LiveCycle ES2 PDF Generator Tutorial

Adobe® LiveCycle® ES2

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Adobe® LiveCycle® ES2 (9.0) LiveCycle ES2 PDF Generator Tutorial

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Contents

1. About This Document

This document describes how PDF Generator ES2 interacts with LiveCycle ES2. It also includes a 20 minute tutorial that teaches you how to do the following:

- Set environment paths for native application support.
- Set up a watched folder on a local hard drive and on a shared network drive.
- Copy a document to the watched folder and view the output.

The intent of the document is to enable users to start using PDF Generator ES2 quickly.

Who should read this document?

This document is intended for anyone who wants to set up PDF Generator ES2 for LiveCycle ES2 as a stand-alone service. It is recommended that you be familiar with the Distiller service.

Before you begin, set up PDF Generator ES2 using the turnkey method on Windows 2003 Server or Windows XP (without LiveCycle Workbench ES2).

Additional information

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

For information about	See
Overview of LiveCycle PDF Generator ES2	LiveCycle ES2 Overview
Installing and configuring PDF Generator ES2	Installing and Deploying LiveCycle ES Using Turnkey
Detailed information about configuring e-mail and watched folder endpoints with PDF Generator ES2.	LiveCycle ES2 Administration Help
Using LiveCycle Workbench ES to add operations to the Generate PDF service.	LiveCycle Workbench ES2 Help
LiveCycle ES2 terminology	LiveCycle ES2 Glossary
Other services and products that integrate with LiveCycle ES2	www.adobe.com
Patch updates, technical notes, and additional information on this product version	LiveCycle Technical Support

2. About PDF Generator ES2

LiveCycle PDF Generator ES2 enables you to automate the creation, assembly, distribution, and archival of PDF documents. Using PDF Generator ES2, you can convert a wide range of native and standard file formats to PDF Portfolios. (See "Supported file formats" on page 7). PDF Generator ES2 also supports direct server-based PDF file printing.

PDF Generator ES2 enables you to assemble a single PDF document from several source documents or separate PDF documents into constituent pages.

Architecture

You can install PDF Generator ES2 as a stand-alone solution component. Several LiveCycle ES2 services are installed with PDF Generator ES2. These services provide a flexible mechanism for extending the range of the file formats that PDF Generator ES2 supports. The services also add support for converting almost any type of document to PDF:

- **Assembler service** The Assembler service combines multiple PDF documents into a single PDF document or separate a PDF document into multiple PDF documents. The Assembler service can manipulate documents in various ways such as changing page size and rotating contents. It can insert additional content such as headers, footers, and a table of contents. It can preserve, import, or export existing content such as annotations, file attachments, and bookmarks. It can also start other LiveCycle ES2 services to convert files to PDF, merge Adobe XML forms with form data, and apply Adobe Reader usage rights.
- **Convert PDF service** The Convert PDF service converts PDF documents to PostScript® or image files (JPEG, JPEG 2000, PNG, and TIFF). Converting a PDF document to PostScript is useful for unattended server-based printing on any PostScript printer. Converting a PDF document to a multipage TIFF file is practical when archiving documents in content management systems that do not support PDF documents.
- **Distiller service** The Distiller service converts PostScript, Encapsulated PostScript (EPS), and printer text files (PRN) to PDF files. The Distiller service is frequently used to convert large volumes of print documents to electronic documents, such as invoices and statements. Converting documents to PDF also allows enterprises to provide their customers a paper version and an electronic version of a document.
- **DocConverter service** The DocConverter service transforms signed or unsigned PDF documents, XML forms (typically created in LiveCycle Designer ES2), and Acrobat forms to PDF/A-compliant documents. This service can also validate whether PDF documents are compliant with the PDF/A format, which is primarily used for archiving.
- **Encryption service** The Encryption service encrypts and decrypts documents. When a document is encrypted, its contents become unreadable. You can encrypt the entire PDF document (including its content, metadata, and attachments), everything other than its metadata, or only the attachments. An authorized user can decrypt the document to obtain access to the contents. If a PDF document is encrypted with a password, the user must specify the open password before viewing the document in Adobe Reader or Acrobat. Likewise, if a PDF document is encrypted with a certificate, the user must decrypt the PDF document with the public key (certificate) that corresponds to the private key that was used to encrypt the PDF document.
- **Generate PDF service** The Generate PDF service converts many different file types to PDF documents. It also converts PDF documents to other document formats.
- **PDF Utilities service** The PDF Utilities service converts documents between PDF and XDP file formats, sets, and retrieves the save mode of PDF documents, and queries information about a PDF document. For example, the service can determine whether a PDF document contains comments or attachments.

