



# Installing and Deploying LiveCycle® ES2 for WebLogic®

November 30, 2011

**Adobe® LiveCycle® ES2**

Version 9

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Installing and Deploying Adobe® LiveCycle® ES2 for WebLogic®  
November 30, 2011

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# About This Document

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This document is one of several resources that are available to help you learn about Adobe® LiveCycle® ES2 (Enterprise Suite), version 9.0. LiveCycle ES2 is a flexible, extensible platform that helps automate and accelerate the flow of business-critical information to and from customers, partners, constituents, and employees.

## What's in this document?

This guide provides information about how to install and configure the following modules on Microsoft® Windows®, Linux®, and Sun™ Solaris™, and how to deploy the modules to Oracle WebLogic Server®:

- Adobe LiveCycle Business Activity Monitoring
- Adobe LiveCycle ES2 Connector for EMC Documentum
- Adobe LiveCycle ES2 Connector for IBM FileNet
- Adobe LiveCycle ES2 Connector for IBM Content Manager
- 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

## Who should read this document?

This guide provides information for administrators or developers who are responsible for installing, configuring, administering, or deploying LiveCycle ES2 components. The information provided is based on the assumption that anyone reading this guide is familiar with J2EE application servers, operating systems, database servers, and web environments.

## Conventions used in this document

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

Name	Default value	Description
<i>[LiveCycleES2 root]</i>	Windows: C:\Adobe\Adobe LiveCycle ES2\  Linux and Solaris: /opt/adobe/adobe_lifecycle_es2/	The installation directory that is used for all LiveCycle ES2 modules. The installation directory contains subdirectories for Adobe LiveCycle Configuration Manager. This directory also includes directories relating to third-party products.
<i>[appserver root]</i>	These installation locations are examples. Your installation location may be different.  WebLogic Server 10g on Windows: C:\bea\wlserver_10.3\  WebLogic Server 10g on Linux and Solaris: /opt/bea/wlserver_10.3/  WebLogic Server 11g on Windows: C:\Oracle\Middleware\wlserver_10.3\  WebLogic Server 11g on Linux and Solaris: /opt/Oracle/Middleware/wlserver_10.3/	The home directory of the application server that runs the LiveCycle ES2 services.
<i>[server name]</i>	LCServer1 for WebLogic Server	The name of the server configured on your application server.
<i>WL_HOME</i>	WebLogic Server 10g on Windows: C:\bea\ WebLogic Server 10g on Linux and Solaris: /opt/bea/  WebLogic Server 11g on Windows: C:\Oracle\Middleware\  WebLogic Server 11g on Linux and Solaris: /opt/Oracle/Middleware/	The install directory for WebLogic Server as specified for the <code>WL_HOME</code> environment variable.

Name	Default value	Description
[appserverdomain]	<p>WebLogic 10g Server on Windows: C:\bea\user_projects\domains\base_domain\                       WebLogic 11g Server on Windows: C:\Oracle\Middleware\user_projects\domains\base_domain\                       WebLogic 10g Server on Linux and UNIX: /opt/bea/user_projects/domains/ base_domain/                       WebLogic 11g Server on Linux and UNIX: /opt/Oracle/Middleware/user_projects/ domains/base_domain/</p>	The domain that you configured on WebLogic Server.
[dbserver root]	Depends on the database type and your specification during installation.	The location where the LiveCycle ES2 database server is installed.

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

## Additional information

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

For information about	See
General information about LiveCycle ES2 and the modules	<a href="#">LiveCycle ES2 Overview</a>
What's new in this LiveCycle ES2 (Enterprise Suite) release	<a href="#">What's New</a>
LiveCycle ES2 terminology	<a href="#">LiveCycle ES2 Glossary</a>
LiveCycle ES2 modules	<a href="#">Adobe LiveCycle ES2</a>
Other services and products that integrate with LiveCycle ES2	<a href="#">Adobe Developer Connection</a>
Installing Adobe LiveCycle Workbench ES2	<a href="#">Installing Your Development Environment</a>
Upgrading to LiveCycle ES2 from a previous version.	<a href="#">Preparing to Upgrade to LiveCycle ES2</a> <a href="#">Upgrading to LiveCycle ES2 for WebLogic</a>
Troubleshooting LiveCycle ES2	<a href="#">Troubleshooting LiveCycle ES2</a>
Performing administrative tasks for LiveCycle ES2	<a href="#">LiveCycle ES2 Administration Help</a>
All the documentation available for LiveCycle ES2	<a href="#">LiveCycle ES2 documentation</a>

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<b>For information about</b>	<b>See</b>
LiveCycle ES2 release information and last-minute changes that occur to the product	<a href="#">Release Notes</a>
Patch updates, technical notes, and additional information about this product version	<a href="#">LiveCycle Technical Support</a>

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This chapter provides information to help you understand the type of installation and deployment you should perform, and information that will help you understand the installation, configuration, and deployment process:

- [“Installation, configuration, and deployment process” on page 9](#)
- [“LiveCycle ES2 installation, configuration, and deployment lists” on page 11](#)

For information about preparing your system for installing LiveCycle ES2, including system requirements, see [Preparing to Install LiveCycle ES2](#).

## 1.1 Installation, configuration, and deployment process

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

**Installing:** Install LiveCycle ES2 by running the installation program. Installing LiveCycle ES2 places all of 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\_lifecycle\_es2 (Linux and Solaris); 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 25](#).)

**Configuring and assembling:** Configuring LiveCycle ES2 modifies various settings that determine how LiveCycle ES2 works. Assembling the product places all of 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 39](#).) You can configure and assemble multiple LiveCycle ES2 modules at the same time.

**Deploying:** Deploying the product involves deploying the assembled EAR files and supporting files to the WebLogic Server on which you plan to run your LiveCycle ES2 solution. If you have configured and assembled multiple modules, the deployable components are packaged within the deployable EAR files. Components and LiveCycle ES2 archive (LCA) files are packaged as JAR files.

**Initializing the LiveCycle ES2 database:** Initializing the database to be used with LiveCycle ES2 creates tables for use with User Management and other components. Deploying any module that connects to the LiveCycle ES2 database requires you to initialize the LiveCycle ES2 database after the deployment process.

## 1.2 Selecting tasks for configuring and deploying

After you perform an installation, you can run LiveCycle Configuration Manager to perform various tasks:

- Configure LiveCycle ES2 modules in an EAR file for deploying to the application server
- Configure application server properties to support LiveCycle ES2
- Package JDBC modules into LiveCycle ES2 EARs (secure datasources)
- Validate application server configuration
- Package JDBC modules into LiveCycle ES2 EAR files (secure datasources)

- Deploy LiveCycle ES2 EAR files
- Initialize LiveCycle ES2 database
- Deploy LiveCycle ES2 components
- Validate LiveCycle ES2 component deployment
- Import LiveCycle ES2 Samples into LiveCycle ES2 (optional)

**Note:** In addition to the LiveCycle ES2 samples that you can import, you can access more samples from [Adobe web site](#).

- Configure LiveCycle ES2 components

If you install Reader Extensions ES2, you can also specify and import the Reader Extensions ES2 Rights credential that is required for applying usage rights to PDF documents.

If you want to install Business Activity Monitoring, see [“Configuring and deploying LiveCycle Business Activity Monitoring ES2” on page 63](#) after you install all other LiveCycle ES2 components.

Although you can use LiveCycle Configuration Manager to configure the application server and set up data sources to the database, you may prefer to complete these steps manually.

You may want to configure your application server manually for these reasons:

- You have other applications running on the application server and are concerned about possible conflicting configurations.
- Corporate security procedures for configuration management dictate finer control.
- You are performing deployments where automatic configuration is not available.

In the manual configuration case, do these tasks:

- Use LiveCycle Configuration Manager to configure LiveCycle ES2 components with the required font, temp, and GDS directories
- Manually configure the application server, configure data sources, and deploy LiveCycle ES2 EAR files
- Run LiveCycle Configuration Manager to initialize the database
- Run LiveCycle Configuration Manager to deploy LiveCycle ES2 components and validate the LiveCycle ES2 component deployment.
- Configure LiveCycle ES2 components.

## 1.3 Upgrading to LiveCycle ES2

If you are upgrading from LiveCycle 7.x, review the *Upgrading from LiveCycle 7.x to LiveCycle ES2* guide.

If you are upgrading to LiveCycle ES2 from LiveCycle 8.x and later, ensure that you completed the tasks that are described in [Preparing to Upgrade to LiveCycle ES2](#) and refer to the [Upgrading to LiveCycle ES2 from LiveCycle ES](#) guide for your application server.

## 1.4 LiveCycle ES2 installation, configuration, and deployment lists

This section includes lists that you can use to step through the installation and configuration process. A list is provided for installing and configuring when using either the automatic method or the manual method.

**Automatic method:** Refers to using LiveCycle Configuration Manager to configure and deploy LiveCycle ES2 EAR files, configure the application server, initialize the database, and deploy the modules to the server. Use the automatic method if you want to have limited input into the installation, configuration, and deployment of LiveCycle ES2.

**Manual method:** Refers to using LiveCycle Configuration Manager only to configure LiveCycle ES2 EAR files, initialize the database, and deploy the modules to the server. Configuring the application server, connecting to the database, and deploying LiveCycle ES2 EAR files to the server is done manually by the administrator by following the instructions later in this document. Use the manual method if you want to have precise input into the installation, configuration, and deployment of LiveCycle ES2. For example, this method may be used in a locked-down server environment.

### 1.4.1 Automatic installation and deployment list

The following list includes the steps that are required for installing LiveCycle ES2 modules by using the automatic method. WebLogic Server must be installed before you perform the installation:

- Ensure that you have the required software installed in the target environment. (See [Preparing to Install LiveCycle ES2 \(Single Server\)](#).)
- Run the installation program. (See ["Installing the LiveCycle ES2 Modules" on page 25.](#))
- Run LiveCycle Configuration Manager and select all the tasks on the Task Selection screen. This step configures and assembles the LiveCycle ES2 EAR files, configures application server settings, deploys the EAR files and other components to the application server, initializes the LiveCycle ES2 database, and verifies the deployment. (See ["Configuring LiveCycle ES2 for Deployment" on page 39.](#))
- Access the LiveCycle Administration Console and User Management. (See ["Accessing LiveCycle Administration Console" on page 31.](#))
- (Optional) Configure LDAP access. (See ["Configuring LiveCycle ES2 to access LDAP" on page 44.](#))

### 1.4.2 Manual installation and deployment list

The following list includes the steps that are required for installing LiveCycle ES2 by using the manual method. Your application server must be installed and configured before you perform the installation.

- Ensure that you have the required software installed and configured in the target environment. (See [Preparing to Install LiveCycle ES2 \(Single Server\)](#).)
- Run the installation program. (See ["Installing the LiveCycle ES2 Modules" on page 25.](#))
- Run LiveCycle Configuration Manager and select the Configure LiveCycle ES2 EARs task. This task configures and assembles LiveCycle ES2. (See ["Configuring LiveCycle ES2 for Deployment" on page 39.](#))
- Manually configure the WebLogic Application Server. .
- Deploy the EAR files to the application server. You can do this manually or use LiveCycle Configuration Manager. (See ["Manually Configuring a WebLogic Server Cluster" on page 43 .](#))
- Run LiveCycle Configuration Manager to deploy LiveCycle ES2 component files, initialize the LiveCycle ES2 database, and (optionally) deploy product samples. (See ["Configuring LiveCycle ES2 for Deployment" on page 39.](#))

- Access LiveCycle Administration Console and User Management. (See [“Accessing LiveCycle Administration Console” on page 31.](#))
- (Optional) Configure LDAP access. (See [“Configuring LiveCycle ES2 to access LDAP” on page 44.](#))

# 3

## 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, Linux, and Solaris. A subsequent phase will include running LiveCycle Configuration Manager to configure 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 Install LiveCycle ES2 \(Single Server\)](#).)

LiveCycle ES2 also provides a command line interface (CLI) for the installation program. See ["Appendix - Install Command Line Interface" on page 110](#) for instructions on using the CLI. There is also a CLI for LiveCycle Configuration Manager. See ["Appendix - LCM Command Line Interface" on page 114](#). These CLIs are intended to be used by advanced users of LiveCycle ES2 or in server environments that do not support the use of the graphical user interface of the installation program or of LiveCycle Configuration Manager.

This chapter covers the following topics:

- ["Checking the installer" on page 25](#)
- ["Installing the product files" on page 26](#)
- ["Viewing the error log" on page 29](#)

### 3.1 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* (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.

## 3.2 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\`
- (Linux or Solaris) `/opt/adobe/adobe_lifecycle_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 `âäçèéëïïöüüÄÖßÜ€`) 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 Install LiveCycle ES2 \(Single Server\)](#). The temporary directory is one of the following locations:

- (Windows) `TMP` or `TEMP` path as set in the environment variables
- (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`

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_lifecycle_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_lifecycle_es2`.

On Windows, you must have administrator privileges to install LiveCycle ES2.

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.

### 3.2.1 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 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.

### 3.2.2 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 Install LiveCycle ES2 \(Single Node\)](#).

### 3.2.3 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 39](#).

**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 `lifecycle_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) `\lifecycle_server\9.0\Disk1\InstData\Windows\VM`
      - (Windows 64-bit) `\lifecycle_server\9.0\Disk1\InstData\Windows_64bit\VM`
  - (Linux, Solaris) Navigate to the appropriate directory, and from a command prompt, type `./install.bin`.
    - (Linux) `/lifecycle_server/9.0/Disk1/InstData/Linux/NoVM`
    - (Solaris) `/lifecycle_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. Select **Next** to continue installing LiveCycle ES2.
    - **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.
  5. **Install LiveCycle ES2 v9.0:** Installation program installs LiveCycle ES2. 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. **(Windows only and when Manual installation is selected)** On the Manual Installation Options screen, select the target deployment option and click **Next**:
    - **Windows (Local):** Select this option if you are installing and deploying LiveCycle ES2 on the local server.
    - **Staged (Installed on Windows targeting remote systems):** Select this option if you plan to use Windows as a staging platform for your deployment and then select the target operating system on the remote server. You can select a UNIX operating system as the target for deployment even if you are installing on Windows. (See ["Installing on a Windows staging platform for Linux or UNIX" on page 27.](#))
- Note:** adobe-livecycle-weblogic.ear and adobe-contentservices.ear files fail to deploy on a remote machine if secured datasources are used with WebLogic. For more information, see [TechNote](#)
7. 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.
  8. On the Pre-Installation Summary screen, review the details and click **Install**. The installation program displays the progress of the installation.
  9. Review the Release Notes information and click **Next**.
  10. Review the details of the Installation Complete screen.
  11. The **Start LiveCycle Configuration Manager** checkbox is selected by default. Click **Done** to run the LiveCycle Configuration Manager.

**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 39.](#)

## 3.3 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.

## 3.4 Next steps

### **\*New for 9.5\***

You must now configure LiveCycle ES2 for deployment. (See [“Configuring LiveCycle ES2 for Deployment” on page 39](#).) 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](#).







# 4

## Configuring LiveCycle ES2 for Deployment

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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
- Package JDBC modules into LiveCycle ES2 EAR files (secure datasources)
- Deploy LiveCycle ES2 EAR files
- Initialize the LiveCycle ES2 database
- Deploy LiveCycle ES2 components
- Configure 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

**Note:** (Optional) LiveCycle Configuration Manager does not support configuration, deployment and database initialization for LiveCycle Business Activity Monitoring ES2 on manual installation option. See [“Configuring and deploying LiveCycle Business Activity Monitoring ES2” on page 63](#) if you want to install BAM.

- (Optional) Import the LiveCycle ES2 samples into LiveCycle ES2

### 4.1 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.

## 4.2.1 CLI versus GUI versions of LiveCycle Configuration Manager

This section describes the GUI version of LiveCycle Configuration Manager. For instructions about using the command line interface (CLI) version of LiveCycle Configuration Manager, see [“Appendix - LCM Command Line Interface” on page 95](#).

You can configure LiveCycle using LCM in GUI, CLI, and manual modes. The following table summarizes the configuration steps and their corresponding valid modes (GUI, CLI, or manual).

LiveCycle ES2 configuration task	LCM GUI	LCM CLI	Manual (Non-LCM)
Configure LiveCycle ES2	Yes	Yes	No
Configure application server	Yes	Yes	Yes
Validate application server configuration	Yes	Yes	Yes
Package JDBC Modules into LiveCycle ES2 EARs	Yes	No	Yes
Deploy LiveCycle ES2 EARs	Yes	Yes	Yes
Initialize LiveCycle ES2 database	Yes	Yes	No
Initialize Business Activity Monitoring ES2	Yes	Yes	Yes
Validate LiveCycle ES2 server connection	Yes	Yes	No
Deploy LiveCycle ES2 components	Yes	Yes	No
Validate LiveCycle ES2 component deployment	Yes	Yes	Yes
Configure LiveCycle components (Includes the following tasks) <ul style="list-style-type: none"> <li>● Configure ECM connectors</li> <li>● Configure PDF Generator ES2</li> <li>● Configure Reader Extensions ES2</li> </ul>	Yes	Yes	Yes
Import Samples	Yes	Yes	Yes

## 4.3 Configuring and deploying LiveCycle ES2

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

**Caution:** Ensure that you have assigned listen addresses for Administration Server, Node Manager, and Managed Servers, before running LiveCycle ES2 Configuration Manager on dual stack machines (IPV6 and IPV4 supported). If you have not already done this, assign listen addresses and restart each of them.

**Note:** If your deployment includes LiveCycle Content Services ES2, you have to increase the Maximum JDBC Connection Pool Size setting to 60 or more. You can manually increase the pool size, see [Increasing WebLogic AS JDBC Connection Pool Size for LiveCycle Content Services ES2](#).

**Note:** Using LiveCycle Configuration Manager to deploy LiveCycle ES2 modules to remote servers is supported only for node-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-weblogic-[OS].ear`
- `adobe-livecycle-weblogic.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.

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).

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. On the Welcome screen, click **Next**.
4. On the Upgrade task selection screen, ensure that no options are selected, then click **Next** to continue.

**Caution:** If you want to upgrade an existing LiveCycle ES installation, do not continue this procedure. For upgrade information and procedures, see the [Preparing to Upgrade to LiveCycle ES2 from 8.x](#) guide applicable to your current version of LiveCycle ES2 and the [Upgrading to LiveCycle ES2](#) guide applicable to your application server.

5. On the Module Selection screen, select the LiveCycle ES2 modules and then click **Next**.
6. On the Task Selection screen, select all the tasks you want to perform and click **Next**.

