



**Adobe**

# **Upgrading to LiveCycle® ES for JBoss® Using Turnkey**

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**Adobe® LiveCycle® ES**

Version 8.0

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Adobe® LiveCycle® ES 8.0 Upgrading to LiveCycle ES for JBoss® Using Turnkey for Microsoft® Windows®  
Edition 1.1, July 2007

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# About This Document

This document explains how to upgrade to Adobe® LiveCycle® ES (Enterprise Suite) for JBoss® and MySQL from LiveCycle 7.x using the turnkey method. The turnkey method automatically installs and configures and upgrades the product.

Perform this type of upgrade to rapidly get a LiveCycle ES system up and running for a small-scale production, demonstration, evaluation, development, or training purposes. The turnkey method installs and configures a default set of Adobe and third-party products that provide a functioning LiveCycle ES environment.

Ensure that you read *Preparing to Upgrade to LiveCycle ES* at [http://www.adobe.com/go/learn\\_lc\\_upgradePreparation](http://www.adobe.com/go/learn_lc_upgradePreparation) before you perform the tasks described in this document. Although all the steps required to upgrade using turnkey are included in this document, *Preparing to Upgrade to LiveCycle ES* contains important information that will help you plan your upgrade.

## Who should read this document?

This document is intended for users who are upgrading from a LiveCycle 7.x turnkey deployment. This includes evaluators, administrators, or developers who are responsible for installing, configuring, administering, or deploying LiveCycle ES. The information provided is based on the assumption that anyone reading this document is familiar with the Microsoft® Windows® operating systems and web environments.

## Additional information

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

<b>For information about</b>	<b>See</b>
Upgrading to LiveCycle ES	<i>Preparing to Upgrade to LiveCycle ES</i> at <a href="http://www.adobe.com/go/learn_lc_upgradePreparation">http://www.adobe.com/go/learn_lc_upgradePreparation</a>
Upgrading to LiveCycle ES using the non-turnkey method	<i>Upgrading to LiveCycle ES for JBoss</i> at <a href="http://www.adobe.com/go/learn_lc_upgradeJBoss">http://www.adobe.com/go/learn_lc_upgradeJBoss</a> <i>Upgrading to LiveCycle ES for WebSphere</i> at <a href="http://www.adobe.com/go/learn_lc_upgradeWebSphere">http://www.adobe.com/go/learn_lc_upgradeWebSphere</a> <i>Upgrading to LiveCycle ES for WebLogic</i> at <a href="http://www.adobe.com/go/learn_lc_upgradeWebLogic">http://www.adobe.com/go/learn_lc_upgradeWebLogic</a>
LiveCycle ES, the solution components, and the development tools	<i>LiveCycle ES Overview</i> at <a href="http://www.adobe.com/go/learn_lc_overview">http://www.adobe.com/go/learn_lc_overview</a>
Other services and products that integrate with LiveCycle ES	<a href="http://www.adobe.com/products/livecycle">www.adobe.com/products/livecycle</a>

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<b>For information about</b>	<b>See</b>
Patch updates, technical notes, and additional information about this product version	<a href="http://www.adobe.com/support/products/enterprise/index.html">www.adobe.com/support/products/enterprise/index.html</a>
LiveCycle ES terminology	<i>LiveCycle ES Glossary</i> at <a href="http://www.adobe.com/go/learn_lc_glossary">http://www.adobe.com/go/learn_lc_glossary</a>

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## Conventions used in this document

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

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<b>Name</b>	<b>Default value</b>	<b>Description</b>
<i>[LiveCycle7 root]</i>	C:\Adobe\LiveCycle\	The installation directory that is used for all LiveCycle 7.x product files.
<i>[LiveCycle ES root]</i>	C:\Adobe\LiveCycle8\	The installation directory that is used for all LiveCycle ES solution components. The installation directory contains subdirectories for LiveCycle Configuration Manager, the LiveCycle ES SDK, and each LiveCycle ES solution component installed.
<i>[JBoss_7 root]</i>	The home directory of the application server that runs LiveCycle 7.x	C:\Adobe\LiveCycle\jboss
<i>[JBoss_ES root]</i>	The home directory of the application server that runs LiveCycle ES	C:\Adobe\LiveCycle8\jboss

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# 1

## Upgrading to LiveCycle ES Using Turnkey

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All the steps required to upgrade from LiveCycle 7.x to LiveCycle ES using the turnkey method are included in this document. If you installed LiveCycle 7.x using a non-turnkey method (manual configuration and deployment to JBoss or deployment to WebSphere or WebLogic), see the *Upgrading to LiveCycle ES* document for your application server.

**Note:** You can upgrade using the turnkey method only if you installed LiveCycle 7.x using turnkey and the LiveCycle 7.x product or products are deployed to the JBoss instance that was included as part of the turnkey installation.

The following information is included in this document:

- A description of the system requirements for upgrading to LiveCycle ES.
- All the steps required to initiate and complete the upgrade. (When you complete these steps, LiveCycle ES is running on JBoss and ready to accept requests.)
- Details about what you can do next, including accessing LiveCycle Administration Console and User Management, and accessing some of the web applications that may be available (depending on the LiveCycle ES solution components you have installed).

LiveCycle Configuration Manager automatically performs most of the tasks required to upgrade a LiveCycle 7.x deployment to LiveCycle ES on a JBoss Application Server and MySQL database running on Windows only.

### How the LiveCycle upgrade works

Upgrading to LiveCycle ES from products of any version of LiveCycle 7 involves the following major tasks, most of which are automated when you use the turnkey method of installation and deployment:

1. Installing LiveCycle ES product files.
2. Upgrading the application server and database (new versions are supported in LiveCycle ES).
3. Extracting configuration settings and data from LiveCycle 7.x EAR files and applying them to the LiveCycle ES EAR files and database. (Not applicable to LiveCycle Policy Server upgrades.)
4. Applying a compatibility layer to the LiveCycle ES EAR files. The compatibility layer comprises a set of deprecated Enterprise JavaBeans™ (EJBs), classes, servlets, and CORBA APIs, which support custom applications developed with LiveCycle 7.x and enable these legacy applications to continue to work with LiveCycle ES. (Not applicable to LiveCycle Policy Server upgrades.)
5. Migrating data to the LiveCycle ES database for LiveCycle 7.x products that used User Management (LiveCycle Forms, LiveCycle PDF Generator, and LiveCycle Workflow).
6. Migrating LiveCycle Policy Server data to the LiveCycle ES database.
7. Migrating remaining data, such as audit records, for LiveCycle Policy Server.

The installation program or LiveCycle Configuration Manager performs all the tasks. You are prompted for input throughout the process, as described by the steps in this document.