- **XMP Utilities service** The XMP Utilities service can retrieve and save XMP metadata from PDF documents, and import XMP metadata into PDF documents. The Adobe Extensible Metadata Platform (XMP) is a standard for handling document metadata. Metadata is information about the document (as distinguished from the contents of the document, such as text and graphics).

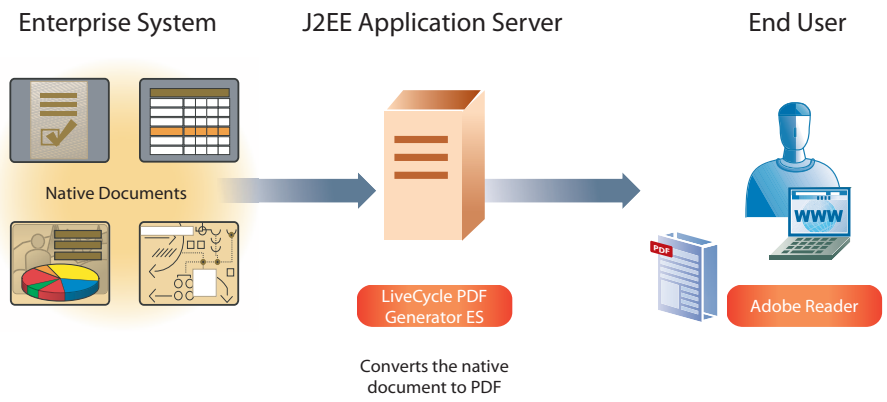
PDF Generator ES2 workflow

These steps describe how to use PDF Generator ES2:

1. An administrator uses LiveCycle Administration Console to customize the default PDF settings, security settings, and file type settings that control how PDF Generator ES2 converts documents.
2. An administrator configures PDF Generator ES2 to call a service that converts the files.

   There are many ways to call a service. In the tutorial, "Walking Through Using PDF Generator ES2" on page 9, you will configure a watched folder. PDF Generator ES2 periodically scans the watched folder. When it finds a file, it starts the Generate PDF service, which converts the file.
3. A user or client application places a file to convert to PDF in the watched folder.

   In the tutorial, "Walking Through Using PDF Generator ES2" on page 9. you will copy the file to the watched folder. It is also possible to use the service's API to create a client application that places the file in the watched folder.
4. PDF Generator ES2 scans the watched folder for files to convert at intervals specified by the administrator.
5. PDF Generator ES2 uses the default settings that the administrator specified in LiveCycle Administration Console to convert the native file to PDF. Then, PDF Generator ES2 moves the resulting PDF document to the Out folder.



Submitting files for conversion

There are many ways to configure PDF Generator ES2 to call a service that converts files. The following are the non-programmatic ways to submit files for conversion:

- **Watched folders** You can configure LiveCycle ES2 to periodically scan folders called watched folders. When LiveCycle ES2 finds a file in the input folder of one of these watched folders, it converts the file according to the configurations. Then, LiveCycle ES2 moves the resulting document to the results folder. A watched folder can have its own PDF, security, and file type settings that apply to all of the files processed from that folder. The tutorial later in this document uses a watched folder source.
- **E-mail** You can configure e-mail accounts to which users can send documents (as e-mail attachments) to be converted. The e-mail inbox acts as a collecting point for the attachments that LiveCycle ES2 monitors. LiveCycle ES2 then starts the appropriate service as defined by the e-mail endpoint (configured in Applications and Services). The results of the conversion are forwarded to the user defined in the endpoint. A separate account can be set up for each type of conversion. For example, you can configure one account to generate standard PDF documents from incoming file attachments. You can configure another account to generate secure PDF documents. Each source must have its own e-mail account. All e-mail endpoints are configured with an authorized user name and password for the e-mail inbox, which are required when starting the service. The mail server system protects the e-mail account.
- **Assembler task**
- **Internet Printing Protocol (IPP)** LiveCycle ES2 also includes a print driver that prints to the Generate PDF service. This print driver is installed like any other print driver on the desktop. Users can take advantage of the centralized PDF generation that PDF Generator ES2 provides from any application on their desktop. For information about installing the print driver, see the Installing and Deploying LiveCycle ES2 guides. For information about configuring this feature, see LiveCycle ES2 Administration Help.