**Note:** To secure the data sources, select Package JDBC Modules into LiveCycle ES2 EARs (secure datasources). However, do not select this task if your LiveCycle ES2 implementation is required to handle XML Forms. Alternatively, perform the steps in [this](#) Technote to secure access to JNDI artifacts on your WebLogic application server.

If you do not plan to configure the application server and deploy LiveCycle ES2 automatically by using LiveCycle Configuration Manager, do not select the **Configure application server**, **Validate application server configuration**, and **Deploy LiveCycle ES2 EARs** tasks. However, you must manually configure the application server by completing the steps provided in ["Appendix - Manually Configuring WebLogic Server" on page 104](#).

7. On the Configure LiveCycle ES2 (1 of 5) screen, click **Configure**. Click **Next** when done.
8. 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.
9. 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.

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

**Note:** The default GDS directory is `[WL_HOME]/user_projects/domains/[domain_name]/adobe/server/DocumentStorage`

11. 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 for storing short-lived artifacts.

**Note:** When choosing the database option, no sensitive data is persisted to the file-system based GDS, therefore eliminating the need for back-up if LiveCycle is moved to another server. Using the database simplifies backup and restore procedures.

12. Click **Configure** to configure the LiveCycle ES2 EARs with this directory information and, after the configuration is complete, click **Next**.
13. (**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**.

- **Deploy Type:** Select **Single Server**.
- **Content storage root directory:** Specify the root directory that is used by Content Services ES2.

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

- (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 `lcservera`. 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 56](#).

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 Install LiveCycle ES2 \(Single Server\)](#) guide

14. **(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 55](#).

15. **(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 35](#).

16. On the Configure LiveCycle ES2 Summary screen, click **Next**. Configured archives are placed in the `[LiveCycleES2 root]/configurationManager/export` directory. Ensure that the application server is configured and running.
17. 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:** On the Application Server Configuration Details screen in Adobe LiveCycle Configuration Manager, the format to use for the host name of the application server depends on the value in the Listen Address box in WebLogic Administration Console. If the Listen Address box is empty, you must leave the default 'localhost' as the host name. If the Listen Address box contains an IP address, you must use the same IP address for the host name.

**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.

The Server Instance Name of the application server is case-sensitive.

LiveCycle Configuration Manager requires you to enter the qualified hostname of the server running the application server. The default value of `localhost` will not work.

18. 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:** Select one of the following options to configure the datasource:
  - **Package JDBC Modules (secure datasources)**

**Note:** Do not select this option if your LiveCycle ES2 implementation is required to handle XML Forms.

- **Globally scoped datasources**

19. **(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.

If you are configuring your server settings manually, without exiting LiveCycle Configuration Manager, perform the tasks that are described in the section [“Appendix - Manually Configuring WebLogic Server” on page 104](#).

20. **(If Configure Datasource option with Packaged JDBC Modules is selected)** On the Configure Datasource JDBC Driver Classpath screen, provide the path for JDBC driver.

21. **(If Configure Datasource option with globally scoped datasources 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.

**Note:** If you're installing LiveCycle ES2 on WebLogic 11g R1 (version 10.3.3), ensure that you complete the procedures in [“Creating JMX policies for database initialization” on page 107](#) before proceeding to the next step.

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

23. **(Configure Datasource with Packaged JDBC modules)** On the Package JDBC modules into LiveCycle ES2 EARs (1 of 2) screen, provide JDBC configuration details and click **Test Database Connection**. Press **F1** for detailed information about datasource configuration parameters.
24. **(Configure Datasource with Packaged JDBC modules)** On the Package JDBC modules into LiveCycle ES2 EARs (2 of 2) screen, provide details to generate an encrypted database password for WebLogic datasource configuration. Use one of the following options:
  - Caution:** This is the database password encrypted by WebLogic application server, and not the application server password.
  - **Use an existing WebLogic encrypted password:** Select this option if you already have an encrypted password for the database. You can use the WebLogic encryption utility to encrypt the password that you entered in the previous screen for database connection test.
  - **Generate WebLogic encrypted password:** Select this option to generate an encrypted password for your database and provide the required details. The plain text password that you entered in the previous screen for database connection test is automatically populated in the *Password* field. Click **Encrypt Password** to generate the encrypted database password.
25. Click **Configure** to package the JDBC modules into LiveCycle ES2 EARs, and when complete, click **Next**.
26. On the Application Server Configuration Validation screen, select the tasks for validating and then click **Validate**. When the process is completed, click **Next**.
  - Note: (WebLogic Only)** If you have packaged JDBC modules into LiveCycle ES2 EAR files, LiveCycle Configuration Manager will report failed datasource validation during application server configuration validation. You can ignore this message.
27. 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.
28. On the Deploy LiveCycle ES2 EARs screen, select the EAR files to deploy and then click **Deploy**. This operation may take several minutes to complete. When the deployment has completed successfully, click **Next**.
  - Note:** After this step, check if a directory named *null* has been created in *[appserverdomain]*. If yes, stop the managed server, node manager, and the admin server and then start them in the reverse order. Ensure that a directory named **adobe** is created in *[appserverdomain]* after the restart. Now, delete the *[appserverdomain]/null* directory.
29. 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**.

The port on this screen refers to the managed server instead of the admin server port.
30. On the LiveCycle ES2 Server Information screen, in the **Password** box, type `password`. (This password is the default administrator password; it is recommended that you change the password later.)
31. 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.

32. 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**.
33. 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**.
34. 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**.
35. On the Configure LiveCycle Components screen, select the tasks to run with LiveCycle Configuration Manager, and click **Next**. Press **F1** for more information.
36. **(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.
37. **(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.
38. **(Optional - EMC Documentum only)** On the Configure Adobe LiveCycle ES2 Connector for EMC Documentum screen, click **Configure Documentum Connector**. When completed, click **Next**.
39. **(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.
40. **(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.
41. **(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**.
42. **(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.

43. **(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.
44. **(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.
45. **(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.
46. **(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.
47. **(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.
48. **(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. 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.

49. **(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.
50. **(PDF Generator ES2 only)** Review the System Readiness Tool Report and click **Next**.
51. **(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**.

52. (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.

53. On the Summary page, review the tasks performed, and click **Next**.
54. 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.

## 4.4 Uninstalling EAR files

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

### ► Uninstall the EAR files:

1. Start the Administration Server and the Managed Server.
2. Start WebLogic Server Administration Console by typing `http://localhost:7001/console` in the URL line of a web browser.
3. Under Domain Structure, click **Deployments**.
4. Under Change Center, click **Lock and Edit**.
5. Select the **LiveCycle application** box and select the LiveCycle applications, such as `adobe-livecycle-native-weblogic-[OS]`, `adobe-livecycle-weblogic`, `adobe-workspace-client`, or `adobe-contentservices`.
6. On the **Deploy** tab, click **Stop**.
7. Click **Lock and Edit**, select the application that has been stopped and then click **Delete**.
8. Repeat steps 5 to 7 for the other deployed LiveCycle ES2 modules.

9. Click **Save**, and then click **Activate Changes**.
10. Stop and start the Administration Server and the Managed Server.

## 4.5 Configuring WebSphere Application Server if global security is enabled

If your installation uses global security, you must run WebSphere Application Server as a user with the appropriate roles. You can employ one of the following options to configure WebSphere Application Server to run if WebSphere global security is enabled:

- Create a new user with the necessary roles, and run WebSphere Application Server as that user (see [“To create a new WebSphere Application Server user \(WebSphere 6.1\):” on page 28](#) or [“To create a new WebSphere Application Server user \(WebSphere 7.0\):” on page 28](#)). If a user already exists to run WebSphere Application Server, assign the necessary roles to that user. (see [“To configure an existing WebSphere Application Server user:” on page 29](#)).

**Caution:** Ensure that you start WebSphere Application Server as this user. Some WebSphere processes may fail if you start WebSphere Application Server as a different user while global security is enabled.

In a secure environment, it is recommended that you employ this option.

- Configure the EVERYONE group with the necessary roles. (See [“To configure the EVERYONE group \(WebSphere 6.1 only\)” on page 29](#)).

### ► To create a new WebSphere Application Server user (WebSphere 6.1):

1. In the WebSphere Administrative Console navigation tree, click **Environment** > **Naming** > **CORBA Naming Service Users**, and then in the right pane, click **Add**.
2. In **User**, type the name of the user that will run WebSphere Application Server, and in **Roles**, select the required roles.
3. Click **OK** or **Apply**.
4. Click **Save** directly to master configuration.

### ► To create a new WebSphere Application Server user (WebSphere 7.0):

1. In the WebSphere Administrative Console navigation tree, click **Environment** > **Naming** > **CORBA Naming Service Users**, and then in the right pane, click **Add**.
2. In **Roles**, select all the roles.
3. Under Search and Select Users, select the User Realm.
4. In the search box, type the search string and click **Search**.

**Note:** To retrieve all users, type an asterisk (\*).

5. From the Available text box, select the required users and click the right arrow to add them to the Mapped to role box.
6. Click **OK** or **Apply**.

7. Click **Save** directly to master configuration.
- **To configure an existing WebSphere Application Server user:**
1. In the WebSphere Administrative Console navigation tree, click **Environment > Naming > CORBA Naming Service Users**, and then in the right pane, select the user.
  2. In **Roles**, select the required roles.
  3. Click **OK** or **Apply**.
  4. Click **Save** directly to master configuration.
- **To configure the EVERYONE group (WebSphere 6.1 only)**
1. In the WebSphere Administrative Console navigation tree, click **Environment > Naming > CORBA Naming Service Groups**.
  2. Enable **Select from special subjects**, and then from the Special subjects list, select the **EVERYONE** group.
  3. In **Roles**, select the required roles.
  4. Click **OK** or **Apply**.
  5. Click **Save** directly to master configuration.
- **To configure the EVERYONE group (WebSphere 7.0 only)**
1. In the WebSphere Administrative Console navigation tree, click **Environment > Naming > CORBA Naming Service Groups**.
  2. In **Roles**, select the required roles.
  3. Enable **Select from special subjects**, and then from the Special subjects list, select the **EVERYONE** group.
- Note:** If the EVERYONE group is already configured, the group will not be shown in the Special subjects list. You only need to assign the required roles to this group if not already done so.
4. Click **OK** or **Apply**.
  5. Click **Save** directly to master configuration.

## 4.6 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 31.](#))
- Access LiveCycle Administration Console. (See [“Accessing LiveCycle Administration Console” on page 31.](#))
- Configure PDF Generator ES2 or PDF Generator 3D ES2. (See [“Configuring LiveCycle PDF Generator ES2 or 3D ES2” on page 34.](#))

- Perform the final setup for Rights Management ES2. (See [“Setting watched folder performance parameters” on page 43.](#))
- Configure LiveCycle ES2 modules to access LDAP. (See [“Configuring LiveCycle ES2 to access LDAP” on page 44.](#))
- Perform watched folder performance-tuning for PDF Generator ES2. (See [“Setting watched folder performance parameters” on page 43.](#))
- Enable FIPS mode. (See [“Enabling FIPS mode” on page 45.](#))
- Enable HTML digital signatures. (See [“Configuring HTML digital signature” on page 46.](#))
- 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 46,](#) [“Configuring the Connector for IBM FileNet service” on page 50,](#) or [“Configuring the Connector for IBM Content Manager” on page 57.](#))
- Set environment variables for PDF Generator ES2. (See [“Setting environment variables” on page 35.](#))
- Install and deploy LiveCycle Business Activity Monitoring ES2. (See [“Configuring and deploying LiveCycle Business Activity Monitoring ES2” on page 63.](#))
- Uninstall LiveCycle ES2. (See [“Uninstalling LiveCycle ES2” on page 61.](#))

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 31](#)
- [“Set the date, time, and time zone” on page 31](#)
- [“Verifying the deployment” on page 31](#)
- [“Installing LiveCycle ES2.5 Solution Accelerators” on page 32 \(optional\)](#)
- [“Accessing module web applications” on page 32](#)
- [“Accessing User Management” on page 34](#)
- [“Configuring LiveCycle PDF Generator ES2 or 3D ES2” on page 34](#)
- [“Configuring LiveCycle ES2 to access LDAP” on page 44](#)
- [“Enabling FIPS mode” on page 45](#)
- [“Configuring HTML digital signature” on page 46](#)
- [“Configuring the Document Management service” on page 46](#)
- [“Configuring the Connector for EMC Documentum service” on page 46](#)
- [“Configuring the Connector for IBM FileNet service” on page 50](#)
- [“Configuring the Connector for IBM Content Manager” on page 57](#)
- [“Perform a system image backup” on page 61](#)
- [“Isloating JBoss Clusters” on page 81](#)
- [“Uninstalling LiveCycle ES2” on page 61](#)

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](#).

### 5.1 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.

### 5.2 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.

## 5.3 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.

### 5.3.1 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 WebLogic Server is 7001. (When you created a new managed server, you may have set a different port. Managed server uses a default port of 8001)

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

### 5.3.2 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.

### 5.3.3 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.

## 5.4 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](#).

## 5.5 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 WebLogic, *[port]* is the port assigned to the Managed WebLogic Server.

2. Log in using the default user name and password:

**User name:** administrator

**Password:** password

**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 WebLogic, *[port]* is the port assigned to the Managed WebLogic Server.

2. Log in using the default user name and password:

**User name:** administrator

**Password:** password

► **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 WebLogic, *[port]* is the port assigned to the Managed WebLogic Server.

2. Log in using the default user name and password:

**User name:** administrator

**Password:** password

## 5.6 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.

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

1. Open a web browser and enter this URL:

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

where *[port]* is the port assigned to the WebLogic Managed Server.

► **To access the Rights Management ES2 administration web application:**

1. Open a web browser and enter this URL:

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

where *[port]* is the port assigned to the Managed WebLogic Server.

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 31](#).)
2. Click **Settings > User Management > Users and Groups**.

3. In the **Find** box, type `a11` 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**.

## 5.7 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.

## 5.8 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 35](#)
- ["Configuring the application server to use HTTP proxy server" on page 36](#)
- ["Setting the Adobe PDF Printer as the default printer" on page 36](#)
- ["Configuring Acrobat Professional" on page 36](#)
- ["Configuring user accounts for multi-threaded file conversions" on page 37](#)
- ["Installing East Asian characters in Windows Server 2003" on page 38](#)
- ["Adding fonts to PDF Generator ES2 or PDF Generator 3D ES2" on page 39](#)
- ["Installing the Network Printer Client" on page 42](#)
- ["Setting watched folder performance parameters" on page 43](#)

### 5.8.1 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.

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

**Note:** The environment variable OpenOffice\_PATH is set to the installation folder instead of the path to the executable.

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

➤ **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:

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

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

- Type the following command:

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

## 5.8.2 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 stand-alone WebLogic:**

1. Stop WebLogic if it is running.
2. From command line, edit the startWebLogic script in the `[WL_HOME]\user_projects\[your-domain]\bin` directory:
  - (Windows) startWebLogic.cmd
  - (Linux, UNIX) startWebLogic.sh
3. Add the following text to the script file:
  - (Windows)

```
set PROXY_SETTINGS=-Dhttp.proxyHost=<hostname> -Dhttp.proxyPort= [port]
```
  - (Linux, UNIX)

```
PROXY_SETTINGS=-Dhttp.proxyHost=<hostname> -Dhttp.proxyPort= [port]
```
4. Save and close the file and restart WebLogic.

### 5.8.3 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**.

### 5.8.4 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**.
6. Deselect **Automatically check for Adobe updates**.

► **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`.

## 5.8.5 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 Install LiveCycle ES2 \(Single Server\)](#) 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 Administration Console, 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`:

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

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

3. Allow all the users that you added via Add a user account to make connections to the LiveCycle 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.

## 5.8.6 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.

## 5.8.7 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.

### 5.8.7.1 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:

#### Windows-only Applications

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

### 5.8.7.2 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.

### 5.8.7.3 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.
- *Importing Fonts into OpenOffice 2.1* at [http://openoffice.blogspot.com/openoffice/2007/02/font\\_import\\_wiz.html](http://openoffice.blogspot.com/openoffice/2007/02/font_import_wiz.html). Even though this blog mentions OpenOffice 2.1, the instructions that are mentioned should be applicable to OpenOffice 2.2 and later.

### 5.8.7.4 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.

## 5.8.8 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 36](#).
2. Locate the pdfgen.api file in the `[LiveCycleES2 root]\plugins\x86_win32` directory and copy it to `[Acrobat root]\Acrobat\plug_ins` directory.

### 5.8.8.1 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`

- UNIX
  - /usr/X/lib/X11/fonts/TrueType
  - /usr/openwin/lib/X11/fonts/TrueType
  - /usr/share/fonts/default/TrueType
  - /usr/X11R6/lib/X11/fonts/ttf
  - /usr/X11R6/lib/X11/fonts/truetype
  - /usr/X11R6/lib/X11/fonts/TrueType
  - /usr/X11R6/lib/X11/fonts/TTF
  - /Users/cfqauser/Library/Fonts
  - /System/Library/Fonts
  - /Library/Fonts
  - /Users/ + System.getProperty(<user name>, root) + /Library/Fonts
  - System.getProperty(JAVA\_HOME) + /lib/fonts
  - /usr/share/fonts (Solaris)

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

2. Modify the font-name mapping in the `cffont.properties` file located in the `[LiveCycleES2 root]/adobe-generatepdf-dsc.jar` file:

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

```
dialog=Arial, Helvetica, kochi mincho
dialog.bold=Arial Bold, Helvetica-Bold, kochi mincho ...
```
- Save and close the properties file, and then repackage and redeploy the `adobe-generatepdf-dsc.jar` file.

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

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

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

## 5.8.9 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

## 5.8.10 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 42.](#)

► **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:

```
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:

```
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.

### 5.8.11 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.

- **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.

## 5.9 Final setup for LiveCycle Rights Management ES2

Rights Management ES2 requires the application server to be configured to use SSL. (See [LiveCycle ES2 Administration Help](#).)

## 5.10 Configuring LiveCycle ES2 to access LDAP

If you configured 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 (Enterprise Domain):**

1. Open a web browser, navigate to `http://[host]:[port]/adminui` and log in. (See [“Accessing LiveCycle Administration Console” on page 31.](#))
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 31.](#))
  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**.

