Upgrading to LiveCycle® ES2 from 8.x for WebSphere®
Upgrading to Adobe® LiveCycle® ES2 from 8.x for WebSphere®

December 05, 2011

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Adobe Systems Incorporated, 345 Park Avenue, San Jose, California 95110, USA
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About This Document

This document is one of several resources that are available to help you learn about upgrading from Adobe LiveCycle ES (Enterprise Suite, version 8.x) to LiveCycle ES2, version 9.

What’s in this document?

This document provides information about how to upgrade the following modules (known as solution components in LiveCycle ES) on Microsoft® Windows®, and Linux®, IBM® AIX®, and Sun™ Solaris™, and how to deploy the modules to IBM WebSphere® Application Server:

- Adobe LiveCycle Barcoded Forms ES2
- Adobe LiveCycle Business Activity Monitoring ES2
- Adobe LiveCycle ES2 Connector for EMC Documentum
- Adobe LiveCycle ES2 Connector for IBM Content Manager
- Adobe LiveCycle ES2 Connector for IBM FileNet
- Adobe LiveCycle Content Services ES2
- Adobe LiveCycle Digital Signatures ES2
- Adobe LiveCycle Forms ES2
- Adobe LiveCycle Foundation
- Adobe LiveCycle Output ES2
- Adobe LiveCycle PDF Generator ES2
- Adobe LiveCycle PDF Generator 3D ES2
- Adobe LiveCycle Process Management ES2
- Adobe LiveCycle Reader Extensions ES2
- Adobe LiveCycle Rights Management ES2

You do not need to refer to the Installing and Deploying LiveCycle ES2 documents if you are only upgrading to LiveCycle ES2. This document, combined with Preparing to Upgrade to LiveCycle ES2 from 8.x, Preparing to Install LiveCycle ES2 (single server), and Preparing to Install LiveCycle ES2 (Server Cluster) contains all the information you need to upgrade LiveCycle ES (8.x) to LiveCycle ES2.

Note: If you are licensing a LiveCycle ES2 module that you did not have in LiveCycle ES (8.x), refer to the appropriate configuration sections for the new modules in the Preparing to Install LiveCycle ES2 guide and the Installing and Deploying LiveCycle ES2 guide for your application server.

Who should read this document?

This document provides information for administrators or developers who are responsible for upgrading LiveCycle ES (8.x) components. The information provided is based on the assumption that anyone reading this document is familiar with J2EE application servers; Linux, Microsoft Windows, AIX, or Solaris operating systems; Oracle®, IBM DB2®, or SQL Server database servers; and web environments.
Conventions used in this document

This document uses the following naming conventions for common file paths.

<table>
<thead>
<tr>
<th>Name</th>
<th>Default value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>[LiveCycleES2 root]</td>
<td>Windows: C:\Adobe\Adobe LiveCycle ES2\</td>
<td>The installation directory that is used for all LiveCycle ES2 modules. This directory contains subdirectories for LiveCycle Configuration Manager, LiveCycle ES2 SDK, and each LiveCycle ES2 module installed (along with the product documentation). This directory also includes directories that relate to third-party technologies.</td>
</tr>
<tr>
<td></td>
<td>Linux and UNIX: /opt/adobe/adobe_livecycle_es2/</td>
<td></td>
</tr>
<tr>
<td>[appserver root]</td>
<td>WebSphere on Windows: C:\Program Files\IBM\WebSphere\AppServer\</td>
<td>The home directory of the application server that runs the LiveCycle ES2 services.</td>
</tr>
<tr>
<td></td>
<td>WebSphere on Linux and Solaris: /opt/IBM/WebSphere/AppServer\</td>
<td></td>
</tr>
<tr>
<td></td>
<td>WebSphere on AIX: /usr/IBM/WebSphere/AppServer/</td>
<td></td>
</tr>
<tr>
<td>[server name]</td>
<td>server1 for WebSphere</td>
<td>The name of the server that is configured on your application server.</td>
</tr>
<tr>
<td>[dbserver root]</td>
<td>The location where the LiveCycle ES2 database server is installed.</td>
<td>Depends on the database type and your specification during installation.</td>
</tr>
</tbody>
</table>

Most of the information about directory locations in this document is cross-platform (all file names and paths are case-sensitive on Linux and UNIX®). Platform-specific information is indicated as required.

Additional information

The resources in this table can help you learn more about LiveCycle ES2.

<table>
<thead>
<tr>
<th>For information about</th>
<th>See</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparing to Upgrade to LiveCycle ES2 from LiveCycle ES (version 8.0) and Update 1 (version 8.2).</td>
<td>[Preparing to Upgrade to LiveCycle ES2 from 8.x](Preparing to Upgrade to LiveCycle ES2 from 8.x)</td>
</tr>
<tr>
<td>General information about LiveCycle ES2 and the modules</td>
<td>[LiveCycle ES2 Overview](LiveCycle ES2 Overview)</td>
</tr>
</tbody>
</table>
### For information about

| What's new in the Adobe LiveCycle ES2 (Enterprise Suite) release | What's New |
| LiveCycle ES2 terminology | LiveCycle ES2 Glossary |
| Other services and products that integrate with LiveCycle ES2 | Adobe Developer Center |
| LiveCycle ES2 modules | LiveCycle ES2 (Enterprise Suite) |
| Installing Adobe LiveCycle Workbench ES2 | Installing Your Development Environment |
| Performing administrative tasks for LiveCycle ES2 | LiveCycle ES2 Administration Help |
| All the documentation available for LiveCycle ES2 | LiveCycle ES2 Documentation |
| LiveCycle ES2 release information and last-minute changes that occur to the product | LiveCycle ES2 Release Notes |
| Patch updates, technical notes, and additional information about this product version | LiveCycle Technical Support |
Introduction

Upgrading to LiveCycle ES2 from LiveCycle ES requires you to install the LiveCycle ES2 files to your hard drive, and then configure, upgrade, and deploy LiveCycle ES2 to your application server by using the LiveCycle Configuration Manager tool.

This section provides information to help you understand the LiveCycle ES2 upgrade process, including how it fits in with the installing, configuring, and deploying process.

1.1 About installing, configuring, and deploying LiveCycle ES2

Most of the work involved in upgrading from LiveCycle ES, version 8.x to LiveCycle ES2 is done by LiveCycle Configuration Manager. The tasks that are specific to upgrading are integrated seamlessly into the configuration and deployment process.

Installing, configuring, and deploying LiveCycle ES2 involves the following processes:

**Installing:** You install LiveCycle ES2 by running the installation program. Installing LiveCycle ES2 places all the required files onto your computer, within one installation directory structure. The default installation directory is C:\Adobe\Adobe LiveCycle ES2 (Windows) or /opt/adobe/adobe_livecycle_es2 (Linux or UNIX); however, you can install the files to a different directory. In this document, the default installation directory is referred to as \[LiveCycleES2 root\]. (See “Installing the LiveCycle ES2 Modules” on page 12.)

**Configuring and assembling:** Configuring LiveCycle ES2 modifies a variety of settings that determine how LiveCycle ES2 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 LiveCycle Configuration Manager. (See “Configuring LiveCycle ES2 for Deployment” on page 18.) You can configure and assemble multiple LiveCycle ES2 modules at the same time.

**Configuring the application server:** You can choose to let LiveCycle 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 ES2 is installed, such as configuring Java™ virtual machine (JVM™) arguments, configuring the data source connections, and setting some time-out values. You can choose to perform these tasks manually; the instructions are provided in this document in “Configuring LiveCycle ES2 for Deployment” on page 18.

**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 ES2 solution. If you configured and assembled multiple modules, the deployable components are packaged within the deployable EAR files. Components and LiveCycle ES2 archive files (LCAs) are packaged as JAR files. LiveCycle Configuration Manager automatically deploys the EAR files and components and archive files to the application server.

**Initializing the LiveCycle ES2 database:** Initializing the database creates tables for use with User Management and other components. LiveCycle Configuration Manager initializes the LiveCycle ES2 database after the deployment process. (See “Configuring LiveCycle ES2 for Deployment” on page 18.)

**Note:** You must initialize the LiveCycle ES (8.X) database for use with LiveCycle ES2. This step does not harm existing data in any way.
1.2 About upgrading

When you choose the upgrade option in LiveCycle Configuration Manager, LiveCycle Configuration Manager performs upgrading tasks such as migrating essential data from the LiveCycle ES (8.x) configuration, and migrating security credentials. The upgrade process also provides backward-compatibility support for the upgraded version of LiveCycle ES (8.x). You are prompted to provide information about your LiveCycle ES (8.x) system as you proceed.

1.2.1 How the LiveCycle upgrade works

Upgrading to LiveCycle ES2 from modules of LiveCycle ES (8.x) involves these tasks:

1. Preparing your environment for upgrade.
2. Installing LiveCycle ES2 product files.
3. Running LiveCycle Configuration Manager to initiate the configuration, upgrading, and deployment process. The next steps (below) are included in this process.
4. (Optional) Applying a compatibility layer to the LiveCycle ES2 EAR files. The compatibility layer comprises a set of deprecated Enterprise JavaBeans™ (EJBs), classes, servlets, and CORBA APIs, which support custom applications that were developed using LiveCycle 7.x and enable these legacy applications to continue to work with LiveCycle ES2.
5. Migrating essential LiveCycle ES (8.x) data.

1.2.2 Post-deployment upgrade tasks

Some manual steps are required after you complete the upgrade and deployment process to ensure that LiveCycle ES (8.x) properties are fully migrated to LiveCycle ES2 and that LiveCycle ES (8.x) client applications can be run in LiveCycle ES2. (See “Post-Deployment Activities” on page 36.)

1.3 Selecting tasks for configuring and deploying LiveCycle ES2

After you install LiveCycle ES2, you can run LiveCycle Configuration Manager to perform a variety of tasks. The first task you choose is to upgrade from a previous version of LiveCycle ES (8.x) to LiveCycle ES2. Then you can select the following tasks for LiveCycle Configuration Manager to perform in addition to the upgrade:

- Configure LiveCycle ES2 modules in an EAR file for deploying to the application server
- Configure application server properties to support LiveCycle ES2
- Validate application server configuration
- Deploy LiveCycle ES2 EAR files
- Initialize the LiveCycle ES2 database
- Initialize Business Activity Monitoring ES2 metadata for LiveCycle ES2 Business Activity Monitoring ES2 (if Business Activity Monitoring ES2 is installed)
- Deploy LiveCycle ES2 modules
- Validate the LiveCycle ES2 module deployment
- Migrate the essential LiveCycle ES (8.x) data to LiveCycle ES2 system
- Configure the LiveCycle ES2 Reader Extensions ES2, PDF Generator ES2, Connectors for ECM modules (if selected for configuration)
- (Optional) Import the LiveCycle ES2 Samples

1.4 Installation, configuration, upgrading, and deploying checklists

This section includes checklists that you can use to step through the installation, configuration, and upgrade process.

**Note:** You can choose to manually deploy the LiveCycle ES2 EAR files to the application server. Instructions are included in the configuration section of this document.

The following table includes the steps that are required for upgrading LiveCycle ES2 solution components. WebSphere must be installed and configured before you perform the installation.

<table>
<thead>
<tr>
<th>Task</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure that files, directories, and databases associated with LiveCycle ES are fully backed up.</td>
<td>Administering LiveCycle ES2</td>
</tr>
<tr>
<td>(LiveCycle PDF Generator ES2 upgrade only) Install Adobe Acrobat from the Acrobat media.</td>
<td>“Configuring Acrobat Professional” on page 44</td>
</tr>
<tr>
<td>Ensure that you have the required software installed and configured in the target environment. This should include installing the new application server and databases that are required for the LiveCycle ES2 deployment.</td>
<td>Preparing to Upgrade to LiveCycle ES2 from 8.x</td>
</tr>
<tr>
<td>Run the installation program to install LiveCycle ES2 on your system.</td>
<td>“Installing the LiveCycle ES2 Modules” on page 12</td>
</tr>
<tr>
<td>Run LiveCycle Configuration Manager and select your upgrade option(s). You will also select corresponding LiveCycle ES2 modules that you are upgrading to or configuring for the first time.</td>
<td>“Configuring LiveCycle ES2 for Deployment” on page 18</td>
</tr>
<tr>
<td>Select all the tasks on the Task Selection screen. This will configure and assemble the LiveCycle ES2 EAR files, configure application server settings, deploy the EAR files and other components to the application server, initialize the LiveCycle ES2 database, and verify the deployment. Various upgrade-specific tasks are included.</td>
<td>“Configuring LiveCycle ES2 for Deployment” on page 18</td>
</tr>
<tr>
<td>Access LiveCycle Administration Console and User Management.</td>
<td>“Accessing LiveCycle Administration Console” on page 37</td>
</tr>
<tr>
<td>Configure LDAP access.</td>
<td>“Configuring LiveCycle ES2 to access LDAP” on page 52</td>
</tr>
</tbody>
</table>
Installing the LiveCycle ES2 Modules

This section describes the first phase of setting up a LiveCycle ES2 system that is running the LiveCycle ES2 installation program on Windows, AIX, Linux, and Solaris. A subsequent phase will include running LiveCycle Configuration Manager to configure, upgrade, and deploy LiveCycle ES2.

Before you install the modules, ensure that your environment includes the software and hardware that is required to run LiveCycle ES2. You should also understand the installation options and have the environment prepared as required. (See Preparing to Upgrade to LiveCycle ES2 from 8.x.)

Prior to running the LiveCycle ES2 installation and configuration, you must back up your existing LiveCycle ES (8.x) database. If you are moving to a new database, prepare the database as described in thePreparing to Install LiveCycle ES2 guide and then migrate the LiveCycle ES (8.x) data to your new database using the database's backup/migration utility. If you are moving to a new operating system or application server, review the configuration information in the Preparing to Install LiveCycle ES2 guide.

This chapter covers the following topics:
- “Checking the installer” on page 12
- “Installing the product files” on page 13
- “Preparing to run LiveCycle Configuration Manager for upgrade” on page 16
- “Preparing the Connectors for ECM for upgrade” on page 16
- “Viewing the error log” on page 17

2.1 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 installer media contents to the hard disk of your computer where you are installing LiveCycle ES2, 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. Also, do not use special characters such as the number sign character (#) in the local path. If you use special characters in the local path, the appropriate license information may not be displayed during installation.

➤ 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 in Solaris.
- Windows: Use a tool such as WinMD5.
Expanding the downloaded archive files:

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

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

2.2 Installing the product files

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

- (Windows) `C:\Adobe\Adobe LiveCycle ES2\`
- (AIX, Linux, or Solaris) `/opt/adobe/adobe_livecycle_es2/`

If the LiveCycle ES2 installation path contains international characters and the UTF-8 locale is not set on the system, LiveCycle ES2 does not recognize the fonts installation directory within the internationalized `LiveCycleES2_root`. To avoid this issue, create a new fonts directory with the UTF-8 locale set and then run the LiveCycle Configuration Manager with UTF-8 locale, by adding the `-Dfile.encoding=utf8` argument in the `ConfigurationManager.bat` or `ConfigurationManager.sh` script.

Caution: When installing LiveCycle ES2, do not use double byte or extended latin characters (such as â€œééùûé) in the installation path.

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.

Caution: Ensure that the temporary directory for your operating system meets the minimum requirements as outlined in `Preparing to Upgrade to LiveCycle ES2 from 8.x`. The temporary directory is one of the following locations:

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

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

- (Solaris) `/var/tmp`
- (AIX) `/tmp`

When you are installing the modules on UNIX-like 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_es2`. 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_livecycle_es2.`

On Windows, you must have administrator privileges to install LiveCycle ES2. When you run the LiveCycle ES2 installer, you should run it as the same user that installed WebSphere Application Server.
Temporary files are generated in the system default temp directory or in the directory that you specified. In certain instances, the generated temporary files may remain after the installer is closed. You can remove these files manually.

On Windows, improve the speed of installation by disabling any on-access virus scanning software during installation.

### 2.2.1 Installing on a Windows staging platform for Linux or UNIX

LiveCycle ES2 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. For example, a locked-down environment does not have a graphical user interface installed.

When you run the installation program on Windows, you can choose a Linux or UNIX operating system as the target platform for deploying LiveCycle ES2. The installation program installs binaries for AIX, Linux, or Solaris that are also used by LiveCycle Configuration Manager when you 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 that you are targeting must be consistent with what you choose during installation and configuration, regardless of the operating system.

### 2.2.2 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 Supported Software table in *Preparing to Upgrade to LiveCycle ES2 from 8.x*.

### 2.2.3 Installing LiveCycle ES2

This section covers the initial installation of LiveCycle ES2 product files. For information about configuration and deployment, see “Configuring LiveCycle ES2 for Deployment” on page 18.