Supported file formats

PDF Generator ES2 can convert PostScript and Encapsulated PostScript (EPS) documents to PDF, native file formats to PDF, and PDF documents to other formats.

Postscript and EPS file formats to PDF

Using PDF Generator ES2, workgroups can convert PostScript files to compact, reliable, and more secure PDF files over a network. Conversion from PostScript to PDF is frequently used to convert large volumes of print documents to electronic documents, such as invoices and statements, or to online reports such as business intelligence reports. Converting documents to PDF also lets enterprises send their customers a paper version and an electronic version of a document.

Native file formats to PDF

PDF Generator ES2 can convert many native file formats to PDF. The following file formats are supported:

- Microsoft Office 2003, 2007 (DOC, XLS, PPT, WPD, RTF, TXT, Microsoft Office open XML Formats)
- Microsoft Office Visio 2003, 2007 (VSD)
- Microsoft Project 2003, 2007 (MPP)
- Microsoft Publisher 2003, 2007 (PUB)
- AutoCAD 2005, 2006, 2007 (DWG)
- Corel WordPerfect 12 (WPD)
- Adobe Photoshop® CS2 (PSD)

- Adobe FrameMaker® 7.2, 8 (FM)
- Adobe PageMaker® 7.0 (PMD, PM6, P65, PM)
- OpenOffice 2.4.2, 3.1.0 (ODT, ODS, OPD, ODG, ODF, SZW, SXI, SXC, SXD, SXM)
- Print files (PS, PRN, EPS)
- Web files (HTML)
- Image files (JPEG, GIF, BMP, TIFF, PNG)
- PDF

Support for the Open Document Format (ODF) by using OpenOffice increases the scalability of PDF Generator ES2.

Note: *You can add support for additional native file formats. You can also determine how PDF Generator ES2 interacts with supported applications. For more information, see LiveCycle ES2 Administration Help (also accessible in the LiveCycle Administration Console)*

PDF to other file formats

PDF Generator ES2 can convert PDF into the following file formats:

- Image formats (JPEG 2000, TIFF, and PNG)
- PostScript and Encapsulated PostScript (EPS)

Open standards output file formats

The following output file formats are supported when the input file is other than PDF:

PDF/X-1a When a document is converted using the Adobe PDF setting called PDFX1a 2001, PDF Generator ES2 produces PDF documents that are checked by or that must conform to PDF/X-1a:2001. PDF/X-1a:2001is an ISO standard for graphic content exchange. PDF documents can be opened using Acrobat or Acrobat Reader 4.0 and later. PDFX 1a is specified in ISO 15930-1.

PDF/X-3 When a document is converted using the Adobe PDF setting called PDFX3 2002, PDF Generator ES2 produces PDF documents that must be checked by or that must conform to PDF/X-3:2002, an ISO standard for graphic content exchange. PDF documents can be opened using Acrobat or Adobe Reader 4.0 and later. PDFX3 is specified in ISO 15930-1.

PDF/A-1B:2005 When a document is converted using the Adobe PDF setting called PDFA-1B, PDF Generator ES2 produces PDF documents that conform to the ISO archival standard for the long-term preservation of electronic documents (called PDF/A-1B). PDF/A-1B is specified in ISO 19005-1.

Searchable PDF This feature is especially useful in converting image file formats such as TIFF. The conversion process uses optical character recognition (OCR) to associate character shapes with the characters they represent. When the resulting searchable PDF file is opened in Acrobat, the document has the same appearance as the original. However, now you can select the characters (using the text tool) and you can search for characters.

3. Walking Through Using PDF Generator ES2

This section walks you through configuring and using PDF Generator ES2 to generate PDF files from a watched folder. Watched folders can call processes that include converting the document, adding legal text, and adding watermarks. Once you create and configure a watched folder, the watched folder works for everyone.

Getting started

Before you begin this tutorial, use the document Installing and Deploying LiveCycle® ES2 Using Turnkey for JBoss® to complete the following tasks:

1. Install LiveCycle ES2. Select the PDF Generator ES2 solution component. You do not need to select any additional components.
2. Install and configure Acrobat Pro Extended.
3. Install Microsoft Office 2007.
4. Grant the Logon As Service right to the Microsoft Administrator in Windows.
5. Validate your installation. For more information, see Validating a LiveCycle Install.