## Detailed outline of tasks performed in the turnkey upgrade process

If you originally installed LiveCycle 7.x using the turnkey method, you can use the turnkey upgrade process to move from LiveCycle 7.x to LiveCycle ES. The turnkey installation and upgrade process performs the following tasks:

- Installs the LiveCycle ES product files
- Installs a preconfigured version of JBoss 4.0.3 SP1 Application Server (with Apache Tomcat servlet container embedded)
- Installs a preconfigured version of the MySQL 5.0 database
- Installs Adobe Acrobat® 8.1 if not already installed (LiveCycle PDF Generator upgrade only)
- Starts LiveCycle Configuration Manager
- Extracts LiveCycle 7.x data from deployed archive files in JBoss 3.2.5
- Configures and assembles the LiveCycle ES EAR files
- Applies applicable data extracted from LiveCycle 7.x EAR files, and applies the LiveCycle API compatibility layer to LiveCycle ES
- Stops the JBoss for Adobe LiveCycle service (for LiveCycle 7.x) and sets it to manual startup mode
- Starts the JBoss for Adobe LiveCycle v8.0 service
- Extracts data from the MySQL 4.1 database and then stops MySQL for Adobe LiveCycle service (for LiveCycle 7.x) and sets it to manual startup mode (not applicable in LiveCycle Policy Server upgrades)
- Starts the MySQL for Adobe LiveCycle v8.0 service, migrates the data to the new MySQL 5.0 database, and starts the MySQL server
- Deploys LiveCycle ES to JBoss
- Initializes the MySQL 5.0 database
- Deploys all the required components to JBoss
- Migrates critical data, including settings, configuration data, fonts, and global document storage directory from LiveCycle 7.x to LiveCycle ES
- Migrates trust certificates and Certificate Revocation Lists (CRLs) (for LiveCycle Document Security upgrade)
- Migrates audit records for LiveCycle Policy Server upgrade, historical data for LiveCycle Workflow, and the Barcoded Forms Decoder Agent QPAC is replaced with the embedded Java Decoder component (for LiveCycle Barcoded Forms ES)
- Imports LiveCycle ES Samples to JBoss

LiveCycle ES must be installed and upgraded on the same computer on which the LiveCycle 7.x server is running.

## System requirements

The following software is required for a LiveCycle ES installation and upgrade:

- Microsoft Windows Server® 2003 Standard Edition operating system (for production)
- Microsoft Windows XP (for evaluation and development)
- Sun™ Java™ Software Development Kit (Java SDK) version 1.5.0\_11 or higher (but previous to version 1.6)
- A supported web browser (Internet Explorer 6.x or later, FireFox 2.0.0.1, or Mac® Safari v1.2. Netscape 7.1 is supported for Windows XP.)

The turnkey method installs and configures JBoss 4.0.3 SP1 Application Server (with Apache Tomcat servlet container embedded) and MySQL 5.0 database.

For any installation, these settings are recommended as the minimum:

- Disk space for installation: 3 GB
- System temp space during installation: 3 GB
- Memory for running LiveCycle ES: 2 GB
- Hardware requirement: Intel® Pentium® 4 or equivalent, 1.6 GHz or higher processor

You must include the path to the Java SDK (version 1.5.0\_11) in the `JAVA_HOME` and `PATH` environment variables.

If you are upgrading LiveCycle Reader Extensions 7.x to Adobe LiveCycle Reader Extensions ES, ensure that you have new a valid credential and password before running the installation. If you do not have this information at this time, you can choose to install the credential after you install and deploy LiveCycle ES on the Trust Store configuration pages in LiveCycle Administration Console. You must use the name of your LiveCycle 7.x Rights credential for LiveCycle ES. If you use a different name, you will have to modify code in existing custom applications or, in future LiveCycle ES, your existing LiveCycle QPACs.

**Tip:** To improve the speed of the installation, disable any on-access virus scanning software for the duration of the installation.

## Installation directories

By default, the turnkey upgrade places LiveCycle ES, including all of its related components and software, in the `C:\Adobe\LiveCycle8\` directory (referred to as the *[LiveCycleES root]* directory).

JBoss is installed and run from the *[LiveCycleES root]/jboss* directory.

## Installed Windows services

The turnkey installation creates the following Windows services, ensuring that LiveCycle ES always starts when the computer is rebooted:

- JBoss for Adobe LiveCycle ES v8.0
- MySQL for Adobe LiveCycle ES v8.0

These services manage the application server and the database for the turnkey upgrade. You can start, stop, and pause these services by using the Windows Services Control Manager. To open the Windows Services Control Manager, go to Control Panel > Administrative Tools > Services. Using this tool, you can also configure the services to start when the computer starts or to require manual startup.

**Note:** It is strongly recommended that you install LiveCycle ES using a local copy of the installation files or installation DVD. Installing from a shared network can take a very long time.

## Installing the Java 5 SDK

Download and install Java 5 (1.5.0\_11 or later updates to version 1.5.0) SDK from <http://java.sun.com>. Ensure that the `JAVA_HOME` and `PATH` variables are configured to point to the Java 5 (1.5.0\_11) SDK.

You must download and install the Sun J2SE SDK version 1.5.0\_11 or later update of version 1.5.0 from [www.java.sun.com](http://www.java.sun.com).

► **To set the `JAVA_HOME` environment variable (Windows):**

1. Select **Start > Control Panel > System**.
2. Click the **Advanced** tab.
3. Click **Environment Variables**.
4. In the System Variables area, click **New**.
5. Enter `JAVA_HOME` as the variable name, and enter the directory where you installed the Java SDK. This directory contain the `/bin` subdirectory. For example, type this directory:

```
C:\Program Files\Java\jdk1.5.0_11
```

**Note:** To verify your `JAVA_HOME` environment variable, open a command prompt and run the following command:

```
cd %JAVA_HOME%\bin
java -version
```

You should receive a response beginning with Java version 1.5.0\_11 (or a later version of 1.5.0).

## Task checklist

Instructions for all upgrade tasks are included in this document. You must perform the following tasks to upgrade LiveCycle 7.x products to LiveCycle ES using the turnkey method on a single server.

Task	Topic
Back up LiveCycle 7.x data in application server and database.	<a href="#">"Backing up LiveCycle 7.x servers and files" on page 11.</a>
(LiveCycle PDF Generator upgrade only) Install Adobe Acrobat 8.0 from the LiveCycle ES media.	<a href="#">"Installing Acrobat for PDF Generator ES" on page 12.</a>
Install LiveCycle ES using the LiveCycle ES installation program.	<a href="#">"Installing LiveCycle ES" on page 12</a>

Task	Topic
Start LiveCycle Configuration Manager and choose Upgrade to LiveCycle ES.	<a href="#">"To configure LiveCycle ES and migrate configuration and data from LiveCycle 7.x:" on page 14</a>
Complete the post-deployment activities.	<a href="#">"Post-Deployment Activities" on page 20</a>

**Note:** Although LiveCycle Policy Server also uses a database, when you upgrade this product, LiveCycle Configuration Manager automatically migrates the LiveCycle Policy Server data from the LiveCycle 7.x database (on MySQL 4.1) to the LiveCycle ES database (on MySQL 5.0) after LiveCycle ES has been deployed and initialized.

## Backing up LiveCycle 7.x servers and files

Before starting the upgrade process, you must back up all the files and directories associated with the LiveCycle 7.x deployment, including the Java SDK, installation files, watched folder contents, temporary directory, and so on. Do not delete any of these items. You do not need to back up the application server or database because LiveCycle ES is migrated to a separate instance of JBoss and MySQL, which run in parallel with the LiveCycle 7.x servers.

### ► To back up all the files and directories associated with LiveCycle 7.x:

1. Determine the location of all watched folders created for LiveCycle 7.x products. This includes watched folders used with LiveCycle Barcoded Forms, and watched folders used with LiveCycle Assembler and LiveCycle PDF Generator.
2. Determine the location of the LiveCycle 7.x global document storage directory. The global document storage directory may have been specified by the administrator who installed the product, or it may be the default location assigned by LiveCycle 7.x. You can use the JMX console in JBoss to determine the location of the global document storage directory:
  - Open a browser and go the URL `http://[servername]:[port]`.
  - Click **JMX console**.
  - Under the adobe.com heading, click **service=DataManagerService**.
  - Look for the value assigned to the GlobalDocumentStorageRootDir property. If none is specified, the default is in use. The default value for JBoss is `[java.io.tmpdir]/AdobeDocumentStorage/global`, where `java.io.tmpdir` is the value of the Java system property 'java.io.tmpdir'. The value of this property is written to the server.log file when LiveCycle 7.x is started.
3. If the value above is blank (no directory is specified), a new default global document storage directory will be created for LiveCycle ES and you do not have to back up this directory. If you specified a value other than the default, you must back up the directory listed at this time. During the configuration and upgrade process, LiveCycle ES is configured to reuse this directory.