**Note:** To avoid permission issues during deployment, ensure that you run the LiveCycle ES2 installer and LiveCycle Configuration Manager as the same user who will run the application server.

➤ **Install LiveCycle ES2:**

1. Start the installation program:
   - (Windows) Do one of the following:
     - Navigate to the livecycle_server directory on the installation media or the folder in your hard disk, and launch the run_windows_installer.bat file. This batch file launches the appropriate installer (32-bit or 64-bit), depending on the Windows version.
     - Navigate to the appropriate directory on the installation media or folder on your hard disk where you copied the installer, and double-click the install.exe file.
   - (Windows 32-bit) \livecycle_server\9.0\Disk1\InstData\Windows\VM
   - (Windows 64-bit) \livecycle_server\9.0\Disk1\InstData\Windows_64bit\VM
   - (AIX, Linux, Solaris) Navigate to the appropriate directory, and from a command prompt, type ./install.bin.
   - (AIX) /livecycle_server/9.0/Disk1/InstData/AIX/VM
1. (Linux) /livecycle_server/9.0/Disk1/InstData/Linux/NoVM
   (Solaris) /livecycle_server/9.0/Disk1/InstData/Solaris/NoVM

   **Note:** If you are installing on UNIX or Linux and you are not installing directly from a release DVD, set executable permissions on the installation file.

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 (8.x) installed on the computer where you are running the installer, the Preparation for Upgrade screen appears. You can choose to prepare for an upgrade to LiveCycle ES2 or perform a new installation of LiveCycle ES2. Choose one of the following options and then click **Next**:
   - **Prepare to upgrade existing installation to LiveCycle ES2 v9.0:** Installation program prepares the data from your existing LiveCycle ES (8.x) installation for an upgrade to LiveCycle ES2. If you select this option, update your module license in LiveCycle Administration Console after the installation. Select this option for an in-place upgrade or an out-of-place upgrade on the same computer that does not involve a new operating system.
   - **Install LiveCycle ES2 v9.0:** Installation program installs LiveCycle ES2. Select this option if you are performing an out-of-place upgrade on a new machine. This option will install all the LiveCycle ES2 files required to complete your upgrade configuration.

5. On the Choose Installation Folder screen, accept the default directory as listed or click **Choose** and navigate to the directory where you intend to install LiveCycle ES2, and then click **Next**.

   If you type the name of a directory that does not exist, it is created for you.

   **Caution:** If you are installing on Linux or UNIX, the directory you specify should not contain any spaces; otherwise, the installation program does not install the module.

6. Read the LiveCycle ES2 Server 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.

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

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


10. The **Start LiveCycle Configuration Manager** checkbox is selected by default. Click **Done** to run the LiveCycle Configuration Manager. If you are upgrading Connectors for ECM, deselect Start LiveCycle Configuration Manager, click Finish, and go to “Preparing the Connectors for ECM for upgrade” on page 16.

   **Note:** To run LiveCycle Configuration Manager later, deselect the **Start LiveCycle Configuration Manager** option before you click **Done**. You can start LiveCycle Configuration Manager later using the appropriate script in the \[LiveCycleES2 root\]/configurationManager/bin directory. See “Configuring LiveCycle ES2 for Deployment” on page 18.

   **Note:** *(Windows only)* Make sure that LiveCycle Configuration Manager is running using appropriate JDK. WebSphere installations typically use the IBM JDK. If your WebSphere installation does not use the IBM JDK, re-launch LiveCycle Configuration Manager using the
2.3 Preparing to run LiveCycle Configuration Manager for upgrade

Prior to running LiveCycle Configuration Manager, locate the Global Document Storage (GDS) directory for your existing LiveCycle ES (8.x) environment. You will need to enter the fully qualified path to this directory during configuration. The exact location is available from Settings > Core System > Core Configuration in the LiveCycle Administration Console for your existing LiveCycle environment. If you are upgrading from version 8.0, this value will be blank if the default locations were used.

2.4 Preparing the Connectors for ECM for upgrade

To upgrade your connectors for ECM to LiveCycle ES2 from LiveCycle ES (8.x), configure the application server system after you install LiveCycle ES2 and before you start LiveCycle Configuration Manager to complete the upgrade process.

There are two ways in which the LiveCycle ES2 upgrade can be performed:

- **In place**: On the existing application server hosting LiveCycle ES (8.x).
- **Out of place**: On a newer version of the existing application server or on another physical computer.

**Configure Connectors for ECM for an in-place upgrade from LiveCycle ES, version 8.0:**

**Note:** This modification is not required when upgrading from LiveCycle ES, version 8.2.

1. Navigate to the [appserver root]/profiles/[profile name] directory and open the adobe-component-ext.properties file in a text editor.

2. Copy the system property [component id]_[component version].ext=[JAR files and/or folders] and paste or add it as a new system property in the file.

3. Delete [component version] from the new system property so that the line appears as [component id].ext=[JAR files and/or folders].

4. Ensure that the new line ends with a hard return and then save the file.

5. Restart the application server.

**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.

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

1. **(For out-of-place to a new computer only)** Install the client for your ECM repository on the LiveCycle ES2 server that hosts the new application server.

2. Perform all settings related to Connectors for ECM (except for LiveCycle Administration Console settings) on the new application server prior to beginning the upgrade. See “Configuring the Connector for EMC Documentum service” on page 56, “Configuring the Connector for IBM FileNet service” on page 57, and “Configuring the Connector for Microsoft SharePoint service” on page 58.
3. Navigate to the \[appserver root]/profiles/[profile name] directory on your LiveCycle ES (8.x) server and copy the adobe-component-ext.properties file to the appropriate directory on the target server.

4. **(Upgrade from version 8.0 only)** Open the adobe-component-ext.properties file in a text editor.

5. **(Upgrade from version 8.0 only)** Copy the system property [component id]_[component version].ext=[JAR files and/or folders] and paste or add it as a new system property in the file.

6. **(Upgrade from version 8.0 only)** Delete [component version] from the new system property so that the line appears as [component id].ext=[JAR files and/or folders].

7. Ensure that the new line ends with a hard return and then save the file.

8. Restart the application server.

You can now continue to run LiveCycle Configuration Manager to upgrade to LiveCycle ES2. (See “Next steps” on page 17.)

**Caution:** For LiveCycle ES Connector for EMC Documentum or Connector for IBM FileNet, the default repository must be set to LiveCycle ES Native Repository Provider or the upgrade deployment will fail. If you have configured the ECM repository provider as the default repository for either of these connectors, open the LiveCycle ES (8.x) LiveCycle Administration Console and navigate to Services > LiveCycle ES [connector type] > Configuration Settings. Select the LiveCycle ES Repository Provider option and then click Save.

### 2.5 Viewing the error log

If errors occur during the installation, the installation program creates the Adobe_LiveCycle_ES2_InstallLog.log file, which contains the error messages. This log file is created in the \[LiveCycleES2_root]/log directory.

### 2.6 Next steps

*New for 9.5*

You must now configure LiveCycle ES2 for deployment. (See “Configuring LiveCycle ES2 for Deployment” on page 18.) You may choose to configure LiveCycle ES2 later if you plan to install LiveCycle ES2.5 Solution Accelerators. In that case, you are required to first apply LiveCycle ES2 service pack 2 or later and install LiveCycle ES2.5 Solution Accelerators.

For more information about installing Solution Accelerators, see Installing and Deploying LiveCycle ES2.5 Solution Accelerators.
This chapter describes how to perform the following tasks:

- Configure LiveCycle ES2 modules in EAR files for deploying to the application server
- Configure application server properties to support LiveCycle ES2
- Validate application server configuration
- Deploy LiveCycle ES2 EAR files
- Initialize the LiveCycle ES2 database
- Deploy LiveCycle ES2 components
- Validate the LiveCycle ES2 component deployment
- (Optional) Configure the LiveCycle ES2 Connectors for ECM, Reader Extensions ES2, PDF Generator ES2, and PDF Generator 3D ES2 modules
- (Optional) Import the LiveCycle ES2 samples into LiveCycle ES2

The following upgrade tasks are also performed when you select the Upgrade From LiveCycle ES task:

- Upgrade LiveCycle ES EAR files and components to LiveCycle ES2
- (Optional) Install compatibility layer for use with LiveCycle 7.x processes, data and APIs
- Migrate data that is essential to LiveCycle ES2 operation

3.1 About LiveCycle Configuration Manager

LiveCycle Configuration Manager is a wizard-like tool used to configure, deploy, and validate LiveCycle ES2 components for deployment to the application server. You can optionally use LiveCycle Configuration Manager to configure the application server and deploy the product EAR files to the application server.

LiveCycle Configuration Manager is installed with the module files when you run the LiveCycle ES2 installation program. When you run LiveCycle Configuration Manager, you specify the LiveCycle ES2 modules you are configuring, and the tasks that you want LiveCycle Configuration Manager to perform.

You can start LiveCycle Configuration Manager from the installation program or any time after the installation. If you plan to use LiveCycle Configuration Manager to configure the application server or deploy to the application server, the application server must be started.

You can configure an application server that is installed on a different computer. However, an application server must also be installed (but does not have to be running) on the computer that is running LiveCycle Configuration Manager so that LiveCycle Configuration Manager can use the application server library files.

3.2.1 Running Configuration Manager in a distributed environment

If you are installing in a distributed environment to a secured server, you will encounter SSL handshake exceptions when running LiveCycle Configuration Manager. To avoid this error, run the following executable file before running LiveCycle 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.

3.3 Upgrading scheduled invocations

LiveCycle ES2 no longer uses Java Messaging Service (JMS) to enable communications within the LiveCycle ES2 environment. Therefore, you must wait for all processes to finish (or stop them manually) before you run LiveCycle Configuration Manager. You will remove any JMS configurations from your LiveCycle ES (8.x) environment after you have configured and tested LiveCycle ES2. (See “Removing Java Messaging Service” on page 38)

3.4 Upgrading LiveCycle Connectors for ECM

You must migrate your existing form templates, particularly if you store them in the ECM repository instead of the LiveCycle ES (8.x) repository. If your LiveCycle ES (8.x) environment includes either Connector for EMC Documentum or Connector for IBM FileNet, during configuration LiveCycle Configuration Manager prompts you for the location of your existing form templates. You can opt to migrate all existing LiveCycle ES (8.x) form templates, or locate and select any custom form templates to migrate.

**Note:** It is not necessary to migrate your form templates during your initial LiveCycle ES2 configuration. You can run LiveCycle Configuration Manager again and perform the necessary tasks later. If your ECM version is not supported across LiveCycle versions, skip the Migrate Form Template step while running the configuration manager. You should upgrade your ECM server and then run the configuration manager again to run this step.

Form templates typically have form data objects associated to them. If you are using the ECM for storing form templates (as XDP files) and rendering them from there, the data entered in the form is returned to the ECM repository. In this type of situation, the form template is rendered and displayed with pre-populated user data when the user clicks the form data (xml).

During the migration process existing form templates or other data are not deleted from the ECM repository. However, a copy of these templates is created in the LiveCycle ES2 native repository. Once form templates have been migrated to LiveCycle ES2 native repository, a reference to them is created within the ECM repository, serving as a weak link between the form templates residing in both repositories.

If you have existing ECM form templates to migrate from your LiveCycle ES (8.x) installation, LiveCycle Configuration Manager can migrate them to the new configuration. You can also migrate custom form templates; that is, any templates you created after installing LiveCycle ES (8.x) that do not have the LiveCycle ES default template names. For example, migration is necessary if you use an ECM repository to store form templates instead of using the LiveCycle repository. You can only migrate form templates that reside in the ECM repository and not those in the LiveCycle ES (8.x) native repository. Press F1 on the Migrating ECM form templates screen of the LiveCycle Configuration Manager for more details.

3.5 Upgrading to Content Services ES2 on a server cluster

When upgrading to Content Services ES2 from LiveCycle ES version 8.2 on a cluster, the Content Services ES2 EAR file is deployed to the first node but not to the other cluster nodes. The following
two workarounds resolve this issue, but each has its drawbacks. Review each workaround to determine which is the best solution for your environment.

- During upgrade, while configuring the Content Services ES2 EAR file using LiveCycle Configuration Manager, point the Index Root directory for LiveCycle ES2 to a location different from what was specified for version 8.2. This workaround allows you to start all the nodes in the cluster directly from LiveCycle Configuration Manager.

  **Note:** With this option, the LiveCycle ES2 server can take a long time to start up if you have a lot of content saved in the Content Services ES2 repository. This is because each node of the cluster attempts to recreate the indexes.

- While deploying the EAR files, make sure that only one of the nodes of the cluster is started and specify the details pertaining to only that node during the entire upgrade process. This step ensures that the LiveCycle ES2 server only updates the indexes rather than recreating them. Also, ensure that the Index Root directory for LiveCycle ES2 is pointing to a location as specified for version 8.2.

  Once the node starts successfully, manually copy the indexes directory from that node to the other nodes of the cluster where you do not plan to run LiveCycle Configuration Manager. Now, start the other nodes of the cluster. The Content Services ES2 EAR file will now be successfully deployed to all cluster nodes.

  **Note:** Although this workaround is time-consuming to implement, it ensures minimal server downtime during startup.

### 3.6 Determining the application server SOAP port

On some LiveCycle Configuration Manager screens, you must provide the SOAP port of the application server. Use the steps in this topic to determine which port is used for SOAP connections with the application server. The default port is 8880.

**➤ To determine the SOAP port on WebSphere Base:**

1. In the navigation panel of the WebSphere Administrative Console, do the following:
   - (WebSphere 6.1) Click **Servers > Applications Servers > [serverName] > Communications > Ports**.
   - (WebSphere 7) Click **Server Types > WebSphere application servers > [serverName] > Communications > Ports**.

2. Under Communications, click **Ports**. On the next screen, make a note of the port number for **SOAP_CONNECTOR_ADDRESS**.

**➤ To determine the SOAP port on WebSphere ND:**

1. In the navigation panel of the WebSphere Administrative Console, click **System Administration > Deployment Manager**.

2. Under **Additional Properties**, click **Ports**. On the next screen, make a note of the port number for **SOAP_CONNECTOR_ADDRESS**.

The WebSphere Administrative Console lists the SOAP Connector Address in two different sections. You must ensure you use the path provided in step 1 for WebSphere ND. If you use the SOAP port listed at
3.7 Configuring, upgrading to, and deploying LiveCycle ES2

Now that LiveCycle ES2 is installed, you are ready to run LiveCycle Configuration Manager to upgrade to LiveCycle ES2. LiveCycle Configuration Manager performs the tasks that are required for upgrading.

When you run LiveCycle Configuration Manager, you can select the tasks that you want the program to perform automatically.

**Note:** Using LiveCycle Configuration Manager to deploy LiveCycle ES2 modules to remote servers is supported only for managed application servers, not for stand-alone application servers.

**Tip:** LiveCycle Configuration Manager verifies the values that are specified on each screen when you click Next. If it cannot validate a value, a warning message appears, the property on the screen becomes red, and you cannot proceed until you enter a valid value.

**Tip:** If you are running LiveCycle Configuration Manager again after an earlier run, parameters that are already configured are shown as non-editable. Click Edit configurations to make these fields editable and make changes.

After LiveCycle Configuration Manager configures the LiveCycle ES2 EAR files, it places the following files in the \[LiveCycleES2 root\]/configurationManager/export directory:

- adobe-livecycle-native-websphere-\[OS\].ear
- adobe-livecycle-websphere.ear
- adobe-workspace-client.ear (if you installed LiveCycle Process Management ES2)
- and adobe-contentservices.ear (if you installed LiveCycle Content Services ES2)

If you use LiveCycle Configuration Manager to deploy the EAR files, LiveCycle Configuration Manager accesses these files and deploys them to the application server. When you manually deploy the LiveCycle ES2 EAR files, you can access the files in this directory and deploy them to the application server.

**Note:** On localized Windows with WebSphere, you must perform additional steps described in the Troubleshooting LiveCycle ES2 guide.

After LiveCycle Configuration Manager configures the LiveCycle ES2 EAR files, you may rename the EAR files to a custom file name (for example, to specify in the file name a version identifier, or any other information required by standard practices in the local JDK environment).

LiveCycle 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 (for example, when you deploy the initial custom-named EAR files, and when applying any later changes such as service packs or patches).

**Tip:** If you are using the same application server instance for your upgraded LiveCycle ES2 environment, you must first manually undeploy the LiveCycle ES (8.x) EAR files from the application server. However, if you use LiveCycle Configuration Manager to deploy EAR files, it automatically undeploys...
previously deployed files before deploying updated files. If errors occur during this process, you can undeploy the LiveCycle ES2 EAR files manually. (See “Uninstalling EAR files” on page 34.)

If you are configuring a remote application server, ensure that an application server is also installed on the same computer as LiveCycle Configuration Manager so that LiveCycle Configuration Manager can use the application server library files.