## 5.11 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).

## 5.12 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**.

## 5.13 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**.

## 5.14 Configuring the Connector for EMC Documentum service

**Note:** LiveCycle ES2 supports EMC Documentum, versions 6.0, 6.5 and 6.7 SP1 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/Documentum/Shared/dfc.jar,  
C:/Program Files/Documentum/Shared/aspectjrt.jar,  
C:/Program Files/Documentum/Shared/log4j.jar  
C:/Program Files/Documentum/Shared/jaxb-api.jar
```

- Connector for EMC Documentum 6.5 only:

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

- Connector for EMC Documentum 6.7 SP1 only:

```
com.adobe.livecycle.ConnectorforEMCDocumentum.ext=  
C:/Program Files/Documentum/Shared/dfc.jar,  
C:/ProgramFiles/Documentum/Shared/aspectjrt.jar,  
C:/Program Files/Documentum/Shared/log4j.jar,  
C:/Program Files/Documentum/Shared/jaxb-api.jar,  
C:/Program Files/Documentum/Shared/configservice-impl.jar,  
C:/Program Files/Documentum/Shared/configservice-api.jar  
C:/Program Files/Documentum/Shared/commons-codec-1.3.jar  
C:/Program Files/Documentum/Shared/commons-lang-2.4.jar
```

3. Open a web browser and enter this URL:

`http://localhost:8001/adminui` (local deployment using the default port)

4. Log in using the default user name and password:

**User name:** administrator

**Password:** password

5. 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**.

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

7. If WebLogic Server is not currently running, start the server. Otherwise, stop and then restart the server.

8. Open a web browser and enter this URL:  
    http://localhost:8001/adminui (local deployment using the default port)
9. Log in using the default user name and password:  
    **User name:** administrator  
    **Password:** password
10. Navigate to **Services > Applications and Services > Service Management** and select the following services:
  - EMCDocumentumAuthProviderService
  - EMCDocumentumContentRepositoryConnector
  - EMCDocumentumRepositoryProvider
11. Click **Start**. If any of the services do not start correctly, check the settings entered in step 5.
12. 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 5 for accessing the default repository in this case and use the default LiveCycle ES2 authentication service.
13. Restart the application server.
14. Log in to LiveCycle Administration Console and click **Settings > User Management > Domain Management**.
15. 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](#).)  
  
**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](#).)
16. Add a custom authentication provider:
  - Click **Add Authentication**.
  - In the **Authentication Provider** list, select **Custom**.
  - Select **EMCDocumentumAuthProvider** and then click **OK**.
17. Add an LDAP authentication provider:
  - Click **Add Authentication**.
  - In the **Authentication Provider** list, select **LDAP**, and then click **OK**.

18. 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.
19. Click **OK** to exit the Add Directory page and then click **OK** again.
20. 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.
21. Navigate to **Settings > User Management > Users and Groups**.
22. 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.
23. 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 5.
24. (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.

## 5.15 Creating the XDP MIME format in a Documentum repository

Before users can store and retrieve XDP files from a Documentum repository, you must do one of these tasks:

- Create a corresponding XDP format in each repository where users will access XDP files.

- Configure the Connector for EMC Documentum service to use a Documentum Administrator account when accessing the Documentum repository. In this case, the Connector for EMC Documentum service uses the XDP format whenever it is required.
- ▶ **To create the XDP format on Documentum Content Server using Documentum Administrator:**
  1. Log in to Documentum Administrator.
  2. Click **Formats** and then select **File > New > Format**.
  3. Type the following information in the corresponding fields:
    - Name:** xdp
    - Default File Extension:** xdp
    - Mime Type:** application/xdp
  4. Repeat steps 1 to 3 for all other Documentum repositories where users will store XDP files.
- ▶ **To configure the Connector for EMC Documentum service to use a Documentum Administrator:**
  1. Open a web browser and enter this URL:  
http://localhost:[port]/adminui (local deployment using the default port)
  2. Log in using the default user name and password:
    - User name:** administrator
    - Password:** password
  3. Click **Services > LiveCycle ES2 Connector for EMC Documentum > Configuration Settings**.
  4. Under Documentum Principal Credentials Information, update the following information and then click **Save**:
    - User Name:** [Documentum Administrator user name]
    - Password:** [Documentum Administrator password]
  5. Click **Repository Credentials Settings**, select a repository from the list or, if none exist, click **Add**.
  6. Provide the appropriate information in the corresponding fields and then click **Save**:
    - Repository Name:** [Repository Name]
    - Repository Credentials User Name:** [Documentum Administrator user name]
    - Repository Credentials Password:** [Documentum Administrator password]
  7. Repeat steps 5 to 6 for all repositories where users will store XDP files.

## 5.16 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.

Choose one of the following procedures to configure the Connector for IBM FileNet service using FileNet 4.x:

- ["To configure the connector using FileNet 4.x or FileNet 5.0 and CEWS transport:" on page 78](#)
- ["To configure the connector using FileNet 4.x and EJB transport:" on page 83](#)

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

1. Locate the `[appserverdomain]/config/config.xml` file and make a backup copy of it.
2. In the WebLogic Server Administration Console, under Domain Structure, click **Environment** > **Servers** and, in the right pane, click the name of your server.
3. Click the **Configuration** tab and then click **Server Start**.
4. Under Change Center, click **Lock & Edit**.

5. In the Arguments box, enter the following text, and then click Save.

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

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

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

6. Locate the `adobe-component-ext.properties` file in the `[appserverdomain]` 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)
  - `wSDL_api.jar`
  - `jaxm.jar`
  - `jaxrpc.jar`
  - `saaj.jar`
  - `jetty.jar`
  - `runner.jar`
  - `p8cjares.jar`
  - `Jace.jar`
  - (optional) `pe.jar`

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

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

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/wsdl_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. If a custom JAAS configuration file is being used, add the following lines in the custom JAAS configuration file:

```
FileNetP8 {weblogic.security.auth.login.UsernamePasswordLoginModule
    required authOnLogin=true;};
FileNetP8WSI {com.filenet.api.util.WSILoginModule required;};
FileNetP8Engine
    {weblogic.security.auth.login.UsernamePasswordLoginModule required
    authOnLogin=true;};
FileNetP8Server
    {weblogic.security.auth.login.UsernamePasswordLoginModule required
    authOnLogin=true;};
```

- Tip:** You can determine whether a custom JAAS configuration file is used from the value of the `-Djava.security.auth.login.config` property in the application server start command.
10. (FileNet Process Engine Connector only) If your deployment uses the FileNet Process Engine Connector, do one of these tasks, as applicable to your configuration:

- If your deployment uses a custom JAAS file, add the following line to the custom JAAS file:

```
FileNetP8 {com.filenet.api.util.WSILoginModule required;};
```

- If your deployment does not use a custom JAAS file, use a text editor to create a file with the following content:

```
FileNetP8 {com.filenet.api.util.WSILoginModule required;};
```

Save the file as `jaas.conf.WSI` and add the location of the file as the following Java option in the WebLogic Server start command:

```
-Djava.security.auth.login.config=<JAAS file location>
```

For example, if you save the file as `C:/pe_config/jaas.conf.WSI`, add the following Java option:

```
-Djava.security.auth.login.config=C:/pe_config/jaas.conf.WSI
```

11. Open the `config.xml` file and locate the `<credential-encrypted>` value for the managed server's User domain. If there is no value for this element, open the backup copy of the `config.xml` file you create in step 1 and copy the `<credential-encrypted>` value.
12. Paste the value to the new `config.xml` file, then save and close it.
13. If the application server is not currently running, start the server. Otherwise, stop and then restart the server.
14. Open a web browser and enter this URL:

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

15. Log in using the default user name and password:

**User name:** administrator

**Password:** password

16. Click **Services > LiveCycle ES2 Connector for IBM FileNet**.
17. 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.
18. Click **Save** and navigate to **Services > Applications and Services > Service Management**.
19. Select the check box next to each of these services and then click **Start**:
  - IBMFileNetAuthProviderService
  - IBMFileNetContentRepositoryConnector
  - IBMFileNetRepositoryProvider
  - IBMFileNetProcessEngineConnector (if configured)If any of the services do not start correctly, verify the settings entered in step 14.
20. 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 14 use the default LiveCycle ES2 authorization service for accessing the default repository in this case.
21. Restart your application server.
22. Log in to LiveCycle Administration Console and click **Settings > User Management > Domain Management**.
23. 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](#).)  
**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](#).)
24. Add a custom authentication provider:
  - Click **Add Authentication**.
  - In the **Authentication Provider** list, select **Custom**.
  - Select **IBMFileNetAuthProviderService** and then click **OK**.

25. Add an LDAP authentication provider:
  - Click **Add Authentication**.
  - In the **Authentication Provider** list, select **LDAP** and then click **OK**.
26. 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.
27. Click **OK** to exit the Add Directory page, and then click **OK** again.
28. 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.
29. Navigate to **Settings > User Management > Users and Groups**.
30. 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.
31. 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 14.
32. (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.

► **To configure the connector using FileNet 4.x and EJB transport:**

1. Locate the *[appserverdomain]/config/config.xml* file and make a backup copy of it.

2. Locate the `adobe-component-ext.properties` file in the `[appserverdomain]` folder (if the file does not exist, create it).
3. Add a new system property that provides the location of the following FileNet Application Engine JAR files:

- `javaapi.jar`
- `log4j-1.2.13.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]
```

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

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

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

4. (FileNet Process Engine Connector only) 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/
```

5. Save the file you created 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.

6. If a custom JAAS configuration file is being used, add the following lines in the custom JAAS configuration file:

```
FileNetP8 { weblogic.security.auth.login.  
    UsernamePasswordLoginModule required authOnLogin=true; };  
FileNetP8WSI { com.filenet.api.util.WSILoginModule required; };  
FileNetP8Engine { weblogic.security.auth.login.  
    UsernamePasswordLoginModule required authOnLogin=true; };
```

```
FileNetP8Server { weblogic.security.auth.login.  
    UsernamePasswordLoginModule required authOnLogin=true; };
```

- Tip:** You can determine whether a custom JAAS configuration file is used from the value of the `-Djava.security.auth.login.config` property in the application server start command.
- Open the `config.xml` file and locate the `<credential-encrypted>` value for the managed server's User domain. If there is no value for this element, open the backup copy of the `config.xml` file you create in step 1 and copy the `<credential-encrypted>` value.
  - Paste the value to the new `config.xml` file, then save and close it.
  - (FileNet Process Engine Connector only) If your deployment uses the FileNet Process Engine Connector, do one of these tasks, as applicable to your configuration:
    - If your deployment uses a custom JAAS file, add the following line to the custom JAAS file:

```
FileNetP8 {com.filenet.api.util.WSILoginModule required;};
```
    - If your deployment does not use a custom JAAS file, use a text editor to create a file with the following content:

```
FileNetP8 {com.filenet.api.util.WSILoginModule required;};
```

Save the file as `jaas.conf.WSI` and add the location of the file as the following Java option in the WebLogic Server start command:

```
-Djava.security.auth.login.config=<JAAS file location>
```

For example, if you save the file as `C:/pe_config/jaas.conf.WSI` add the following Java option:

```
-Djava.security.auth.login.config=C:/pe_config/jaas.conf.WSI
```
  - If WebLogic Server is not currently running, start the server. Otherwise, stop and then restart the server.
  - Open a web browser and enter this URL:

```
http://localhost:8001/adminui
```

 (local deployment using the default port)
  - Log in using the default user name and password:
    - User name:** administrator
    - Password:** password
  - Click **Services > LiveCycle ES2 Connector for IBM FileNet**.
  - 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 you provide during 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.
  - Click **Save**.
  - Under FileNet DSC Configuration Information, in the **Port Number box**, enter the port number where Content Engine is running. The default port is 8001.

17. Click **Save** and then navigate to **Services > Applications and Services > Service Management**.
18. Select the check box next to each of these services and then click **Start**:
  - IBMFileNetAuthProviderService
  - IBMFileNetContentRepositoryConnector
  - IBMFileNetRepositoryProvider
  - IBMFileNetProcessEngineConnector (if configured)If any of the services do not start correctly, verify the settings entered in step 15.
19. 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.
20. Restart WebLogic Server.
21. Log in to LiveCycle Administration Console and click **Settings > User Management > Domain Management**.
22. 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](#).)

**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](#).)
23. Add a custom authentication provider:
  - Click **Add Authentication** and, in the **Authentication Provider** list, select **Custom**.
  - Select **IBMFileNetAuthProviderService** and 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 information, click the **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:  
**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 by 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, you must 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.

## 5.17 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:

### 5.17.1 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.
5. Locate the line `<endpoint-url>http://localhost:8001/alfresco/s</endpoint-url>` and change it to `<endpoint-url>http://localhost:8001/contentspace/s</endpoint-url>`
6. Save and close the file.

## 5.17.2 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.
  - (WebLogic): `[appserver domain]\servers\\stage\adobe-contentservices\`
2. Add the updated share.war file to the adobe-contentservices.ear archive that is opened in the archive utility window.
3. From the file archive utility window, extract the file application.xml to a folder in the local file system, and open it using a text editor. This file is in the adobe-contentservices.ear\META-INF directory.
4. Add the following lines under the `<application >` tag:

```
<module id="Share">
  <web>
    <web-uri>share.war</web-uri>
    <context-root>/share</context-root>
  </web>
</module>
```
5. Copy the updated application.xml file back to the adobe-contentservices.ear archive.
6. Save and close the archive.
7. Deploy the updated EAR file.

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

## 5.18 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.

## 5.18.1 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.

## 5.19 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 `[appserverdomain]` folder. If the file does not exist, create it.
2. Add a new system property that provides the location of the following IBM I14C JAR files, Config folder that contains the IBM I14C 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
- icrm81.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/ibmjsseprovider2.jar,  
C:/Program Files/IBM/db2cmv8/java/jre/lib/ibmjgssprovider.jar,  
C:/Program Files/IBM/db2cmv8/java/jre/lib/ibmpkcs.jar,  
C:/Program Files/IBM/db2cmv8/java/jre/lib/xml.jar,  
C:/Program Files/IBM/db2cmv8/lib/cmbview81.jar,  
C:/Program Files/IBM/db2cmv8/lib/cmb81.jar,  
C:/Program Files/IBM/db2cmv8/lib/cmbcm81.jar,  
C:/Program Files/IBM/db2cmv8/lib/xsd.jar,  
C:/Program Files/IBM/db2cmv8/lib/common.jar,  
C:/Program Files/IBM/db2cmv8/lib/ecore.jar,  
C:/Program Files/IBM/db2cmv8/lib/cmbicm81.jar,  
C:/Program Files/IBM/db2cmv8/lib/cmbwcm81.jar,  
C:/Program Files/IBM/db2cmv8/lib/jcache.jar,
```

```
C:/Program Files/IBM/db2cmv8/lib/cmbutil81.jar,  
C:/Program Files/IBM/db2cmv8/lib/cmbutilicm81.jar,  
C:/Program Files/IBM/db2cmv8/lib/icmrm81.jar,  
C:/Program Files/IBM/db2cmv8/lib/db2jcc.jar,  
C:/Program Files/IBM/db2cmv8/lib/db2jcc_license_cu.jar,  
C:/Program Files/IBM/db2cmv8/lib/db2jcc_license_cisuz.jar,  
C:/Program Files/IBM/db2cmv8/lib/xerces.jar,  
C:/Program Files/IBM/db2cmv8/lib/cmblog4j81.jar,  
C:/Program Files/IBM/db2cmv8/lib/log4j-1.2.8.jar,  
C:/Program Files/IBM/db2cmv8/lib/cmbSDK81.jar,  
C:/Program Files/IBM/db2cmv8/lib/cmbwas81.jar
```

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

You can now connect to the IBM Content Manager 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](#).)  
  
**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](#).)
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](#).

## 5.20 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](#).

## 5.21 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 88](#).

**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:
      - 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_lifecycle_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`).

**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.

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.

# Configuring and deploying LiveCycle Business Activity Monitoring ES2

This section describes the tasks that must be performed to manually configure and deploy LiveCycle Business Activity Monitoring ES2 (BAM):

- [“Configuring the keystore” on page 65](#)
- [“Creating the bam.properties file” on page 65](#)
- [“Configuring WebLogic Server for BAM Server” on page 69](#)
- [“Creating a managed server” on page 70](#)
- [“Create the BAM Server metadata and geography databases” on page 66](#)
- [“Securing WebLogic JNDI artifacts for BAM Server” on page 74](#)
- [“Configure Process Management ES2 for BAM Server” on page 73](#)
- [“Deploying a BAM application to WebLogic Server” on page 77](#)
- [“Using BAM Dashboard” on page 77](#)
- [“Additional documentation” on page 78](#)
- [“Uninstalling Business Activity Monitoring ES2” on page 78](#)

The instructions in this document use the following naming conventions for common file paths.

Name	Description	Default value
<i>[appserver root]</i>	The home directory of the application server for Business Activity Monitoring ES2.	WebLogic on Windows: C:\bea\wlserver_10.3\ WebLogic on Linux: /opt/bea/wlserver_10.3/
<i>[LiveCycleES2 root]</i>	The location where the LiveCycle ES2 services are installed	Windows: C:\Adobe\Adobe LiveCycle ES2 UNIX: /opt/adobe/adobe_lifecycle_es2

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

## 5.1 Configuring the keystore

You need administrator and user keystores for password encryption and decryption. You also need to specify the location of these keystores.

### ► Set up the keystores and keystore locations:

1. Copy the *admin.jks* keystore file from *[LiveCycleES2 root]\LiveCycle\_ES\_SDK\misc\Business\_Activity\_Monitoring\keystore* to a location that will be called *[Admin Keystore Location]*. The default password is 40fd2442fa.

2. Copy the `user_sample.jks` keystore file from `[LiveCycleES2 root]\LiveCycle_ES_SDK\misc\Business_Activity_Monitoring\keystore` to a location that will be called `[User Keystore Location]`. The default password is `8deb5102f8`.

► **Create a user keystore:**

It is strongly recommended that you create your own user keystore. To create a user keystore, do the following:

1. Refer to "Working with Encryption Configuration" in [LiveCycle Workbench ES2 Help](#) for information on how to create a Java Keystore.
2. Specify the location of your user keystore with the system setting property called `Keystore Location` in your `bam.properties` file. (See ["Creating the bam.properties file" on page 65.](#))

## 5.2 Creating the bam.properties file

Before you begin installation, you must create a system properties text file called `bam.properties`, typically in your `[appserver-bam root]/bin` directory. This document refers to this file location as `[bam.properties file location]`. The properties are required so that Business Activity Monitoring ES2 can start properly. Without this text file, BAM Workbench might display the First Time Setup web page dialog box because some required system properties are not set.