Back up the global document storage directory by creating a ZIP file or TAR file of the entire directory.
4. Back up the contents of each watched folder by creating a ZIP file or TAR file of each watched folder directory.

## Installing Acrobat for PDF Generator ES

LiveCycle PDF Generator ES can convert many native file formats to PDF. Such native file formats include Microsoft Word, Microsoft Excel, Microsoft PowerPoint, Microsoft Project, Microsoft Visio, Corel WordPerfect, Adobe Photoshop®, Adobe FrameMaker®, Adobe PageMaker®, and image formats such as JPEG and BMP. For more information about PDF Generator ES, see *LiveCycle ES Overview* at [http://www.adobe.com/go/learn\\_lc\\_overview](http://www.adobe.com/go/learn_lc_overview).

If you plan to use PDF Generator ES native application format conversion or optical character recognition (OCR) generation, you must install Acrobat 8.0 on the computer where PDF Generator ES will run before you run the LiveCycle ES installation program. If you do not install Acrobat 8.0 before you install LiveCycle ES, you must install Acrobat 8.0 afterward and perform some additional manual tasks. A copy of Acrobat 8.0 is included on the LiveCycle ES DVD.

If you do not want to configure PDF Generator ES to support this functionality, you do not need to install or upgrade to Acrobat 8.0. However, if you intend to use Microsoft Office 2007, you must upgrade to Acrobat 8.1 because Acrobat 8.0 is not compatible with Microsoft Office 2007.

### ► To install Acrobat 8.0 for PDF Generator ES:

1. Uninstall any other version of Acrobat by using the Add/Remove Programs window in the Windows Control Panel.
2. Ensure that no system variables exist using the name Acrobat\_PATH.
3. Restart your computer if prompted.
4. Navigate to the /additional/acrobat directory on the LiveCycle ES installation media.
5. Run the Acrobat installer by double-clicking the Setup.exe file.
6. Follow the instructions on the Acrobat installer screens.

## Installing LiveCycle ES

For a turnkey upgrade, you must install LiveCycle ES on the same computer as the LiveCycle 7.x server. The default target installation directory for LiveCycle ES is C:\Adobe\LiveCycle8. After you install LiveCycle ES, you will run LiveCycle Configuration Manager to perform the upgrade from LiveCycle 7.x to LiveCycle ES.

You will be prompted for a serial number(s) during the installation.

### ► To install LiveCycle ES:

1. On the DVD media drive, navigate to the /livecycle directory and click the **win\_livecycle8\_setup.exe** file to start the installation.
2. On the Welcome screen, click **Next**.
3. Accept the default directory as listed or click **Browse** and navigate to the directory where you want to install the product, and then click **Next**. This directory is referred to as *[LiveCycleES root]*.
4. In the **Serial Number** box, type or copy the serial numbers and then click **Add**. If you have licensed multiple solution components, repeat this step for each serial number you have.

**Note:** Installing LiveCycle Barcoded Forms ES, LiveCycle Business Activity Monitoring ES, or LiveCycle Workspace ES also require the LiveCycle Process Management ES license.

5. Verify that the list of solution components is correct and click **Next**.
6. On the Type of Installation screen, select **Turnkey** and click **Next**.
7. Read the Adobe LiveCycle ES Server License Agreement, select **I accept the terms of the license agreement**, and then click **Next**.
8. Read the JBoss Application Server License Agreement, select **I accept the terms of the license agreement**, and then click **Next**.
9. Read the MySQL License Agreement, select **I accept the terms of the license agreement**, and then click **Next**.
10. Verify the path to your Java5 SDK or click **Browse** to navigate to its root directory, and then click **Next**. This directory must be the same one that is specified in the `JAVA_HOME` environment variable.
11. **(LiveCycle PDF Generator ES only)** Select **Yes, enable native application support for PDF Generator ES**.

**Note:** Acrobat version 8.0 is required to configure support for native Windows applications. If you select this option and do not have Acrobat installed on your system, the installation program prompts you to allow it to install Acrobat.

If you have an earlier version of Acrobat installed, you can complete the LiveCycle ES installation. After completing the installation you must uninstall the older version of Acrobat, and reinstall and configure Acrobat 8.0 by following the instructions in the procedure ["To install Acrobat 8.0 for PDF Generator ES:" on page 12](#).
12. **(LiveCycle PDF Generator ES only)** Type the user name and password for the user who installed Microsoft Office and click **Next**.

**Caution:** You must provide the correct administrator name and password or LiveCycle ES will not run. This administrator account name must be the same user who installed Microsoft Office on the system and should include the Windows DOMAIN prefix if that user is not a local account on the target computer.
13. Set the MySQL 5.0 root administrator password and, optionally, type your MySQL port number (for version 5.0). Ensure that you record this password for future reference. (You will use this password when you later migrate the LiveCycle 7.x database to the LiveCycle ES database.)
  - To verify that the port number is not in use, click **Test**. If the port is available, the installer displays a green check mark. If the port is in use, the installer displays a red X.
  - If the port is in use, type a new port number and repeat the process until you find a port that is available. Clicking **Reset** populates the port box with the default port number 1138.

**Note:** It is recommended that you click **Test** to make sure that the port is available and then follow the instructions to type the password to be used. If you are upgrading a product that does not use a database, the port tested is 3306. If you are upgrading a product that uses a database, the existing LiveCycle 7.x database instance is using port 3306; therefore, the installer tests port 1138 instead. If you are upgrading LiveCycle Policy Server, you must have both databases running simultaneously so that the data can be copied from one database to the other.
14. Click **Next**, review the preinstallation summary, and then click **Install**. The installation program displays the progress of the installation. This process may take several minutes to complete.
15. Review the Release Notes and click **Next**.

16. Review the post-installation summary information and choose one of these options:
  - Ensure that **Start the LiveCycle Configuration Manager** is selected, and click **Finish**.
  - If you were prompted earlier to install Acrobat 8.0, deselect **Start the LiveCycle Configuration Manager**, exit the installer, and install Acrobat 8.0 from the installation DVD (see [“To install Acrobat 8.0 for PDF Generator ES:” on page 12](#)). To complete the configuration, run LiveCycle Configuration Manager by using the ConfigurationManager.bat file located in `[LiveCycleES root]\configurationManager\bin`.

## Upgrading LiveCycle 7.x to LiveCycle ES

Now that LiveCycle ES is installed on the computer where LiveCycle 7.x is running, you are ready to upgrade from LiveCycle 7.x to LiveCycle ES. LiveCycle Configuration Manager performs the tasks required for upgrading, including extracting the required data and properties from the LiveCycle 7.x configuration and applying it to the LiveCycle ES configuration.

When LiveCycle Configuration Manager completes the upgrade process, LiveCycle ES will be deployed and started.

**Tip:** You can press **F1** in LiveCycle Configuration Manager to view Help information for the screen you are viewing.

### ► To configure LiveCycle ES and migrate configuration and data from LiveCycle 7.x:

1. On the LiveCycle Configuration Manager Welcome screen, click **Next**.
2. Select **Upgrade from LiveCycle 7.x**. All the subtasks are selected by default. You can leave all the tasks selected or deselect a task if you do not want to perform it now. (Some conditions for deselecting tasks are described in this list.):

**Apply LiveCycle 7.x configuration to LiveCycle ES:** Retrieves all required data from LiveCycle 7.x files (deployable modules) and applies this data to the deployable LiveCycle ES components. You must complete this task before you can migrate data to LiveCycle ES. The following two tasks are dependent on this task being selected or already completed.