**Tip:** You can override the font while selecting or browsing to a directory or file name on a LiveCycle Configuration Manager screen. Add the following JVM argument to `ConfigurationManager.bat` (Windows) or `ConfigurationManager.sh` (Linux, UNIX):

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

For example, `-Dlcm.font.override=SansSerif`.

➤ **Configure using LiveCycle Configuration Manager:**

**Tip:** You can press **F1** in LiveCycle Configuration Manager to view Help information for the screen you are viewing. This Help contains details that may not be included in this document and are specific to the context of each screen in LiveCycle Configuration Manager.

**Tip:** If you are running LiveCycle Configuration Manager again after an earlier run, parameters that are already configured are shown as non-editable. Click **Edit configurations** to make these fields editable and make changes.

1. If you did not start LiveCycle Configuration Manager automatically from the installation program, navigate to the `[LiveCycleES2 root]/configurationManager/bin` directory and enter the appropriate command:
   - (Windows) `ConfigurationManager.bat`
   - (Non-Windows) `/ConfigurationManager.sh`

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

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

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

5. Select either **Upgrade from LiveCycle ES 8.0.x** or **Upgrade from LiveCycle ES 8.2.1.x**.

6. **(Optional)** If you are installing LiveCycle ES2 on a development system on which you may also be running or developing client applications developed with LiveCycle 7.x, select **Install the LiveCycle 7.x Compatibility Layer**.

   **Note:** You must select this option if your LiveCycle ES (8.x) system was upgraded from LiveCycle 7.x.

7. Click **Next** to continue.

8. On the Module Selection screen, select the LiveCycle ES2 modules and then click **Next**.

   **Note:** You must install and deploy as many or more modules than those existing on your current LiveCycle ES (8.x) system but not fewer modules.

**Caution:** Do not select Adobe Business Activity Monitoring ES2 even if you have Business Activity Monitoring 8.x as part of your LiveCycle ES (8.x).
9. On the LiveCycle 7.x Compatibility screen (appears only if you selected **Install the LiveCycle 7.x Compatibility Layer**), deselect any LiveCycle 7.x product for which you do not want to merge the compatibility layer.

   **Note:** Only select the products that were present on your pre-upgrade LiveCycle 7.x environment. Selecting additional products causes benign exceptions while extracting the LiveCycle 7.x data.

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

   **Note:** You must select the Initialize LiveCycle ES2 Database option when you are upgrading. Perform all the tasks sequentially without skipping any to avoid upgrade issues.

11. 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**. See [Preparing to Upgrade to LiveCycle ES2 from 8.x](#).

12. 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**.

13. **(Out-of-place upgrade on the same computer only)** On the Shutdown Previous LiveCycle screen, shut down your existing LiveCycle ES application server and then click **Next**.

14. **(Installing 7.x compatibility layer only)** On the Import LiveCycle ES Files screen, provide the path to the deployable archive files that are associated with LiveCycle ES (8.x). After you provide the required information, click **Next**.

15. **(Installing 7.x compatibility layer only)** On the Extract LiveCycle 7.x Configuration Data screen, click **Start** and, when the extraction has completed successfully, click **Next**.

   **Note:** This screen only appears if the LiveCycle 7.x products had extractable data.

16. On the Configure LiveCycle ES2 (1 of 5) screen, click **Configure**. Click **Next** when done.

17. **(Installing 7.x compatibility layer only)** On the Apply LiveCycle 7.x Compatibility screen, click **Start** to add the compatibility layer to the LiveCycle ES2 EAR files and then click **Next** to continue.

18. On the Configure LiveCycle ES2 (2 of 5) screen, click **Next** to accept the default directory locations, or customize the directories that LiveCycle ES2 will use to access fonts, and then click **Next**.

   - (Optional) To change the default location of the **Adobe server fonts directory**, type the path or browse to the directory.
   - (Optional) Specify a directory for the **Customer fonts directory**. The directory contains any additional fonts that you have licensed and installed.
   - (Optional) To change the default location of the **System fonts directory**, type the path or browse to the directory.
   - (Optional) To enable FIPS, ensure that **Enable FIPS** is selected. Select this option only if you require the Federal Information Processing Standards (FIPS) to be enforced.

   **Note:** Any modification to the System fonts directory or Enable FIPS values made on this screen will not be configured during the upgrade process. You must manually update your system fonts directories and enable the FIPS option in LiveCycle Administration Console after configuration is complete. See “Core Configurations” in the [LiveCycle ES2 Administration Help](#).
19. Click **Browse** on the Configure LiveCycle ES2 (3 of 5) screen to specify the **Location of the temporary directory**.

    *(UNIX only)* If a non-root user is running the application server, the user must have full permissions on the specified temporary directory.

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

    **Caution:** Your upgrade might fail if you specify a shared network directory as the temporary directory.

20. On the Configure LiveCycle ES2 (4 of 5) screen, click **Browse** to specify the path for the Global Document Storage (GDS) directory.

    **Note:** For upgrades on the same operating system as LiveCycle ES (8.x) you can specify the existing GDS location in the LiveCycle Configuration Manager. If you choose to change the directory, copy the contents of the LiveCycle ES (8.x) GDS directory to the new location before completing this step.

21. 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 ES2 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.

22. Click **Configure** to configure the LiveCycle ES2 EARs with this directory information and, after the configuration is complete, click **Next**.

23. *(Content Services ES2 only)* On the LiveCycle Content Services ES2 Configuration screen, set the following parameters that Content Services ES2 will use, and click **Next**.

    - **Content storage root directory:** Specify the root directory that is used by Content Services ES2.
    - **WebSphere Shared Library Location (myfaces libs):** Specify the folder in which LiveCycle Configuration Manager will add the myfaces jar files required for Content Services ES2. By default, a directory, `myfaces1_1` is created under `[LiveCycleES2 root]\lib` on the machine running LiveCycle Configuration Manager.

    **Note:** Run LiveCycle Configuration Manager with the UTF-8 locale if you want to specify a content storage root directory having international characters.

    If Content Services ES was installed as part of your LiveCycle version 8.2 environment, specify the root directory that is currently used or manually copy the data to the new LiveCycle ES2 directory specified here.

    - *(Optional)* **Enable CIFS:** Select this option to allow Windows-based clients to access files from the server that runs LiveCycle ES2 using the Common Internet File System (CIFS) protocol. Click **Next** to specify the following details:

        - **CIFS Server Name:** Specify the name through which the Content Services ES2 Repository will be accessible. By default, LiveCycle Configuration Manager populates the server name of the LiveCycle ES2 server with ‘a’ attached to it. For example, if the LiveCycle ES2 server name is
lcserver, the CIFS Server name will be populated as lcserver. You must ensure that the CIFS server name that you specify is unique within the network.

- **Choose the CIFS Server Implementation:** Select the type of CIFS implementation supported on the server as one of the following:
  
  **JAVA (Socket Based):** Specify the alternate IP address assigned to the CIFS Server, and how the server name will be resolved in the local domain. For example, if the primary IP is 10.40.68.142, assign 10.40.68.143 as the alternate IP. Ensure that this IP is not allocated to any other machine on the network.

  **Windows Native (DLL Based):** Click **Browse** to select the path (usually, C:\Windows\system32) to where LiveCycle Configuration Manager will copy the DLL files. The path where DLL files will be copied must be specified in the system PATH environment variable. For example, for Windows Server 2003 and 2008, the system PATH must include C:\Windows\system32.

- **Use WINS Server or Broadcast to resolve Local Domain:** Select the method used to resolve the local domain:
  
  **Broadcast:** Specify the broadcast address (subnet mask) of the network segment in the local domain. For example, 10.40.91.255. In Broadcast mode, the CIFS server and clients must be in the same subnet.

  **WINS Server:** Specify the IP addresses of the primary and secondary WINS servers. For example, 10.40.4.248. If WINS server is selected, the clients can reside in any subnet in the local domain.

**Windows only**

CIFS is not supported on Windows when the application server is running in pure IPv6 mode.

You may have to update your DNS entries with CIFS server name and the virtual IP address assigned so that Windows clients can access the CIFS server by name.

**UNIX only**

For UNIX machines, only Java implementation is supported. For UNIX machines, you must create a virtual interface and assign a virtual IP address that can be used as the alternate IP address for CIFS implementation. This ensures that the UNIX machines can run Samba and CIFS on the same machine, but on two different IP addresses, because both these services use the same ports.

To enable CIFS on an IPv6 implementation of LiveCycle ES2, 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 LiveCycle Configuration Manager. See “Enabling CIFS in IPv6 mode” on page 65.

In addition to these steps in LiveCycle Configuration Manager, you must complete other manual configuration steps for Windows Server 2003 and Windows Server 2008. See “Server configuration for enabling CIFS” in the *Preparing to Upgrade to LiveCycle ES2 from 8.x* guide.

24. **(Content Services ES2 only)** On the LiveCycle Content Services ES2 Module Configuration screen, do the following tasks, and then click **Configure** to configure the LiveCycle ES2 EAR files with the Content Services ES2 settings. After the configuration is complete, click **Next**. See Alfresco documentation for more information.

- Select the Alfresco Module Packages (AMP) that you want to include in Content Services ES2. By default, all AMPs that are dependent on the selected LiveCycle ES2 modules are included.

- (Optional) To include your own AMPs, select the **Do you want to package your own AMPs** in Content Services box, and click **Browse** to select the directory where the custom AMPs are available. All AMPs in the selected directory are packaged.
Note: If you want to enable SharePoint clients to migrate to Alfresco CMS, you must add the SharePoint AMP:

```
[LiveCycleES2 root]\LiveCycle_ES_SDK\misc\ContentServices\adobe-vti-module.amp
```

After you add this file, follow the steps detailed in “Configuring SharePoint client access” on page 64.

25. *(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.

This screen appears only when LiveCycle Configuration Manager is running locally on a server computer. You must have Adobe Acrobat already installed or this step will fail.

Note: To use OpenOffice.org on Linux or Solaris, set the Openoffice_PATH environment variable. Refer to “Setting environment variables” on page 42.

26. On the Configure LiveCycle ES2 Summary screen, click Next. Configured archives are placed in the `[LiveCycleES2 root]\configurationManager\export` directory.

27. On the LiveCycle ES2 Database screen, provide the information about your LiveCycle ES2 database so that LiveCycle Configuration Manager can connect to it:

Note: The following information applies to the database LiveCycle ES2 will connect to. This can be either your existing LiveCycle ES (8.x) database, or a new one that you have already configured and migrated the existing LiveCycle data to. (See Preparing to Upgrade to LiveCycle ES2 from 8.x)

- **Database Type**: The type of database you are using as the LiveCycle ES2 database.
- **Database Name**: The name of the LiveCycle ES2 database you are connecting to.
- **Host**: The name or IP address of the computer that hosts the LiveCycle ES2 database server. (Use the name only if it can be resolved.)
- **Port**: The port used to access the database service. The port number listed is the default for the database type you selected. If you are using a non-default port number for the database, enter it here.
- **User**: The name of the user account that accessed the database server specified in the database name entered above (the database you created for LiveCycle ES2).
- **Password**: The password for the user account specified for the database name you entered above.
- **JDBC driver**: The location of the JDBC driver installed with LiveCycle ES2 and used to connect to the database. The driver may be located in the `[LiveCycle ES2 root]\lib\db` directory. Specifying the drivers here allows LiveCycle Configuration Manager to test the database connection. Only one file can be entered here. The JDBC driver will be used when LiveCycle ES2 is running, so the location must be available on the Application Server node. Press F1 while you are on the LiveCycle ES2 Database screen for information about JDBC drivers.

Note: If LiveCycle Configuration Manager cannot find the supporting drivers, the failure is non-fatal and is not reported.

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

Note: If you launched LiveCycle Configuration Manager from JDK 5, use ojdbc5.jar for Oracle databases; if launched from JDK 6, use ojdbc6.jar for Oracle databases.
28. 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**. Press **F1** for details about the required information.

**Note:** If you are using LiveCycle Configuration Manager to configure your application server and you enter the host name as an IP address, you must continue to use the IP address for any related access to the application server.

**Note:** When using WebSphere Network Deployment standalone application server, enter the port number of the deployment manager in the **Admin Port** field.

29. On the Application Server Configuration Selection screen, select the tasks for LiveCycle Configuration Manager to perform, and click **Next**. Press **F1** for details about the required information. You can select one or more of the following tasks. Both tasks are selected by default.

- Configure Server Settings
- Configure Datasource

30. **(If Configure Server Settings is selected)** On the Server Settings Configuration screen, provide the information for the fields, and then click **Next**. Press **F1** for details about the required information.

31. **(If Configure Datasource option is selected)** On the Datasource Configuration screen, provide the information for the fields and then click **Test Database Connection**. When the connection is tested successfully, click **Next**. Press **F1** for details about the required information.

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

33. On the Application Server Configuration Validation screen, select the tasks for validating and then click **Validate**. When the process is completed, click **Next**.

**Note:** During this task, the adobe-lcm-lcvalidator.ear file is deployed to the WebSphere Application Server to capture version information.

34. On the LiveCycle ES2 IVS EARs Inclusion Confirmation screen, if applicable, select the option to include the Installation Verification Sample (IVS) EAR files in the deployment set.

**Caution:** Deploying the IVS EAR files to a production environment is not recommended.

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

**Note:** On localized Windows with WebSphere, you must perform additional steps described in the Troubleshooting LiveCycle ES2 guide.

36. On the Deploy LiveCycle ES2 EARs screen, select the EAR files to deploy and the virtual host, and then click **Deploy**. This operation may take several minutes to complete. Restart the server if you are prompted to do so. When the deployment has completed successfully, click **Next**.

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

By default, LiveCycle 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 Hosts list.

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

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

37. On the LiveCycle ES2 Database Initialization screen, verify that the host and port information 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**.

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

38. On the LiveCycle ES2 Server Information screen, in the **Password** box, type the LiveCycle ES (8.x) administrator password.

39. 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.

40. 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**.

41. On the LiveCycle Component Deployment screen, click **Deploy**. The components that are deployed at this time are Java archive files that plug into the LiveCycle ES2 service container for purposes of deploying, orchestrating, and executing services. Click **View Progress Log** to view the deployment progress and, when the deployment has completed successfully, click **Next**.

**Note:** Due to changes in the Task Manager module from LiveCycle ES (8.x) to LiveCycle ES2, an exception message similar to the following may appear during deployment:

```
Caused by: java.lang.ClassNotFoundException: http-0.0.0.0-8080-1
Class name com.adobe.idp.taskmanager.dsc.userservice.UserServiceImpl from package com.adobe.idp.taskmanager.dsc.userservice not found.
```

These exceptions are normal and can be ignored.

42. On the LiveCycle Component Deployment Validation screen, click **Validate**. LiveCycle Configuration Manager validates that the LiveCycle components (Java archive files) are deployed to and running on the LiveCycle ES2 server. Click **View Progress Log** to view the validation progress and, when the validation has completed successfully, click **Next**.
43. On the LiveCycle Server JNDI screen, provide all the information for the JNDI port for the application server where LiveCycle ES2 will be deployed, click **Verify Connection** and when verification is complete, click **Next**.

**Note:** The JNDI port number can be determined by logging in to WebSphere Administrative Console. On WebSphere 6.1, click Servers > Application Servers > [server name] > Communications > Ports and use the value for BOOTSTRAP_ADDRESS. On WebSphere 7.0, click Servers > Server Types > WebSphere application servers > [server name] > Communications > Ports, and use the value for BOOTSTRAP_ADDRESS.

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

**Tip:** Press F1 on this screen to review the LiveCycle Configuration Manager Help.

- Select **Skip Form Template Import** and click **Next** to continue configuring LiveCycle ES2 without importing your form templates. You can run LiveCycle Configuration Manager again to import the templates after you configure your LiveCycle ES2 environment.
- Deselect **Skip Form Template Import** and click **Start** to have LiveCycle Configuration Manager run a query that gets the form template information that exist in the ECM Connectors’ repository. LiveCycle Configuration Manager then returns the results on the subsequent screen, where you can select individual templates to import.

45. **(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**:

- Select or deselect the LiveCycle ES form templates to migrate from your existing LiveCycle ES environment.
- In the **Add additional form paths to migrate** box, type the fully qualified path to the directory containing your custom form templates, 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, existing LiveCycle ES (8.x) form templates are not deleted from the ECM repository but are copied to the LiveCycle ES2 repository. Any form templates deselected at this time can be migrated later by running LiveCycle Configuration Manager again.

46. On the Migrate Data Essential to LiveCycle ES2 Operation screen, click **Start** and, when the migration is complete, click **Next**.

This step involves copying configuration settings, forms, form data, preferences, FileType settings, job options, security settings, watched folder and email job sources (depending on the product or products you are upgrading), custom fonts, and documents in the GDS directory. For LiveCycle Rights Management ES2, the database schema is updated, if necessary.