Step 1: Set the Adobe PDF Printer as the default printer

First, 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. Click **Start** > **Printers and Faxes**.
2. In the Printers and Faxes window, right-click Adobe **PDF**, and then click **Set as Default Printer**.

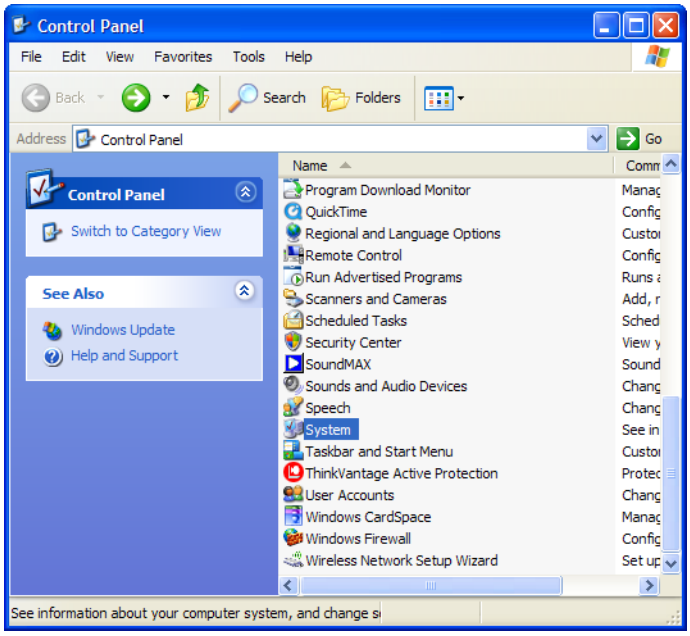
Step 2: Set environment variables

To convert some file formats, PDF Generator ES2 requires the location of the executable that is used to start the corresponding application. Environment variables tell PDF Generator ES2 the location of the applications. Each environment variable contains a variable name and the absolute path to the executable file of an application.

To set environment variables:

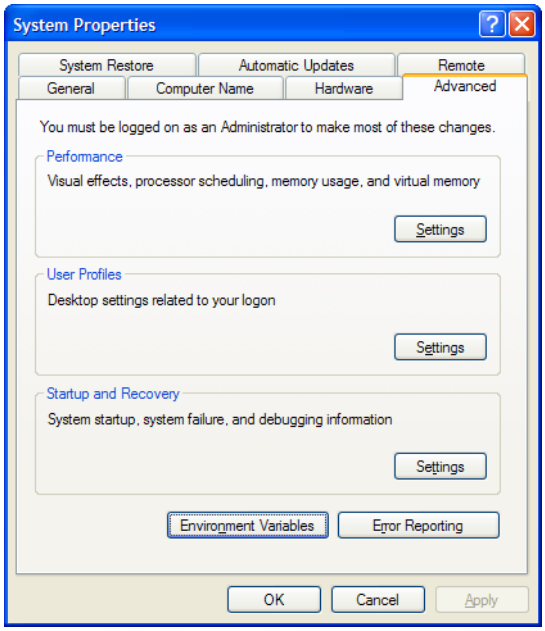
1. Click **Start** > **All Programs** > **Control Panel**.
2. If the Control Panel is in Category View, click **Switch to Classic View**.

3 Double-click the System control panel.

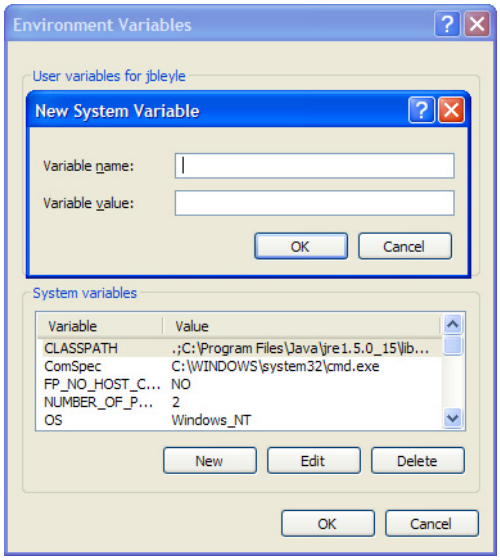


4 In the System Properties control panel, click the **Advanced** tab.

5 Click **Environment Variables**.



6 To create a System variable, click **New**.



7 Create a system environment variable for any of the following applications installed on your computer:

Application	Variable name	Example variable value
Acrobat 9.0	`Acrobat_PATH`	`C:\Program Files\Adobe\Acrobat 9.0\Acrobat\Acrobat.exe`
FrameMaker®	`FrameMaker_PATH`	`C:\Program Files\Adobe\FrameMaker8\FrameMaker.exe`
Notepad	`Notepad_PATH`	`C:\WINDOWS\Notepad.exe`
OpenOffice.org	`OpenOffice_PATH`	`C:\Program Files\OpenOffice.org 3`
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* `OpenOffice_PATH` *environment variable 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.*