**Migrate data essential to LiveCycle ES operation:** Imports essential data files, such as server configuration settings, custom fonts and files in the global document storage directories, LiveCycle Policy Server policies, external users, document licenses, watermarks, and revocation information into LiveCycle ES. To complete this task, you are prompted to stop the LiveCycle 7.x server. When LiveCycle Configuration Manager finishes migrating the data, LiveCycle ES can begin accepting requests.

**Migrate remaining data:** Imports additional non-essential data, such as audit records associated with LiveCycle Policy Server, from LiveCycle 7.x to LiveCycle ES. The task is only relevant to upgrading LiveCycle Policy Server. The LiveCycle ES server can continue to take requests during this task. This task may require a significant amount of time to complete. You can deselect this task for the initial installation and upgrade, and return to LiveCycle Configuration Manager at a later time to complete the migration.

3. Click **Next** to continue.
4. On the Solution Component Selection screen, select the LiveCycle ES solution components that you have installed and plan to deploy, and then click **Next**.

5. On the Product Upgrade Selection screen, ensure that the products you want to upgrade are selected. The products that are selected indicate the LiveCycle 7.x equivalents that can be upgraded. If a product that you are planning to upgrade is not available for selection, ensure that the corresponding solution component is selected on the previous screen.

**Note:** If you are upgrading LiveCycle Forms 7.x, LiveCycle Print 7.x, or LiveCycle PDF Generator 7.x to LiveCycle Forms ES, LiveCycle Output ES, or LiveCycle PDF Generator ES, LiveCycle Assembler 7.x is enabled by default. If you are not upgrading LiveCycle Assembler 7.x, you must deselect it.

6. Click **Next** to continue.

7. On the Task Selection screen, ensure that all the available tasks are selected, and then click **Next**.

**Note:** The tasks **Configure Application Server** and **Validate Application Server Configuration** are not available for selection. The turnkey method does not support these tasks because the application server is already configured for LiveCycle ES.

8. **(Not applicable for LiveCycle Policy Server upgrade)** On the Import LiveCycle 7.x File screen, provide the path to the deployable archives associated with LiveCycle 7.x. You should use archives located in the `[JBoss7 root]/server/all/deploy` directory to ensure that you are using the most current version of the files. If you have both the `Adobeservices.sar` file and the `LiveCycle.ear` file in your LiveCycle 7.x deployment, import the `LiveCycle.ear` file. When you have provided the required information, click **Next**.

**Note:** The fields are enabled based on the products you selected for upgrading on the previous screen. All enabled fields are required, and the specific file name depends on the version of LiveCycle 7.x from which you are upgrading.

**Tip:** Press **F1** to view a list of the expected file names, according to the version of LiveCycle that you are upgrading from. You can also move your mouse over the fields to display tool tips that contain lists of the possible file names. These expected file names are only defaults. Any file that matches the applicable file type filter (`.war`, `.bar`, `.sar`, `.ear`) is accepted.

9. **(Not applicable for LiveCycle Policy Server upgrade)** On the Extract LiveCycle 7.x Configuration Data screen, click **Start** and, when the extraction has completed successfully, click **Next**.
10. On the Configure LiveCycle ES screen, click **Configure** and, when the EAR files have been configured, click **Next**. Depending on the number of solution components included in the configuration, this process may take several minutes to complete.
11. **(Not applicable for LiveCycle Policy Server upgrade)** On the Apply LiveCycle 7.x Configuration Data screen, click **Start** and, when the task has completed successfully, click **Next**. Depending on the number of products you are upgrading, this process may take several minutes to complete.
12. **(Not applicable if custom fonts not detected)** On the Copy LiveCycle 7.x Customer Fonts screen, select the option to automatically place the fonts into the LiveCycle ES customer fonts directory. (This screen appears only if LiveCycle Configuration Manager detects custom fonts on the server. If you are not using additional fonts, go to step [14](#).) By selecting this option, you do not have to manually copy the fonts later in the process.

13. **(Not applicable if custom fonts not detected)** Specify a location for the customer fonts directory in the second text field (for example, *[LiveCycleES root]/customerFonts*), and then click **Next**.

**Note:** The customer fonts directory is used to store fonts that are not provided as part of the LiveCycle ES installation.

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

14. On the Configure LiveCycle ES (continued) screen, set the directories that LiveCycle ES will use to access fonts and store temporary data associated with processing jobs:
  - (Optional) To change the default locations of the Adobe Server Fonts directory, type the path or browse to the directory.
  - Accept the value in the **Customer Fonts directory** box. If you did not specify a location for the customer fonts directory on the previous screen, this box appears empty, and you can choose to specify a new location for your customer fonts. (Accepting the empty box accepts the default font directory location.)
  - (Optional) To change the default locations of the System Fonts directory, type the path or browse to the directory.
  - (Optional) To specify the location of the Temp directory, click **Browse**.
  - To specify the locations of the global document storage root directory, click **Browse**. (You determined the location of the global document storage root directory during the directory backup process. (See [“Backing up LiveCycle 7.x servers and files” on page 11.](#))
  - 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.
15. Click **Configure** to configure the directories and, when the configuration is complete, click **Next**.
16. On the Configure LiveCycle ES Summary screen, click **Next**.
17. **(LiveCycle Workflow, LiveCycle Form Manager, LiveCycle PDF Generator, or LiveCycle Forms with User Management upgrades only)** On the LiveCycle 7.x Database screen, provide the following information about your LiveCycle 7.x database so that LiveCycle Configuration Manager can connect to it:

**Database Type:** The type of database you are using as the LiveCycle 7.x database.

**Database Name:** The name of the LiveCycle 7.x database you are connecting to.

**Host:** The name or IP address of the computer that hosts the LiveCycle 7.x database server. Because the database is on the same host for turnkey installations, you can use localhost.

**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 7.x).

**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 ES and used to connect to the LiveCycle 7.x database. The driver may be located in the *[LiveCycle ES root]/lib/db* directory.

**Note:** For more information about the MySQL JDBC driver, press F1 in LiveCycle Configuration Manager.

18. **(LiveCycle Policy Server upgrade only)** On the LiveCycle Policy Server 7.x Database screen, provide information about your LiveCycle Policy Server 7.x database so that LiveCycle Configuration Manager can connect to it:

**Database Type:** The type of database you are using as the LiveCycle Policy Server 7.x database.

**Database Name:** The name of the LiveCycle Policy Server 7.x database you are connecting to. Reselect the database to ensure that the JDBC driver field (below) shows the default driver.

**Host:** The name or IP address of the computer that hosts the LiveCycle Policy Server 7.x 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 Policy Server 7.x).

**Password:** The password for the user account specified for the database name you entered above.

**JDBC driver:** The location of the JDBC driver used with the LiveCycle Policy Server 7.x database. You can use the drivers in `[LiveCycleES root]/lib/db<database>`. Specifying the drivers here allows LiveCycle Configuration Manager to test the database connection.

**Note:** For more information about the MySQL JDBC driver, press F1 in LiveCycle Configuration Manager.

19. On the LiveCycle Server Information screen, do the following tasks and then click **Next**:
- Type `administrator` in the **LiveCycle ES User ID** box if it is not already populated.
  - Type `password` in the **Password** box.
  - Select **LiveCycle 7.x host is also the LiveCycle ES host**.
  - Provide the JNDI information for LiveCycle ES. This information allows LiveCycle Configuration Manager to connect to the LiveCycle ES server and set preferences. Press **F1** for more information about the contents required for each field.