You must set the following properties and defaults in your start-up properties text file:

```
SMTP\ Host=[Hostname or IP Address]
SMTP\ From\ Address=smtp@company.com
SMTP\ User=user
SMTP\ Password=password
Logging\ Directory=[log Directory]
Additional\ Log4j\ Properties=[Log4j Location]/log4j.properties
Recovery\ Log\ Directory=[Recovery Log Directory]
Recover\ State\ on\ Restart=true
Enable\ Checkpoint=true
Admin\ Keystore\ Location=[Admin Keystore Location]/admin.jks
Keystore\ Location=[User Keystore Location]/user_sample.jks
Keystore\ Password=8deb5102f8
User\ PrivateKey\ Password=8deb5102f8
```

In addition, create a `log4j.properties` file and specify its location with system setting property `Additional Log4j Properties`. This file must contain the following:

```
com.cognos.obi.metadata.DDLDispatch=com.cognos.obi.settings.DebugLow
```

**Note:** The location where recovery files would be saved is referred to as `[Recovery Log Directory]`. All spaces in property names must be escaped with a back slash (\) character. In addition, you should use front slash (/) characters for all the file paths used in `bam.properties`.

## 5.3 Configuring WebLogic Server for BAM Server

If you are installing LiveCycle Process Management ES2 and manually deploying to the WebLogic Server, you must manually configure a separate WebLogic Server so that BAM Server runs correctly. You must perform the following tasks:

- If you have not already done so, create a separate WebLogic Server instance in the same domain for hosting the BAM Server.
- If you have not already done so, create a database for Business Activity Monitoring ES2.
- Configure the connection to the BAM Server metadata and geography databases.
- Configure the connection to the LiveCycle ES2 database.
- Modify the WebLogic Server JVM.

## 5.4 Creating a managed server

You need to create a managed server for BAM Server. Each managed server must then be assigned to a computer.

### ► Create a managed server in an existing domain:

1. If you have not already done so, log in to WebLogic Server Administration Console.
2. Under Change Center in the WebLogic Server Administration Console, click **Lock & Edit**.
3. Under Domain Structure, click **Environment > Servers** and, in the **Servers** table, click **New**.
4. Under Create a New Server, specify the values for the properties:
  - In the **Server Name** box, type the name of the server.
  - In the **Server Listen Port** box, type the port number to access the server instance from (for example, type 8008 or 8888).
  - Select **No, this is a stand-alone server**.
5. Click **Next**, review the configuration options you chose and then click **Finish**.

### ► Create and configure a new computer:

1. If you have not already done so, log in to WebLogic Server Administration Console.
2. In the WebLogic Server Administration Console, under Domain Structure, click **Environment > Servers** and, in the right pane, click the managed server that you created for BAM Server.
3. Click the **Configuration** tab > **General** tab.
4. In the **Machine** list, select the LiveCycle ES2 computer, and then click **Save**.
5. Click **Activate Changes**.
6. Shut down and restart the servers by starting Node Manager, Administration Server, and Managed Server.

### 5.4.1 Configuring the WebLogic Server JVM

Configure the WebLogic Server Java Virtual Machine (JVM) so that it can support BAM Server.

► **Set up the libraries and libraries locations:**

1. Copy the `obiProperties.jar`, `obiProperties_Lava_Adobe.jar` file from `[LiveCycleES2 root]/deploy` to a location that will be called `[obi Jar Location]`.
2. Copy the `jaxen-1.1-1.jar`, `log4j.jar` file from `[LiveCycleES2 root]/LiveCycle_ES_SDK/client-libs/thirdparty` to a location that will be called `[thirdparty Jar Location]`.

► **Configure the WebLogic Server JVM:**

1. Under Change Center in the WebLogic Server Administration Console, click **Lock & Edit**.
2. Under Domain Structure, click **Domain Name > Environment > Servers** and, in the right pane, click the server created for BAM Server.
3. Click the **Server Start** tab and, in the **Java Home** box, type the location of your JDK version, as shown in these examples:
  - (Windows) `C:\Program Files\JRockit Real Time\jdk1.6.0_14`
  - (Linux) `/opt/jrvt-3.0.0-1.6.0`
  - (Solaris) `/opt/java/jdk160_14`

4. In the Classpath box, type the following lines:

- (Windows): `%CLASSPATH%; [obi Jar Location]/obiProperties_Lava_Adobe.jar; [obi Jar Location]/obiProperties.jar; [thirdparty Jar Location]/jaxen-1.1.1.jar; [thirdparty Jar Location]/log4j.jar`
- (UNIX): `$CLASSPATH: [obi Jar Location]/obiProperties_Lava_Adobe.jar: [obi Jar Location]/obiProperties.jar: [thirdparty Jar Location]/jaxen-1.1.1.jar: [thirdparty Jar Location]/log4j.jar`

**Note:** You must enter these parameters in a single line. In addition, make sure that you have specified the following JARs in the **Classpath** in exactly this order:

```
obiProperties_Lava_Adobe.jar
obiProperties.jar.
```

5. In the **Arguments** box, type the following lines:

```
-Dfile.encoding=UTF8 -XX:MaxPermSize=256m -Xms256m -Xmx1024m
-DCASBOOTPROPS=[bam.properties file location including the file name]
-Dcom.cognos.obi.bootstrap.envpropname=CASBOOTPROPS
-Dintegrationenabled=false
-Danonymoussaccessenabled=false
```

**Note:** All the above arguments are separated by space.

6. Click **Save** and then click **Activate Changes**.

**Note:** When you restart BAM server, if you encounter a clear text value error, you should modify the `config.xml` file in `[appserverdomain]/config` directory. If the property `<password-encrypted></password-encrypted>` is empty, delete this line below `<server>` property.

7. Start BAM Server.

## 5.5 Create the BAM Server metadata and geography databases

You must have a BAM Server metadata database created to store the definitions of process metrics that BAM Server monitors. In addition, you must create a Business Activity Monitoring ES2 geography database to support geography maps, which is required for using geography charts in the BAM Dashboard. For details on supported databases and permissions, see [Preparing to Install LiveCycle ES2 \(Single Server\)](#).

### 5.5.1 Create user accounts

You must create a dedicated user account that BAM Server can use to connect to the BAM Server metadata and geography databases. For details on the required user permissions, please consult [Preparing to Install LiveCycle ES2 \(Single Server\)](#).

### 5.5.2 Configure your database environment (DB2 only)

This section only applies if you are using DB2 as your metadata database and geography database.

If you are using DB2 as the BAM Server metadata database and geography database, you must create an environment variable that contains the name of the associated DB2 instance. You also must include the path to the DB2 shared libraries in the library path variable.

The following examples show commands for configuring the environment variables. Use the command that corresponds with your operating system. You may need to modify the command according to the location where you installed DB2.

#### **Example: Commands to configure environment variables on Windows**

Use the following commands to configure environment variables for a DB2 instance named *DB2*, with DB2 library files installed in *C:\SQLLIB\BIN*:

```
set DB2INSTANCE=DB2
set PATH=C:\SQLLIB\BIN;%PATH%
```

#### **Example: Commands to configure environment variables on Solaris**

Use the following commands to configure environment variables for a DB2 instance named *db2fs*, with DB2 library files installed in */opt/IBM/db2/V9.1/lib*:

```
export DB2INSTANCE=db2fs
export LD_LIBRARY_PATH=/opt/IBM/db2/V9.1/lib:${LD_LIBRARY_PATH}
```

### 5.5.3 Connect to BAM Server metadata and geography databases

You must configure the following data sources on WebLogic Server:

- Data source for the BAM Server metadata database:

This data source configuration is for BAM Server to retrieve information about process metrics that it needs to monitor.

- Data source for the BAM Server geography database:  
This data source is for the BAM Server geography database to support Geography Maps, which is required for using Geography charts in the BAM dashboard.

► **Create the connection to the BAM Server metadata database:**

1. If not already started, start the Node Manager, Administration Server, and Managed Servers.
2. Type `http://[host name]:[port]/console` in the URL line of a web browser (for example, `http://localhost:7001/console`) to start WebLogic Server Administration Console.
3. Under Change Center, Click **Lock and Edit**.
4. Under Domain Structure, click **Services > JDBC > Data sources** and, in the right pane, click **New**.
5. In the **Name** box and the **JNDI Name** box, type `com.cognos.obj.metadata.metaDataSource`.
6. In the **Database Type** list, select the type of database you are using to store BAM Server metadata.
7. In the **Database Driver** list, select the appropriate database driver, and then click **Next**:
  - (MS SQL Server) Microsoft MS SQL Server Driver (Type 4)
  - (Oracle) Oracle's Driver (Thin) versions 9.x, 10
  - (MySQL) MySQL's Driver (Type 4) Versions using `com.mysql.jdbc.Driver`
8. On the next screen, deselect **Supports Global Transactions** and then click **Next**.
9. Specify values for the following properties, and then click **Next**:
  - Database Name:** The name of the database (SQL Server) or database instance (Oracle)
  - Host Name:** The network name or IP address of the database host computer
  - Port:** The port used by the database host computer
  - Database User Name:** The name of a user account that can access the database
  - Password** and **Confirm Password:** The password that corresponds with the user name you provided
10. On the next screen, click **Test Configuration** to verify the configuration settings, and then click **Finish**.

► **Configure the connection pool of the metadata database:**

1. Under Domain Structure, click **Services > JDBC > Data sources** and, in the right pane, click the metadata data source you created.
2. On the next screen, click the **Configuration** tab > **Connection Pool** tab.
3. Under Change Center, click **Lock and Edit**.
4. In the **Initial Capacity** box, type 1 and, in the **Maximum Capacity** box, type 20.
5. Accept the default values for all the remaining properties, and then click **Save**.
6. Click the **Targets** tab, select the BAM Server, click **Save**, and then click **Activate Changes**.

► **Create the connection to the BAM Server geography database:**

To support Geography Maps, you will need to define a geography data source. To set up Geography Map support, follow the steps for creating a data source with the WebLogic Server Console as described in the section [“Connect to BAM Server metadata and geography databases” on page 72](#). However, you should specify the data source name and JNDI name as `com.cognos obi.geo.geoDataSource`.

► **Configure the connection to the LiveCycle ES2 database if LiveCycle and BAM are on single machine:**

1. Under Change Center, Click **Lock and Edit**.
2. Under Domain Structure, click **Services > JDBC > Data Sources** and, in the right pane, click **IDP\_DS**.
3. On the next screen, click the **Targets** tab and then select both the BAM Server and the LiveCycle ES2 Server.
4. Click **Save** and then click **Activate Changes**.

► **Configure the connection to the LiveCycle ES2 database if LiveCycle and BAM are on different machines:**

1. Under Change Center, click **Lock and Edit**.
2. Following the steps described in the section, [“Connect to BAM Server metadata and geography databases” on page 72](#), create a data source for BAM Server to connect LiveCycle ES2 database. The data source name and JNDI name are `IDP_DS`.
3. Under Domain Structure, click **Services > JDBC > Data Sources** and, in the right pane, click **IDP\_DS**.
4. On the next screen, click the **Targets** tab and then select **BAM Server**.
5. Click **Save** and then click **Activate Changes**.

► **Configure the connection pool of IDP\_DS database:**

1. Under Domain Structure, click **Services > JDBC > Data sources** and, in the right pane, click **IDP\_DS** data source.
2. On the next screen, click **Configuration > Connection Pool**.
3. Under Change Center, click **Lock and Edit**.
4. In the **Initial Capacity** box, type `10` and, in the **Maximum Capacity** box, type `50`.
5. Accept the default values for all the remaining properties, click **Save**, and then click **Activate Changes**.

## 5.6 Securing WebLogic JNDI artifacts for BAM Server

You can secure access to JNDI artifacts on WebLogic for BAM server. The process relies on the ability to specify JNDI credentials in a properties file that is in the classpath of the BAM and making sure that the artifacts to be secured are properly configured in the WebLogic admin console.

► **Create BAMUser in the Administrator group in WebLogic's security realm:**

1. Log in to WebLogic Server Administration Console.
2. Under Domain Structure, click **Security Realms**.
3. On the next screen, select **myrealm**.
4. On the next screen, click **Users and Groups** tab and then select **New**.
5. Under Create a New User, specify the value for the properties, and click **OK**.
  - In the **Name** box, type **BAMUser**.
  - In the **Password** box, type the password.
  - In the **Confirm Password** box, type the password.
6. Under Users, select the created user **BAMUser**.
7. On the next screen, click **Groups** tab.
8. On the next screen, select **Administrators** in the **Available** table.
9. Click right arrow button and add **Administrators** to **Chosen** table and click **Save**.

► **Create a jndi.properties file:**

You should create a jndi.properties in a known location. This file must contain the following:

```
java.naming.security.principal=BAMUser
java.naming.security.credentials=password
```

► **Add jndi.properties file in the classpath of the BAM server:**

1. Log in to WebLogic Server Administration Console.
2. Under Change Center in the WebLogic Server Administration Console, click **Lock & Edit**.
3. Under Domain Structure, click **Environment > Servers** and, in the right pane, click the server created for BAM Server.
4. Click the **Server Start** tab and, in the Class Path box, append the folder containing the jndi.properties file, as shown in these examples:
  - (Windows): %CLASSPATH%; [folder location];  
[obi Jar Location]/obiProperties\_Lava\_Adobe.jar;  
[obi Jar Location]/obiProperties.jar;  
[thirdparty Jar Location]/jaxen-1.1.1.jar;  
[thirdparty Jar Location]/log4j.jar
  - (UNIX): \$CLASSPATH: [folder location]:  
[obi Jar Location]/obiProperties\_Lava\_Adobe.jar:  
[obi Jar Location]/obiProperties.jar:  
[thirdparty Jar Location]/jaxen-1.1.1.jar:  
[thirdparty Jar Location]/log4j.jar
5. Click **Save** and then click **Activate Changes**.

6. Restart the BAM server so that the JNDI properties take effect.

► **Secure the datasources needed by BAM:**

1. Log in to WebLogic Server Administration Console.
2. Under Domain Structure, click **Environment** > **Servers** and, in the right pane, click the server created for BAM Server.
3. On the next screen, click **View JNDI Tree**. A new window appears with the JNDI Tree Structure.
4. Under the JNDI Tree Structure, navigate to the datasource objects according to their JNDI name:
  - com.cognos.obi.metadata.metaDatasource
  - com.cognos.obi.geo.geoDatasource
  - IDP\_DS
5. Navigate to **com** > **cognos** > **obi** > **metadata**, and then select *metaDatasource*:
6. Click **Security** > **Policies**, and then click **Add Conditions**.
7. Select *User* in the Predicate List and click **Next**.
8. In the **User Argument Name** box, type the user's name as *BAMUser*, and click **Add**.
9. Click **Finish** to go back to the Policies screen, and then click **Save**.
10. Repeat steps 5 to 9 for resources *geoDatasource* and *IDP\_DS*.

## 5.7 Configure Process Management ES2 for BAM Server

You can configure LiveCycle Process Management ES2 to connect to BAM Server by using LiveCycle Administration Console. You must specify the server that the LiveCycle ES2 server and BAM Server are running on and the user account information to access BAM Server.

► **Configure Process Management ES2 for BAM Server:**

1. Log in to LiveCycle Administration Console from a web browser:  
`http://[host name]:[port]/adminui.`
2. Click **Services** > **LiveCycle Process Management ES2** > **Server Settings** > **BAM Configuration Settings**.
3. Type values for the following properties:

**BAM Host:** The host name or IP address of the server that BAM Server is running on.

**Note:** If LiveCycle ES2 and BAM are on different machines, you must enter the BAM Host hostname or IP address instead of *localhost*.

**BAM Port:** The service port of the application server that BAM Server is running on. For WebLogic server, this value is typically 8008 or 8888.

**LiveCycle Server Host:** The host name or IP address of the server that the LiveCycle ES2 server is running on. The default value is *localhost*.

**Note:** If LiveCycle ES2 and BAM are on different machines, you must enter the LiveCycle ES2 Host hostname or IP address instead of *localhost*.

**LiveCycle Server Port:** The service port of the application server that the LiveCycle ES2 server is running on. For WebLogic this value is typically 8001.

**User Name:** (Optional) The administrator user account that Process Management ES2 uses to access BAM Server. The default user name is `CognosNowAdmin`.

**Note:** If you specify the user name for a different user account, ensure that the user has complete administrative privileges for BAM Server. For information about administering BAM Server user accounts, see [Creating Processes Using Workbench ES2 Help](#).

**Password:** (Optional) A valid password for the user name specified above. The default password is `manager`.

4. Click **Save** and restart the LiveCycle ES2 server.

## 5.8 Deploying a BAM application to WebLogic Server

Use WebLogic Server Administration Console to deploy the BAM Server EAR file to the WebLogic Server. The BAM Server EAR file (`Lava_Adobe-weblogic.ear`) that you need to deploy is installed in the `[LiveCycleES2 root]/deploy` directory.

**Note:** Ensure that you deploy the EAR file to the WebLogic Server application server that you configured for BAM Server.

### ► Deploy BAM Server to WebLogic Server:

1. If not already started, start the Administration Server and, if applicable, the managed server.
2. Log in to WebLogic Server Administration Console by typing `http:// [host name] : [port] /console` in the URL line of a web browser.
3. Under Change Center, click **Lock and Edit**.
4. Under Domain Structure, click **Deployments** and, in the right pane, click **Install**.
5. Click **Upload your files**, browse to the `[LiveCycle root]/deploy` directory, select the `Lava_Adobe-weblogic.ear` file, and then click **Next**.
6. In the **Choose Targeting style** list, select **Install this deployment as an application**, and then click **Next**.
7. In the **Select Deployment target** list, select the server that was created for BAM Server in ["Creating a managed server" on page 70](#), and then click **Next**.
8. Click **Next**, click **Finish**, and then **Save**.
9. Click **Activate changes** and then start the application.

### ► Log in to BAM Workbench:

1. After WebLogic Application Server is started, access the BAM Workbench interface by typing the following URL in a web browser:

`http:// [host name] : [port] /bam/login/workbench.htm`

2. Log in as an administrator. The default administrator account for BAM Server uses the following ID:

**Username:** CognosNowAdmin

**Password:** manager

► **Configure the BAM Server system settings:**

When you log in to the BAM Workbench for the first time, you are prompted to configure the system settings.

1. On the Administration Console tab, click **System Settings...**
2. In the **Configure** list, select **Checkpoint Configuration** and then ensure that **Enable Checkpoint** is selected.

**Note:** BAM Recovery Log Directory is set to `/root` for WebLogic and WebSphere by default. You can set a custom BAM Recovery Log directory so that you won't lose data if you forget to backup the DEFAULTRECOVERYLOGGER file during a restore.

3. In the **Configure** list, select **System Control** and then ensure that **Recover State on Restart** is selected.
4. In the **Configure** list, select **Encryption Configuration**.
5. Specify a password in the **Keystore Password** and **User PrivateKey Password** boxes. The default user keystore password is `8deb5102f8`.
6. Click **OK**.