**Caution:** **(LiveCycle ES2 Connector for IBM FileNet only)** When upgrading from LiveCycle ES version 8.0, the migration log displays the error “[IBMFileNetProcessEngineConnector] failed to start” when trying to start the Connector for IBM FileNet Process Engine service. This service was not available in version 8.0 and can be configured manually after you have performed the tasks in “Post-Deployment Activities” on page 36.
47. **(If you selected Install the LiveCycle 7.x Compatibility Layer only)** On the Deploy 7.x Compatibility DSCs screen, click **Start** to deploy the LiveCycle 7.x compatibility layer component files and, when the deployment is completed, click **Next**.

48. When prompted, restart the application server.

49. On the Configure LiveCycle Components screen, select the tasks to run with LiveCycle Configuration Manager, and click **Next**. Press **F1** for more information.

**Note:** If you are upgrading any LiveCycle ES (8.x) 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 ES2 and proceed with the following steps as appropriate.

50. **(Optional - EMC Documentum only)** 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.

51. **(Optional - EMC Documentum only)** 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.

52. **(Optional - EMC Documentum only)** On the Configure Adobe LiveCycle ES2 Connector for EMC Documentum screen, click **Configure Documentum Connector**. When completed, click **Next**.

53. **(Optional - IBM Content Manager only)** On the Specify Client for IBM Content Manager screen, select **Configure Client 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.

54. **(Optional - IBM Content Manager only)** On the Specify IBM Content Manager Server Settings screen, enter the details of the IBM Content Manager Server, and click **Next**. Press **F1** for more information.

55. **(Optional - IBM Content Manager only)** On the Configure Adobe LiveCycle ES2 Connector for IBM Content Manager screen, click **Configure IBM Content Manager Connector**. When complete, click **Next**.

56. **(Optional - IBM FileNet only)** On the Specify Client for IBM FileNet screen, select **Configure Client for IBM FileNet Content Manager**, and specify the following settings. Enter the details, click **Verify**, and when complete, click **Next** to continue.
   - **Choose IBM FileNet Client Version:** Select the client version that you want to use with the EMC Documentum Content Server.
   - **IBM FileNet Client Installation Directory Path:** Click **Browse** to select the directory path.

57. **(Optional - IBM FileNet only)** On the Specify IBM FileNet Content Server Settings screen, enter the required details, and click **Next**. Press **F1** for more information.

58. **(Optional - IBM FileNet only)** On the Specify Client for IBM FileNet Process Engine screen, enter the required details, and click **Verify**. When complete, click **Next**. Press **F1** for more information.

59. **(Optional - IBM FileNet only)** On the Specify IBM FileNet Process Engine Server Settings screen, enter the required details and click **Next**. Press **F1** for more information.
60. **(Optional - IBM FileNet only)** On the Configure Adobe LiveCycle ES2 Connector for IBM FileNet screen, click **Configure FileNet Connector**. When complete, click **Next**. Press F1 for more information.

61. **(Optional - LiveCycle ES2 Connector for Microsoft SharePoint only)** On the Adobe LiveCycle ES2 Connector for Microsoft SharePoint screen, enter the following details and click **Configure**. When complete, click **Next**.

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

   - **User Name and Password:** Enter the user account details that will be used to connect to the SharePoint server.
   - **Host Name:** Enter the host name of the SharePoint server in the format `<hostname>:<port>`. The port number must be of the web application on the SharePoint server.
   - **Domain Name:** Enter the domain in which the SharePoint server is present.

62. **(PDF Generator ES2 only)** On the **Administrator user credentials for LiveCycle server machine** screen, enter the user name and password of a user with administrative privileges on the server computer, and then click **Add**.

   **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.

   For Windows Server 2003, Linux, and Solaris, adding a user is not mandatory. Multithreaded conversions are not supported on the AIX platform. Users added on Linux and Solaris platforms must have **sudo** privileges.

   For more information, press **F1** on this screen to access the LiveCycle Configuration Manager Help.

63. **(Only for PDF Generator ES2 when LiveCycle Configuration Manager is running locally on a server machine)** On the **LiveCycle PDFGenerator System Readiness Test** screen, click **Start** to validate if the system has been appropriately configured for PDF Generator ES2.

64. **(PDF Generator ES2 only)** Review the System Readiness Tool Report and click **Next**.

65. **(Reader Extensions ES2 only)** On the Default Reader Extensions Credential screen, verify that the alias for the default Reader Extensions ES credential is correct and then click **Next**.

   **Note:** If no credential was configured on your LiveCycle ES (8.x) system, then the following screen appears instead.

66. **(Reader Extensions ES2 only)** On the LiveCycle Reader Extensions ES2 Credential Configuration screen, specify the details that are associated with the Reader Extensions ES2 credential that activates the module services:

   - **Credential file:** The path and file name of the Reader Extensions ES2 credential (.pfx or .p12 file type).
   - **Credential Password:** The password that is associated with the credential. This password was provided with the credential file.
• **User defined name for this credential:** The name (or alias) that you specified for this credential when it is configured.

This name appears in the Reader Extensions ES2 web interface, and the alias that is used to reference the credential through SDK calls. You can create any unique name for the Reader Extensions ES2 credential.

**Note:** You can skip this step at this time by selecting **Configure later using LiveCycle Administration Console.** You can configure the Reader Extensions ES2 credential by using LiveCycle Administration Console after you complete the deployment. (After logging in to LiveCycle Administration Console, click **Home > Settings > Trust Store Management > Local Credentials**.)

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

67. **(Optional)** On the LiveCycle ES2 Samples Import screen, click **Import**. When the import has completed successfully, click **Next** or click **Skip LiveCycle Samples Import** and then click **Next** to import the samples at a later time.

**Caution:** Do not import the LiveCycle ES2 Samples in a production employment. These samples create users with default passwords, which may be a security concern for your production environment.

68. On the Summary page, review the tasks performed, and click **Next**.

69. The Next steps screen displays the URL and login information. Click **Finish** to exit LiveCycle Configuration Manager.

**Note:** After you configure LiveCycle ES2, complete the post-configuration activities that apply to your solution implementation.

### 3.8 Manually deploying the EAR files

If you did not select Deploy LiveCycle ES2 EARs on the task selection screen, you must manually deploy them before you complete the upgrade. The EAR files must already be configured using LiveCycle Configuration Manager.

During the deployment process, you must deploy the following EAR files:

- Adobe-livecycle-native-websphere-[OS].ear
- Adobe-livecycle-websphere.ear
- Adobe-workspace-client.ear (Process Management ES2 only)
- Adobe-contentservices.ear (Content Services ES2 only)

After you configure LiveCycle ES2 with LiveCycle Configuration Manager (required), these files are located in the **[LiveCycleES2 root]/configurationManager/export/** directory. Deploy LiveCycle ES2 components to the application server by deploying the component EAR files to the application server by using Administration Console of the application server.

Before you deploy to the application server, start the application server on your computer. After you deploy the required components, stop and restart the application server before you start any of the services.
Run LiveCycle Configuration Manager to initialize the database and deploy the components and LiveCycle ES2 archive files (LCAs). You can also choose to validate the components and LCA deployment.

➤ Deploy the EAR files for WebSphere 6.1:

1. Start WebSphere and access Administrative Console by typing http://[host]:[port]/admin in the URL line of a web browser.
2. In the WebSphere Administrative Console navigation tree, click Applications > Install New Application.
3. In the right pane, select Remote file system.
4. Click Browse, browse to one of the EAR files listed above, select it, and then click OK.
5. Select Show me all installation options and parameters and click Next.
6. Select Generate Default Bindings and click Next.
7. Select the last step in the left column of the right pane titled Summary and click Finish.
8. When the EAR file is successfully installed, in the Messages box, click Save directly to Master Configuration.
9. Repeat these steps for each of the EAR files listed above.

➤ Deploy the EAR files for WebSphere 7:

1. Start WebSphere and access Administrative Console by typing http://[host]:[port]/admin in the URL line of a web browser.
2. In the WebSphere Administrative Console navigation tree, click Applications > New Application > New Enterprise Application.
3. In the right pane, select Remote file system.
4. Click Browse, browse to one of the EAR files listed above, select it, and then click OK.
5. Click Next.
6. Select Detailed - Show all installation options and parameters.
7. Select Choose to generate default bindings and mappings > Generate Default Bindings, and then click Next.
8. Select the last step in the left column of the right pane titled Summary and click Finish.
9. When the EAR file is successfully installed, in the Messages box, click Save directly to Master Configuration.
10. Repeat these steps for each of the EAR files listed above.

➤ Start an application in WebSphere:

1. In the navigation tree, do the following:
   - (WebSphere 6.1) Click Applications > Enterprise Applications.
● (WebSphere 7) Click Applications > Application Types > WebSphere enterprise applications.

2. Select any or all of the LiveCycle ES2 applications you want to start.

3. Click Start. The red “X” beside the status of each application changes to a green arrow, indicating that the application is running.

3.9 Uninstalling EAR files

Perform the following procedure if you need to undeploy LiveCycle ES2 modules.

1. Start the application server.


3. In the navigation tree, do the following:
   ● (WebSphere 6.1) Click Applications > Enterprise Applications.
   ● (WebSphere 7) Click Applications > Application Types > WebSphere enterprise applications.

4. Select the adobe-livecycle-native-websphere-[OS].ear, adobe-livecycle-websphere.ear, adobe-contentservices.ear, and adobe-workspace-client.ear applications, and any other installed LiveCycle ES2 applications, and then click Stop.

   Note: The adobe-workspace-client.ear is deployed only with Process Management ES2 and adobe-contentservices.ear only with Content Services ES2.

5. Select the adobe-livecycle-native-websphere-[OS].ear, adobe-livecycle-websphere.ear, adobe-contentservices.ear, and adobe-workspace-client.ear applications, and any other installed LiveCycle ES2 applications, and then click Uninstall.

6. Click Save directly to Master Configuration and then restart WebSphere.

3.10 Next steps

Now that you have configured and deployed LiveCycle ES2, you can do the following tasks:

● Verify the deployment. (See “Verifying the deployment” on page 37.)

● Access LiveCycle Administration Console. (See “Accessing LiveCycle Administration Console” on page 37.)

● Configure PDF Generator ES2 or PDF Generator 3D ES2. (See “Configuring LiveCycle PDF Generator ES2 or 3D ES2” on page 42.)

● Perform the final setup for Rights Management ES2. (See “Setting watched folder performance parameters” on page 51.)

● Configure LiveCycle ES2 modules to access LDAP. (See “Configuring LiveCycle ES2 to access LDAP” on page 52.)

● Perform watched folder performance-tuning for PDF Generator ES2. (See “Setting watched folder performance parameters” on page 51.)

● Enable FIPS mode. (See “Enabling FIPS mode” on page 54.)
● Enable HTML digital signatures. (See “Configuring HTML digital signature” on page 55.)

● Configuring Connector for EMC Documentum, Connector for IBM Content Manager, or Connector for IBM FileNet. (See “Configuring the Connector for EMC Documentum service” on page 56, “Configuring the Connector for IBM FileNet service” on page 59, or “Configuring the Connector for IBM Content Manager” on page 66.)

● Set environment variables for PDF Generator ES2. (See “Setting environment variables” on page 42.)

● Install and deploy LiveCycle Business Activity Monitoring ES2.

● Uninstall LiveCycle ES2. (See “Uninstalling LiveCycle ES2” on page 71.)
This chapter describes how to verify the deployment by accessing the LiveCycle Administration Console and checking the application server log files. It also describes how to get started using LiveCycle ES2 modules and services after they are installed, configured, and deployed to your application server:

- "Restart the application server" on page 36
- "Set the date, time, and time zone" on page 36
- "Verifying the deployment" on page 37
- "Installing LiveCycle ES2.5 Solution Accelerators" on page 38 (optional)
- "Removing Java Messaging Service" on page 38
- "Accessing module web applications" on page 39
- "Upgrading to Workbench ES2" on page 40
- "Accessing User Management" on page 41
- "Configuring LiveCycle PDF Generator ES2 or 3D ES2" on page 42
- "Resetting the Forms ES2 cache" on page 52
- "Configuring LiveCycle ES2 to access LDAP" on page 52
- "Enabling FIPS mode" on page 54
- "Configuring HTML digital signature" on page 55
- "Configuring the Document Management service" on page 55
- "Configuring the Connector for EMC Documentum service" on page 56
- "Configuring the Connector for IBM FileNet service" on page 59
- "Configuring the Connector for IBM Content Manager" on page 66
- "Upgrade and deploy Business Activity Monitoring ES2" on page 70
- "Perform a system image backup" on page 71
- "Uninstalling LiveCycle ES2" on page 71

After you configure the settings in this chapter, for additional information about configuring your LiveCycle ES2 environment for development and production, see LiveCycle ES2 Administration Help.

4.1 Restart the application server

When you first deploy LiveCycle ES2, 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.

4.2 Set the date, time, and time zone

Setting the date, time, and time zone on all servers connected to your LiveCycle ES2 environment will ensure that time-dependent modules, such as LiveCycle Digital Signatures ES2 and
LiveCycle Reader Extensions ES2, 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.

4.3 Verifying the deployment

You can verify the deployment by logging in to LiveCycle Administration Console. If you log in successfully, then LiveCycle ES2 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.

4.3.1 Accessing LiveCycle Administration Console

LiveCycle 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 ES2 operates. When you log in to LiveCycle Administration Console, you can access User Management, Watched Folder, and Email client configuration, and administrative configuration options for other services. LiveCycle 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 (8.x) was configured.

Before you access LiveCycle Administration Console, LiveCycle ES2 must be deployed and running on your application server.

For information about using LiveCycle Administration Console, see LiveCycle ES2 Administration Help.

To access LiveCycle Administration Console:

1. Type the following URL in a web browser:
   \[http://[host name]:[port]/adminui\]
   The default port number for WebSphere is 9080.

2. In the User Name and Password boxes, type the name and password of the LiveCycle ES2 administrator user.

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.

4.3.2 Change default password

LiveCycle ES2 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 ES2 administrator user password is set to “password” by default. You must change it in LiveCycle Administration Console > Settings > User Management.
4.3.3 Viewing 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 \(\text{appserver root}/\text{profiles/}[\text{profilename}]/\text{logs/}[\text{server name}]\) directory:

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

**Note:** *(WebSphere 7.0 only)* Each time LiveCycle ES2 starts, the following error appears in the log:

```
FacesConfigurator 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 7.0. This is a known issue and this error can be safely ignored.

4.4 Installing LiveCycle ES2.5 Solution Accelerators

*New for 9.5*

If you are planning to install LiveCycle ES2.5 Solution Accelerators, you are required to first apply LiveCycle ES2 service pack 2 or later and install LiveCycle ES2.5 Solution Accelerators. However, note that you need to rerun LiveCycle Configuration Manager after installing LiveCycle ES2.5 Solution Accelerators.

For more information about installing Solution Accelerators, see *Installing and Deploying LiveCycle ES2.5 Solution Accelerators*.

4.5 Removing Java Messaging Service

LiveCycle ES (8.x) uses Java Messaging Service (JMS) to enable distributed communication between application components. LiveCycle ES2 no longer uses this technology, therefore, after you determine that your LiveCycle ES2 deployment is running properly, remove all JMS configurations from your application server.

If you performed an in-place upgrade, reusing your existing WebSphere 6.1 server, delete the JMS settings created for your LiveCycle ES (8.x) system.

➤ **Remove the JMS settings:**

1. Start the WebSphere Administrative Console. Type the following in the URL line of a web browser:

   `http://[host]:[port]/ibm/console`

2. In the navigation tree, click **Resources > JMS > Queue connection factories**.

3. Delete all queue connection factories and click **Apply** and then click **Save directly to master configuration**.
4. Click Resources > JMS > Topic connection factories.

5. Delete all topic connection factories and click Apply and then click Save directly to master configuration.

6. Click Resources > JMS > Queues.

7. Delete the following queues and click Apply and then click Save directly to master configuration.
   - adobe_JobManagerQueue
   - adobe_PECmdQueue
   - adobe_PEDCmdQueue
   - adobe_PCInteractiveQueue

8. Click Resources > JMS > Topics.

9. Delete the adobe_TaskEventTopic topic, click Apply and then click Save directly to master configuration.

10. Click Resources > JMS > Activation specification.

11. Delete the following activation specifications and click Apply and then click Save directly to master configuration.
   - JobManager_AS
   - PECmd_AS
   - PEDCmd_AS
   - Task_Event_AS

4.6 Accessing module web applications

After LiveCycle ES2 is deployed, you can access the web applications that are associated with the following modules:

- LiveCycle Reader Extensions ES2
- LiveCycle Workspace ES2
- LiveCycle Content Services ES2
- LiveCycle Rights Management ES2
- LiveCycle Business Activity Monitoring ES2

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 LiveCycle ES2 Administration Help.)

➤ To access the Reader Extensions ES2 web application:

Note: You must apply a Reader Extensions ES2 credential and apply the user roles for a new user. (See “Configuring credentials for use with Reader Extensions ES2” in LiveCycle ES2 Administration Help.)
1. Open a web browser and enter this URL if you are using a local deployment:
   
   http://localhost:[port]/ReaderExtensions

   For WebSphere, the port is 9080.

2. Log in using the user name and password created for LiveCycle ES2.

   **Note:** You must have administrator or superuser privileges to log in using the default user name and password. To allow other users to access the Reader Extensions ES2 web application, you must create the users in User Management and grant them the Reader Extensions Web Application role.

   ➤ **To access Workspace ES2:**

   1. Open a web browser and enter this URL if you are using a local deployment:

      http://localhost:[port]/workspace

      For WebSphere, the port is 9080.

   2. Log in using the user name and password created for LiveCycle ES2.

   ➤ **To access the Content Services ES2 web application:**

      **Note:** You must apply the LiveCycle Contentspace Administrator or LiveCycle 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 if you are using a local deployment:

         http://localhost:[port]/contentspace

         For WebSphere, the port is 9080.

      2. Log in using the user name and password created for LiveCycle ES2.

4.7 Upgrading to Workbench ES2

Once you have completed your LiveCycle ES2 server upgrade and verified that it is working properly, you must install the new version of Workbench ES2 in order to continue creating and modifying your LiveCycle ES2 applications. See *Installing Your Development Environment*.

4.8 Accessing Rights Management ES2

You must create a user with the LiveCycle Rights Management End User role in User Management and log in to the Rights Management ES2 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 ES2 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 LiveCycle Administration Console.
Repackaging the client application JAR files:

In order to run your LiveCycle ES, version 8.0 Java client applications after upgrade, you must replace the existing adobe-rightsmanagement-client.jar and adobe-livecyle-client.jar files with the LiveCycle ES2 versions and recompile your applications.

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