**Caution:** After completing the upgrade, you should change the default password in LiveCycle Administration Console. (See [“Accessing LiveCycle Administration Console” on page 21.](#))

20. On the Stop LiveCycle 7.x screen, click the **Stop LiveCycle 7.x** button. This action stops the JBoss Application Server on which LiveCycle 7.x is running.
21. When the Success dialog box appears, indicating that the LiveCycle 7.x service has stopped and been set to manual mode, click **OK** and then, click **Next** on the LiveCycle Configuration Manager screen.
22. **(Not applicable for LiveCycle Policy Server or products without a database)** On the *Upgrade MySQL Relational Database* screen, click **Upgrade MySQL**. LiveCycle Configuration Manager stops the MySQL for Adobe LiveCycle service, migrates the data to the new MySQL 5.0 database, and then starts the MySQL for Adobe LiveCycle v8.0 service. Click **Next**.
23. On the Deploy LiveCycle ES EARs screen, click **Deploy**. This operation may take several minutes to complete. When the deployment has completed successfully, click **Next**.
24. On the LiveCycle ES Database Initialization screen, verify 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**.

25. **(LiveCycle Business Activity Monitoring ES only)** On the Initialize Business Activity Monitoring screen, provide the information for the following fields:

**Database type:** The database on which BAM metadata is running.

**BAM Host:** The name or IP address of the computer that hosts the application server on which BAM server is running.

**BAM HTTP Port:** The HTTP service port that the database uses (for example, 9080 for WebSphere, 8080 for JBoss, or 7001 for WebLogic).

**BAM Administrator User ID:** The administrator ID required to log in to BAM Workbench. The default User ID is "system".

**BAM Administrator Password:** The password to log in to the BAM Workbench. The default password is "manager".

26. **(LiveCycle Business Activity Monitoring ES only)** Click **Initialize** to begin the initialization process and, when initialization is complete, click **Next** to continue.

27. On the LiveCycle ES Server Information screen, click **Test Server Connection** to ensure that the information for the default JBoss server is correct. When the test has completed successfully, click **Next**.

**Note:** The server information that appears on this screen represents default values for the turnkey deployment. You can change the values if the LiveCycle 7.x server uses a different port.

Testing the server connection helps to 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.

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

29. On the LiveCycle Component Deployment Validation screen, click **Validate**. LiveCycle Configuration Manager validates that the Java archive files are deployed to and running on the LiveCycle ES server. When the validation has completed successfully, click **Next**.

30. **(LiveCycle Document Security upgrade only)** On the Unlock Credential Files Used by LiveCycle 7.x screen, select the credential you want to import, and then type and confirm the password for the certificate file. Click **Next** to import the credentials and continue.

**Note:** For information about migrating HSM-based credentials, see *Preparing to Upgrade to LiveCycle ES* at [http://www.adobe.com/go/learn\\_lc\\_upgradePreparation](http://www.adobe.com/go/learn_lc_upgradePreparation).

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

This step involves copying forms, form data, processes, preferences, FileType settings, job options, security settings, watched folders, and email job sources (depending on the product(s) you are upgrading), custom fonts, and documents in the global document storage directory. For LiveCycle Policy Server, policies, external users, document licenses, watermarks, and revocation information are copied, and the user directory is synchronized. For LiveCycle Barcoded Forms, the Decoder Agent QPAC is upgraded to an embedded Java decoder.

32. **(LiveCycle Reader Extensions ES and Barcoded Forms ES only)** On the LiveCycle Reader Extensions ES Credential Configuration screen, specify the following details associated with the Rights credential that activates the solution component services:

**LiveCycle Reader Extensions ES Rights credential:** The path and file name of the Rights credential (.pfx or .p12 file type).

**LiveCycle Reader Extensions ES Rights credential password:** The password associated with the credential. This password was provided with the credential file.

**Name for the configured Rights credential:** The name (or alias) LiveCycle Configuration Manager gives the credential when it is configured. If you are installing Reader Extensions ES for the first time, this name can be any name. If you are upgrading from LiveCycle Reader Extensions, you must use the name of your LiveCycle 7.x Rights credential for LiveCycle ES. If you use a different name, you will have to modify code in existing custom applications or, in a future LiveCycle ES release, your existing LiveCycle 7.x QPACs.

This name appears in the Reader Extensions ES web interface, as well as the alias used to reference the credential through SDK calls. You can create any unique name for the Rights credential.

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

33. On the LiveCycle ES Ready for Essential Tasks screen, click **Next**. The LiveCycle ES server is running on JBoss and can process basic requests.

34. **(LiveCycle Policy Server upgrade only)** On the Migrate Remaining Data screen, click **Start** to begin migrating the remaining data from LiveCycle 7.x to LiveCycle ES. This screen appears only if you selected **Migrate Remaining Data** on the Upgrade Selection screen.

This step migrates data and collateral that is not required to be in place in order for LiveCycle ES to run and accept user requests. For example, audit data used by LiveCycle Policy Server and LiveCycle Rights Management ES is not required to correctly grant and deny document viewing requests. Although it is important to migrate this data, it is not necessary to do so before making the LiveCycle ES server available to users. Records and data are available for viewing by using LiveCycle Administration Console as they are migrated.

35. On the LiveCycle ES Samples Import screen, click **Import**. This task is optional and only appears if you selected it on the Task Selection screen. If you did select it but do not want to import Samples at this time, select **Skip Samples Import**.

**Note:** Samples should not be installed on production systems because they create users and other settings that implement default passwords.

36. When the import has completed successfully, click **Next**.

37. On the Summary page, click **Exit**.

## Next steps

If you used LiveCycle Configuration Manager to configure and deploy LiveCycle ES, you can now complete the post-deployment tasks. See [“Post-Deployment Activities” on page 20](#).

## 2

# Post-Deployment Activities

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This section details post-installation tasks that should be completed before you use LiveCycle ES.

## 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.

The JBoss Application Server log files are in the `[LiveCycleES root]\jboss\server\all\log` directory.

The LiveCycle Configuration Manager log files are in the `[LiveCycleES root]\configurationManager\log` directory.

You can open the log files by using any text editor.

## Deleting working files that contain sensitive data

During upgrade, all the information is extracted from the LiveCycle Policy Server database and written to working files, from which the information is then migrated into the LiveCycle ES database. The files containing this information remain in the `[LiveCycleES root]/configurationManager/working/upgrade` directory after the data migration is complete.

Some of this data is sensitive information, such as passwords and document encryption keys. After you verify that the upgrade is complete (essential and non-essential data is migrated) and LiveCycle Rights Management is working as expected, you must delete the LiveCycle Policy Server migration files.

In the `[LiveCycleES root]/configurationManager/working/upgrade` directory, delete all the files whose names begin with `OrigExported` and `Intermediate`. Approximately 50 files need to be removed. Do not delete the `sharedData` file.

## Configuring Acrobat 8.0 for use with PDF Generator ES

This procedure is required only if you upgraded to or installed Acrobat 8.0 after completing the LiveCycle ES installation. It can be completed after you run LiveCycle Configuration Manager and deploy LiveCycle ES to the application server.

### ► To configure Acrobat 8.0 for use with PDF Generator ES:

1. Uninstall the unsupported version of Acrobat (earlier than 8.0) if one is installed. You can use the Add or Remove Programs window in the Windows Control Panel.
2. Install Acrobat 8.0 from the LiveCycle ES DVD by running the `Setup.exe` file from the `/additional/acrobat` directory.
3. When the installation is complete, open a Windows command prompt and navigate to the `/additional/scripts` directory on the LiveCycle ES installation media.
4. Run the following command:

```
Acrobat_for_PDFG_Configuration.bat [LiveCycleES root]
```

► **To validate the Acrobat 8.0 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 8.0 is installed correctly.
2. If the PDF fails to open correctly, uninstall Acrobat and reinstall it.

## Setting the Adobe PDF Printer as default for PDF Generator ES

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, LiveCycle PDF Generator ES 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**.