► **Import the LiveCycle ES2 metadata definitions:**

1. Click the **Administration Console** tab > **Import/Export**.
2. Select **Import Metadata from a JAR file (upload)** and click **Browse** to enter the full path to the location of the Business Activity Monitoring ES2 metadata template that is appropriate for the LiveCycle ES2 database:
  - (DB2) `adobeimport_DB2.jar`
  - (MySQL) `adobeimport_MySQL.jar`
  - (Oracle) `adobeimport_Oracle.jar`
  - (SQL Server) `adobeimport_SQLServer.jar`

These files are located in the `[LiveCycleES2 root]/deploy` directory.

3. Click **OK** to import the file.

This task brings in all long-lived processes with Auto generates BAM dashboards enabled. After importing, log in as an administrator user to view all the Workbench and Dashboard objects.

► **Import the Adobe User Management plug-in:**

1. On the Workbench tab, click **JAR Files** then click **New JAR...** on the right hand side.
2. On the Create JAR File dialog, enter the name as `BAMUMPlugin`, click **Browse**, choose the location of `[LiveCycleES2 root]/deploy/adobe-um-plugin.jar` and then click **Open**.

3. Click **Save**.
4. On Administration Console tab, click **System Settings...**
5. From the Configure list select **UM-SSO Configuration > BAMUMPlugin**.
6. Click **OK**.
7. Click **System Settings...**, select Adobe LiveCycle Settings from the Configure list, update the following values if required, then click **OK**.
  - User Name: The administrator user account
  - Password: The administrator password
  - Host: The machine name or IP address of LiveCycle ES2 server
  - Port: The LiveCycle ES2 server port
  - Server Type: WebLogic
  - Invocation Protocol: SOAP

## 5.9 Synchronize users from LiveCycle User Management

You can synchronize the users from LiveCycle User Management to BAM so that the users can be authenticated by BAM Workbench and BAM Dashboard. For this, you need to create a group in User Management and then synchronize the list of users from User Management.

### ► Create a User Management Group:

1. Log in to LiveCycle Administration Console at `http://[host name]:[port]/adminui` as a user with a Security Administrator role.
2. Click **Settings > User Management > Users and Groups**, and then click **New Group**.
3. Type the Group Name and enter other details, and then click **Next**.
4. Choose the users on Group Membership page to associate with a group, select **Associate this group to other group page** and then click **Next**.
5. Click **Next**, and then click **Finish**.

**Note:** To create multiple groups for BAM, ensure that these group names have the same prefix.

### ► Synchronize users from User Management:

1. Log in to BAM Workbench by typing `http://[host name]:[port]/bam/login/workbench.htm` in a web browser.
2. On the Administration Console tab, click **System Settings...** and from the Configure list, select **Adobe LiveCycle Settings**.
3. Modify the Role Prefix to match your BAM group prefix and click **OK**.
4. Click **System Settings...**, and from the Configure list click **UM-SSO Configuration > BAMUMPlugin**.
5. Set the schedule for synchronizing users and click **OK**.

6. (Optional) To synchronize the users immediately, click **Synchronize Now** and then click **OK**. All the users in BAM group will be synchronized into BAM system.

**Note:** If you perform another user synchronization, the existing users in BAM server will be re-written, including their BAM roles. To avoid this, create a new user group for your new BAM users and use **Synchronize Now** option.

## 5.10 Using BAM Dashboard

Process-specific dashboards are created in Business Activity Monitoring ES2 if you select “Auto generate BAM dashboards” when creating your process in LiveCycle Workbench ES2. When a process is activated and immediately invoked, the process instance is not registered on the corresponding BAM Dashboard. BAM Server requires several seconds after a process is activated before it can monitor the process for activity. After you activate a process, wait several seconds before you invoke it.

If you install BAM Server after LiveCycle ES2 has run a process, you must populate BAM Dashboard. Populating BAM Dashboard initializes BAM Server to begin polling the LiveCycle ES2 database. When this process is enabled, the AdobeView can be created from the information that is gathered from the LiveCycle ES2 database. In the case of a clean LiveCycle ES2 installation, the database will be empty and no view will be created.

### ► Populate BAM Dashboard

1. Log in to BAM Workbench by typing  
`http://[host name]:[port]/bam/login/workbench.htm` in the URL line of a web browser.
2. On Workbench tab, click **Public Folders**.
3. Locate `ActivityInstanceStartedEvent` and `ActivityInstanceCompletedEvent`.
4. Disable each Data Stream. Double click each Data Stream, click **Status: Enabled** on the right hand side of each Data Stream page and click **Disable Dependencies** button.
5. Enable each Data Stream. Double click each Data Stream, click **Status: Disabled** on the right hand side of each Data Stream page and click **Enable All**.
6. Repeat steps 4 to 5 for `ProcessInstanceStartedEvent` and `ProcessInstanceCompletedEvent`.
7. Repeat steps 4 to 5 for all remaining events except `AdobeEvent`, `VC_SYSTEM_EVENTS`, and `VC_TASK_EVENTS`.

When BAM Dashboard has been populated, you can log in to BAM Dashboard to view the LiveCycle ES2 processes.

### ► Log in to BAM Dashboard

1. Type the URL to the dashboard in a web browser. For example, type this URL:  
`http://[host name]:[port]/bam/`

2. Log in as an administrator. The default administrator account for BAM Server uses the following credentials:

**Username:** *CognosNowAdmin*

**Password:** *manager*

## 5.11 Additional documentation

You can access additional information about Business Activity Monitoring ES2 in the [Adobe Business Activity Monitoring ES2 Help](#).

## 5.12 Uninstalling Business Activity Monitoring ES2

You must uninstall BAM Server completely before attempting to reinstall. When you uninstall LiveCycle ES2, BAM will be removed along with it. Because some folders might not be removed during uninstallation, you should ensure that BAM has been cleanly uninstalled before you attempt to reinstall BAM.

### ► Uninstall BAM Server:

1. Undeploy and delete the old BAM Server EAR file using WebLogic Server Administration Console.
2. Delete all the files from the recovery log directory and logging directory that have names similar to the following patterns:
  - filestore\*.dat
  - DEFAULTRECOVERYLOGGER\_\*
  - chkpoint\*
3. Review the contents of the *[appserver root]\bin* folder and, if any *chkpoint\** files exist, delete them.
4. Use your database management tools to drop the database tables that store the BAM Server metadata.
  - UNCOMMITTED\_TID
  - ALLOCATED\_UID
  - METADATA\_OBJECTS

Alternatively, you may want to create a new BAM Server metadata database.





This section describes advanced tuning for LiveCycle Output ES2, LiveCycle Forms ES2, and LiveCycle PDF Generator ES2. This section should be completed only on a production system by an advanced application server administrator.

## 9.1 Configuring pool size for Output ES2 and Forms ES2

The current default value for PoolMax is 4. The actual value to set depends on the hardware configuration and the expected usage in your environment.

For optimal use, we recommend that the lower limit of PoolMax not be less than the number of CPUs that are available. The upper limit must be determined by the load pattern on your server. Generally, the upper limit should be set to twice the number of CPUs cores on your server.

► **To modify the existing PoolMax value:**

1. Using a text editor, edit the WebLogic startup script.
2. Add the following properties for `ConvertPdf`:
  - `com.adobe.convertpdf.bmc.POOL_MAX=[new value]`
  - `com.adobe.convertpdf.bmc.MAXIMUM_REUSE_COUNT=5000`
  - `com.adobe.convertpdf.bmc.REPORT_TIMING_INFORMATION=true`
  - `com.adobe.convertpdf.bmc.CT_ALLOW_SYSTEM_FONTS=true`
3. Add the following properties for `XMLFM`:
  - `com.adobe.xmlform.bmc.POOL_MAX=[new value]`
  - `com.adobe.xmlform.bmc.MAXIMUM_REUSE_COUNT=5000`
  - `com.adobe.xmlform.bmc.REPORT_TIMING_INFORMATION=true`
  - `com.adobe.xmlform.bmc.CT_ALLOW_SYSTEM_FONTS=true`

## 9.2 LiveCycle PDF Generator ES2

LiveCycle PDF Generator ES2 is capable of doing multiple PDF conversions simultaneously for some types of input files. This is enforced through the use of stateless session beans.

### 9.2.1 Configuring EJB Pool Size

Four different stateless session beans exist for enforcing independent pool sizes for the following types of input files:

- Adobe PostScript® and Encapsulated PostScript (EPS) files
- Image files, such as BMP, TIFF, PNG, and JPEG files
- OpenOffice files

- All other file types (except HTML files), such as Microsoft Office, Photoshop®, PageMaker®, and FrameMaker® files

The pool size for HTML-to-PDF conversions is not managed through the use of stateless session beans.

The default pool size for PostScript and EPS files and for image files is set to 3, and the default pool size for OpenOffice and other file types (except HTML) is set to 1.

You can configure the PS/EPS and image pool size to a different value based on your server hardware configuration, such as the number of CPUs, the number of cores within each CPU, and so on. However, it is mandatory that the pool size for the OpenOffice and other file types be left unchanged at 1 for proper functioning of PDF Generator ES2.

This section describes how the pool size for PS2PDF and Image2PDF can be configured for each of the supported application servers.

The text that follows assumes that the following two LiveCycle ES2 application EARs are deployed on the application server:

- adobe-livecycle-weblogic.ear
- adobe-livecycle-native-weblogic-[platform].ear

where [platform] should be replaced with one of the following strings, depending on your operating system:

- (Windows) x86\_win32
- (Linux) x86\_linux
- (SunOS™) sparc\_sunos

► **To configure the pool size for PS2PDF and Image2PDF:**

Refer to *Distiller service settings* and *Generate PDF service settings* under “Managing services” in the [LiveCycle ES2 Administration Help](#).

## 9.3 Enabling CIFS on Windows

You will need to manually configure the Windows Server 2003 and 2008 machines that host LiveCycle ES2. When you enable CIFS support in Alfresco, users can access the Content Services ES2 repository as a network folder and perform various file operations as on their local file system. In LiveCycle Content Services ES2, CIFS is supported for enterprise domain users with ActiveDirectory as their directory provider.

**Note:** Ensure that the server has a static IP address.

On Windows machines, you need to do the following:

- [“Enable NetBIOS over TCP/IP” on page 108](#)
- [“Add additional IP addresses” on page 108](#)
- [“Disable SMB over NetBIOS registry \(Windows 2003 only\)” on page 108](#)
- [“Disable File and Printer Sharing \(Windows 2008 only\)” on page 108](#)

### 9.3.1 Enable NetBIOS over TCP/IP

You need to enable NetBIOS over TCP/IP so that clients connecting to the LiveCycle ES2 server can have their requests resolved for the server host name.

1. In the **Local Area Connection Properties** dialog box, on the **General** tab, select **Internet Protocol**, and then click **Properties**.
2. In the **General** tab of the **Internet Protocol (TCP/IP) Properties** dialog box, ensure that the server has a static IP address. Click **Advanced**.
3. In the **Advanced TCP/IP Settings** dialog box, select the **WINS** tab and select **Enable NetBIOS over TCP/IP**.

### 9.3.2 Add additional IP addresses

1. In the **Local Area Connection Properties** dialog box, on the **General** tab, select **Internet Protocol**, and then click **Properties**.
2. In the **General** tab of the **Internet Protocol (TCP/IP) Properties** dialog box, ensure that the server has a static IP address. Click **Advanced**.
3. In the **Advanced TCP/IP Settings** dialog box, select the **IP Settings** tab and click **Add**.
4. Specify a static IP address and click **Add**.

### 9.3.3 Disable SMB over NetBIOS registry (Windows 2003 only)

You must disable SMB over NetBIOS by editing the Windows registry.

1. In the Windows Registry Editor, navigate to **HKEY\_LOCAL\_MACHINE > SYSTEM > CurrentControlSet > Services > NetBT > Parameters**.
2. Set the DWORD **SMBDeviceEnabled** to 0. If it is not present, add a new DWORD value with name **SMBDeviceEnabled** and set it to 0.

### 9.3.4 Disable File and Printer Sharing (Windows 2008 only)

- Go to **Network Settings**, deselect **File and Printer Sharing for Microsoft Clients**, and click **Apply**.

# 7

## Troubleshooting

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For information about troubleshooting your LiveCycle ES2 installation and configuration, see the [Troubleshooting LiveCycle ES2](#) guide.

# A

## Appendix - Install Command Line Interface

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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 Install LiveCycle ES2 \(Single Server\)](#).)
- You have reviewed the first page of ["Installing the product files" on page 26](#) and the ["Installing the LiveCycle ES2 Modules" on page 25](#) section.

This appendix covers the following topics:

- ["Installing LiveCycle ES2" on page 67](#)
- ["Error logs" on page 69](#)
- ["Uninstalling LiveCycle ES2 in console mode" on page 69](#)
- ["Next steps" on page 70](#)

### 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 39](#) or ["Appendix - LCM Command Line Interface" on page 71](#).

**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`
2. Open a command prompt and run the following command:
  - (Windows) `install.exe -i console`

- (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 as described in the following table:

Prompt	Description
Choose Locale	Select the locale for the installation to use by entering a value between 1 and 3. You can select the default value by pressing <b>Enter</b> .  The options are Deutsch, English, and Français. English is the default language.
Choose Install Folder	On the Destination screen, press <b>Enter</b> to accept the default directory or type the new installation directory location.  Default install folders are: (Windows): C:\Adobe\Adobe LiveCycle ES2 (Linux, Solaris): /opt/adobe/adobe_lifecycle_es2  <b>Note:</b> 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.
Choose Operating System	<b>(Windows only)</b>  Select the operating system that you want to install LiveCycle ES2 to.  The options are Windows, and Linux, Solaris. Windows (Local) is the default.  Select a different target operating system so that you can use the installation on Windows as the staging platform to deploy LiveCycle ES2 on to another operating system.
LiveCycle ES2 Server License Agreement	Press <b>Enter</b> to read through the pages of the license agreement. If you agree to the agreement, type <code>Y</code> and press <b>Enter</b> .
Pre-Installation Summary	Review the installation choices you have made and press <b>Enter</b> to continue installation with the choices you have made.  Type <code>back</code> to go back to previous steps and change any of the settings.
Ready To Install	Installer displays the installation directory.  Press <b>Enter</b> to start the installation process. During the installation process, the progress bar advances to indicate the progress of installation.  Type <code>back</code> if you want to change the settings, or <code>quit</code> to close the installation.
Installing	The progress of the installation process is indicated.

Prompt	Description
LiveCycle Configuration Manager	Press <b>Enter</b> 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  (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 <b>Enter</b> to exit the installer.  To correctly uninstall Adobe LiveCycle ES2, you should run the uninstaller from the command line, using the <code>-i console</code> flag.

## 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`
- (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`
- (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`
- (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.

Prompt	Description
Uninstall Adobe LiveCycle ES2	Press <b>Enter</b> to continue uninstallation. Enter <b>quit</b> to close the uninstall program.  After you start the uninstall program, type <b>back</b> to go back to the previous step and make any changes.
Uninstalling.. Uninstall Complete	After the uninstallation starts, the rest of the uninstallation process is completed and the cursor returns to the prompt.  Note that some items may not be removed. Also, any folder created after installing LiveCycle ES2 are not removed. You must remove these files and folders manually.

## A.4 Next steps

You must now configure LiveCycle ES2 for deployment. (See [“Configuring LiveCycle ES2 for Deployment” on page 39](#) or [“Appendix - LCM Command Line Interface” on page 71](#).)

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 71](#)
- [“Command Line Interface property file” on page 72](#)
- [“Examples Usage” on page 91](#)
- [“Error Logs” on page 91](#)

### 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. Configure LiveCycle ES2.
2. Validate application server topology.
3. Validate the database connectivity.
4. Configure the application server (WebSphere and WebLogic only).
5. Validate the application server configurations.
6. Deploy LiveCycle ES2.
7. Initialize LiveCycle ES2.
8. Initialize Business Activity Monitoring ES2.
9. Validate the LiveCycle ES2 server.
10. Deploy the LiveCycle ES2 modules.
11. Deploy the 7.x compatibility layer with the LiveCycle ES2 modules.
12. Validate the LiveCycle ES2 module deployment.
13. Check system readiness for PDF Generator ES2.
14. Add administrator user for PDF Generator ES2.
15. Configure LiveCycle ES2 Connector for IBM Content Manager.
16. Configure LiveCycle ES2 Connector for IBM FileNet.
17. Configure LiveCycle ES2 Connector for EMC Documentum.

18. Test all LiveCycle ES2 Connectors for ECM configurations.
19. Configure Content Services ES2.

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

## B.2 Command Line Interface property file

The LiveCycle Configuration Manager CLI requires a property file containing the defined properties for your LiveCycle environment. The template for the properties file, cli\_propertyFile\_template.txt, is located in the `[LiveCycleES2 root]/configurationManager/bin` folder. You must create a copy of this file 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 to use it as a template 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.2.1 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.

Property	Values	Description
<i>WebLogic specific properties</i>		

Property	Values	Description
targetServer.topologyType	server or cluster	The type of application server topology for which you are deploying LiveCycle ES2.
targetServer.name	String	The name assigned to the application server node or cluster.
targetServer.adminHost	String Default is <i>localhost</i>	The hostname of the server where the WebLogic application server is installed.
targetServer.adminPort	Integer	The port number the WebLogic admin server uses to listen for requests.
targetServer.adminUserID	String	The administrative user ID to use when accessing the WebLogic application server.
targetServer.adminPassword	String	The password associated with the WebLogic administrative user ID.
localServer.appServerRootDir	Default: (Windows) WebLogic 10g Server 10.3 C:\bea\wlserver_10.3 (Linux, Solaris) WebLogic 10g Server 10.3 /opt/bea/wlserver_10.3 (Windows) WebLogic 11g Server 10.3 C:\Oracle\Middleware\wlserver_10.3 (Linux, Solaris) WebLogic 10g Server 10.3 /opt/Oracle/Middleware/wlserver_10.3	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).

Property	Values	Description
targetServer.appServerRootDir	Default: (Windows ) WebLogic 10g Server 10.3 C:\bea\wlserver_10.3 (Windows ) WebLogic 11g Server 10.3 C:\Oracle\Middleware\wlserver_10.3 (Linux, Solaris) WebLogic 10g Server 10.3 /opt/bea/wlserver_10.3 (Linux, Solaris) WebLogic 11g Server 10.3 /opt/Oracle/Middleware/wlserver_10.3	The root directory of the application server instance that you are configuring on a remote server (on which you plan to deploy LiveCycle ES2).
<i>LiveCycle Server specific properties</i>		
LCHost	String	The hostname of the server where LiveCycle ES2 will be deployed.
LCPort	Integer	The web port number where LiveCycle ES2 will be deployed.
excludedSolutionComponents	String. Values include: ALC-LFS-Forms, ALC-LFS-BusinessActivityMonitoring, ALC-LFS-ConnectorEMCDocumentum, ALC-LFS-ConnectorIBMFileNet, ALC-LFS-ConnectorIBMContentManager, ALC-LFS-ContentServices, ALC-LFS-DigitalSignatures, ALC-LFS-DataCapture, ALC-LFS-Output, ALC-LFS-PDFGenerator, ALC-LFS-PDFGenerator3D, ALC-LFS-ProcessManagement, ALC-LFS-ReaderExtensions, ALC-LFS-RightsManagement	(Optional) List the LiveCycle ES2 modules you do not want to configure. Specify the excluded modules in a comma separated list.

