuration for Connector for IBM Content Manager.

1. Copy the *adobe-component-ext.properties* file from *[LiveCycle root]*/configurationManager/configure-ecm/websphere to the following [appserver root]/profiles/[profile_name] directory.
2. Restart the Application Server.
3. Start the following services from LiveCycle Administration Console
   - IBMCMAuthProviderService
   - IBMCMConnectorService

7.4.12.15 Configure Connector for IBM FileNet

The Configure Connector for IBM FileNet operation is optional and requires the following syntax:

filenet-configurationCLI -f <propertyFile>

Where:

- -f <*propertyFile*>: A property file containing the required arguments. For more information on creating a property file, see Command Line Interface property file.

  Important: *Modify the <propertyFile> called cli_propertyFile_ecm_filenet_template.txt located in the [LiveCycle root]\configurationManager\bin\ directory.*

Perform the following steps manually to complete the configuration for Connector for IBM Content Manager.

1 Copy the *adobe-component-ext.properties* file from *[LiveCycle root]*/configurationManager/configure-ecm/websphere to the following [appserver root]/profiles/[profile_name] directory.

2 Locate the wsjass.conf file in the [appserver root]/profiles/[profile name]/properties directory and add to it contents of wsjass.conf file available in [LiveCycle root]/configurationManager/configure-ecm/websphere directory.

3 (**Only for FileNet 4.x**) Add the Java option -Dwasp.location=[FileNetClient root]/wsi to the Application Server startup options.

4 Restart the Application Server.

5 Start the following services from LiveCycle Administration Console

- IBMFileNetAuthProviderService
- IBMFileNetContentRepositoryConnector
- IBMFileNetRepositoryProvider
- IBMFileNetProcessEngineConnector(If configured)

7.4.12.16 Configure Connector for EMC Documentum

The Configure Connector for EMC Documentum operation is optional and requires the following syntax:

documentum-configurationCLI -f <propertyFile>

Where:

- -f <*propertyFile*>: A property file containing the required arguments. For more information on creating a property file, see Command Line Interface property file.

  Important: *Modify the <propertyFile> called cli_propertyFile_ecm_documentum_template.txt located in the [LiveCycle root]\configurationManager\bin\ directory.*

Perform the following steps manually to complete the configuration for Connector for EMC Documentum.

1 Copy the *adobe-component-ext.properties* file from *[LiveCycle root]*/configurationManager/configure-ecm/websphere to the following [appserver root]/profiles/[profile_name] directory.

2 Restart the Application Server.

3 Start the following services from LiveCycle Administration Console

- EMCDocumentumAuthProviderService
- EMCDocumentumRepositoryProvider
- EMCDocumentumContentRepositoryConnector

7.4.12.17 Configure Connector for Microsoft SharePoint

The Configure Connector for Microsoft SharePoint operation is optional and requires the following syntax:

sharepoint-configurationCLI -f <propertyFile>

Where:

- -f <*propertyFile*>: A property file containing the required arguments. For more information on creating a property file, see Command Line Interface property file.

Important: *Modify the <propertyFile> called cli_propertyFile_ecm_sharepoint_template.txt located in the [LiveCycle root]\configurationManager\bin\ directory.*

7.5 Examples Usage

From the C:\Adobe\Adobe LiveCycle ES3\configurationManager\bin, type:

```
ConfigurationManagerCLI configureLiveCycle -f cli_propertyFile.txt
```

Where *cli_propertyFile.txt* is the name of the property file you created.

7.6 Configuration Manager CLI Logs

If an error occurs, you can review the CLI logs located here in the *[LiveCycle root]*\configurationManager\log folder. The log file generated will have a naming convention such as lcmCLI.0.log where the number in the filename (0) will increment when the log files are rolled over.

7.7 Next steps

If you used Configuration Manager CLI to configure and deploy LiveCycle, you can now do the following tasks:

- Verify the deployment. (See "5.1.6 Verify the deployment" on page 23.)
- Access Administration Console. (See "5.1.6.1 Accessing Administration Console" on page 23.)
- Configure LiveCycle modules to access LDAP. (See "5.5 Configuring LDAP access" on page 35.)

Chapter 8: Appendix - Configuring the Connector for Microsoft SharePoint on the SharePoint Server

The Connector for Microsoft SharePoint allows you to integrate workflows from both the LiveCycle and the SharePoint development perspectives. This module includes a LiveCycle service and a sample SharePoint feature that facilitates end-to-end connection between the two systems.