## Accessing LiveCycle Administration Console

LiveCycle Administration Console is the web-based portal for accessing a variety of configuration pages, where you set run-time properties that control the way LiveCycle ES operates. When you log in to LiveCycle Administration Console, you can access User Management, watched folder, and email client configuration, as well as administrative configuration options for other services. You access Archive Administration, which administrators use for deploying services to a production environment, from within LiveCycle Administration Console.

The default user name and password for logging in to LiveCycle Administration Console is *administrator* and *password*. After you log in the first time, you can access User Management and change the password of the LiveCycle ES administrator account. (See [“Accessing User Management” on page 22.](#))

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

For information about using Administrator, see *LiveCycle Administration Console Help* (available from the Help menu of the LiveCycle Administration Console page).

► **To access LiveCycle Administration Console:**

1. Type the following URL in a web browser:

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

2. In the User **Name** box, type *administrator* and, in the Password box, type *password*. If you upgraded LiveCycle Forms with User Management and Administrator or LiveCycle PDF Generator, upgrades must use the LiveCycle 7.x administrator password. (This user name and password were migrated to the LiveCycle ES database during the upgrade.)

**Note:** Administrative users created in LiveCycle Policy Server 7.x are not migrated to LiveCycle ES during the upgrade. The super administrator password is reverted to the default value of “password” if it had been changed in the LiveCycle Policy Server 7.x deployment. All policies created by different administrators in LiveCycle Policy Server 7.x are placed in the APS7 organizational policy set in LiveCycle ES. Events associated with LiveCycle 7.x administrators are not searchable by user name, but the original owner name is displayed.

3. Click **Login**.
4. Click **Services** to access the services' pages, and click **Settings** to access the Core System Settings, User Management, and Trust Store Management pages.

## Accessing User Management

Adobe User Management allows administrators to maintain a database of all users and groups. The database is synchronized with one or more third-party user directories. User Management provides authentication, authorization, and user management for LiveCycle ES solution components, including Reader Extensions ES, Workspace ES, Rights Management ES, Process Management ES, and Forms ES.

**Note:** User roles created in LiveCycle 7.x are migrated to LiveCycle ES but cannot be modified or deleted.

Passwords in LiveCycle ES must contain at least eight characters. For user records migrated from LiveCycle 7.x, LiveCycle ES does not enforce this while fetching and displaying the user record. However, if you change a user record and save it, you are prompted to change the password to contain eight characters or more.

### ► To access User Management:

1. Log in to LiveCycle Administration Console and click **Settings**.
2. On the Settings page, click **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.

## Accessing solution component web applications

After LiveLiveCycle ES is deployed, you can access the web applications that are associated with the following solution components:

- LiveCycle Reader Extensions ES
- LiveCycle Workspace ES
- LiveCycle Rights Management ES
- LiveCycle Business Activity Monitoring ES

For information about using Reader Extensions ES, Workspace ES, and Rights Management ES, you can refer to the Help available within each application.

After you access 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. For information, see *User Management Help*, which is accessible from *LiveCycle Administration Console Help* or the User Management page.

► **To access Reader Extensions ES:**

1. Open a web browser and enter this URL:  
<http://localhost:8080/ReaderExtensions> (local deployment using the default port)
2. Log in using the default user name and password:  
**User name:** administrator  
**Password:** password

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

► **To access Workspace ES:**

1. Open a web browser and enter this URL:  
<http://localhost:8080/workspace> (local deployment using the default port)
2. Log in using the default user name and password:  
**User name:** administrator  
**Password:** password

## Accessing Rights Management ES

To log in to Rights Management ES, you must be assigned the LiveCycle Rights Management End User user role.

All new and existing users are not granted the LiveCycle Rights Management End User role by default. You must create a user account with the LiveCycle Rights Management End User role in User Management and then log in to Rights Management ES using the login information associated with the user that you create.

The Rights Management ES web application is then accessible from this URL:

<http://localhost:8080/edc/Main.do>

**Note:** You may need to restart the application server if you cannot log in as a user other than administrator.

For information about setting up users and roles for Rights Management ES, see *Administering LiveCycle ES* at [http://www.adobe.com/go/learn\\_lc\\_administration](http://www.adobe.com/go/learn_lc_administration).

It is also necessary to configure SSL for Rights Management ES. (See *Administering LiveCycle ES* at [http://www.adobe.com/go/learn\\_lc\\_administration](http://www.adobe.com/go/learn_lc_administration).)

When a user adds a principal user to a policy entry in Rights Management ES, by default no principal users are visible because the My Policies policy set does not include a domain. To add visible users and groups, you can change the My Policies configuration in the Rights Management ES administration web application to add a domain. All the users in the added domain(s) are visible and can be added to a user policy. For information, see "Editing Policy Sets" in *Rights Management ES Help* at [http://www.adobe.com/go/learn\\_lc\\_adminRightsMgmt](http://www.adobe.com/go/learn_lc_adminRightsMgmt).

► **To create the LiveCycle Rights Management End User role:**

1. Log in to LiveCycle Administration Console. (See [“Accessing LiveCycle Administration Console” on page 21.](#))
2. Browse to **Settings > User Management > Users and Groups**.
3. In the **Find** box, type `all`.
4. In the **In** list, select **Groups**, and then click **Find**.
5. Click **All Principals** for the required domain(s).
6. On the **Role Assignments** tab, click **Find Roles**.
7. Select **LiveCycle Rights Management End Users** from the list and click **OK**.
8. Click **Save**.

## Activating BAM Dashboard

LiveCycle Business Activity Monitoring ES is deployed by LiveCycle Configuration Manager during the turnkey upgrade process. However, you must update the BAM Dashboard by starting and stopping all events. For instructions on performing this task, see the section “Using the BAM Dashboard” in the *Installing and deploying for JBoss* document at [www.adobe.com/go/learn\\_lc\\_installJBoss](http://www.adobe.com/go/learn_lc_installJBoss).

## Upgrading the LiveCycle Barcoded Forms workflow scheduler

The LiveCycle Barcoded Forms workflow scheduler was used to invoke LiveCycle Barcoded Forms 7.x processes. To continue using Barcoded Forms 7.x processes in LiveCycle ES, you must migrate the LiveCycle Barcoded Forms workflow scheduler to LiveCycle ES.

LiveCycle Barcoded Forms ES processes are invoked using any of the LiveCycle ES common invocation methods, such as email, watched folders, API, or web service calls.

When you installed LiveCycle Barcoded Forms 7.2, the installer automatically set the `WF_BARCODEDFORMS_HOME` environment variable. This variable must still be in place when you upgrade to LiveCycle ES.

You can determine the path to the `[WF_BARCODEDFORMS_HOME]` directory by looking at the `WF_BARCODEDFORMS_HOME` environment variable in Windows.

► **To locate the `[WF_BARCODEDFORMS_HOME]` directory:**

1. On the Windows Desktop or in the **Start** menu, right-click **My Computer** and select **Properties**.
2. On the **Advanced** tab, click **Environment Variables**.
3. Find the `WF_BARCODEDFORMS_HOME` variable in the **System Variable** list. The path to the directory is included there.