## B.2.2 Configure LiveCycle properties

These properties only apply to the configure LiveCycle operation.

Property	Values	Description
AdobeFontsDir	String	Location of the Adobe server fonts directory. This path must be accessible from the server being deployed to.
customerFontsDir	String	Location of the customer fonts directory. This path must be accessible from the server being deployed to.
systemFontsDir	String	Location of the system fonts directory. Multiple System fonts locations can be entered using a semicolon as separator.  These paths must be accessible from the server being deployed to.
LCTempDir	String	Location of the temporary directory. This path must be accessible from the server being deployed to.
LCGlobalDocStorageDir	String	The global document storage root directory.  Specify a path to an NFS shared directory used to store long-lived documents and to share them among all cluster nodes.  Specify this property only when deploying LiveCycle ES2 components in a clustered environment. This path must be accessible from the server being deployed to.
EnableDocumentDBStorage	true or false Default: false	Enables or disables document storage in database for persistent documents.  Even if you enable document storage in database, you will need the file system directory for GDS.

Property	Values	Description
enableFIPS	true or false Default: false	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.
<i>Content Services ES2 only</i>		
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.
contentServices.topology	String. Specify either SERVER or CLUSTER. Default: SERVER	[Adobe LiveCycle Content Services ES2 only] SERVER for single node, CLUSTER for a cluster configuration.
contentServices.cifs.enable	true or false Default: false	[Adobe LiveCycle Content Services ES2 only] Enables or disables CIFS.
contentServices.cifs.servername	String	[Adobe LiveCycle Content Services ES2 only] Server name of the CIFS server.
contentServices.cifs.implementation	String. Specify one of the following: <ul style="list-style-type: none"> <li>• NetBIOS</li> <li>• PureJava</li> </ul>	[Adobe LiveCycle Content Services ES2 only] Specifies how Content Services ES2 connects to the CIFS server.
contentServices.cifs.dllpath	String. Specify the path from where the NetBIOS DLL will be copied.	[Adobe LiveCycle Content Services ES2 only] Path where NetBios DLL will be copied. Required if "contentServices.cifs.implementation=NetBIOS". This path must be present in the environment.

Property	Values	Description
contentServices.cifs.alternateIP	Numeric	[Adobe LiveCycle Content Services ES2 only] Alternate IP Address of the CIFS Server. It should be static IP and it is required field if "contentServices.cifs.implementation=PureJava".
contentServices.cifs.WinsOrBroadcast	String. Specify one of the following: <ul style="list-style-type: none"> <li>• winsServer</li> <li>• broadcast</li> </ul>	[Adobe LiveCycle Content Services ES2 only] DNS discovery method. It can be "winsServer" or "broadcast" and it is required field if "contentServices.cifs.implementation=PureJava".
contentServices.cifs.winsPrmIP	Numeric	[Adobe LiveCycle Content Services ES2 only] Primary WINS Server IP address. It can be obtained from ipconfig /all command. It is required field if "contentServices.cifs.implementation=PureJava" and "contentServices.cifs.WinsOrBroadcast=winsServer".
contentServices.cifs.winsSecIP	Numeric	[Adobe LiveCycle Content Services ES2 only] Secondary WINS Server IP address. It can be obtained from ipconfig /all command. It is required field if "contentServices.cifs.implementation=PureJava" and "contentServices.cifs.WinsOrBroadcast=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.WinsOrBroadcast=broadcast".
contentServices.dbType	String	[Adobe LiveCycle Content Services ES2 only] Content Services database type.

## B.2.3 Configure or Validate Application Server properties

The LiveCycle Configuration Manager can configure or validate your WebLogic 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

Property	Values	Description
<i>You must configure the WebLogic specific properties section. For more information see <a href="#">"Common properties" on page 80.</a></i>		
jvm.initialHeapSize	Default: 512	The initial heap size, in MB, for the JVM.
jvm.maxHeapSize	Default: 1792	The maximum heap size, in MB, for the JVM.
<i>WebLogic server core classpath configuration</i>		
classpath.targetServer.javaHome	String	Configuration of target application server requires the location of the Java Home that is used to run the target application server.  This path must be accessible from the server being configured.
classpath.targetServer.pop3JarPath	String	Path to the Pop3 JAR file that is accessible to the target application server. This path must be accessible from the server being configured.
<i>Datasource configuration</i>		
datasource.dbType	Choose: <ul style="list-style-type: none"> <li>• oracle</li> <li>• mysql</li> <li>• db2</li> <li>• sqlserver</li> </ul>	The type of database configured to use with LiveCycle ES2.
datasource.dbName	String	The name of the database.

Property	Values	Description
datasource.dbHost	String	The host name or IP address of the server where the database is located.
datasource.dbPort	Integer	The database port LiveCycle ES2 will use when communicating with the database.
datasource.dbUser	String	The user ID LiveCycle ES2 will use when accessing the database.
datasource.dbPassword	String	The password associated with the database user ID.
datasource.target.driverPath	String	JDBC driver in the application server lib directory. This path must be valid and accessible from the server being configured.
datasource.local.driverPath	String	Local JDBC driver. This value is used for testing direct database connection.

## B.2.4 Deploy LiveCycle properties

These properties only apply to the deploy LiveCycle ES2 operation.

Property	Values	Description
<i>You must configure the LiveCycle Server Information section. For more information, see <a href="#">"Common properties" on page 80.</a></i>		
deployment.includeIVS	true or false	Specifies whether IVS EAR files are included in the deployment.  <b>Caution:</b> It is recommended not to include IVS EAR files in a production environment.

## B.2.5 Initialize LiveCycle properties

These properties only apply to the initialize LiveCycle ES2 operation.

Property	Values	Description
<i>You must configure the LiveCycle Server Information section. For more information, see <a href="#">"Common properties" on page 80.</a></i>		

## B.2.6 Initialize BAM properties

These properties only apply to the initialize BAM operation.

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

Property	Values	Description
BAMHost	String	The hostname of the server where BAM is deployed and running.
BAMPort	Integer	The port number the BAM server is using to listen for requests.
BAMAdminUserID	String	The BAM administrator user ID to use when connecting to the BAM server.
BAMAdminPassword	String	The BAM administrator password to use when connecting to the BAM server.
databaseType	Choose: <ul style="list-style-type: none"> <li>• oracle</li> <li>• mysql</li> <li>• db2</li> <li>• sqlserver</li> </ul>	The type of database LiveCycle is using to capture BAM data.

## B.2.7 Deploy LiveCycle Components properties

These properties apply to the following operations:

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

Property	Values	Description
<i>You must configure the LiveCycle Server Information section. For more information, see <a href="#">"Common properties" on page 80.</a></i>		
LCAdminUserID	String	The user ID to assign to the LiveCycle Administrator user. This User ID is used to login to the LiveCycle Administrator Console.

Property	Values	Description
LCAdminPassword	String	The password to assign to the LiveCycle Administrator user. This password is used to login to the LiveCycle Administrator Console.

## B.2.8 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.2.8.1 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 72](#).

### B.2.8.2 Configure the Application Server CLI Usage

The Configure Application Server operation for WebLogic 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 72](#).
- `-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.2.8.3 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 72](#).

#### B.2.8.4 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 72](#).

#### B.2.8.5 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 72](#).

#### B.2.8.6 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 72](#).
- `-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.2.8.7 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 72](#).
- `-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.2.8.8 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 72](#).
- -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.2.8.9 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 72](#).
- -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.2.8.10 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 72](#).
- -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.2.8.11 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 72](#).

- `-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.3 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.4 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.5 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 43.](#))
- Access LiveCycle Administration Console. (See [“Accessing LiveCycle Administration Console” on page 31.](#))
- Configure LiveCycle modules to access LDAP. (See [“Configuring LiveCycle ES2 to access LDAP” on page 44.](#))
- Uninstall LiveCycle ES2. (See [“Uninstalling LiveCycle ES2” on page 61.](#))

If you did not configure your application server for deployment, you must now configure your application server. (See [“Appendix - Manually Configuring WebLogic Server” on page 104.](#))

















# C

## Appendix - Manually Configuring WebLogic Server

**Note:** This appendix describes how to manually configure your application server for LiveCycle ES2. LiveCycle Configuration Manager provides an option to automatically complete these steps for you. If you deselect this option, you will need to complete the steps in this appendix.

For information about how to automatically configure your application server, see [“Configuring and deploying LiveCycle ES2” on page 40](#).

**Note:** You must have already configured your WebLogic Server according to the instructions in the “Configuring WebLogic Server” chapter of [Preparing to Install LiveCycle ES2 \(Single Server\)](#).

This chapter assumes that you have started the WebLogic Administration Server, Node Manager, and the Managed Server.

This chapter includes the following information:

- [“Modifying class files” on page 104](#)
- [“Increasing the WebLogic Server stuck thread time-out” on page 106](#)
- [“Configuring the managed server start arguments for Solaris” on page 106](#)
- [“Creating JMX policies for database initialization” on page 107](#) (*WebLogic 11g R1 only*)
- [“Configuring the JVM arguments” on page 108](#)
- [“Configuring database connectivity” on page 108](#)
- [“Secure data sources” on page 123](#)

### C.1 Modifying class files

LiveCycle ES2 requires the JDBC driver for your database and the pop3 JAR file for email support to be correctly set up for WebLogic Server.

► **To copy the JDBC drivers and JAR files:**

1. Under the `[appserverdomain]` directory, create a new directory called `idplib`.
2. Copy the JDBC drivers for your database from the `[LiveCycleES2 root]\lib\db` directory to the `[appserverdomain]/idplib` directory.

**Note:** For the specific version of the JDBC drivers, see the “System Requirements for Installing LiveCycle ES2” chapter in [Preparing to Install LiveCycle ES2 \(Single Server\)](#).

3. Copy the `pop3.jar` library from the `[LiveCycleES2 root]\lib\weblogic` directory to the `[appserverdomain]/idplib` directory.

► **To modify the class path of a managed server:**

1. (SQL Server only) Modify the `domain_name/bin/startWebLogic.sh` or `startWebLogic.cmd` script by adding the SQL server JAR file location in the class path, as shown in this example:

```
set
CLASSPATH= [WL_HOME]\user_projects\domains\base_domain\idplib\sqljdbc.jar
```

2. To access the WebLogic Administration Console, type `http:// [host name] : [port] /console` in the URL line of a web browser, where `[port]` is the non-secure listening port. By default, this port value is 7001.
3. On the login screen, type your WebLogic user name and password and click **Log In**.
4. Under Change Center, click **Lock & Edit**.
5. Under Domain Structure, click **Environment > Servers** and, in the right pane, click the managed server name.
6. In the Settings for Server pane, click the **Configuration** tab > **Server Start** tab.
7. In the **Class Path** box, type the location and file name for the following JAR files in the order shown:
  - pop3.jar
  - weblogic.jar (WebLogic Server JAR file)
  - tools.jar (WebLogic Server JAR file)
  - ojdbc6.jar (JDBC driver file)

For example, in a Windows environment using WebLogic 10.3, enter the following text:

```
C:\Adobe\Adobe LiveCycle ES2\lib\weblogic\pop3.jar; [WL_HOME]\wlserver_10.3\server\lib\weblogic.jar; C:\Program Files\JRockit Real Time\jrrt-3.0.0-1.6.0\lib\tools.jar; C:\Adobe\Adobe LiveCycle ES2\lib\db\ojdbc6.jar
```

For example, in a UNIX environment using WebLogic 10.0, enter the following text:

```
/opt/adobe/adobe livecycle_es2/lib/weblogic/pop3.jar: [WL_HOME]/wlserver_10.3/server/lib/weblogic.jar:/opt/jrrt-3.0.0-1.6.0/lib/tools.jar:/opt/adobe/adobe livecycle_es2/lib/db/ojdbc6.jar
```

**Note:** The above examples specify the Oracle JDBC driver file. If you are using another database, this JAR file will be specified accordingly.

8. In the **Arguments** box, add the following arguments separated by a space delimiter

```
-Dadobeidp.RootDirectory= [AppServerdomain]
-Dfile.encoding=utf8
-Djava.net.preferIPv4Stack=true
-Djava.security.policy= [WL Home]\server\lib\weblogic.policy
```

If you are using IPv6, replace `-Djava.net.preferIPv4Stack=true` with `-Djava.net.preferIPv6Stack=true`.

Replace `[WL Home]` with the WebLogic home directory, as shown in this example:

```
(WebLogic 10g only)
-Djava.security.policy=opt/bea/weblogic10.3/server/lib/weblogic.policy
(WebLogic 11g only)
-Djava.security.policy=opt/Oracle/Middleware/weblogic10.3/server/lib/weblogic.policy
```

Replace `[AppServerdomain]` with the domain directory, as shown in this example:

```
(WebLogic 10g only)
```

```
-Dadobeidp.RootDirectory=opt/bea/user_projects/domains/base_domain/  
  (WebLogic 11g only)  
-Dadobeidp.RootDirectory=opt/Oracle/Middleware/user_projects/domains/base_do  
main/
```

9. Click **Save** and then click **Activate Changes**.

## C.2 Increasing the WebLogic Server stuck thread time-out

Depending on your deployment, LiveCycle ES2 EAR files can get large. To avoid EAR file deployment time-outs, you must increase the WebLogic Server stuck thread maximum time-out value. This value is the length of time that the WebLogic Administration Server will treat a long-running thread as still active. After this threshold is reached, WebLogic Server attempts to remove this thread.

► **To configure the transaction and stuck thread time-outs:**

1. Start the WebLogic Administration Console by typing `http://[host name]:[port]/console` in the URL line of a web browser.
2. Type the user name and password that you created for the WebLogic Server domain and click **Log In**.
3. Under Change Center, click **Lock & Edit**.
4. Under Domain Structure, click **Environment > Servers** and, in the right pane, click the managed server name.
5. On the Configuration tab, click on the **Tuning** tab.
6. In the **Stuck Thread Max Time** box, type 1200 and then click **Save**.
7. Under Domain Structure, click your domain name.
8. On the Configuration tab, click the **JTA** tab.
9. In the **Timeout Seconds** box, enter 300.
10. Click **Save** and then click **Activate Changes**.

## C.3 Configuring the managed server start arguments for Solaris

If you are configuring WebLogic Server manually, Solaris requires an additional server start argument to use 64-bit features with your managed server. Without this configuration change, the Sun JDK defaults to 32-bit support only.

► **Modify the Server Start argument:**

1. Start the WebLogic Administration Console by typing `http://[host name]:[port]/console` in the URL line of a web browser.
2. Type the user name and password that you created for the WebLogic Server domain and click **Log In**. Under Change Center, click **Lock & Edit**.
3. Under Domain Structure, click **Environment > Servers** and, in the right pane, click the managed server name.

4. On the next screen, click the **Configuration** tab > **Server Start** tab.
5. In the **Arguments** box, append `-d64` to the end of the current content.
6. Click **Save** and then click **Activate Changes**.
7. Restart WebLogic managed server.

## C.4 Creating JMX policies for database initialization

### **\*New for 9.0.0.2\***

(*WebLogic 11g R1 only*) If you're installing LiveCycle ES2 on WebLogic 11g (version 10.3.3), you must create JMX policies to ensure that the database for core LiveCycle ES2 components initializes correctly.

Complete the following procedures.

### C.4.1 Delegating MBean authorization to the realm

Before creating JMX policies, ensure that the security realm is set up to control access to MBeans. For more information, refer to the [WebLogic Administration Console documentation](#).

Follow these steps:

1. In the WebLogic Administration Console, click **Domain Structure** > **Security Realms**.
2. Click **myrealm** from the Realms list on the **Summary of Security Realms** page.
3. On the Configuration > General page, ensure that **Use Authorization Providers to Protect JMX Access** is selected. If this option is not selected, perform the following steps:
  - Click **Lock & Edit** in the Change Center.
  - Select **Use Authorization Providers to Protect JMX Access**.
  - Click **Save**.
  - In the Change Center, click **Activate Changes**.
  - Restart the admin server and the managed server.

### C.4.2 Creating JMX policies

1. In the WebLogic Administration Console, click **Domain Structure** > **Security Realms**.
2. On the **Summary of Security Realms** page, click the name of the realm for which you want to modify JMX policies.
3. On the Settings page, click the **Roles and Policies** tab and then click the **Realm Policies** sub tab.
4. In the Name column of the **Policies** table, click **JMX Policy Editor**.
5. On the JMX Policy Editor page, ensure that the **GLOBAL SCOPE** option is selected. Click **Next**.
6. Ensure that the **ALL MBEANS TYPES** option is selected on the next page. Click **Next**.
7. Select the **Attributes: Permission to Write** option and click **Create Policy**.

8. On the Edit JMX Policies page, click **Add Conditions**.
9. Select **Role** from the **Predicate List** drop-down menu and click **Next**.
10. In the **Role Argument Name** box, enter **Anonymous** and click **Add**.  
**Note:** The *Anonymous* role is a default WebLogic role for all runtime process users (for example, users required for bootstrapping an application, such as LiveCycle ES2).
11. Click **Finish**.
12. On the Edit JMX Policies page, click **Save**.
13. Repeat steps 1 to 6.
14. On the **JMX Policy Editor - Attributes and Operations** page, select the **Unregister instances of this MBean using MBean server** option and click **Create Policy**.
15. Repeat steps 8 to 12.

## C.5 Configuring the JVM arguments

Whether you are using the Oracle JRockit JVM on Windows or Linux, or the Sun JVM on Solaris, you must increase the memory allocation for the JVM from 512 MB to 1024 MB.

### ► Increase the memory allocation for the JVM of a managed server:

1. Start the WebLogic Administration Console by typing `http://[host name]:[port]/console` in the URL line of a web browser.
  2. Type the user name and password that you created for the WebLogic Server domain and click **Log**. Under Change Center, click **Lock & Edit**.
  3. Under Domain Structure, click **Environment > Servers** and, in the right pane, click the managed server name.
  4. On the next screen, click the **Configuration** tab > **Server Start** tab.
  5. In the **Arguments** box, append this information to the end of the current content:
    - (Solaris using 64-bit JVM) `-Xms256m -Xmx1792m -XX:MaxPermSize=512m`
- Note:** Only Solaris requires setting the MaxPermSize parameter.
- (Windows 32-bit) `-Xms256m -Xmx1024m`
  - (Windows, Linux 64-bit) `-Xms256m -Xmx1792m`
6. Click **Save** and then click **Activate Changes**.
  7. Restart WebLogic managed server.