```java
com.adobe.edc.common.dto.AuditSpec; local class incompatible: stream
classdesc serialVersionUID = -6839645748622739902, local class
serialVersionUID = -778215071249017043
```

To access the Rights Management ES2 end-user web application:

1. Open a web browser and enter this URL:
   ```text
   http://[server]:[port]/edc/Login.do
   ```

To access the Rights Management ES2 administration web application:

1. Open a web browser and enter this URL:
   ```text
   http://[server]:[port]/adminui
   ```
2. Click Services > LiveCycle Rights Management ES2. For information about setting up users and roles for Rights Management ES2, see LiveCycle ES2 Administration Help.

To assign the LiveCycle Rights Management End User role:

1. Log in to LiveCycle Administration Console. (See “Accessing LiveCycle Administration Console” on page 37.)
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 LiveCycle Rights Management End User.
7. Click OK and then click Save.

4.9 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 ES2 modules, including Reader Extensions ES2, Workspace ES2, Rights Management ES2, Process Management ES2, Forms ES2, PDF Generator ES2, PDF Generator 3D ES2, and Content Services ES2.

To access User Management:

1. Log in to LiveCycle 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.

4.10 Configuring LiveCycle PDF Generator ES2 or 3D ES2

If you installed LiveCycle PDF Generator ES2 or LiveCycle PDF Generator 3D ES2 as part of your LiveCycle ES2 solution, complete the following tasks:

- “Setting environment variables” on page 42
- “Configuring the application server to use HTTP proxy server” on page 43
- “Setting the Adobe PDF Printer as the default printer” on page 44
- “Configuring Acrobat Professional” on page 44
- “Configuring user accounts for multi-threaded file conversions” on page 45
- “Installing East Asian characters in Windows Server 2003” on page 46
- “Adding fonts to PDF Generator ES2 or PDF Generator 3D ES2” on page 46
- “Installing the Network Printer Client” on page 50
- “Setting watched folder performance parameters” on page 51

4.10.1 Setting environment variables

If you installed the PDF Generator ES2 or PDF Generator 3D ES2 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 native applications that PDF Generator ES2 or PDF Generator 3D ES2 requires you to set up environment variables for.

<table>
<thead>
<tr>
<th>Application</th>
<th>Environment variable</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrobat</td>
<td>Acrobat_PATH</td>
<td>C:\Program Files\Adobe\Acrobat 9.0\Acrobat\Acrobat.exe</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> The environment variable Acrobat_PATH is case-sensitive.</td>
<td></td>
</tr>
<tr>
<td>Adobe FrameMaker*</td>
<td>FrameMaker_PATH</td>
<td>C:\Program Files\Adobe\FrameMaker7.1\FrameMaker.exe</td>
</tr>
<tr>
<td>Notepad</td>
<td>Notepad_PATH</td>
<td>C:\WINDOWS\Notepad.exe</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> You can leave the Notepad_PATH variable blank.</td>
<td></td>
</tr>
<tr>
<td>OpenOffice</td>
<td>OpenOffice_PATH</td>
<td>C:\Program Files\OpenOffice.org 3</td>
</tr>
<tr>
<td>Adobe PageMaker*</td>
<td>PageMaker_PATH</td>
<td>C:\Program Files\Adobe\PageMaker 7.0\PageMaker.exe</td>
</tr>
<tr>
<td>WordPerfect</td>
<td>WordPerfect_PATH</td>
<td>C:\Program Files\WordPerfect Office 12\Programs\wpwin12.exe</td>
</tr>
</tbody>
</table>
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.

To 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 code:
   ```plaintext
   D:\Program Files\Adobe\Adobe Photoshop CS4\Photoshop.exe
   ```

To set the PATH variables on Linux or UNIX (OpenOffice only):

- Type the following command:
  ```bash
  export OpenOffice_PATH=/opt/openoffice.org3
  ```

4.10.2 Configuring the application server to use HTTP proxy server

If the computer that LiveCycle ES2 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.

To add the setting to WebSphere:

1. In the WebSphere Administrative Console navigation tree, do the following:
   - (WebSphere 6.1) Log in to WebSphere Administrative Console, click `Servers` > `Application servers`, and then click the name of the server instance to configure (for example, server1).
   - (WebSphere 7) 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).
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.

4.10.3 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 ES2 cannot convert files successfully.

➤ To 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.

4.10.4 Configuring Acrobat Professional

This procedure is required only if you upgraded to or installed Acrobat after you completed the LiveCycle ES2 installation. Upgrading Acrobat can be completed after you run LiveCycle Configuration Manager and deploy LiveCycle ES2 to the application server. Acrobat Professional root directory is designated as [Acrobat root]. Typically, the root directory is C:\Program Files\Adobe\Acrobat 9.0\Acrobat.

➤ To 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. Do one of the following:
   • If you are using the media, insert the Acrobat CD.
   • If you are using the ESD downloads, download Acrobat from your ESD location.
3. Install Acrobat by running the AutoPlay.exe file.
4. Navigate to the additional\scripts folder on the LiveCycle ES2 installation media. Run the following batch file Acrobat_for_PDFG_Configuration.bat [LiveCycleES2 root]/pdfg_config
5. Open Acrobat and select Help > Check for updates > Preferences.

➤ To 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 9.0\Acrobat\Acrobat.exe).

➤ **To configure native application support:**

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

2. Set Adobe PDF printer as the default printer.

3. **(PDF Generator 3D ES2)** Register the DLL file located at \[LiveCycleES2 root\]\plugins\x86_win32\PDFG3dAddin.dll.

### 4.10.5 Configuring user accounts for multi-threaded file conversions

By default, PDF Generator ES2 can convert only one OpenOffice, Microsoft Word, or PowerPoint document at a time. If you enable multi-threaded conversions, PDF Generator ES2 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 Upgrade to LiveCycle ES2 from 8.x](#) guide.

For Linux and Solaris users, you must create your users and make these additional configurations to remove the password prompts.

➤ **Add a user account:**

1. In LiveCycle Configuration Manager, click Services > LiveCycle PDF Generator ES2 > User Accounts.

2. Click Add and enter the user name and password of a user who has administrative privileges on the LiveCycle ES2 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 ES2 server.

➤ **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 ES2 server in the `/etc/sudoers` file. For example, if you are running LiveCycle ES2 as a user named `lcadm` and a server
named myhost, and you want to impersonate user1 and user2, add the following entries to /etc/sudoers:

```
1cadm myhost=(user1) NOPASSWD: ALL
1cadm 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 ES2 server. For example, to allow a local user named user1 the permission of making the connection to the LiveCycle ES2 server, use the following command:

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

For more details, refer to xhost command documentation.

4. Restart the server.

4.10.6 Installing East Asian characters in Windows Server 2003

When HTML files are converted to PDF by using PDF Generator ES2 or PDF Generator 3D ES2, 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.

➤ To 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.

4.10.7 Adding fonts to PDF Generator ES2 or PDF Generator 3D ES2

LiveCycle ES2 provides a central repository of fonts named Adobe LiveCycle ES2 Fonts Management, which is accessible to all LiveCycle ES2 modules. Make the extra fonts available to non-LiveCycle ES2 applications on the server so that PDF Generator can use these fonts to create PDF documents that are created with these applications.

4.10.7.1 Non-LiveCycle applications

The following list contains non-LiveCycle ES2 applications that PDF Generator ES2 or PDF Generator 3D ES2 can use for PDF generation on the server side:

- 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 Extended

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.

4.10.7.2 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 ES2 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.

4.10.7.3 Adding new fonts to OpenOffice Suite

Adding custom fonts to OpenOffice Suite is explained on the OpenOffice Fonts-FAQ page at http://wiki.services.openoffice.org.

In addition, OpenOffice Suite has these resources about the fonts-related behavior:
● OpenOffice Fonts Troubleshooting Guide at http://www.openoffice.org/FAQs/fontguide.html. Some of the text in this guide is applicable only to OpenOffice 1.x and therefore may be obsolete for OpenOffice 3.x and above.
4.10.7.4 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.

4.10.8 Configuring HTML to PDF conversions

The HTML-to-PDF conversion process is designed to use the settings from Acrobat 9 that override the settings from LiveCycle PDF Generator ES2.

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

To configure the HTML-to-PDF conversion:

1. Install and validate Acrobat as described in “Configuring Acrobat Professional” on page 44.

2. Locate the pdfgen.api file in the [LiveCycleES2 root]\plugins\x86_win32 directory and copy it to [Acrobat root]\Acrobat\plug_ins directory.

4.10.8.1 Enabling support for Unicode fonts in HTML to PDF conversions

Caution: 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
4.10.9 Modifying Microsoft Visio 2007 default macro settings

When a Microsoft Visio 2007 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.
➤ Change the default Visio 2007 macro settings:
   - In Visio 2007, 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

### 4.10.10 Installing the Network Printer Client

PDF Generator ES2 includes an executable file to install the PDF Generator ES2 network printer on a client computer. After the installation is complete, a PDF Generator ES2 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 PDF Generator ES2 Network Printer Client (wizard) is supported on 32-bit Windows platforms only.

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 “To configure PDFG Network Printer on Windows using the native Add Printer wizard:” on page 50.

➤ To install the PDF Generator ES2 Network Printer Client:

1. Ensure that you successfully installed PDF Generator ES2 on your server.
2. From a Windows client computer, enter the following URL in your web browser, where `{server}` is the name of the server where you installed PDF Generator ES2 and `{port}` is the application server port used:
   ```plaintext
   http://{server}:{port}/pdfg-ipp/install
   ```
3. On the Configure Internet Port screen, select **Use the specified user account** 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**.
   Upon successful installation, a dialog box appears, indicating that “The Printer Adobe LiveCycle PDF Generator ES2 has been successfully installed.”
4. Click **OK**. You will now have a printer named Adobe LiveCycle PDF Generator ES2 in your list of available printers.