► **To migrate the LiveCycle Barcoded Forms workflow scheduler to LiveCycle ES:**

1. Go to the `[LiveCycleES root]/configuratonManager/plugins/upgrade-plugin/collateral` directory and copy the `run-workflow-lc7upgradescheduler.bat` file to the `[WF_BARCODEDFORMS_HOME]/bin` directory, where `[WF_BARCODEDFORMS_HOME]` is the directory set in the `WF_BARCODEDFORMS_HOME` environment variable.
2. Copy the following files to the `[WF_BARCODEDFORMS_HOME]/lib` directory:

File	Location
<code>jbossall-client.jar</code>	<code>[LiveCycleES root]/jboss/client</code>
<code>activation.jar</code>	<code>[LiveCycleES root]/jboss/server/all/lib</code>
<code>mail.jar</code>	<code>[LiveCycleES root]/jboss/server/all/lib</code>
<code>adobe-usermanager-client.jar</code>	<code>[LiveCycleES root]/LiveCycle_ES_SDK/client-libs/common</code>
<code>adobe-pof-client.jar</code>	<code>[LiveCycleES root]/configuratonManager/plugins/upgrade-plugin/lib</code>
<code>adobe-wkf-client.jar</code>	<code>[LiveCycleES root]/configuratonManager/plugins/upgrade-plugin/lib</code>
<code>adobe-wkf-util.jar</code>	<code>[LiveCycleES root]/configuratonManager/plugins/upgrade-plugin/lib</code>
<code>adobe-wkf-qlc.jar</code>	<code>[LiveCycleES root]/configuratonManager/plugins/upgrade-plugin/collateral</code>

The `run-workflow-lc7upgradescheduler.bat` file should be used as Barcoded Forms workflow scheduler to execute LiveCycle 7.x processes in the LiveCycle ES environment.

## Encrypting the plaintext password

To encrypt the plaintext password in the data source configuration, follow the instructions at <http://wiki.jboss.org/wiki/Wiki.jsp?page=EncryptingDataSourcePasswords>.

## Managing the MySQL database

The turnkey installation and configuration supports the transaction-safe storage engine (InnoDB) in MySQL. This means that all document services must operate in the same storage engine and have consistent version support. For details about the InnoDB storage engine, go to <http://dev.mysql.com/doc/refman/5.0/en/innodb.html>.

## Migrating HSM credentials

If you are using a Hardware Security Module (HSM) device to store credentials for LiveCycle Document Security 7.x, information about the credentials stored in the device must be migrated to the LiveCycle ES Trust Store.

The function of signing documents that was provided by LiveCycle Document Security 7.x is provided in LiveCycle ES by the Signature service (included in the LiveCycle Digital Signatures ES solution component). The LiveCycle ES Trust Store stores the various parameters that the Signature service requires for HSM signing, including options for SHA1 and certificate-based identification of an HSM signing key.

Upgrading LiveCycle Document Security 7.x to Digital Signatures ES includes migrating information from the trust.xml file, which is not used by LiveCycle ES, to the Trust Store. Migrated data includes file-based credentials, certificates, and CRLs and preferences information. This process is performed by LiveCycle Configuration Manager. However, only file-based credentials are migrated, specifically the `p12record` tag in trust.xml. The HSM reference credentials in the `hsmrecord` tag are not migrated. You must manually migrate HSM credentials.

For more information about the Trust Store and credentials used with Digital Signatures ES, see the *Help* available from the Trust Store Management pages in LiveCycle Administration Console.

► **To migrate HSM credentials:**

1. Log in to the LiveCycle Administration Console.
2. Browse to **Settings > Trust Store Management > HSM Credentials**.
3. Click **Add** to add a credential to the LiveCycle ES Trust Store. For detailed information, click **Help** and go to the “Managing HSM Credentials” section.
4. Add all the HSM credentials that you used with LiveCycle 7.x.

## Add enabling FIPS

LiveCycle ES 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 with LiveCycle Configuration Manager during the LiveCycle ES configuration or if you enable it but want to turn it off, you can change this setting through the 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 processes Encrypt With Password and Remove Password include the Acrobat setting Acrobat 5, the process fails.

In general, when FIPS is enabled, the Assembler service will 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 the LiveCycle Administration Console.
2. Browse to **Settings > Core System > Core Configurations > Configurations**.
3. Select the **Enable FIPS** option to enable FIPS mode or deselect it to disable FIPS mode.
4. Click **OK**.
5. Restart the application server.

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

## Configuring LiveCycle ES to access LDAP

If you configured Lightweight Directory Access Protocol (LDAP) for LiveCycle 7.x products, those settings are migrated during the upgrade process, and you do not need to perform the steps in this section. If you did not previously configure LDAP, you can use the following procedure as a guideline when configuring User Management to support authentication using LDAP.

► **To configure User Management with LDAP:**

1. Open a web browser, navigate to `http://[host name]:8080/adminui`, and log in. (See [Accessing LiveCycle Administration Console](#).)
2. Click **Settings > User Management > Domain Management**, and click **New Enterprise Domain**.
3. In the **ID** box, type a unique identifier for the domain.
4. In the **Name** box, type a descriptive name for the domain.
5. Click **Add Authentication** and, in the **Authentication Provider** list, select **LDAP**.
6. Click **OK** and, on the page that appears, click **Add Directory**.
7. In the **Profile Name** box, type a name, and then click **Next**.
8. Specify values in the **Server**, **Port**, **SSL**, and **Binding** boxes as required.
9. Under **Populate Page With**, select a directory settings option (for example, **Default Sun ONE values**), and then click **Next**.
10. Configure **User Settings** as required, and then click **Next**.
11. Configure **Group Settings** as required, and then click **Next**.
12. (Optional) Test your configuration:
  - Click **Test**.
  - In the **Test Directory** pane, in the **Find** box, enter an object name and, in the **using** box, select the object's type, such as **Login ID**.
  - Click **Test**. If successful, your object's details will be displayed. You can then click **Back**.
13. Click **OK** to exit the **Add Directory** page, and then click **OK** again.

**Note:** Sync the LDAP server to ensure the new settings take effect.

## Setting environment variables for PDF Generator ES

You must manually set the environment variables if you installed the PDF Generator ES solution component and configured it to convert native applications (such as Microsoft Office) to PDF. You must set the following environment variables:

- Acrobat\_PATH
- Notepad\_PATH
- Photoshop\_PATH
- WordPerfect\_PATH
- PageMaker\_PATH
- FrameMaker\_PATH

All other PATH variables must be set to point to the executable associated with the application (for example, C:\Program Files\Adobe\Framemaker7.2\Framemaker.exe or C:\Program Files\Adobe\Acrobat 8.0\Acrobat\Acrobat.exe).

### ► To set the PATH variables in Windows:

1. Click **Start**, right-click **My Computer**, and select **Properties**.
2. In the System Properties dialog box, click the **Advanced** tab and then click **Environment Variables**.
3. In the Environment Variables dialog box, click **New** and type the following information:

**Variable name:** Acrobat\_PATH

**Variable value:** [Acrobat\_directory]\Acrobat.exe

The default path to Acrobat is C:\Program Files\Adobe\Acrobat 8.0\Acrobat\Acrobat.exe. If you installed Acrobat to a different directory, type that path as [Acrobat\_directory].

3. Perform these steps for each variable in the list above (for the applications that you have installed).

## Setting PDF Generator ES watched folder performance parameters

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

### ► To set performance parameters for PDF Generator ES:

1. Log in to LiveCycle Administration Console and browse to **Services > Archive Administration > Service Management > Configure PDFGConfigService**.
2. Set the following values:

**PDFG Cleanup Scan Seconds:** 30 min

**Job Expiration Seconds:** 100 min

## Creating email endpoints for email notifications

After upgrading to LiveCycle ES from LiveCycle 7.x, you must create an email endpoint if you used email notifications with attachments in LiveCycle 7.x and want to ensure that users can continue to submit tasks by email. The email endpoint is created for the CompleteTask service.

► **To add an endpoint to the CompleteTask service:**

1. Log in to LiveCycle Administration Console and click **Services > Archive Administration > Service Management**.
2. Select the **CompleteTask** service from the list of services.
3. Click the **End Points** tab, select **Email** from the list, and then click **Add**.
4. On the Add Email Endpoint screen, set the options and then click **Add**.