## C.6 Configuring database connectivity

This section describes how to configure the JDBC data source for your LiveCycle ES2 database.

## C.6.1 Configuring Oracle database connectivity

To enable WebLogic Server and your LiveCycle ES2 deployment to connect to the Oracle 10g or 11g database, you must create a database connection for WebLogic Server by setting up a connection pool and a data source.

► **To create a new data source for Oracle on WebLogic 10g:**

1. Start the WebLogic Administration Console by typing `http://[host name]:[port]/console` in the URL line of a web browser.
  2. Type the user name and password that you created for the WebLogic Server domain and click **Log In**.
  3. Under Change Center, click **Lock & Edit**.
  4. Under Domain Structure, click **Services > JDBC > Data Sources** and, in the right pane, click **New**.
  5. On the next screen, set the following properties:
    - In the **Name** box, type `IDP_DS`.
    - In the **JNDI name** box, type `IDP_DS`.
    - In the **Database Type** list, select **Oracle** and click **Next**.
    - In the **Database Driver** list, select **Oracle's Driver (Thin); Versions: 9.0.1,9.2.0,10:**
  6. Click **Next** and select **Supports Global Transactions** and **Emulate Two-Phase Commit**.
  7. Click **Next** and define the following properties that apply to the Oracle database that you created during your LiveCycle ES2 installation preparations:
    - Database Name:** The name of the database you have created.
    - Host Name:** The name or IP address of the computer on which Oracle is running.
    - Port:** Database Port. The default is 1521.
    - Database User Name:** The name of the user you created on the Oracle database.
    - Password** and **Confirm Password:** The password associated with the user.
  8. Click **Next** and then click **Test Configuration** to verify the configuration settings
- Note:** If the test is successful, a "Connection test succeeded" message appears. Click **Next**. Otherwise, review the error message that appears and modify the settings as required until the test succeeds.
9. On the next screen, select the server that the data source will connect to (in this case, the managed server) and then click **Finish**.

► **To create a new data source for Oracle on WebLogic 11g:**

1. Start the WebLogic Administration Console by typing `http://[host name]:[port]/console` in the URL line of a web browser.
2. Type the user name and password that you created for the WebLogic Server domain and click **Log In**.
3. Under Change Center, click **Lock & Edit**.
4. Under Domain Structure, click **Services > JDBC > Data Sources** and, in the right pane, click **New**.

5. On the next screen, set the following properties:
    - In the **Name** box, type `IDP_DS`.
    - In the **JNDI name** box, type `IDP_DS`.
    - In the **Database Type** list, select **Oracle** and click **Next**.
    - In the **Database Driver** list, select **Oracle's Driver (Thin) for Server connections; Versions: 9.0.1,9.2.0,10,11**
  6. Click **Next** and select **Supports Global Transactions** and **Emulate Two-Phase Commit**.
  7. Click **Next** and define the following properties that apply to the Oracle database that you created during your LiveCycle ES2 installation preparations:
    - Database Name:** The name of the database you have created.
    - Host Name:** The name or IP address of the computer on which Oracle is running.
    - Port:** Database Port. The default is 1521.
    - Database User Name:** The name of the user you created on the Oracle database.
    - Password** and **Confirm Password:** The password associated with the user.
  8. Click **Next** and then click **Test Configuration** to verify the configuration settings

**Note:** If the test is successful, a "Connection test succeeded" message appears. Click **Next**. Otherwise, review the error message that appears and modify the settings as required until the test succeeds.
  9. On the next screen, select the server that the data source will connect to (in this case, the managed server) and then click **Finish**.
- **To configure the connection pool settings:**
1. Under Domain Structure, click **Services** > **JDBC** > **Data Sources** and, in the right pane, click **IDP\_DS**.
  2. On the next screen, click the **Configuration** tab and the **Connection Pool** tab.
  3. In the **Maximum Capacity** box, type 30.
  4. In the **Statement Cache Size** box, type 80.
  5. Click **Save** and then click **Activate Changes**.
  6. Restart WebLogic managed server.
- **To create a new data source for Oracle for LiveCycle Rights Management ES2 on WebLogic 10g:**
- Note:** This procedure applies only if you have Rights Management ES2 installed.
1. Under Change Center, click **Lock & Edit**.
  2. Under Domain Structure, click **Services** > **JDBC** > **Data Sources** and, in the right pane, click **New**.
  3. On the next screen, set the following properties:
    - In the **Name** box, type `RM_DS`.
    - In the **JNDI Name** box, type `EDC_DS`.
    - In the **Database Type** list, select **Oracle**.

- In the **Database Driver** list, select **Oracle's Driver (Thin); Versions: 9.0.1,9.2.0,10**
4. Click **Next** and select **Supports Global Transactions** and **One-Phase Commit**.
  5. Click **Next** and define the following properties that apply to the Oracle database you created during your LiveCycle ES2 install preparations:
    - Database Name:** The name of the database you have created.
    - Host Name:** The name or IP address of the computer on which Oracle is running.
    - Port:** Database Port. The default is 1521.
    - Database User Name:** The name of the user you created on the Oracle database.
    - Password** and **Confirm Password:** The password associated with the user.
  6. Click **Next** and then click **Test Configuration** to verify the configuration settings.

**Note:** If the test is successful, a "Connection test succeeded" message appears. Click **Next**. Otherwise, review the error message that appears and modify the settings as required until the test succeeds.
  7. On the next screen, select the server that the data source will connect to (in this case, the managed server) and then click **Finish**.
- **To create a new data source for Oracle for LiveCycle Rights Management ES2 on WebLogic 11g:**
- Note:** This procedure applies only if you have Rights Management ES2 installed.
1. Under Change Center, click **Lock & Edit**.
  2. Under Domain Structure, click **Services > JDBC > Data Sources** and, in the right pane, click **New**.
  3. On the next screen, set the following properties:
    - In the **Name** box, type `RM_DS`.
    - In the **JNDI Name** box, type `EDC_DS`.
    - In the **Database Type** list, select **Oracle** and click **Next**.
    - In the **Database Driver** list, select **Oracle's Driver (Thin) for Server Connections; Versions: 9.0.1,9.2.0,10,11**
  4. Click **Next** and select **Supports Global Transactions** and **One-Phase Commit**.
  5. Click **Next** and define the following properties that apply to the Oracle database you created during your LiveCycle ES2 install preparations:
    - Database Name:** The name of the database you have created.
    - Host Name:** The name or IP address of the computer on which Oracle is running.
    - Port:** Database Port. The default is 1521.
    - Database User Name:** The name of the user you created on the Oracle database.
    - Password** and **Confirm Password:** The password associated with the user.
  6. Click **Next** and then click **Test Configuration** to verify the configuration settings.

**Note:** If the test is successful, a "Connection test succeeded" message appears. Click **Next**. Otherwise, review the error message that appears and modify the settings as required until the test succeeds.

7. On the next screen, select the server that the data source will connect to (in this case, the managed server) and then click **Finish**.

► **To configure the connection pool settings:**

1. Under Domain Structure, click **Services > JDBC > Data Sources** and, in the right pane, click **RM\_DS**.
2. On the next screen, click the **Configuration** tab > **Connection Pool** tab, and set the following properties:
  - In the **Initial Capacity** box, type 1.
  - In the **Maximum Capacity** box, type 20.
  - In the **Capacity Increment** box, type 5.
  - In the **Statement Cache Size** box, type 80.
3. Click **Save** and then click **Activate Changes**.
4. Restart WebLogic managed server.

## C.6.2 Configuring MySQL database connectivity

To enable WebLogic Server and your LiveCycle ES2 deployment to connect to a manually installed MySQL database, you must create a database connection for WebLogic Server by setting up a connection pool and a data source.

► **To install the MySQL database driver:**

- Copy the `mysql-connector-java-5.1.6-bin.jar` driver file from the `[DVD_root]/third_party/jdbc` directory on the installation DVD to the `[appserverdomain]/idplib` directory.

► **To create a new data source for MySQL:**

1. Start the WebLogic Administration Console by typing `http://[host name]:[port]/console` in the URL line of a web browser.
2. Type the user name and password that you created for the WebLogic Server domain and click **Log In**.
3. Under Change Center, click **Lock & Edit**.
4. Under Domain Structure, click **Services > JDBC > Data Sources** and, in the right pane, click **New**.
5. On the next screen, set the following properties:
  - In the **Name** box, type `IDP_DS`.
  - In the **JNDI name** box, type `IDP_DS`.
  - In the **Database Type** list, select **MySQL** and click **Next**.
  - In the **Database Driver** list, select **MySQL's Driver (Type 4) Versions:using com.mysql.jdbc.Driver**.
6. Click **Next** and select **Supports Global Transactions** and **Emulate Two-Phase Commit**.

7. Click **Next** and define the following properties that apply to the database you created during your LiveCycle ES2 installation preparations:

**Database Name:** The name of the database you have created

**Host Name:** The name or IP address of the computer on which MySQL is running

**Port:** Database Port. The default is 3306.

**Database User Name:** The name of the user you created on the MySQL database

**Password** and **Confirm Password:** The password associated with the user

8. Click **Next** and then click **Test Configuration** to verify the configuration settings

**Note:** If the test is successful, a "Connection test succeeded" message appears. Click **Next**. Otherwise, review the error message that appears and modify the settings as required until the test succeeds.

9. On the next screen, select the server that the data source will connect to (in this case, the managed server) and then click **Finish**.

► **To configure the connection pool settings:**

1. Under Domain Structure, click **Services > JDBC > Data Sources** and, in the right pane, click **IDP\_DS**.
2. On the next screen, click the **Configuration** tab > **Connection Pool** tab.
3. In the **Maximum Capacity** box, type 30.
4. In the **Statement Cache Size** box, type 80.
5. Click **Save** and then click **Activate Changes**.
6. Restart WebLogic managed server.

► **To create a new data source for MySQL for LiveCycle Rights Management ES2:**

**Note:** This procedure applies only if you have Rights Management ES2 installed.

1. Under Change Center, click **Lock & Edit**.
2. Under Domain Structure, click **Services > JDBC > Data Sources** and, in the right pane, click **New**.
3. On the next screen, set the following properties:
  - In the **Name** box, type `RM_DS`.
  - In the **JNDI name** box, type `EDC_DS`.
  - In the **Database Type** list, select **MYSQL** and click **Next**.
  - In the **Database Driver** list, select **MySQL's Driver (Type 4) Versions:using com.mysql.jdbc.Driver**.
4. Click **Next** and select **Supports Global Transactions** and **One-Phase Commit**.

5. Click **Next** and define the following properties that apply to the MySQL database you created during your LiveCycle ES2 install preparations:

**Database Name:** The name of the database you have created

**Host Name:** The name or IP address of the computer on which MySQL is running

**Port:** Database Port. The default is 3306

**Database User Name:** The name of the user you created on the MySQL database

**Password** and **Confirm Password:** The password associated with the user

6. Click **Next** and then click **Test Configuration** to verify the configuration settings.

**Note:** If the test is successful, a "Connection test succeeded" message appears. Click **Next**. Otherwise, review the error message that appears and modify the settings as required until the test succeeds.

7. On the next screen, select the server that the data source will connect to (in this case, the managed server) and then click **Finish**.

► **To configure the connection pool settings:**

1. Under Domain Structure, click **Services** > **JDBC** > **Data Sources** and, in the right pane, click **RM\_DS**.
2. On the next screen, click the **Configuration** tab and the **Connection Pool** tab, and set the following properties:
  - In the **Initial Capacity** box, type 1.
  - In the **Maximum Capacity** box, type 20.
  - In the **Capacity Increment** box, type 5.
  - In the **Statement Cache Size** box, type 80.
  - Click **Save** and then click **Activate Changes**.
3. Restart WebLogic managed server.

### C.6.3 Configuring DB2 database connectivity

To enable WebLogic Server and your LiveCycle ES2 deployment to connect to the DB2 database, you must create a database connection for WebLogic Server by setting up a connection pool and a data source.

► **To Install the DB2 database driver:**

- Copy the db2jcc.jar and db2jcc\_license\_cu.jar files from one of these locations to the `[appserverdomain]/idplib` directory:
  - The java directory under your `[dbserver root]` directory (for example, `[dbserver root]/ibm/Sqllib/java` (Windows) or `[dbserver root]/java` (Linux or UNIX)).
  - `[LiveCycleES2 root]\lib\db\db2`

► **To create a new data source for DB2 on WebLogic 10g:**

1. Start the WebLogic Administration Console by typing `http://[host name]:[port]/console` in the URL line of a web browser.
2. Type the user name and password that you created for the WebLogic Server domain and click **Log In**.

3. Under Change Center, click **Lock & Edit**.
  4. Under Domain Structure, click **Services > JDBC > Data Sources** and, in the right pane, click **New**.
  5. On the next screen, set the following properties:
    - In the **Name** box, type `IDP_DS`.
    - In the **JNDI name** box, type `IDP_DS`.
    - In the **Database Type** list, select **DB2**.
    - In the **Database Driver** list, select **Other**
  6. Click **Next** and select **Supports Global Transactions** and **Emulate Two-Phase Commit**.
  7. Click **Next** and, on the next screen, define the following properties that apply to the database you created during your LiveCycle ES2 install preparations:
    - Database Name:** The name of the database you have created
    - Host Name:** The name or IP address of the computer on which DB2 is running
    - Port:** Database port. The default is 50000
    - Database User Name:** The name of the user you created on the DB2 database
    - Password** and **Confirm Password:** The password associated with the user
  8. Click **Next** and set the following properties:
    - In the **Driver Class Name** box, type `com.ibm.db2.jcc.DB2Driver`.
    - In the **URL** box, type `jdbc:db2://[host name]:[port]/[database_name]`.
    - In the **Properties** box, type `user=<userid>` (`userid` as mentioned in Database User Name).
  9. Click **Test Configuration** to verify the configuration settings.
- Note:** If the test is successful, a "Connection test succeeded" message appears. Click **Next**. Otherwise, review the error message that appears and modify the settings as required until the test succeeds.
10. On the next screen, select the server that the data source will connect to (in this case, the managed server).
  11. Click **Finish** and **Activate Changes**.

► **To create a new data source for DB2 on WebLogic 11g:**

1. Start the WebLogic Administration Console by typing `http://[host name]:[port]/console` in the URL line of a web browser.
2. Type the user name and password that you created for the WebLogic Server domain and click **Log In**.
3. Under Change Center, click **Lock & Edit**.
4. Under Domain Structure, click **Services > JDBC > Data Sources** and, in the right pane, click **New**.
5. On the next screen, set the following properties:
  - In the **Name** box, type `IDP_DS`.
  - In the **JNDI name** box, type `IDP_DS`.

- In the **Database Type** list, select **DB2**.
  - In the **Database Driver** list, select **IBM's DB2 Driver (Type 4) for JDBC and SQLJ; Versions: 8.x; 9.x**
6. Click **Next** and select **Supports Global Transactions** and **Emulate Two-Phase Commit**.
  7. Click **Next** and, on the next screen, define the following properties that apply to the database you created during your LiveCycle ES2 install preparations:
    - Database Name:** The name of the database you have created
    - Host Name:** The name or IP address of the computer on which DB2 is running
    - Port:** Database port. The default is 50000
    - Database User Name:** The name of the user you created on the DB2 database
    - Password** and **Confirm Password:** The password associated with the user
  8. Click **Test Configuration** to verify the configuration settings.

**Note:** If the test is successful, a "Connection test succeeded" message appears. Click **Next**. Otherwise, review the error message that appears and modify the settings as required until the test succeeds.
  9. On the next screen, select the server that the data source will connect to (in this case, the managed server).
  10. Click **Finish** and **Activate Changes**.
- **To configure the connection pool settings:**
1. Under Domain Structure, click **Services > JDBC > Data Sources** and, in the right pane, click **IDP\_DS**.
  2. On the next screen, click the **Configuration** tab > **Connection Pool** tab.
  3. In the **Maximum Capacity** box, type 30.
  4. In the **Statement Cache Size** box, type 80.
  5. Click **Save** and then click **Activate Changes**.
  6. Restart WebLogic managed server.
- **To create a new data source for DB2 for LiveCycle Rights Management ES2 on WebLogic 10g:**
- Note:** This procedure applies only if you installed Rights Management ES2.
1. Under Change Center, click **Lock & Edit**.
  2. Under Domain Structure, click **Services > JDBC > Data Sources** and, in the right pane, click **New**.
  3. On the next screen, set the following properties:
    - In the **Name** box, type **RM\_DS**.
    - In the **JNDI Name** box, type **EDC\_DS**.
    - In the **Database Type** list, select **DB2**.
    - In the **Database Driver** list, select **Other**

4. Click **Next** and select **Supports Global Transactions** and **One-Phase Commit**.
  5. Click **Next** and define the following properties that apply to the DB2 database you created during your LiveCycle ES2 install preparations:
    - Database Name:** The name of the database you have created
    - Host Name:** The name or IP address of the computer on which DB2 is running
    - Port:** Database port. The default is 50000
    - Database User Name:** The name of the user you created on the DB2 database
    - Password and Confirm Password:** The password associated with the user
  6. Click **Next** and set the following properties:
    - In the **Driver Class Name** box, type `com.ibm.db2.jcc.DB2Driver`.
    - In the **URL** box, type `jdbc:db2://[hostname]:[port]/[database_name]`.
    - In the **Properties** box, type `user=<userid>` (`userid` as mentioned in Database User Name).

**Note:** Driver Class Name, URL, and Properties will vary, depending on the DB2 driver you installed.
  7. Click **Test Configuration** to verify the configuration settings.

**Note:** If the test is successful, a "Connection test succeeded" message appears. Click **Next**. Otherwise, review the error message that appears and modify the settings as required until the test succeeds.
  8. On next screen, select the server that the data source will connect to (in this case, the managed server).
  9. Click **Finish** and **Activate Changes**.
- **To create a new data source for DB2 for LiveCycle Rights Management ES2 on WebLogic 11g:**
- Note:** This procedure applies only if you installed Rights Management ES2.
1. Under Change Center, click **Lock & Edit**.
  2. Under Domain Structure, click **Services > JDBC > Data Sources** and, in the right pane, click **New**.
  3. On the next screen, set the following properties:
    - In the **Name** box, type `RM_DS`.
    - In the **JNDI Name** box, type `EDC_DS`.
    - In the **Database Type** list, select **DB2**.
    - In the **Database Driver** list, select **IBM's DB2 Driver (Type 4) for JDBC and SQLJ; Versions: 8.x; 9.x**
    - Click **Next** and select **Supports Global Transactions** and **One-Phase Commit**.