Note: *If the installation is on a 64-bit computer, create the JAVA_HOME32 variable and set the path to a 32-bit Sun JDK.*

8 Click **OK**, and then click **OK** again.

Step 3: Create a watched folder

You can configure LiveCycle ES2 to periodically scan folders called watched folders for files to be converted. When LiveCycle ES2 finds a file in the input folder of one of these watched folders, it converts the file according to the configurations. LiveCycle ES2 then moves the new document to the results folder.

In a clustered environment, the watched folder must be accessible, writable, and shared on the file system or network. Each application server in the cluster must have access to the shared folder.

For the purposes of this tutorial, you can create a watched folder on the computer hosting LiveCycle ES2 or you can create a watched folder on a shared drive. Complete one of the following tasks.

To create a watched folder on the computer hosting LiveCycle ES2:

1. Browse to the root folder of the C drive, and then click **File** > **New** > **Folder**.
2. For this tutorial, rename the New Folder folder to WatchedFolder.

   You have created the folder C:\WatchedFolder.

To create a watched folder on a shared drive:

1. Browse to the volume on the shared drive where you want to create a watched folder.
2. Right-click a blank area in a folder window, and then click **New**. Click **Folder**.
3. For this tutorial, rename the New Folder folder to WatchedFolder.
4. To assign a drive letter to the folder, do the following:
   - Double-click **My Computer**.
   - Click **Tools** > **Map Network Drive**.
   - Select a drive letter from the **Drive** list.
   - Enter the watched folder path in the **Folder** box. For example, \\yourservername\watchedfoldername. You can also click **Browse** to select the watched folder.
   - To reconnect to the mapped drive every time you log on, select **Reconnect at logon**.
   - To log on to the shared folder as a different user, click **Connect using a different user name**.

   Note: *It is recommended that you access network shared folders using the following syntax:* *\\MachineName\FolderName1[\FolderName2...]*
5. To make sure LiveCycle ES2 can access the shared folder, do the following:
   - Click **Start** > **Control Panel**.
   - Double-click **Administrative Tools**, and then double-click **Services**.
   - Select **JBoss for Adobe LiveCycle ES**, and then click **Actions** > **Properties**.
   - In the **Log On** tab, do one of the following:
     - Select **This account**, and then enter a user account and password. This user must have administrator read and write access to the shared watched folder.
     - Select **Start as Local System account**, and then select **Allow service to interact with the desktop**. When you choose this option, all users who want to convert files must be able to read to and write from the shared watched folder.
6. Click **OK**.