The service provides search, read, write, delete, update, and check in/out capabilities with a SharePoint repository. SharePoint users can initiate LiveCycle processes such as an approval process from within SharePoint, convert documents to Adobe PDF, and manage the rights on a file in PDF or native formats. In addition, from within the SharePoint context, you can automate running LiveCycle processes from within SharePoint workflows.

8.1 Installation and configuration

After you configured the LiveCycle installation, carry out the following steps to configure the connector on the SharePoint server.

8.1.1 System requirements for the SharePoint server

Ensure that your server that runs the SharePoint site meets the following requirements:

- Microsoft SharePoint Server 2007 or 2010
- Microsoft .NET Framework 3.5

8.1.2 Installation considerations

Keep in mind the following before you plan your installation:

- If you are using Microsoft SharePoint Server 2007, the installation process stops and restarts the Windows IIS Server when installing Connector for Microsoft SharePoint on the SharePoint server.
- Before you run the installation, ensure that none of the other sites or web applications is using services on the IIS Server. Consult your IIS Administrator before you proceed with the installation.
- (For Sharepoint server 2010 Farmed installation) The SharePoint administration service is running on the centeral adminstration server of sharepoint server Farm. (For Sharepoint server 2010 Standalone installation) The SharePoint administration service is stopped on the sharepoint server.

8.2 Installation and configuration on the SharePoint server 2007

8.2.1 Extract the web part installer

When you installed the LiveCycle server, the web part installer for SharePoint server named `Adobe LiveCycle Connector-2007.zip` was created in the *[LiveCycle root]*\plugins\sharepoint folder. Copy this file to a folder on the Windows server that hosts SharePoint, and then extract the files.

8.2.2 Edit the batch file

The folder extracted from the web part installer contains a batch file named `Install.bat`. You must update this batch file with the file and folder paths relevant to your SharePoint server.

1 Open the `Install.bat` file in a text editor.

2 Locate the following lines in the file and change them:

```
@SET GACUTILEXE="C:\Program Files\Microsoft SDKs\Windows\v6.0A\Bin\ gacutil.exe"
@SET TEMPLATEDIR="c:\Program Files\Common Files\Microsoft Shared\ web server
extensions\12\TEMPLATE"
@SET WEBAPPDIR="C:\Inetpub\wwwroot\wss\VirtualDirectories\<port>"
@SET SITEURL="http://<SharePoint Server>:<port>/SiteDirectory/<site name>/"
@SET STSADM="C:\Program Files\Common Files\Microsoft Shared\ web server
extensions\12\bin\stsadm.exe"
```

- *GACUTILEXE:* Change the path to the folder where the GAC utility is located.
- *TEMPLATEDIR:* Change the template directory path of the IIS Server on your system.
- *WEBAPPDIR:* Change the path of the WEBAPPDIR of the IIS Server on your system if it differs from the default value included in the batch file.
- *SITEURL:* Change the URL of the SharePoint site on your system on which you want to activate the LiveCycle feature.
- *STSADM*: Change the path to the folder where the STSADM utility is located.

Note: *The LiveCycle feature is installed on a web application on the SharePoint server. The LiveCycle feature will be activated only on the site that you have provided the site URL for. You can activate the LiveCycle feature for other SharePoint sites later from the Site Settings page of those sites. See SharePoint Help for more information.*

3 Save and close the file.

8.2.3 Run the batch file

Navigate to the folder where the edited batch file is present, and then run the `Install.bat` file.

Keep in mind that the SharePoint site will be unavailable for other services during the time the batch file runs.

When you run the batch file, the following occur:

- Registers the `AdobeLiveCycleConnector.dll` and `AdobeLiveCycleWorkflow.dll` files. These dynamic libraries integrate the LiveCycle features with the SharePoint server.
- Uninstalls any previously installed SharePoint connector.
- Copies the template files to the *WSS \TEMPLATE* directory.

- Copies the resource files to *WEBAPPDIR\App_GlobalResources* directory.
- Installs and activates the LiveCycle features with web server extensions.
- Closes the installer and returns the prompt.