4. Click **Next** and define the following properties that apply to the DB2 database you created during your LiveCycle ES2 install preparations:

**Database Name:** The name of the database you have created

**Host Name:** The name or IP address of the computer on which DB2 is running

**Port:** Database port. The default is 50000

**Database User Name:** The name of the user you created on the DB2 database

**Password** and **Confirm Password:** The password associated with the user

5. Click **Test Configuration** to verify the configuration settings.

**Note:** If the test is successful, a "Connection test succeeded" message appears. Click **Next**. Otherwise, review the error message that appears and modify the settings as required until the test succeeds.

6. On next screen, select the server that the data source will connect to (in this case, the managed server).
7. Click **Finish** and **Activate Changes**.

► **To configure the connection pool settings:**

1. Under Domain Structure, click **Services** > **JDBC** > **Data Sources** and, in the right pane, click **RM\_DS**.
2. On the next screen, click the **Configuration** tab > **Connection Pool** tab.
3. In the **Maximum Capacity** box, type 20.
4. In the **Statement Cache Size** box, type 80.
5. Click **Save** and then click **Activate Changes**.
6. Restart WebLogic managed server.

## C.6.4 Configuring SQL Server database connectivity

To enable WebLogic Server and your LiveCycle ES2 deployment to connect to the SQL Server database, you must create a database connection for WebLogic Server by setting up a connection pool and a data source.

► **To install the SQL Server database driver:**

- If you have not done so already, download the SQL Server 2005 JDBC Driver 1.2 from the [Microsoft Download Center](#).

Follow the instructions on the website for downloading and installing the driver. Make a note of the directory location where you install the driver on your system.

**Note:** Use SQL Server JDBC Driver 1.2 for both Microsoft SQL Server 2005 SP2 and Microsoft SQL Server 2008.

► **To add the sqljdbc.jar file to the class path:**

1. Start the WebLogic Administration Console by typing `http://[host name]:[port]/console` in the URL line of a web browser.

2. Type the user name and password that you created for the WebLogic Server domain and click **Log In**.
3. Under Change Center, click **Lock & Edit**.
4. Under Domain Structure, click **Environment > Servers** and, in the right pane, click the managed server name.
5. On the next screen, click the **Configuration** tab > **Server Start** tab.
6. In the **Class Path** box, type the location and file name for the sqljdbc.jar file to class path, such as in this example:

```
DOMAIN_HOME\idplib\sqljdbc.jar
```

where **DOMAIN\_HOME** is location of the base domain, such as  
C:/Oracle/Middleware/user\_projects/domains/base\_domain

7. Click **Save** and then click **Activate Changes**.

► **To create a new data source for SQL Server on WebLogic 10g:**

1. Under Change Center, click **Lock & Edit**.
2. Under Domain Structure, click **Services > JDBC > Data Sources** and, in the right pane, click **New**.
3. On the next screen, set the following properties:
  - In the **Name** box, type **IDP\_DS**.
  - In the **JNDI name** box, type **IDP\_DS**.
  - In the **Database Type** list, select **MS SQL Server**.
  - In the **Database Driver** list, select **Microsoft's MS SQL Server Driver (Type 4) Versions:2005**
4. Click **Next** and select **Supports Global Transactions** and **Emulate Two-Phase Commit**.
5. (Only for integrated authentication) Add the sqljdbc\_auth.dll file to the Windows systems path on the computer that is running the application server. The sqljdbc\_auth.dll file is located with the Microsoft SQL JDBC 1.2 driver installation (the default is <InstallDir>/sqljdbc\_1.2/enu/auth/x86).
6. Click **Next** and define the following properties that apply to the SQL Server database you created during your LiveCycle ES2 install preparations:

**Database Name:** The name of the database you have created

**Host Name:** The name or IP address of the computer on which SQL Server is running

**Port:** The database port. The default is 1433

**Database User Name:** The name of the user you created on the SQL Server database

**Password** and **Confirm Password:** The password associated with the user

7. Click **Next** and then click **Test Configuration** to verify the configuration settings.

**Note:** If the test is successful, a "Connection test succeeded" message appears. Click **Next**. Otherwise, review the error message that appears and modify the settings as required until the test succeeds.

8. On the next screen, select the server that the data source will connect to (in this case, the managed server.)

9. Click **Finish** and then click **Activate Changes**.

► **To create a new data source for SQL Server on WebLogic 11g:**

1. Under Change Center, click **Lock & Edit**.
2. Under Domain Structure, click **Services > JDBC > click Data Sources** and, in the right pane, click **New**.
3. On the next screen, set the following properties:
  - In the **Name** box, type `IDP_DS`.
  - In the **JNDI name** box, type `IDP_DS`.
  - In the **Database Type** list, select **MS SQL Server**.
  - In the **Database Driver** list, select **Microsoft's MS SQL Server Driver (Type 4) Versions:2005, 2008**
4. Click **Next** and select **Supports Global Transactions** and **Emulate Two-Phase Commit**.
5. *(Only for integrated authentication)* Add the `sqljdbc_auth.dll` file to the Windows systems path on the computer that is running the application server. The `sqljdbc_auth.dll` file is located with the Microsoft SQL JDBC 1.2 driver installation (the default is `<InstallDir>/sqljdbc_1.2/enu/auth/x86`).
6. Click **Next** and define the following properties that apply to the SQL Server database you created during your LiveCycle ES2 install preparations:

**Database Name:** The name of the database you have created

**Host Name:** The name or IP address of the computer on which SQL Server is running

**Port:** The database port. The default is 1433

**Database User Name:** The name of the user you created on the SQL Server database

**Password** and **Confirm Password:** The password associated with the user

7. Click **Next** and then click **Test Configuration** to verify the configuration settings.

**Note:** If the test is successful, a "Connection test succeeded" message appears. Click **Next**. Otherwise, review the error message that appears and modify the settings as required until the test succeeds.

8. On the next screen, select the server that the data source will connect to (in this case, the managed server.)
9. Click **Finish** and then click **Activate Changes**.

► **To configure the connection pool settings:**

1. Under Domain Structure, click **Services > JDBC > Data Sources** and, in the right pane, click **IDP\_DS**.
2. On the next screen, click the **Configuration** tab > **Connection Pool** tab.
3. In the **Maximum Capacity** box, type 30.
4. In the **Statement Cache Size** box, type 80.
5. Click **Save** and then click **Activate Changes**.
6. Restart WebLogic managed server.

► **To create a new data source for SQL Server for LiveCycle Rights Management ES2 on WebLogic 10g:**

**Note:** This procedure applies only if you have Rights Management ES2 installed.

1. Under Change Center, click **Lock & Edit**.
2. Under Domain Structure, click **Services > JDBC > Data Sources** and, in the right pane, click **New**.
3. On the next screen, set the following properties:
  - In the **Name** box, type `RM_DS`.
  - In the **JNDI Name** box, type `EDC_DS`.
  - In the **Database Type** list, select **MS SQL Server**.
  - In the **Database Driver** box, select **Microsoft's MS SQL Server Driver (Type 4) Versions:2005**.

4. Click **Next** and select **Supports Global Transactions** and **One-Phase Commit**.

5. Click **Next** and define the following properties that apply to the SQL Server database you created during your LiveCycle ES2 install preparations:

**Database Name:** The name of the database you have created

**Host Name:** The name or IP address of the computer on which SQL Server is running

**Port:** The database port. The default is 1433

**Database User Name:** The name of the user you created on the SQL Server database

**Password** and **Confirm Password:** The password associated with the user

6. Click **Next** and, if using Integrated Security, type `integratedSecurity=true` in the **Properties** box.

**Note:** If you set this value to `true`, you must ensure that you configured your SQL Server to use Integrated Security. (See [Preparing to Install LiveCycle ES2 \(Single Server\)](#).)

7. Click **Test Configuration** to verify the configuration settings.

**Note:** If the test is successful, a "Connection test succeeded" message appears. Click **Next**. Otherwise review the error message that appears and modify the settings as required until the test succeeds.

8. On the next screen, select the server that the data source will connect to (in this case, the managed server) and then click **Finish**.

► **To create a new data source for SQL Server for LiveCycle Rights Management ES2 on WebLogic 11g:**

**Note:** This procedure applies only if you have Rights Management ES2 installed.

1. Under Change Center, click **Lock & Edit**.
2. Under Domain Structure, click **Services > JDBC > Data Sources** and, in the right pane, click **New**.
3. On the next screen, set the following properties:
  - In the **Name** box, type `RM_DS`.
  - In the **JNDI Name** box, type `EDC_DS`.

- In the **Database Type** list, select **MS SQL Server**.
  - In the **Database Driver** box, select **Microsoft's MS SQL Server Driver (Type 4) Versions:2005, 2008**
  - Click **Next** and select **Supports Global Transactions** and **One-Phase Commit**.
4. Click **Next** and define the following properties that apply to the SQL Server database you created during your LiveCycle ES2 install preparations:
    - Database Name:** The name of the database you have created
    - Host Name:** The name or IP address of the computer on which SQL Server is running
    - Port:** The database port. The default is 1433
    - Database User Name:** The name of the user you created on the SQL Server database
    - Password** and **Confirm Password:** The password associated with the user
  5. Click **Next** and, if using Integrated Security, type `integratedSecurity=true` in the **Properties** box.

**Note:** If you set this value to `true`, you must ensure that you configured your SQL Server to use Integrated Security. (See [Preparing to Install LiveCycle ES2 \(Single Server\)](#).)
  6. Click **Test Configuration** to verify the configuration settings.

**Note:** If the test is successful, a "Connection test succeeded" message appears. Click **Next**. Otherwise review the error message that appears and modify the settings as required until the test succeeds.
  7. On the next screen, select the server that the data source will connect to (in this case, the managed server) and then click **Finish**.
- **To configure the connection pool settings:**
1. Under Change Center, click **Lock & Edit**.
  2. Under Domain Structure, click **Services > JDBC > Data Sources** and, in the right pane, click **RM\_DS**.
  3. On the next screen, click the **Configuration** and the **Connection Pool** tab, and set the following properties:
    - In the **Initial Capacity** box, type 1.
    - In the **Maximum Capacity** box, type 20.
    - In the **Capacity Increment** box, type 5.
    - In the **Statement Cache Size** box, type 80.
  4. Click **Save** and then click **Activate Changes**.
  5. Restart WebLogic managed server.
- **To map the Windows login to the LiveCycle ES2 database user:**
- Note:** You must already have a user account created and associated with your Windows domain.
1. Using Microsoft SQL Server Management Studio, connect to the database server that hosts the LiveCycle ES2 database.

2. Set the Authentication mode to **Windows authentication**.
3. Under Security > Logins, create a new account for the Windows domain user and select **Windows authentication**.
4. On the Login - New screen, click **User Mapping** and set the database and default schema for the new user.
5. Select **db\_owner** as the Database role and click **OK**.

To verify that you created the user, expand the LiveCycle ES2 database in the navigation tree and click Security > Users. The new user is listed there.

► **To configure integrated security on Windows:**

1. Start the WebLogic Administration Console by typing `http://[host_name]:[port]/console` in the URL line of a web browser.

**Note:** Start the application server by using the Windows domain user. If WebLogic Server is running as a service, it should be started by using the Windows domain user account.

2. Type the user name and password that you created for the WebLogic Server domain and click **Log In**.
3. Under Change Center, click **Lock & Edit**.
4. Under Domain Structure, click `[base_domain]` > **Services** > **JDBC** > **Data Sources** and, in the right pane, click **IDP\_DS**.
5. On the next screen, click the **Configuration** tab > **Connection Pool** tab and, in the **Properties** box, type `integratedSecurity=true`.
6. Under Domain Structure, click `[base_domain]` > **Services** > **JDBC** > **Data Sources** and, in the right pane, click **RM\_DS**.
7. On the next screen, click the **Configuration** tab > **Connection Pool** tab and, in the **Properties** box, type `integratedSecurity=true`.
8. On the computer where the application server is installed, add `sqljdbc_auth.dll` to the Windows systems path (C:\Windows).

**Note:** The `sqljdbc_auth.dll` file is in the same location as the Microsoft SQL JDBC 1.2 driver installation (default is `[InstallDir]/sqljdbc_1.2/enu/auth/x86`).

## C.7 Secure data sources

When using LiveCycle ES2 deployed on WebLogic, you may want to secure access to JNDI artifacts. See [this](#) TechNote for the procedure to restrict JNDI access to a limited set of users.

## C.8 Next steps

You must now deploy the LiveCycle ES2 EAR files to the application server. (See [“Appendix - Manually Deploying to WebLogic Server” on page 123](#).)

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## Appendix - Manually Deploying to WebLogic Server

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This chapter describes how to manually deploy LiveCycle ES2 modules to WebLogic Server. This chapter applies only if you chose not to deploy LiveCycle ES2 to WebLogic Server automatically. For information about how to automatically deploy LiveCycle ES2 to your application server, see [“Configuring LiveCycle ES2 for Deployment” on page 39](#).

At this point in the installation process, you have already installed LiveCycle ES2 files, run LiveCycle Configuration Manager to configure the LiveCycle ES2 deployable archives, and manually configured your WebLogic Server. Now, you manually deploy the LiveCycle ES2 deployable archives.

This chapter includes the following topics:

- [“About deploying LiveCycle ES2 modules” on page 123](#)
- [“Deploying to WebLogic Server” on page 124](#)

### About deploying LiveCycle ES2 modules

Before you deploy LiveCycle ES2, ensure that you completed these tasks:

- Installed the required software and files, and know the location of the directories you will be working with. If you did not complete this task, see [Preparing to Install LiveCycle ES2 \(Single Server\)](#).
- Run LiveCycle Configuration Manager to configure and assemble LiveCycle ES2 modules according to your system and application server requirements. To add a module to your deployment, you can run LiveCycle Configuration Manager to make the changes and then redeploy the updated EAR file.

If you are deploying LiveCycle ES2 for the first time, initialize the database by using LiveCycle Configuration Manager after you deploy the product.

If you are using an external web server, see your web server documentation for information about the configuration that is required to allow access to the application server.

### WebLogic Server directory name

This chapter refers to the WebLogic Server home directory as *[appserver root]*. The home directory is the same as the one specified for the `WL_INSTALL_ROOT` environment variable. Similarly, *[LiveCycleES2 root]* refers to the location where LiveCycle ES2 components are installed. (See [“Conventions used in this document” on page 7](#).)

### Summary of deployable components

During the deployment process, deploy the following EAR files:

- `adobe-livecycle-native-weblogic-[OS].ear`
- *(Process Management ES2 only)* `adobe-livecycle-weblogic.ear`
- `adobe-workspace-client.ear`
- `adobe-contentservices.ear` (LiveCycle Content Services ES2 only)

After LiveCycle ES2 is configured with LiveCycle Configuration Manager (required), these files are located in the `[LiveCycleES2 root]/configurationManager/export` directory.

## Deploying to WebLogic Server

Deploy LiveCycle ES2 components to WebLogic Server by deploying the component EAR files to the application server by using WebLogic Administration Console.

Before deploying to WebLogic Server, start the application server on your computer. After you deploy the required components, stop and restart the application server before you start any services.

### ► To deploy the EAR files:

1. To access the WebLogic Administration Console, type `http://localhost:7001/console` in the URL line of a web browser.
2. Type the user name and password that was used when creating to WebLogic Server configuration and click **Log In**.
3. Under Change Center, click **Lock & Edit**.
4. Under Domain Structure, click **Deployments** and then, in the right pane, click **Install**.
5. On the Install Application Assistant pane, navigate to the deployment EAR files to install.
6. Select the EAR file and click **Next**.
7. Select **Install this deployment as an application** and click **Next**.
8. For your deployment targets, select your cluster and then select **All servers in the cluster**.
9. Click **Next**, accept the default settings, and then click **Finish**.
10. Under Change Center, click **Activate Changes**.
11. In the right pane, select the check box for the application you just installed.
12. Click **Start** and, in the menu, select **Servicing all requests**.
13. In the right pane, click **Yes** and, under Change Center, click **Lock & Edit**.
14. Repeat steps 5 to 13 for each of the EAR files listed in [“Summary of deployable components” on page 123](#).
15. When the deployment is complete, restart WebLogic. (See [“Restarting WebLogic Server” on page 124](#).)

## Restarting WebLogic Server

After you make all your configuration changes, restart WebLogic for the changes to take effect. The WebLogic Managed Server and the WebLogic Administration Server also need to be restarted. The Node Manager does not need to be restarted.

► **To stop WebLogic Managed Server:**

1. In the WebLogic Administration Console, under Domain Structure, click the domain name.
2. Click the **Control** tab and select the check box beside the server you want to stop.
3. Click **Shutdown** and select one of these options:

**When work completes:** Initiates a graceful shutdown of the selected server, causing the Managed Server to notify its subsystems to complete all in-work requests. A graceful shutdown gives the WebLogic Server subsystems time to complete certain application processing that is currently in progress.

**Force Shutdown Now:** Initiates a forced shutdown, which causes the Managed Server to instruct subsystems to immediately drop in-work requests.

4. At the WebLogic Administration Console prompt, click **Yes** to confirm the command.

You can verify that the Managed Server has shut down by viewing the table at the bottom of the Control tab. The table displays a list of all the servers and indicates their current state.

► **To stop WebLogic Administration Server:**

1. From a command prompt, navigate to `WL_HOME\user_projects\domains\[appserverdomain]\bin`.
2. Type the following command:
  - (Windows) `stopWebLogic.cmd`
  - (Linux, UNIX) `./stopWebLogic.sh`
3. Enter the WebLogic user name and password (if you enabled security when installing WebLogic).

► **To restart WebLogic Administration Server:**

1. From a command prompt, navigate to `WL_HOME/user_projects/domains/[appserverdomain]`.
2. Type the following command:
  - (Windows) `startWebLogic.cmd`
  - (Linux, UNIX) `./startWebLogic.sh`
3. Enter the WebLogic user name and password (if you enabled security when installing WebLogic).

► **To restart WebLogic Managed Server:**

1. When the WebLogic Administration Server has started, log in to the WebLogic Administration Console.
2. Under Change Center, click **Lock & Edit**.
3. Under Domain Structure, click **Environment > Servers** and, in the right pane, click the managed server.
4. On the next screen, click the **Control** tab and select the check box beside the managed server you want to start.
5. Click **Start** and then click **Yes**.

## Next steps

You must 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 component and archive file deployment. (See ["Configuring and deploying LiveCycle ES2" on page 40.](#))