Step 4: Configure the Generate PDF service

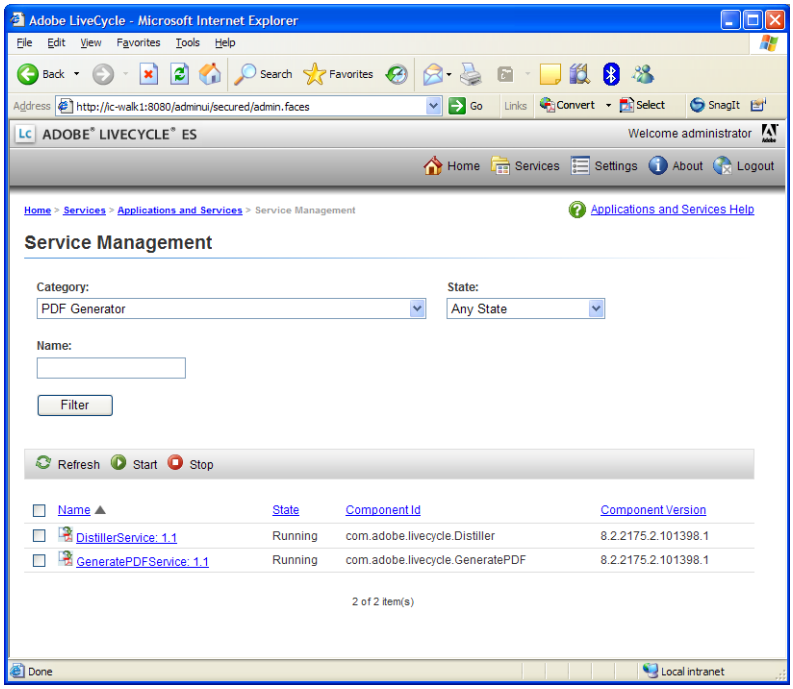
Configure the Generate PDF

1 Open the LiveCycle Administration Console in a browser. The address is http://*[servername]*:8080/adminui.

2 Log in and do one of the following:

- Click **Services** > **Applications and Services** > **Service Management**
- Click **Services** > **LiveCycle PDF Generator ES2** > **Sources**

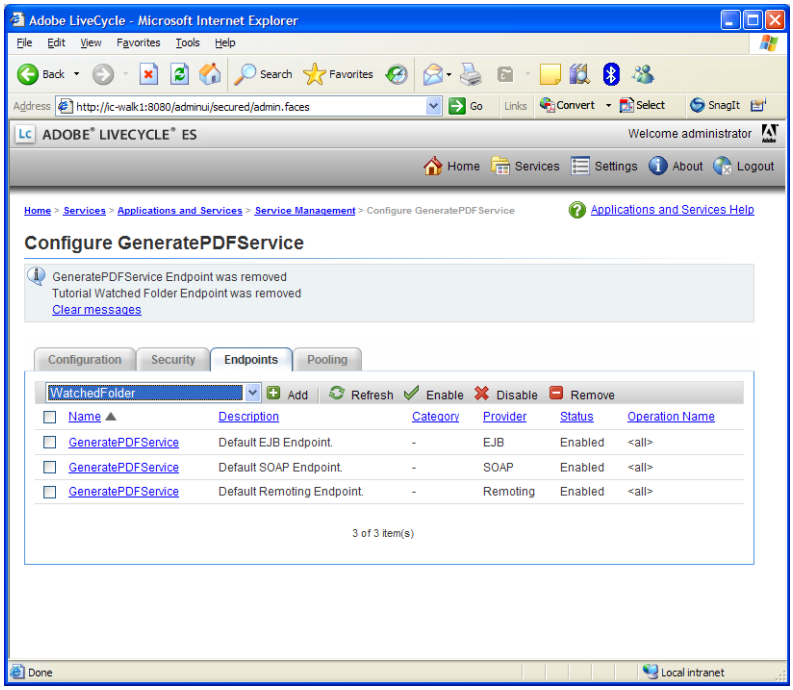
3 Select **PDF Generator** from the Category list, and then click **Filter**.



4 Click **GeneratePDFService: 1.1**.

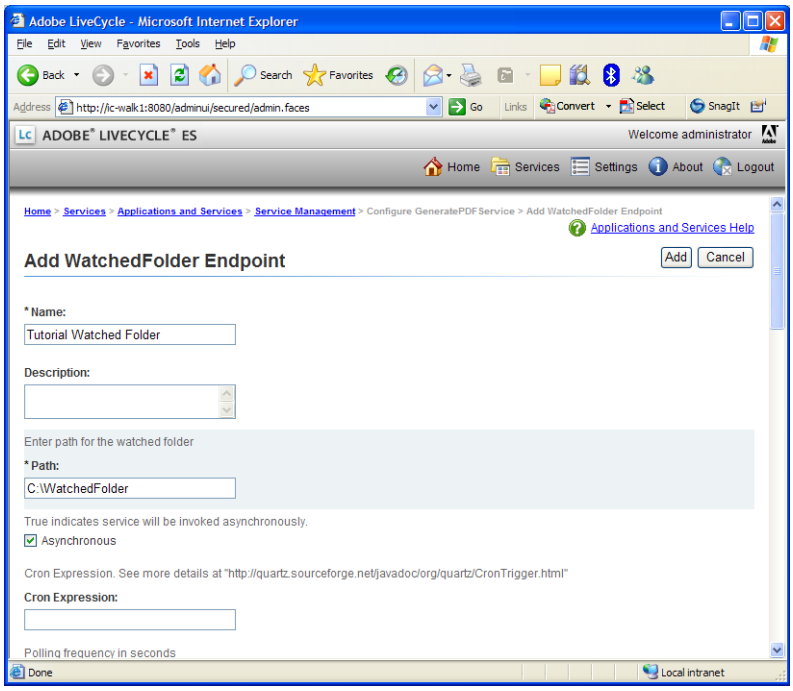
Each service in the PDF Generator ES2 category converts a file format to PDF.