8.2.4 Copy the Service Model configuration to the IIS Web Application folder

You must copy the SharePoint Connector-specific configuration settings to the web application home directory of the IIS Server. This adds the LiveCycle feature to the web application.

1. Navigate to the *sharepoint-webpart* folder that was created when you extracted the LiveCycle feature installer.
2. Open the `AdobeLiveCycleConnector.dll.config` file in a text editor.
3. Copy the contents between `<system.serviceModel>` and `</system.serviceModel>` tags (including both the starting and ending tags), and then close the file.
4. Navigate to the web application home directory on the IIS Service on your computer that you specified in the batch file. Typically, the folder is `C:\Inetpub\wwwroot\wss\VirtualDirectories\<port>`.
5. Create a backup copy of the `web.config` file and then open the original file in a text editor.
6. Append the contents that you copied before the `</configuration>` tag.
7. Save and close the file.

8.3 Installation and configuration on the SharePoint server 2010

8.3.1 Edit Environment Variables

Append path of stsadm.exe to PATH environment variable. The default path of stsadm.exe is `C:\Program Files\Common Files\MicrosoftShared\Web Server Extensions\14\BIN`.

8.3.2 Extract the web part installer

When you installed the LiveCycle server, the web part installer for SharePoint server named `Adobe LiveCycle Connector-2010.zip` was created in the *[LiveCycle root]*\plugins\sharepoint folder. Copy this file to a folder on the Windows server that hosts SharePoint, and then extract the files.

8.3.3 Install and Activate Connector

1. (Optional)Select options for SharePoint Server Context menu before installing connector. See "8.3.4 Enable/Disable features" on page 82 for detailed steps.
2. Run following commands in the listed order to install Connector for SharePoint Server. Ensure that you run `stsadm - o enumsolutions` after each command to verify that the changes have been the propagated to all the servers. Run `stsadm - o enumsolutions` repeatedly, until the resultant xml contains `<state>pending</state>` tag.

```
install.bat -create
install.bat -add
install.bat -deploy
install.bat -install
```

3 Activate the connector from SharePoint Web Application. To activate the connector:

a Open SharePoint Web Application in a browser.

b Click **Site Settings**.

c Click **Site Collection Features.**

d Click Activate for **Adobe LiveCycle Connector** and **Adobe LiveCycle Workflow** feature.

8.3.4 Enable/Disable features

You can change options of context menu and disable other features on SharePoint Sites. For the Sharepoint Connector installed with default set of options, following options are enabled on SharePoint Server:

- Convert to Adobe PDF
- Enable for commenting by adobe reader.
- Secure with Adobe Policy.
- Invoke Adobe LiveCycle Processes

You may make changes to `Elements.xml` file to change above options and to enable or disable another features. To make changes to `Elements.xml`

1 Navigate to the folder containing extracted contents of `Adobe LiveCycle Connector-2010.zip` file.

2 Take backup of Elements.xmlfile. The default location of `Elements.xml` is `< Directory containing Extracted Adobe LiveCycle Connector-2010.zip File >\TEMPLATE\FEATURES\LiveCycle\Elements.xml`

3 Open the `Elements.xml` file in a text editor.

4 Delete or comment the CustomAction elements of features that you want to disable .

Docuent Server feature	CustomAction element ID	Description
Reader Extensions	LiveCycle.ApplyReaderExtensions	Enables Reader Extensions on PDF documents.
Rights Management	LiveCycle.RightsManagement.ApplyPolicyToPdf	Rights-protect PDF documents
	LiveCycle.RightsManagement.ApplyPolicyToDoc	Rights-protect Microsoft Word documents
	LiveCycle.RightsManagement.ApplyPolicyToXls	Rights-protect Microsoft Excel documents
	LiveCycle.RightsManagement.ApplyPolicyToPpt	Rights-protect Microsoft PowerPoint doments
	LiveCycle.RightsManagement.ApplyPolicyToDocx	Rights-protect Microsoft Word documents
	LiveCycle.RightsManagement.ApplyPolicyToXlsx	Rights-protect Microsoft Excel documents
	LiveCycle.RightsManagement.ApplyPolicyToPptx	Rights-protect Microsoft PowerPoint doments
	LiveCycle.RightsManagement.ApplyPolicyToDwg	Rights-protect Microsoft Excel documents