➤ To 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 `{server}` is the server name and `{port}` is the port number where the server is running:
   ```plaintext
   http://{server}:{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.

➤ **To install and configure the PDF Generator ES2 Network Printer Client using Proxy server port forwarding**

1. Configure port forwarding on the CC Proxy server on a particular port to the LiveCycle ES2 server, and disable the authentication at proxy server level (since LiveCycle ES2 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 ES2 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 ES2 server.

4.10.11 Setting 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 LiveCycle Administration Console.

You must also ensure that the maximum transaction time-out and ORB service values have the proper values.

➤ **To configure transaction time-out:**

1. Do the following:
   
   ● *(WebSphere 6.1)* Log in to WebSphere Administrative Console, click **Servers > Application servers**, and then click the name of the server instance to configure (for example, server1).
   
   ● *(WebSphere 7)* 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**.
To increase the CORBA time-out value:

1. Do the following:
   - *(WebSphere 6.1)* Log in to WebSphere Administrative Console, click **Servers > Application servers**, and then click the name of the server instance to configure (for example, *server1*).
   - *(WebSphere 7)* 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**.

To set performance parameters for PDF Generator:

1. Log in to LiveCycle 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.

### 4.11 Resetting the Forms ES2 cache

After upgrading your LiveCycle ES (8.x) system that included Forms ES, it is recommended that you reset the Forms ES2 cache to avoid any possible issues with form generation from migrated processes.

- Access the **Reset Cache** button from LiveCycle Administration Console by clicking **Services > LiveCycle Forms ES2 > Forms Cache Control Settings**.

### 4.12 Configuring LiveCycle ES2 to access LDAP

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

To configure User Management with LDAP (Enterprise Domain):

1. Open a web browser, navigate to http:///[host]/:[port]/adminui and log in. (See “Accessing LiveCycle Administration Console” on page 37.)

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 ES2 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 ES2 Administration Help.)

Note: When using MySQL for your LiveCycle ES2 database, use only single-byte (ASCII) characters for the ID. (See “Adding enterprise domains” in LiveCycle ES2 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 LiveCycle ES2 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 LiveCycle ES2 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 LiveCycle ES2 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.

➤ To configure User Management (Local Domain):
   1. Open a web browser, navigate to http://[host]:[port]/adminui, and log in. (See “Accessing LiveCycle Administration Console” on page 37.)
   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 LiveCycle ES2 Administration Help.)
4. (Optional) Disable account locking by deselecting the **Enable Account Locking** option.

5. Click **OK**.

### 4.13 Considerations when upgrading from LiveCycle 7.x

When upgrading to LiveCycle ES2 Process Management from either LiveCycle 7.x or 8.x, several email-related settings require manual configuration in order to restore proper function. Therefore, if you have configured any of the following user preferences in Form Manager 7.x or Process Management 8.x, you will need to set them manually as described here.

➤ **Attach Forms in email:**

The Attach Forms in email setting specifies whether a copy of a form is attached to email notification messages, thus allowing the user to edit the form content (the task) and then submit it via email.

**Note:** Only PDF and XDP file attachments are supported.

To continue submitting tasks by email, each user must configure their preferences in Workspace ES2 as follows:

1. Log in to the Workspace ES2 application by going to http://[host]:[port]/workspace.
2. Go to **Preferences > Manage UI Settings**.
3. Set the **Attach Forms in Email** value to Yes.

Due to changes in the way email tasks are managed in LiveCycle ES2, the LiveCycle Administrator user must create a Complete Task email endpoint so that processes created in Form Manager 7.x that required the user to complete a task using email can be completed.

➤ **Complete Task email endpoint:**

1. Log in to LiveCycle Administration Console by going to http://[host]:[port]/adminui.
2. Go to **Services > Applications and Services > Service Management** and click the **Complete Task: 1.0** service.
3. On the Configure Complete Task screen, click the **Endpoint** tab, select **Email** from the list and then click **Add**.
4. Configure the endpoint as required and then click **Add**.
5. If required, go to **Services > Applications and Services > Endpoint Management**, and enable the new endpoint.

The Task Assignment and Reminder email settings are set back to the default values during the upgrade process.

### 4.14 Enabling FIPS mode

LiveCycle ES2 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 LiveCycle Configuration Manager during LiveCycle ES2 configuration or if you enable it but want to turn it off, you can change this setting through LiveCycle 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.

To turn FIPS mode on or off:

1. Log in to LiveCycle 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 ES2 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).

### 4.15 Configuring HTML digital signature

To use the HTML digital signature feature of Forms ES2, complete the following procedure.

➢ **To enable HTML digital signature:**

1. Manually deploy the `[LivecycleES2 root]/deploy/adobe-forms-ds.ear` file to your application server.
2. Log in to LiveCycle Administration Console and click `Services` > `LiveCycle Forms ES2`.
3. Select `HTML Digital Signature Enabled` and then click `Save`.

### 4.16 Configuring the Document Management service

If you installed Content Services ES2 and your application server is running on a non-default port, modify the port that the Document Management service uses.

➢ **To modify the port:**

1. Log in to LiveCycle 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`. 
4.17 Configuring the Connector for EMC Documentum service

**Note:** LiveCycle ES2 supports EMC Documentum, versions 6.0 and 6.5 only. Make sure your ECM is upgraded accordingly.

If you installed the Connector for EMC Documentum service as part of your LiveCycle ES2 solution, configure the service to connect to the Documentum repository.

➤ **To configure Connector for EMC Documentum:**

1. Locate the adobe-component-ext.properties file in the \[appserverdomain\] 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:

   **Note:** If you copy and paste this text, you must remove the formatting characters.

   - **Connector for EMC Documentum 6.0 only:**
     
     `com.adobe.livecycle.ConnectorforEMCDocumentum.ext=
     C:/Program Files/Documents/Documentum/Shared/dfc.jar,`
     `C:/Program Files/Documents/Documentum/Shared/aspectjrt.jar,`
     `C:/Program Files/Documents/Documentum/Shared/log4j.jar`
     `C:/Program Files/Documents/Documentum/Shared/jaxb-api.jar`

   - **Connector for EMC Documentum 6.5 only:**
     
     `com.adobe.livecycle.ConnectorforEMCDocumentum.ext=
     C:/Program Files/Documents/Documentum/Shared/dfc.jar,`
     `C:/Program Files/Documents/Documentum/Shared/aspectjrt.jar,`
     `C:/Program Files/Documents/Documentum/Shared/log4j.jar,`
     `C:/Program Files/Documents/Documentum/Shared/jaxb-api.jar,`
     `C:/Program Files/Documents/Documentum/Shared/configservice-impl.jar,`
     `C:/Program Files/Documents/Documentum/Shared/configservice-api.jar`

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://localhost:9080/adminui (local deployment using the default port)

5. Log in using the default user name and password:
   **User name**: administrator
   **Password**: password

6. Navigate to Services > LiveCycle ES2 Connector for EMC Documentum > Configuration Settings and perform these tasks:
   - Type 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**.

7. (Optional) Navigate to Services > LiveCycle ES2 Connector for EMC Documentum > Repository Credentials Settings, click **Add**, specify the Docbase information, and then click **Save**.

8. If WebSphere 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://localhost:9080/adminui (local deployment using the default port)

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 the following services:
    - EMCDocumentumAuthProviderService
    - EMCDocumentumContentRepositoryConnector
    - EMCDocumentumRepositoryProvider

12. Click **Start**. If any of the services do not start correctly, check the settings entered in step 6.

13. Do one of the following tasks:
    - To use the Documentum Authentication service (EMCDocumentumAuthProviderService) to display content from a Documentum repository in the Resources view of Workbench ES2, continue with this procedure. Using the Documentum Authentication service overrides the default LiveCycle ES2 authentication and must be configured to log in to Workbench ES2 using Documentum credentials.
    - To use the LiveCycle ES2 repository, log in to Workbench ES2 by using the LiveCycle ES2 super administrator credentials (by default, Administrator and password).

You have now completed the required steps for this procedure. Use the credentials provided in step 6 for accessing the default repository in this case and use the default LiveCycle ES2 authentication service.

14. Enable the Remoting and EJB endpoints by doing these tasks:
    - Log in to LiveCycle Administration Console and click Home > Services > Application and Services > Service Management.
● Filter the category **Connector for EMC Documentum** and click **EMC DocumentumContentRepositoryConnector:1.0**.

● Select the disabled endpoints and enable them.

15. Restart the application server.

16. Log in to LiveCycle 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:** When using DB2 for your LiveCycle ES2 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 ES2 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 ES2 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 ES2 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 ES2. If you do not log in using the username@repository_name, Workbench ES2 attempts to log in to the default repository specified in step 6.

26. (Optional) To install the LiveCycle ES2 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 ES2 Administration Help for information about configuring Workbench ES2 with your Documentum repository.

4.18 Configuring the Connector for IBM FileNet service

LiveCycle ES2 supports IBM FileNet, versions 4.0, 4.5 and 5.0 only. Make sure your ECM is upgraded accordingly.

If you installed the Connector for IBM FileNet service as part of your LiveCycle ES2 solution, you must configure the service to connect to the FileNet object store.

Complete the following procedure to configure the Connector for IBM FileNet service.

➤ To configure the connector using FileNet 4.x or FileNet 5.0 and CEWS transport:

1. In the Administration console of WebSphere, do the following:
   ● (WebSphere 6.1) Log in to WebSphere Administrative Console, click Servers > Application servers, and then click the name of the server instance to configure (for example, server1).
   ● (WebSphere 7) 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).


4. 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:\Program Files\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 \(\text{appserver root}/\text{profiles/}\text{[profile name]}\) 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:
   - javaapi.jar
   - log4j-1.2.13.jar
   - soap.jar
   - wasp.jar
   - builtin_serialization.jar (FileNet 4.0 only)
   - wsd1_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.

   **Note:** For FileNet 4.x, add following .jar files

   ```
   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,
   C:/Program Files/FileNet/AE/Workplace/WEB-INF/lib/soap.jar,
   C:/Program Files/FileNet/AE/CE_API/wsi/lib/wasp.jar,
   C:/Program Files/FileNet/AE/CE_API/wsi/lib/builtin_serialization.jar,
   C:/Program Files/FileNet/AE/CE_API/wsi/lib/wsd1_api.jar,
   C:/Program Files/FileNet/AE/CE_API/wsi/lib/jaxm.jar,
   C:/Program Files/FileNet/AE/CE_API/wsi/lib/jaxrpc.jar,
   C:/Program Files/FileNet/AE/CE_API/wsi/lib/saaj.jar,
   C:/Program Files/FileNet/AE/CE_API/wsi/lib/jetty.jar,
   C:/Program Files/FileNet/AE/CE_API/wsi/lib/runner.jar,
   C:/Program Files/FileNet/AE/CE_API/lib2/p8cjares.jar,
   ```
C:/Program Files/FileNet/AE/CE_API/lib/Jace.jar,
C:/Program Files/FileNet/AE/Workplace/WEB-INF/lib/pe.jar

**Note:** Add C:/Program Files/FileNet/AE/Workplace/WEB-INF/lib/pe.jar only if your deployment uses the IBMFileNetProcessEngineConnector service.

**Note:** For FileNet 4.5, remove the line C:/Program Files/FileNet/AE/CE_API/wsi/lib/builtin_serialization.jar,

**Note:** For FileNet 5.0, add following .jar files

C:/Program Files/FileNet/AE/CE_API/lib/Jace.jar,
C:/Program Files/FileNet/AE/CE_API/lib2/javaapi.jar,
C:/Program Files/FileNet/AE/CE_API/lib2/log4j.jar,
C:/Program Files/FileNet/AE/Router/lib/mailapi.jar,
C:/Program Files/FileNet/AE/Workplace/WEB-INF/lib/pe.jar
C:/Program Files/FileNet/AE/CE_API/lib/stax-api.jar,
C:/Program Files/FileNet/AE/CE_API/lib/xlxpScanner.jar
C:/Program Files/FileNet/AE/CE_API/lib/xlxpScannerUtils.jar
C:/Program Files/FileNet/AE/Router/java/jre/lib/xml.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:
   - (WebSphere 6.1) In the WebSphere Administrative Console navigation tree, click **Security > Secure administration, applications and infrastructure**.
   - (WebSphere 7) 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 ES2 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 ES2, continue with this procedure. Using the FileNet Authorization service overrides the default LiveCycle ES2 authorization and must be configured to log in to Workbench ES2 by using FileNet credentials.

To use the LiveCycle ES2 repository, log in to Workbench ES2 by using the LiveCycle ES2 super administrator credentials (by default, Administrator and password). The credentials provided in step 15 use the default LiveCycle ES2 authorization service for accessing the default repository in this case.

19. Enable the Remoting and EJB endpoints by doing these tasks:
   - Log in to LiveCycle 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 LiveCycle 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.

   **Note:** When using DB2 for your LiveCycle ES2 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 ES2 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 ES2 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 ES2 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 ES2. If you do not log in using the username@repository name, Workbench ES2 attempts to log in to the default repository specified in step 15.

31. (Optional) If you intend to install the LiveCycle ES2 Samples for Connector for IBM FileNet, create a FileNet object store named **Samples** and install the samples in that object store.

After you configure your Connector for IBM FileNet service, it is recommended that you see LiveCycle ES2 Administration Help for information about configuring Workbench ES2 functions properly with your FileNet repository.

### 4.19 Configuring SharePoint client access

You can configure Microsoft SharePoint clients to access content services from LiveCycle ES2. For this, you should add the SharePoint Alfresco Module Package using LiveCycle Configuration Manager. The SharePoint AMP file (adobe-vti-module.amp) is available in [LiveCycleES2 root]\LiveCycle_ES_SDK\misc\ContentServices folder.

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

#### 4.19.1 Obtain and edit the share.war file

Alfresco CMS uses the file share.war to connect with Content Services ES2. You should modify the share.war file to enable SharePoint clients to access Content Services ES2.

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.


6. Save and close the file.

4.19.2 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.
   ● (WebSphere):[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.

4.20 Enabling CIFS in IPv6 mode

If you want to enable CIFS for Content Services ES2 on an IPv6 implementation, you must explicitly add an additional IPv6 address to the machine that hosts LiveCycle ES2. 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 ES2 using LiveCycle Configuration Manager. Typically, you should pause the LiveCycle 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 LiveCycle Configuration Manager to deploy the updated EAR file along with other selected EAR files.
4.20.1 Edit the contentservices.war file

1. Navigate to [LiveCycleES2 root]\configurationManager\export directory.

2. Use a file archive utility such as WinRar to open the contentservices.war file.

3. From the file archive utility window, extract the file contentservices.war\WEB-INF\classes\alfresco\file-services-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\extension\file-servers-properties into a folder in the local file system, 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. Save the contentservices.war file.

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

4.21 Configuring the Connector for IBM Content Manager

Note: LiveCycle ES2 supports IBM Content Manager, version 8.4 only. Make sure your ECM is upgraded accordingly.

If you installed the Connector for IBM Content Manager service as part of your LiveCycle ES2 solution, complete the following procedure to configure the service to connect to the IBM Content Manager data store.

➤ To 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, Config folder that contains the IBM II4C property files, and a ZIP file from DB2 Universal Database Client installation:

   ● 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
- icmrmm81.jar
- jcache.jar
- log4j-1.2.8.jar
- xerces.jar
- xml.jar
- xsd.jar

The new system property look like this structure:

```
[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/ibmjgssprovider2.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,
```
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 data store 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 data store from IBMCMConnectorService Property Sheets by using the Use Credentials From Process Context as the login mode, complete the following procedure.

➤ To 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 default user name and password:
   
   **User name:** administrator  
   **Password:** password

3. Click Services > LiveCycle ES2 Connector for IBM Content Manager > Configuration Settings.

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 the these tasks:
   
   - To use the IBM Content Manager Authorization service (IBMCMProviderService) to use content from an IBM Content Manager data store, in the Processes view of Workbench ES2, continue with this procedure. Using the IBM Content Manager Authorization service overrides the default LiveCycle ES2 authorization and must be configured to log in to Workbench ES2 by using IBM Content Manager credentials.

   - To use the System Credentials provided in step 4 to use content from an IBM Content Manager data store, in the Processes view of Workbench ES2, log in to Workbench ES2 by using the LiveCycle ES2 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 ES2 authorization service for accessing the default repository in this case.

6. Log in to the LiveCycle 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 ES2 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 ES2 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 ES2 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 ES2 and log in using the following credentials for IBM Content Manager data store:

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

   The IBM Content Manager data store can now be used in the Processes view within Workbench ES2 when the login mode for IBMCMConnectorService orchestrable components is selected as **Use Credentials from process context**.

   After you configure your Connector for IBM Content Manager service, it is recommended that you see [LiveCycle ES2 Administration Help](#).

### 4.22 Upgrade and deploy Business Activity Monitoring ES2

If you installed Business Activity Monitoring (BAM) as part of your LiveCycle ES (8.x) solution, you need to perform the following tasks to ensure it will work in LiveCycle ES2.

➤ **Install and configure Business Activity Monitoring ES2:**

1. Perform a manual installation of Business Activity Monitoring ES2. See the [Installing and Deploying LiveCycle ES2](#) guide for your application server.

2. Modify the BAM settings as follows:

   - Open a web browser and log in to LiveCycle Administration Console by typing `http://[host]:[port]/adminui`.
   - Go to `Services > LiveCycle Process Management ES2 > Server Settings > BAM Configuration Settings`.
   - Modify the following values as appropriate for your BAM server: BAM Host, BAM Port, LiveCycle Server Host, and LiveCycle Server SOAP Port.
   - Change the **User Name** to CognosNowAdmin and click **Save**.
   - Restart the LiveCycle ES2 server.

➤ **Disable and enable all Data Stream:**

1. Open a web browser and log in to BAM Workbench by typing `http://[host]:[BAM port]/bam/workbench`.

2. Click the **Workbench tab > Public Folders**, find **Data Stream AdobeEvent** and select **AdobeEvent**. From the Activities list, click **Disable** and then on the popup dialog, click **Disable Dependencies**.

3. Select **AdobeEvent**, and then from the Activities list, click **Enable** and then on the popup dialog, click **Enable All**.

4. Repeat steps 2 and 3 for all other Data Streams.

➤ **Import the LiveCycle ES (8.x) BAM metadata:**

1. Locate the LiveCycle ES (8.x) BAM metadata JAR file you exported prior to performing the upgrade. See “Export and backup Business Activity Monitoring ES2 metadata” in the [Preparing to Upgrade to LiveCycle ES2 from 8.x](#) guide.

2. Go to Administration Console tab and click **Import/Export**.
3. Select **Import metadata from a JAR file (upload)**, click **Browse** and navigate to your exported metadata JAR file.

4. Select **Import Mode > Do not overwrite** and click **OK**.

Your LiveCycle ES (8.x) process data should now appear in LiveCycle Business Activity Monitoring ES2.

**Note:** Some LiveCycle ES (8.x) objects have been deprecated in LiveCycle ES2. These objects will not be displayed in BAM Workbench.

### 4.23 Deleting working files after upgrade

During upgrade, information is extracted from the LiveCycle ES (8.x) database and written to working files, from which the information is then migrated into the LiveCycle ES2 database. The files remain in the `\[LiveCycleES2 root\]/configurationManager/working/upgrade` directory after the data migration is complete.

When the upgrade is complete, most of these files are not needed, and some of this data may contain sensitive information, such as passwords and document encryption keys, depending on the LiveCycle solution components upgraded. To save disk space and to maintain the security of your system, delete most of the files in this directory after you verify that the upgrade is complete (essential and non-essential data is migrated) and LiveCycle ES2 is working as expected.

Navigate to the `\[LiveCycleES2 root\]/configurationManager/working/upgrade` directory, and delete all the files except for the `sharedData` file.

### 4.24 Perform a system image backup

After LiveCycle ES2 is installed and deployed into production areas and before the system is live, it is recommended that you perform a system image backup on servers to which LiveCycle ES2 is implemented. The LiveCycle ES2 database, GDS directory, 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 ES2 Backup and Recovery” topic in LiveCycle ES2 Administration Help.

### 4.25 Uninstalling LiveCycle ES2

The uninstaller located in the `\[LiveCycleES2 root\]` directory removes the files and applications that were created by the LiveCycle ES2 installer. However, the uninstaller does not remove any custom, non-LiveCycle application folders or files deployed on the application server. If some folders are not removed during uninstallation, restart the system and delete those folders manually.

**Note:** If you installed LiveCycle ES2 using the command line interface (CLI), you must uninstall LiveCycle ES2 using the CLI itself. See “Appendix - Install Command Line Interface” on page 74.

**Caution:** By running the uninstaller, all the contents within the product installation directory are subject to removal without further warning. Before you proceed, back up any data you do not want to lose.
To remove the files from your computer:

1. Invoke the uninstall program:
   - (Windows) Do one of the following:
     - Use Add or Remove Programs in the Windows Control Panel and remove Adobe LiveCycle ES2.
     - Manually uninstall:
       - Set the JAVA_HOME and PATH so that they use the IBM JDK from WebSphere.
       - Navigate to the directory that contains the uninstaller:
         `[LiveCycleES2 root]\Uninstall_Adobe LiveCycle ES2`
       - Double-click the `Uninstall Adobe LiveCycle ES2.exe` file.
   - (UNIX) Do the following:
     - From a terminal, navigate to the directory that contains the uninstall script:
       `cd /opt/adobe/adobe_livecycle_es2/Uninstall_Adobe LiveCycle ES2`
     - Type `./Uninstall Adobe LiveCycle ES2` (you may need to make this binary an executable file by typing a command, such as `chmod 777`).
   - (AIX) Perform these tasks:
     - Set JAVA_HOME and PATH so that they use the IBM JDK from WebSphere.
     - Change directory: `cd /opt/adobe/livecycleES2/Uninstall_Adobe_LiveCycle_ES2`
     - From a terminal, type `java -jar uninstall.jar`.

   **Note:** (UNIX) Navigate to the directory (Uninstall_Adobe LiveCycle ES2) which contains the uninstall script to run it. Because the directory name contains spaces, you should include the entire directory path as part of the command to uninstall the product.

   - (AIX) Perform these tasks:
     - Set JAVA_HOME and PATH so that they use the IBM JDK from WebSphere.
     - Change directory: `cd /opt/adobe/livecycleES2/Uninstall_Adobe_LiveCycle_ES2`
     - From a terminal, type `java -jar uninstall.jar`.

2. Follow the on-screen instructions in the uninstall program, and then click **Finish**.

3. If you are planning to reinstall LiveCycle ES2, remove all residual directories and files existing under the `[LiveCycleES2 root]` directory.
For information about troubleshooting your LiveCycle ES2 installation and configuration, see the *Troubleshooting LiveCycle ES2* guide.
LiveCycle ES2 provides a command line interface (CLI) for the installation program. The CLI is intended to be used by advanced users of LiveCycle ES2 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 the following:

- Your environment includes the software and hardware required to run LiveCycle ES2.
- You have prepared the environment as required. (See Preparing to Upgrade to LiveCycle ES2 from 8.x.)
- You have reviewed the first page of “Installing the product files” on page 13 and the “Installing the LiveCycle ES2 Modules” on page 12 section.

This appendix covers the following topics:

- “Installing LiveCycle ES2” on page 74
- “Error logs” on page 76
- “Uninstalling LiveCycle ES2 in console mode” on page 76
- “Next steps” on page 77

A.1 Installing LiveCycle ES2

This section covers the initial installation of LiveCycle ES2. For information about configuration and deployment, see “Configuring LiveCycle ES2 for Deployment” on page 18 or “Appendix - LCM Command Line Interface” on page 78.

**Note:** To avoid permission issues during the deployment, ensure that you are logged in as the user who will run the application server process when you run the LiveCycle ES2 install CLI and LiveCycle Configuration Manager.

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. 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*.

To install LiveCycle ES2:

1. Open a command prompt and navigate to the folder in the installation media or your hard disk that contains the installer executable:
   - (Windows) `livecycle_server\9.0\Disk1\InstData\Windows\VM`
   - (Windows 64-bit) `livecycle_server\9.0\Disk1\InstData\Windows_64bit\VM`
   - (Linux) `livecycle_server/9.0/Disk1/InstData/Linux/NoVM`
   - (Solaris) `livecycle_server/9.0/Disk1/InstData/Solaris/NoVM`
   - (AIX) `livecycle_server/9.0/Disk1/InstData/AIX/NoVM`
Note: Adobe LiveCycle ES2 installations for WebSphere are not supported on 32-bit operating systems. It is recommended that you do not proceed with the installation.

2. Open a command prompt and run the following command:
   - (Windows) install.exe -i console
   - (AIX, Linux, Solaris) ./install.bin -i console

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

3. Respond to the prompts without the -i console option as described in the following table:

<table>
<thead>
<tr>
<th>Prompt</th>
<th>Description</th>
</tr>
</thead>
</table>
| 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. |
| Update Installation                         | Select the installation option and press Enter. The options are Perform Update or Skip Update. If the installer detects a previous installation of LiveCycle, you can choose to update the existing installation. The update 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 ES2
   (AIX, Linux, Solaris): /opt/adobe/adobe_livecycle_es2
   Note: 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 ES2 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. During the installation process, the progress bar advances to indicate the progress of installation. Type back if you want to change the settings, or quit to close the installation. |
### A.2 Error logs

If an error occurs, you can review the Adobe_LiveCycle_ES2_InstallLog.log in the log directory of your installation:

- (Windows) C:\Adobe\Adobe LiveCycle ES2\log
- (AIX, Linux, Solaris) /opt/adobe/adobe_livecycle_es2/log

For information about errors that may occur during the installation, see the appropriate troubleshooting guide.

### A.3 Uninstalling LiveCycle ES2 in console mode

If you had installed LiveCycle using the command line option, you can uninstall Adobe LiveCycle ES2 only by running the uninstaller from the command line. If you want a silent uninstallation, omit the “-i console” flag.

Do the following:

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 ES2\Uninstall_Adobe LiveCycle ES2
   - (AIX, Linux, Solaris) cd /opt/adobe/adobe_livecycle_es2/Uninstall_Adobe LiveCycle ES2

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

   - (Windows) Uninstall Adobe LiveCycle ES2.exe -i console

---

<table>
<thead>
<tr>
<th>Prompt</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installing</td>
<td>The progress of the installation process is indicated.</td>
</tr>
</tbody>
</table>
| LiveCycle Configuration Manager | Press Enter to complete the installation of LiveCycle ES2. You can run the LiveCycle Configuration Manager by invoking the following script:  
(Windows): C:\Adobe\Adobe Livecycle ES2\configurationmanager\bin\ConfigurationManager.bat  
(AIX, Linux, Solaris): /opt/adobe/adobe_livecycle_es2/configurationManager/bin/ConfigurationManager.sh |
| Installation Complete         | The installation completion screen displays the status and the location of install.  
Press Enter to exit the installer.  
To correctly uninstall Adobe LiveCycle ES2, you should run the uninstaller from the command line, using the -i console flag. |
● (AIX, Linux, Solaris) ./Uninstall Adobe LiveCycle ES2 -i console

**Note:** If you typed the uninstall command without the `-i console` option, uninstallation is completed silently.

3. Follow the on-screen instructions.

<table>
<thead>
<tr>
<th>Prompt</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uninstall Adobe LiveCycle ES2</td>
<td>Press <strong>Enter</strong> to continue uninstallation. Enter <strong>quit</strong> to close the uninstall program. After you start the uninstall program, type <strong>back</strong> to go back to the previous step and make any changes.</td>
</tr>
<tr>
<td>Uninstalling...</td>
<td>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 ES2 are not removed. You must remove these files and folders manually.</td>
</tr>
</tbody>
</table>

**A.4 Next steps**

You must now configure LiveCycle ES2 for deployment. (See “Configuring LiveCycle ES2 for Deployment” on page 18 or “Appendix - LCM Command Line Interface” on page 78.)
Appendix - LCM Command Line Interface

LiveCycle ES2 provides a Command Line Interface (CLI) for the LiveCycle Configuration Manager. The CLI is intended to be used by advanced users of LiveCycle ES2, for example in server environments which do not support the use of the Graphical User Interface (GUI) of the LiveCycle Configuration Manager. This chapter describes how to use the CLI to configure LiveCycle ES2.

- “Order of operations” on page 78
- “Command Line Interface property file” on page 79
- “General Configuration Commands” on page 87
- “Examples Usage” on page 97
- “Error Logs” on page 97

B.1 Order of operations

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

1. Shut down JBoss for LiveCycle ES (8.x). (Turnkey only)
2. Migrate the GDS directory contents. (Turnkey only)
3. Migrate the datasources. (Turnkey only)
5. Apply the LiveCycle 7.x compatibility layer.
7. Validate application server topology.
8. Validate the database connectivity.
9. Configure the application server (WebSphere and WebLogic only).
10. Validate the application server configurations.
15. Deploy the LiveCycle ES2 modules.
16. Deploy the 7.x compatibility layer with the LiveCycle ES2 modules.
17. Retrieve the LiveCycle ES (8.x) form templates to migrate to LiveCycle ES2.
18. Post deployment configurations.
19. Validate the LiveCycle ES2 module deployment.
20. Check system readiness for PDF Generator ES2.
22. Configure LiveCycle ES2 Connector for IBM Content Manager.
25. Test all LiveCycle ES2 Connectors for ECM configurations.

**Caution:** You must restart WebSphere Application Server after you complete your LiveCycle Configuration Manager CLI operations.

### B.2 Command Line Interface property file

The LiveCycle 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 \[LiveCycleES2 root\]/configurationManager/bin folder. The cli_propertyFile_template.txt contains properties that apply to LiveCycle ES2 installation and configuration scenarios, in general. The cli_propertyFile_upgrade_template.txt contains properties specific to upgrading tasks. Both are required for upgrading from LiveCycle ES (8.x). You must create copies of these files and edit the values. You can customize this file based on the LiveCycle 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 and edit the values based on the LiveCycle Configuration Manager operations you intend to use.
- Use the GUI of the LiveCycle Configuration Manager and then use the property file created by the GUI version as the CLI version property file. When you run the \[LiveCycleES2 root\]/configurationManager/bin/configurationManager.bat file, the userValuesForCLI.properties file is created in the \[LiveCycleES2 root\]/configurationManager/config directory. You can use this file as input for the LiveCycle 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 LiveCycle Configuration Manager CLI script, you should enter it as C:\\Windows\\\Fonts.
B.3 Upgrading LiveCycle ES (8.x) Commands

B.3.1 (Turnkey only) Shutdown LiveCycle ES (8.x) JBoss command

The `upgrade8-shutdownESJboss` command shuts down the JBoss service installed with LiveCycle ES (8.x) turnkey installation and sets the service run mode to 'manual'.

This command requires no properties.

B.3.2 (Turnkey only) Migrate LiveCycle ES (8.x) GDS command

The `upgrade8-migrateGDS` command migrates the Global Document Storage (GDS) directory contents from LiveCycle ES (8.x) default GDS location to the LiveCycle ES2 default GDS location.

This command works only for 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 ES (8.x) JBoss bin directory to the new JBoss location. If the LiveCycle ES (8.x) system being upgraded was previously upgraded from LiveCycle 7.x, then the `adobe-bmc-client.jar` file will be copied to the `/JBoss root/server/lc_turnkey/lib` directory as well.

This command requires no input properties.

B.3.3 (Turnkey only) Migrate LiveCycle ES (8.x) datasources command

The `upgrade8-migrateDataSources` command migrates the custom datasource definitions that might have been added to the `adobe-ds.xml` or `mysql-ds.xml` datasource files in the JBoss `/server/all/deploy` directory. If no custom datasources are defined, skip this command.

The following properties are available for the `upgrade8-migrateDataSources` command.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
<th>Required</th>
<th>Can be empty</th>
</tr>
</thead>
<tbody>
<tr>
<td>adobeDSDatasourcesToMigrate</td>
<td>A comma separated list of the JNDI_NAME of custom datasources that need to be migrated from the LiveCycle ES (8.x) <code>adobe-ds.xml</code> file</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>mysqlDSDatasourcesToMigrate</td>
<td>A comma separated list of the JNDI_NAME of custom datasources that need to be migrated from LiveCycle ES (8.x) <code>mysql-ds.xml</code> file.</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
### B.3.4 Apply 7.x compatibility layer command

The `apply7compatibility-configure` command injects the LiveCycle 7.x compatibility layer into the LiveCycle ES2 EAR files. This command is required only if you need the LiveCycle 7.x compatibility layer.

The following properties are available for the `apply7compatibility-configure` command.

<table>
<thead>
<tr>
<th>Property</th>
<th>Example values</th>
<th>Description</th>
<th>Required</th>
<th>Can be empty</th>
</tr>
</thead>
<tbody>
<tr>
<td>productsToUpgrade</td>
<td>assembler, barcodedforms, documentsecurityserver, formmanager, forms, pdfgenerator, policyserver, print, readerextensions, workflow, watchedfolder</td>
<td>A list of products to be merged into the LiveCycle ES2 EAR files.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>livecycleESCoreEARPath</td>
<td>Path to the LiveCycle ES (8.x) core EAR file adobe-livecycle-&lt;app server&gt;.ear. Obtain it either from the previous installation or export it from your LiveCycle ES (8.x) application server.</td>
<td>No</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>livecycleESNativeEARPath</td>
<td>Path to LiveCycle ES (8.x) native EAR file adobe-livecycle-native-&lt;appserver&gt;-&lt;OS&gt;.ear. Obtain it either from the previous installation or export it from your LiveCycle ES (8.x) application server.</td>
<td>No</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>
### B.3.5 Extract information from LiveCycle ES (8.x) EAR file command

The `upgrade8-configurePreDeploy` command extracts information from the LiveCycle ES (8.x) EAR file and configures the LiveCycle ES2 EAR files before they are deployed.

The following properties are required for the `upgrade8-configurePreDeploy` command:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
<th>Required</th>
<th>Can be empty</th>
</tr>
</thead>
<tbody>
<tr>
<td>prevLCVersion</td>
<td>The version of LC from which upgrade is being performed Values can be</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>LC8.0.1.x or LC8.2.1.x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>excludedSolutionComponents</td>
<td>Comma separated list of LC LFS not being installed. This is equivalent to</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>deselecting installed/licensed solution components in the GUI</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### B.3.6 Deploy 7.x compatibility layer

The `apply7compatibility-deployComponents` command deploys the LiveCycle 7.x compatibility layer to the LiveCycle ES2 server.

This command is required only if LiveCycle 7.x API compatibility is required.

**Caution:** You must run this command if you have run the `apply7compatibility-configure` command already.

The following properties are available for the `apply7compatibility-deployComponents` command:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
<th>Required</th>
<th>Can be empty</th>
</tr>
</thead>
<tbody>
<tr>
<td>productsToUpgrade</td>
<td>A list of products whose compatibility layer to deploy to LiveCycle ES2.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>LCHost</td>
<td>Hostname where LiveCycle ES2 server is installed.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>LCPort</td>
<td>Port number where LiveCycle ES2 application server is configured.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>LCAdminUserID</td>
<td>Username of LiveCycle ES2 administrator user.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>LCAdminPassword</td>
<td>Password for LiveCycle ES2 administrator user. If the password is not</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
B.3.7 Retrieve the LiveCycle ES (8.x) form templates to migrate command

The `upgrade8-getFormTemplatesToMigrate` command can be used to retrieve a list of form templates that can be migrated from ECM repositories to the LiveCycle ES2 Native repository.

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

Once the list is obtained, use the `upgrade8-configurePostDeploy` command to actually migrate the templates from the list. You can skip this command and set the `skipFormTemplatesImport` property to true in the `upgrade8-configurePostDeploy` command to skip migration of form templates.

The following properties are available for the `upgrade8-getFormTemplatesToMigrate` command.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
<th>Required</th>
<th>Can be empty</th>
</tr>
</thead>
<tbody>
<tr>
<td>prevLCVersion</td>
<td>The version of LiveCycle ES (8.x) being upgraded. Values can be LC8.0.1.x or LC8.2.1.x</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>excludedSolutionComponents</td>
<td>Comma separated list of components not being installed. This is equivalent to deselecting installed/licensed solution components in the GUI.</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>jboss.clientjar.location</td>
<td>Location of the jbossall-client.jar file. (JBoss only)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**LiveCycle ES2 Host and Authorization information**

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
<th>Required</th>
<th>Can be empty</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCHost</td>
<td>Hostname on which LiveCycle ES2 server is installed.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>LCPort</td>
<td>Port number on which LiveCycle ES2 application server is configured.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>lc8JndiPort</td>
<td>JNDI port corresponding to LiveCycle ES2 application server.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>localServer.appServerRootDir</td>
<td>This is used to access appserver client JAR files. Local application server root directory required for Weblogic and Websphere only.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>LCAadminUserlID</td>
<td>Username of LiveCycle ES2 administrator user</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>LCAadminPassword</td>
<td>Password for administrator user. If you don’t provide a password in the file, you will prompted to provide it on command line</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
### LiveCycle ES2 Database information

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
<th>Required</th>
<th>Can be empty</th>
</tr>
</thead>
<tbody>
<tr>
<td>lc8DatabaseType</td>
<td>Type of database configured for LiveCycle ES2. Values can be mysql, db2, oracle, or sqlserver</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>lc8DatabaseHostName</td>
<td>Hostname for the LiveCycle ES2 database.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>lc8DatabasePortNumber</td>
<td>The port used by the LiveCycle ES2 database.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>lc8DatabaseDriverFile</td>
<td>Path to driver file for database.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>lc8DatabaseUserName</td>
<td>Username for accessing database</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>lc8DatabaseName</td>
<td>Database name. Default is adobe.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>lc8DatabaseUserPassword</td>
<td>Password for accessing database. If you don’t provide a password in the file, you will prompted to provide it on command line</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### ECM Form Template Migration properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
<th>Required</th>
<th>Can be empty</th>
</tr>
</thead>
<tbody>
<tr>
<td>documentumFormTemplatesFile</td>
<td>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 input to upgrade8-configurePostDeploy command later.</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>filenetFormTemplatesFile</td>
<td>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 upgrade8-configurePostDeploy command later.</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
B.3.8 Upgrade the LiveCycle Server command

The `upgrade8-configurePostDeploy` command does the actual upgrade of the system and is run after LiveCycle ES2 EAR files and modules have been deployed.

The following properties are available for the `upgrade8-configurePostDeploy` command.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
<th>Required</th>
<th>Can be empty</th>
</tr>
</thead>
<tbody>
<tr>
<td>prevLCVersion</td>
<td>The version of LiveCycle ES (8.x) being upgraded. Values can be LC8.0.1.x or LC8.2.1.x</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>excludedSolutionComponents</td>
<td>Comma separated list of LiveCycle ES (8.x) components not being installed. This is equivalent to deselecting installed/licensed solution components in the GUI.</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>jboss.clientjar.location</td>
<td>The location of the jbossall-client.jar file (JBoss only)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**LiveCycle ES2 Host and Authorization information**

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
<th>Required</th>
<th>Can be empty</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCHost</td>
<td>Hostname of the LiveCycle ES2 server.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>LCPort</td>
<td>Port number for the LiveCycle ES2 Samples application server.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>lc8JndiPort</td>
<td>JNDI port corresponding to LiveCycle ES2 application server.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>localServer.appServerRootDir</td>
<td>Used to access the application server client JAR files. Local application server root directory required for Weblogic and Websphere only.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>LCAdminUserID</td>
<td>Username of LiveCycle ES2 administrator user</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>LCAdminPassword</td>
<td>Password for the administrator user. If you don’t provide a password in the file, you will prompted to provide it on command line</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
LiveCycle ES2 Database information

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
<th>Required</th>
<th>Can be empty</th>
</tr>
</thead>
<tbody>
<tr>
<td>lc8DatabaseType</td>
<td>Type of database configured for LiveCycle ES2. Values can be mysql, db2, oracle, or sqlserver.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>lc8DatabaseHostName</td>
<td>Hostname for the LiveCycle ES2 database.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>lc8DatabasePortNumber</td>
<td>The port number for the LiveCycle ES2 database.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>lc8DatabaseDriverFile</td>
<td>Path to driver file for the LiveCycle ES2 database.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>lc8DatabaseUserName</td>
<td>Username for accessing the LiveCycle ES2 database.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>lc8DatabaseName</td>
<td>LiveCycle ES2 database name. Default is adobe.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>lc8DatabaseUserPassword</td>
<td>Password for accessing database. If you don’t provide a password in the file, you will prompted to provide it on command line.</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

ECM Form template Migration properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
<th>Required</th>
<th>Can be empty</th>
</tr>
</thead>
<tbody>
<tr>
<td>skipFormTemplatesImport</td>
<td>Whether to import form templates from ECM repositories to LiveCycle ES2 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.</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>documentumFormTemplatesFile</td>
<td>File containing a list of form templates to migrate from EMC Documentum repository to LiveCycle ES2 Native repository. This file is generated using the upgrade8-getFormTemplatesToMigrate command.</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>filenetFormTemplatesFile</td>
<td>File containing a list of form templates to be migrated from IBM FileNet repository to LiveCycle ES2 Native repository. This file is generated using the upgrade8-getFormTemplatesToMigrate command.</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
B.4 General Configuration Commands

B.4.1 Common properties

The common properties are as follows:

**WebLogic and WebSphere specific properties**: Are 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 ES2
- Deploy LiveCycle ES2 components.

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WebSphere specific properties</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>targetServer.topologyType</td>
<td>server or cluster</td>
<td>The type of application server topology for which you are deploying LiveCycle ES2.</td>
</tr>
<tr>
<td>targetServer.name</td>
<td>String</td>
<td>The name assigned to the application server node or cluster.</td>
</tr>
<tr>
<td>targetServer.adminHost</td>
<td>String</td>
<td>The hostname of the server where the WebSphere application server is installed.</td>
</tr>
<tr>
<td></td>
<td>Default is localhost</td>
<td></td>
</tr>
<tr>
<td>targetServer.adminPort</td>
<td>Integer</td>
<td>The port number the WebSphere admin server uses to listen for SOAP requests.</td>
</tr>
<tr>
<td>targetServer.adminUserID</td>
<td>String</td>
<td>The administrative user ID to use when accessing the WebSphere application server.</td>
</tr>
<tr>
<td>localServer.appServerRootDir</td>
<td>Default: (Windows) C:\Program Files\IBM\WebSphere\AppServer (Linux, Solaris) /opt/IBM/WebSphere/AppServer (AIX) /usr/IBM/WebSphere/AppServer</td>
<td>The root directory of the application server instance that you are configuring locally (on which you plan to deploy LiveCycle ES2 or that you will use to communicate with a remote server on which you plan to deploy LiveCycle ES2).</td>
</tr>
<tr>
<td><strong>LiveCycle Server specific properties</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCHost</td>
<td>String</td>
<td>The hostname of the server where LiveCycle ES2 will be deployed.</td>
</tr>
</tbody>
</table>
### B.4.2 Configure LiveCycle properties

These properties only apply to the configure LiveCycle operation.

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCPort</td>
<td>Integer</td>
<td>The web port number where LiveCycle ES2 will be deployed.</td>
</tr>
<tr>
<td>AdobeFontsDir</td>
<td>String</td>
<td>Location of the Adobe server fonts directory. This path must be accessible from the server being deployed to.</td>
</tr>
<tr>
<td>customerFontsDir</td>
<td>String</td>
<td>Location of the customer fonts directory. This path must be accessible from the server being deployed to.</td>
</tr>
<tr>
<td>systemFontsDir</td>
<td>String</td>
<td>Location of the system fonts directory. Multiple System fonts locations can be entered using a semicolon as separator. These paths must be accessible from the server being deployed to.</td>
</tr>
<tr>
<td>Property</td>
<td>Values</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------</td>
<td>------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>LCTempDir</td>
<td>String</td>
<td>Location of the temporary directory. This path must be accessible from the server being deployed to.</td>
</tr>
<tr>
<td>LCGlobalDocStorageDir</td>
<td>String</td>
<td>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 ES2 components in a clustered environment. This path must be accessible from the server being deployed to.</td>
</tr>
<tr>
<td>EnableDocumentDBStorage</td>
<td>true or false</td>
<td>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.</td>
</tr>
<tr>
<td>enableFIPS</td>
<td>true or false</td>
<td>Enabling the Federal Information Processing Standards (FIPS) option restricts data protection to FIPS 140-2 approved algorithms using the RSA BSAFE Crypto-J 3.5.2 encryption module with FIPS 140-2 validation certificate #590. Set this value to true only if you require FIPS to be enforced.</td>
</tr>
</tbody>
</table>

**Content Services ES2 only**

<p>| contentServices.rootDir      | String     | [Adobe LiveCycle Content Services ES2 only] Specify the root directory used by Content Services ES2. If the 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. |</p>
<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>contentServices.myfacesDir</td>
<td>String</td>
<td>[Adobe LiveCycle Content Services ES2 only] [WebSphere only]. Directory where myfaces jar will be copied and used as shared libs.</td>
</tr>
<tr>
<td>contentServices.topology</td>
<td>String</td>
<td>[Adobe LiveCycle Content Services ES2 only] SERVER for single node, CLUSTER for a cluster configuration.</td>
</tr>
<tr>
<td>contentServices.cifs.enable</td>
<td>true or false</td>
<td>[Adobe LiveCycle Content Services ES2 only] Enables or disables CIFS.</td>
</tr>
<tr>
<td>contentServices.cifs.servername</td>
<td>String</td>
<td>[Adobe LiveCycle Content Services ES2 only] Server name of the CIFS server.</td>
</tr>
<tr>
<td>contentServices.cifs.implementation</td>
<td>String</td>
<td>[Adobe LiveCycle Content Services ES2 only] Specifies how Content Services ES2 connects to the CIFS server.</td>
</tr>
<tr>
<td>contentServices.cifs.dllpath</td>
<td>String</td>
<td>[Adobe LiveCycle Content Services ES2 only] Path where NetBios DLL will be copied. Required if &quot;contentServices.cifs.implementation=NetBIOS&quot;. This path must be present in the environment.</td>
</tr>
<tr>
<td>contentServices.cifs.alternateIP</td>
<td>Numeric</td>
<td>[Adobe LiveCycle Content Services ES2 only] Alternate IP Address of the CIFS Server. It should be static IP and it is required field if &quot;contentServices.cifs.implementation=PureJava&quot;.</td>
</tr>
<tr>
<td>contentServices.cifs.WinsOrBrdcast</td>
<td>String</td>
<td>[Adobe LiveCycle Content Services ES2 only] DNS discovery method. It can be &quot;winsServer&quot; or &quot;broadcast&quot; and it is required field if &quot;contentServices.cifs.implementation=PureJava&quot;.</td>
</tr>
</tbody>
</table>
### Property | Values | Description
--- | --- | ---
contentServices.cifs.winsPrmIP | Numeric | [Adobe LiveCycle Content Services ES2 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 | [Adobe LiveCycle Content Services ES2 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 | [Adobe LiveCycle Content Services ES2 only] Broadcast IP address. It is required field if "contentServices.cifs.implementation=PureJava" and "contentServices.cifs.WinsOrBrdcast=broadCast".

contentServices.dbType | String | [Adobe LiveCycle Content Services ES2 only] Content Services database type.

### B.4.3 Configure or Validate Application Server properties

The LiveCycle Configuration Manager can configure or validate your WebSphere application server as required by LiveCycle ES2.

These properties apply to the following operations:

- Configure Application Server
- Validate Application Server Topology
- Validate Application Server Configurations
- Validate Database Connectivity
<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>You must configure the WebSphere specific properties section. For more information see &quot;Common properties&quot; on page 87.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>jvm.initialHeapSize</td>
<td>Default: 512</td>
<td>The initial heap size, in MB, for the JVM.</td>
</tr>
<tr>
<td>jvm.maxHeapSize</td>
<td>Default: 1792</td>
<td>The maximum heap size, in MB, for the JVM.</td>
</tr>
<tr>
<td>Datasource configuration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>datasource.dbType</td>
<td>Choose:</td>
<td>The type of database configured to use with LiveCycle ES2.</td>
</tr>
<tr>
<td></td>
<td>● oracle</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● mysql</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● db2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● sqlserver</td>
<td></td>
</tr>
<tr>
<td>datasource.dbName</td>
<td>String</td>
<td>The name of the database.</td>
</tr>
<tr>
<td>datasource.dbHost</td>
<td>String</td>
<td>The host name or IP address of the server where the database is located.</td>
</tr>
<tr>
<td>datasource.dbPort</td>
<td>Integer</td>
<td>The database port LiveCycle ES2 will use when communicating with the database.</td>
</tr>
<tr>
<td>datasource.dbUser</td>
<td>String</td>
<td>The user ID LiveCycle ES2 will use when accessing the database.</td>
</tr>
<tr>
<td>datasource.dbPassword</td>
<td>String</td>
<td>The password associated with the database user ID.</td>
</tr>
<tr>
<td>datasource.target.driverPath</td>
<td>String</td>
<td>JDBC driver in the application server lib directory. This path must be valid and accessible from the server being configured.</td>
</tr>
<tr>
<td>datasource.local.driverPath</td>
<td>String</td>
<td>Local JDBC driver. This value is used for testing direct database connection.</td>
</tr>
</tbody>
</table>
### B.4.4 Deploy LiveCycle properties

These properties only apply to the deploy LiveCycle ES2 operation.

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Description</th>
</tr>
</thead>
</table>
| deployment.includeIVS     | true or false| Specifies whether IVS EAR files are included in the deployment.             
|                           |              | **Caution:** It is recommended not to include IVS EAR files in a production environment. |

### B.4.5 Initialize LiveCycle properties

These properties only apply to the initialize LiveCycle ES2 operation.

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>**You must configure the LiveCycle Server Information section. For more information, see “Common properties” on page 87.</td>
</tr>
</tbody>
</table>

### B.4.6 Initialize BAM properties

These properties only apply to the initialize BAM operation.

**Note:** Business Activity Monitoring ES2 is an optional component with LiveCycle ES2.

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAMHost</td>
<td>String</td>
<td>The hostname of the server where BAM is deployed and running.</td>
</tr>
<tr>
<td>BAMPort</td>
<td>Integer</td>
<td>The port number the BAM server is using to listen for requests.</td>
</tr>
<tr>
<td>BAMAdminUserID</td>
<td>String</td>
<td>The BAM administrator user ID to use when connecting to the BAM server.</td>
</tr>
<tr>
<td>BAMAdminPassword</td>
<td>String</td>
<td>The BAM administrator password to use when connecting to the BAM server.</td>
</tr>
</tbody>
</table>
B.4.7 Deploy LiveCycle Components properties

These properties apply to the following operations:
- Deploy LiveCycle Components
- Validate LiveCycle Component Deployment
- Validate LiveCycle Server.

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>databaseType</td>
<td>Choose:</td>
<td>The type of database LiveCycle is using to capture BAM data.</td>
</tr>
<tr>
<td></td>
<td>• oracle</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• mysql</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• db2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• sqlserver</td>
<td></td>
</tr>
</tbody>
</table>

You must configure the LiveCycle Server Information section. For more information, see “Common properties” on page 87.

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCAdminUserID</td>
<td>String</td>
<td>The user ID to assign to the LiveCycle Administrator user. This User ID is used to login to the LiveCycle Administrator Console.</td>
</tr>
<tr>
<td>LCAdminPassword</td>
<td>String</td>
<td>The password to assign to the LiveCycle Administrator user. This password is used to login to the LiveCycle Administrator Console.</td>
</tr>
</tbody>
</table>

B.4.8 Command Line Interface Usage

Once you have configured your property file, you must navigate to the \[LiveCycleES2 root\]/configurationManager/bin folder.

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

B.4.8.1 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” on page 79.
B.4.8.2 Configure the Application Server CLI Usage

The Configure Application Server operation for WebSphere 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 instructions on creating a property file, see "Command Line Interface property file" on page 79.
- `-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.

B.4.8.3 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" on page 79.

B.4.8.4 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 instructions on creating a property file, see "Command Line Interface property file" on page 79.

B.4.8.5 Initialize Business Activity Monitoring CLI Usage

The initialize Business Activity Monitoring operation requires the following syntax:

```
initializeBAM -f <propertyFile>
```

Where:

- `-f <propertyFile>`: A property file containing the required arguments. For instructions on creating a property file, see "Command Line Interface property file" on page 79.

B.4.8.6 Deploy LiveCycle Components CLI Usage

The Deploy LiveCycle Components operation requires the following syntax:
deployLiveCycleComponents -f <propertyFile> -targetServer_AdminPassword <password>

Where:
- **-f <propertyFile>:** A property file containing the required arguments. For instructions on creating a property file, see “Command Line Interface property file” on page 79.
- **-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.

B.4.8.7 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 instructions on creating a property file, see “Command Line Interface property file” on page 79.
- **-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.

B.4.8.8 Validate database connectivity CLI Usage

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

validateDBConnectivity -f <propertyFile> -datasource_dbPassword <password>

Where:
- **-f <propertyFile>:** A property file containing the required arguments. For instructions on creating a property file, see “Command Line Interface property file” on page 79.
- **-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.

B.4.8.9 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 instructions on creating a property file, see “Command Line Interface property file” on page 79.
- **-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.
B.4.8.10 Validate LiveCycle Server CLI Usage

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

validateLiveCycleServer -f <propertyFile> -targetServer_AdminPassword <password>

Where:
- `-f <propertyFile>`: A property file containing the required arguments. For instructions on creating a property file, see "Command Line Interface property file" on page 79.
- `-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.

B.4.8.11 Validate LiveCycle Component Deployment CLI Usage

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

validateLiveCycleComponentDeployment -f <propertyFile> -targetServer_AdminPassword <password>

Where:
- `-f <propertyFile>`: A property file containing the required arguments. For instructions on creating a property file, see "Command Line Interface property file" on page 79.
- `-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.

B.5 Examples Usage

From the C:\Adobe\Adobe LiveCycle ES2\configurationManager\bin, type:

ConfigurationManagerCLI configureLiveCycle -f cli_propertyFile.txt

Where `cli_propertyFile.txt` is the name of the property file you created.

B.6 Error Logs

If an error occurs, you can review the CLI Error logs located here in the \LiveCycleES2 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.

B.7 Next steps

If you used LiveCycle Configuration Manager CLI to configure and deploy LiveCycle ES2, you can now do the following tasks:
- Verify the deployment. (See “Setting watched folder performance parameters” on page 51.)
- Access LiveCycle Administration Console. (See “Accessing LiveCycle Administration Console” on page 37.)
● Configure LiveCycle modules to access LDAP. (See “Configuring LiveCycle ES2 to access LDAP” on page 52.)

● Uninstall LiveCycle ES2. (See “Uninstalling LiveCycle ES2” on page 71.)

If you did not configure your application server for deployment, you must now configure your application server. (See the appendix for manually configuring your application server in the Preparing to Install LiveCycle ES2 guide.)