5 In the **Endpoints** tab, select **WatchedFolder** from the list, and then click **Add.**



6 Set the following values on the Add WatchedFolder Endpoint page (this tutorial does not set values for optional parameters):

Parameter	Description	Value
Name	Identifies the watched folder.	Tutorial Watched Folder
Path	The absolute path to the watched folder. If the folder doesn't exist, LiveCycle ES2 creates it.	If you created a watched folder on the computer hosting LiveCycle ES2, enter the following value: **C:\WatchedFolder**. If you created a watched folder on a shared drive, enter the path to the folder, for example: **\\sharedserver\Watched-Folder**.
Operation Name	A list of operations that can be assigned to the watched folder.	**ExportPDF** Converts PDF files to supported formats, such as Microsoft Word, Plain Text, HTML, and XML. **CreatePDF** Converts input files in various supported formats to PDF. **HTMLFileToPDF** Converts HTML files to PDF.
Input Parameter Mappings > inputDocument	Specifies which documents in the watched folder to convert to PDF.	Leave the pop-up menu set to **Variable**. Enter the following value in the box: ***.*** This value converts all documented copied to the watched folder to PDF.
Output Parameter Mappings > Result	Output filenames, such as Word, Excel, PowerPoint, AutoCAD, and images such as, JPEG, TIFF, PNG, and GIF, cannot contain characters other than letters, numbers, and a period (.) before the file name extension. LiveCycle ES2 converts other characters to their hexadecimal values.	Leave the pop-up menu set to **Variable**. Enter following value in the box: **%F.pdf**. This value creates a file with the same name as the input file and with the .pdf filename extension.



7 Click **Add**.

Step 5: Copy a file to the watched folder

To copy a file to the watched folder

1 Do one of the following:

- If you created a local folder, copy a file to C:\WatchedFolder\input.
- If you created a shared folder, copy a file to \\sharedserver\WatchedFolder\input.

Step 6: View the PDF document

To view the PDF document

❖ By default, PDF Generator ES2 moves the file from the input folder to a subfolder of either the failure folder or the results folder. The subfolder is named according to today's date. For example, if you successfully convert a file on January 25, 2009, the PDF is created in the folder C:\WatchedFolder\results\2009\1\25. If you attempt to create a PDF but fail, the input file is moved to the folder C:\Watched-Folder\failure\2009\1\25.

4. Troubleshooting PDF Generator ES2

This section provides some of the common errors for PDF Genertator ES2 and how to addresse these errors.

Reading the log file

The log files describes the reason for failure to convert the file. For example, the log could indicate that the input file is password protected, that the file itself is corrupt, or that the PostScript interpretor encountered an error while parsing the input file.

Cannot convert MS-Word or other native application file

If you cannot convert MS-Word or other native application files to PDF, verify that you installed LiveCycle ES2, Acrobat, and MS-Office using the same Administrator account. To test, create a watched folder and copy a postscript (.ps) file to the input folder. If the file converts to PDF, LiveCycle ES2 and Acrobat are working.

Allow delete access to watched folder

Ensure that the application server has delete access to the files in the watched folder. If LiveCycle ES2 cannot delete the files from the input folder after they are scanned, the associated process will be run indefinitely. In this case, to grant delete access to the application server, use the operating system specific tools that are capable of modifying file system permissions. For example, use the `chmod` utility in UNIX and the **attribe** command in Windows to perform this task.

Prevent disk space errors

To avoid `java.io.IOException` error messages indicating that not enough disk space is available to perform PDF conversions using a watched folder, you can modify the settings for PDF Generator ES2 in LiveCycle Administration Console.

To set performance parameters for PDF Generator ES2

1. Log in to LiveCycle Administration Console, and then click **Services** > **Application and Services** > **Service Management**.
2. Click **PDFGConfigService** in the list of services.
3. On the Configure PDFGConfigService page, set the following values:
   - PDFG Cleanup Scan Seconds: 30 min
   - Job Expiration Seconds: 100 min

Additional Troubleshooting

For additional troubleshooting information, refer to *Troubleshooting LiveCycle ES2*.