	LiveCycle.RightsManagement.ApplyPolicyToDxf	Rights-protect AutoCAD documents
	LiveCycle.RightsManagement.ApplyPolicyToDwf	Rights-protect AutoCAD documents
PDF Generator	LiveCycle.GeneratePDFFromPdf	Convert a PDF created from an image to a text-based PDF if Standard OCR was used as the file type in Site Settings.
	LiveCycle.GeneratePDFFromDoc	Generate PDF from Microsoft Word documents
	LiveCycle.GeneratePDFFromPs	Generate PDF from PostScript files
	LiveCycle.GeneratePDFFromEps	Generate PDF from EPS documents
	LiveCycle.GeneratePDFFromPrn	Generate PDF from PRN files
	LiveCycle.GeneratePDFFromDocx	Generate PDF from Microsoft Word 2007 documents
	LiveCycle.GeneratePDFFromPpt	Generate PDF from Microsoft PowerPoint documents
	LiveCycle.GeneratePDFFromPptx	Generate PDF from Microsoft PowerPoint documents
	LiveCycle.GeneratePDFFromXls	Generate PDF from Microsoft Excel documents
	LiveCycle.GeneratePDFFromXlsx	Generate PDF from Microsoft Excel documents
	LiveCycle.GeneratePDFFromBmp	Generate PDF from BMP files
	LiveCycle.GeneratePDFFromGif	Generate PDF from GIF files
	LiveCycle.GeneratePDFFromJpeg	Generate PDF from JPEG images
	LiveCycle.GeneratePDFFromJpg	Generate PDF from JPG images
	LiveCycle.GeneratePDFFromTiff	Generate PDF from TIFF images
	LiveCycle.GeneratePDFFromTif	Generate PDF from TIF images
	LiveCycle.GeneratePDFFromPng	Generate PDF from PNG images
	LiveCycle.GeneratePDFFromJpf	Generate PDF from JPF images
	LiveCycle.GeneratePDFFromJpx	Generate PDF from JPX images
	LiveCycle.GeneratePDFFromJp2	Generate PDF from JPEG 2000 images
	LiveCycle.GeneratePDFFromJ2k	Generate PDF from JPEG 2000 images
	LiveCycle.GeneratePDFFromJ2c	Generate PDF from JPEG 2000 images
	LiveCycle.GeneratePDFFromJpc	Generate PDF from JPEG 2000 images
	LiveCycle.GeneratePDFFromHtm	Generate PDF from HTM documents
	LiveCycle.GeneratePDFFromHtml	Generate PDF from HTML documents
	LiveCycle.GeneratePDFFromSwf	Generate PDF from SWF files
	LiveCycle.GeneratePDFFromFlv	Generate PDF from Flash video files

	LiveCycle.GeneratePDFFromTxt	Generate PDF from text files
	LiveCycle.GeneratePDFFromRtf	Generate PDF from Rich Text Format files
	LiveCycle.GeneratePDFFromMpp	Generate PDF from Microsoft Project files
	LiveCycle.GeneratePDFFromPub	Generate PDF from Microsoft Publisher documents
Invoke LiveCycle process	LiveCycle.InvokeGenericLiveCycleProcessOnALL	Invoke LiveCycle Process
Adobe Forms Library	AdobeFormsLibrary	Set up SharePoint as the repository for forms data.Remove the CustomAction, ListTemplate and ListInstance elements.
LiveCycle User Tasks	LiveCycleUserTasks	Lists the user tasks.Remove the ListTemplate element.
LiveCycle Group Tasks	LiveCycleGroupTasks	Lists the group tasks.Remove the ListTemplate element.

5 Save and close `Elements.xml`

8.3.5 Uninstalling Connector for Microsoft SharePoint Server 2010

1 Deactivate SharePoint Connector from Shrepoint Web Application. To deactivate SharePoint Connector

a Open SharePoint Web Application in a browser.

b Click **Site Settings**.

c Click **Site Collection Features.**

d Click Deactivate for **Adobe LiveCycle Connector** and **Adobe LiveCycle Workflow** Features

2 On the command prompt, run the following commands in the given order. Ensure that you run `stsadm - o enumsolutions` after each command to verify that the changes have been the propagated to all the servers. Run `stsadm - o enumsolutions` repeatedly, until the resultant xml contains `<state>pending</state>` tag.

```
Install.bat -uninstall
Install.bat -retract
Install.bat -delete
```