For more information about the attributes you can set for an Email endpoint, see the section “Endpoint attributes” in *Archive Administration Help*.

## Ensuring all languages are displayed after conversion

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

To display these languages, appropriate fonts must be present on the client and server.

## Reverting to LiveCycle 7.x server

If the upgrade is not successful, you can restart the LiveCycle 7.x server to minimize downtime while you troubleshoot the upgrade.

If you are reverting from PDF Generator ES to LiveCycle PDF Generator 7.x and installed Acrobat 8.0 or later, you must uninstall Acrobat and reinstall Acrobat 7.x before you can fully use LiveCycle PDF Generator.

► **To revert to LiveCycle 7.x:**

1. Stop the following LiveCycle ES services in the Windows Services window, and set the **Startup Type** to **Manual**:
  - JBoss for Adobe LiveCycle ES v8.0
  - MySQL for Adobe LiveCycle ES v8.0
2. Start the following LiveCycle 7.x services (the services available depend on the product and version you are using):
  - MySQL for Adobe LiveCycle
  - JBoss for Adobe LiveCycle
  - AdobeDocumentSecurity
  - AdobeReaderExtensions

## Removing LiveCycle 7.x services

When LiveCycle ES is up and running and you are sure you do not need to revert to LiveCycle 7.x, you can remove the LiveCycle 7.x services. Depending on the LiveCycle 7.x products that were installed, any of the following services may be present:

- JBoss for Adobe LiveCycle
- MySQL for Adobe LiveCycle
- AdobeDocumentSecurity
- AdobeReaderExtensions
- JBoss for Adobe LiveCycle Workflow BAM

You can remove all the services associated with LiveCycle 7.x. (Services for LiveCycle ES include the v8.0 label.)

► **To remove a LiveCycle 7.x service:**

1. Open a Windows Command Prompt window.
2. Ensure that the service is stopped by typing the command `sc stop [service name]`
3. Delete the service by typing the command `sc delete [service name]`
4. Repeat steps [2](#) - [3](#) for each LiveCycle 7.x service installed.
5. Close Command Prompt window.

## Uninstalling LiveCycle ES

Before removing MySQL, back up any data that you do not want to lose.

The uninstallation program does not remove Acrobat, which you may have installed with PDF Generator ES. If you are uninstalling LiveCycle ES to revert to LiveCycle 7.x, you must uninstall Acrobat 8.x and reinstall Acrobat 7.x in order to fully use LiveCycle PDF Generator 7.x.

► **To remove the product files:**

1. To start the uninstall program, select **Start > Control Panel** and click/double-click **Add or Remove Programs**.
2. Follow the on-screen instructions. Select the **JBoss** and **MySQL** options to remove the application server and database server.

**Caution:** Removing the MySQL database server permanently deletes all data.

3. Click **Finish**.
4. Restart your computer.

# 3

## Post-Deployment Upgrading Issues

There are some issues to be aware of when you have upgraded from LiveCycle 7.x to LiveCycle ES.

### Printer setting for PDF Generator ES when connecting remotely

If you are running PDF Generator ES, the default printer on the LiveCycle ES server must be set to Adobe Printer. (This device is installed when you install Acrobat.) If you connect remotely to the LiveCycle ES server using the Remote Desktop Connection in Windows, the default printer setting may be changed to the setting on the remote client. This causes native format conversions to fail. To ensure that the required printer setting is maintained when you connect remotely to LiveCycle ES running PDF Generator ES, you can deselect the Printers option on the Local Resources tab in the Windows Remote Desktop Connection utility.

- ▶ **To ensure LiveCycle ES server printer setting is used when connecting from a remote computer:**
  1. Select **Start > All programs > Accessories > Communications > Remote Desktop Connection**.
  2. In the Remote Desktop Connection dialog box, click the **Local Resources** tab. (If tabs do not appear in the dialog box, click **Options** and then click the **Local Resources** tab.)
  3. Under Local Devices and Resources, deselect **Printers**, and then click **Connect**.

### LiveCycle Document Security APSPProxy configuration settings

The APSPProxy configuration settings described in LiveCycle Document Security 7.x documentation are not required in LiveCycle ES. Running separate instances of LiveCycle Document Security and LiveCycle Policy Server are no longer supported; they are replaced by the Digital Signatures ES and Rights Management ES solution components within a service-oriented architecture.

### Issues related to LiveCycle Forms

#### **Default form settings are restored when upgrading from LiveCycle Forms 7.x without User Management and Administrator**

When you upgrade from LiveCycle Forms 7.x (installed without User Management and Administrator), any forms settings you customized in the forms administration interface are lost, and the default form settings are restored. This situation occurs because these settings are not stored in a database. You must reset form settings within LiveCycle Administration Console.

#### **Forms created with LiveCycle Designer 7.1 do not render in PDF mode with LiveCycle 7.0**

Forms created with Designer 7.1 or later will not render in PDF mode with LiveCycle 7.0 because of differences in the render cache text. The message `Encoding 184 is not supported` is displayed. However, if this error occurs, you can disable the use of render cache in the XCI file:

```
<renderCache>  
<enable>0</enable>  
</renderCache>
```

### **PDF version of forms created for LiveCycle Forms 7.x changes when rendered using LiveCycle Forms ES**

An interactive form created using LiveCycle Designer 8.0 and rendered using LiveCycle Forms 7.2.2 has PDF version 1.6. After upgrading to LiveCycle Forms ES, the same form is rendered as PDF version 1.7.

### **Minor changes in calendar and digital signatures are displayed when forms are rendered in HTML**

When forms are rendered in HTML, some differences occur from LiveCycle 7.x to LiveCycle ES in the areas of Calendar Control and Digital Signatures for HTML.

If a form includes the date-time field, a calendar is now displayed next to the date/time field. If a form has a signature field, an option is now available to sign the form in HTML.

### **The PrintIVS.ear file is not compatible in LiveCycle ES**

The PrintIVS.ear file from LiveCycle Forms and LiveCycle Print 7.x should not be deployed on the LiveCycle ES server.

## **Processing signature fields in LiveCycle ES**

Field MDP in forms created in Acrobat or LiveCycle Designer are not supported in LiveCycle ES.

## **LiveCycle Policy Server to LiveCycle Rights Management ES**

If a computer crashes unexpectedly while migrating essential data (policies and database information) or non-essential data (such as audit events), and a reboot is required, the upgrade process will fail until several corrupted files are deleted. When the upgrade is run again, LiveCycle Configuration Manager quits when you begin the nonessential data migration and displayed the `java.io.StreamCorruptedException: invalid stream header` message is displayed.

To avoid this problem if the computer crashes during upgrade, delete the following files from `C:\Adobe\LiveCycle8\configurationManager\working\upgrade`:

- Intermediate\_NonCrit\_APS\_Audit.data
- Intermediate\_NonCrit\_APS\_Audit.index
- Intermediate\_NonCrit\_APS\_Audit.metadata
- OrigExported\_NonCrit\_APS\_Audit.data
- OrigExported\_NonCrit\_APS\_Audit.index
- OrigExported\_NonCrit\_APS\_Audit.metadata

## LiveCycle Form Manager to LiveCycle Workspace ES

When you are upgrading LiveCycle Form Manager to LiveCycle Workspace ES (part of LiveCycle Process Management ES), deadlines and reminders set to be sent during the upgrade process do not execute.

Any deadline or reminder that is set to be sent at a time that coincides with the server down time that occurs during the upgrade process (that is, when the LiveCycle 7.x server has been stopped, but LiveCycle ES is not yet up and running) are lost and never sent. When the upgrade is complete (LiveCycle 7.x data has been migrated to LiveCycle ES) and the LiveCycle ES server is up and running, deadline and reminders function as expected.

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