Running office automation from a ASP.NET

It is sometimes problematic to configure MS Office and ABCpdf to convert Office documents server   
side. This is for the following reasons.

- IIS processes do not, by default, have the permissions required to launch MS Office tasks.

- The IIS process and any MS Office task need to run as the same user so that they can

communicate correctly.

- Microsoft Office is primarily designed to run as an interactive application.

Further, please be aware that there are risks running MS office server side, so please read   
“Considerations for server-side Automation of Office“ (http://support.microsoft.com/kb/257757).

Follow these steps to validate office automation in an IIS process. We will rely on a COM+   
application for performing office automation. Some users have reported that the COM+ application   
is not necessary but we recommend you start with COM+ at first.

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1. Unzip the following file:

MSOfficeExampleSite.zip

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This file contains a MS Visual Studio solution with two projects:

 PdfEnterpriseServices, an ABCpdf COM+ wrapper.

 WebUtilities, a simple web site that uses PdfEnterpriseServices to convert a

word document into pdf. The PDF will be displayed directly in the browser.

2. Launch WebUtilities.sln and build it.

3. Install the Web Site in IIS Manager, the web site folder is ExampleSite\WebUtilities.

4. Create a dedicated account for running office automation, for example call it

OfficeAutomationUser.

5. Assign a password that never expires to this account and give this account Administrator

rights.

6. Log in using this account and open at least one office document of the type that you intend

to convert. In this example we will convert a .docx document. Make sure that when opening   
such a document there are no pop-ups. This means making sure that Office has been   
activated and all the initial questions Office asks have been answered, e.g. if you are running   
it with a trial key, etc.

7. Logging in using this account is also necessary to initialize the XPS print driver, otherwise you

might get INVALID\_PRINTER\_NAME (1801) errors.

8. From a MS Visual Studio command prompt register PdfEnterprises:

*RegSvcs PdfEnterprises.dll*

On x64 Windows, RegSvcs.exe in %SystemRoot%\Microsoft.NET\Framework\v2.0.50727 is   
32-bit and the one in %SystemRoot%\Microsoft.NET\Framework64\v2.0.50727 is 64-bit.   
The version of RegSvcs.exe determines whether the COM+ Application it registers will run in   
a 32-bit or 64-bit process. The 32-bit or 64-bit MS Visual Studio command prompt chooses   
the corresponding framework directory as one of the search paths. You should use the one

that matches ABCpdf you plan to use.

9. Set the identity of PdfEnterprises to OfficeAutomationUser. You can do so from Component   
Services, by running DCOMCNGF: right-click on the COM+ component, select properties and   
go to the Identity tab. You can also set the identity to the interactive user to start with but   
you will have to change it later on unless someone will always be logged in.

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10. Browse to default.aspx of the example web site. If successful a PDF document containing the

word “TEST” will be displayed by the browser.

Important Notes for Windows 2008

1. Make sure there is a folder called “Desktop” in

C:\Windows\SysWOW64\config\systemprofile for Windows 2008 Server x64 or   
C:\Windows\config\systemprofile\Desktop for Windows 2008 Server x86. Create the folder

if it does not exist.

2. For further information:

http://social.msdn.microsoft.com/Forums/en/innovateonoffice/thread/b81a3c4e-62db-  
488b-af06-44421818ef91.

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3. Some people have reported that it was necessary to install the MS Office SP2 on Windows

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Server 2008 R2 or else MS Word would crash. To install the SP2:   
http://support.microsoft.com/kb/953195.

4. Some people have reported it is necessary to set the Microsoft XPS Document Writer as the

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default printer.

Additional information on configuring Office

This is not normally necessary unless the default settings have been changed.

We basically want the Office Application to launch as the “Launching User” when it is activated via   
DCOM.

1. Launch DCOMCNFG.   
2. Go to Computers->MyComputer->DCOM Config.  
3. Right-click the application that you want to automate. The application names are listed

below:

Microsoft Access 97 - Microsoft Access Database  
Microsoft Access 2000/2002/2003 - Microsoft Access Application  
Microsoft Office Access 2007 - Microsoft Office Access Application  
Microsoft Excel 97/2000/2002/2003 - Microsoft Excel Application  
Microsoft Office Excel 2007 - Microsoft Excel Application  
Microsoft Word 97 - Microsoft Word Basic  
Microsoft Word 2000/2002/2003 - Microsoft Word Document  
Microsoft Office Word 2007 - Microsoft Office Word 97 - 2003 Document

On some systems Microsoft Word is not displayed and you will have to use {00020906-0000-  
0000-C000-000000000046} instead.

Click Properties to open the property dialog box for this application.

4. Click the Identity tab. Verify that The Launching User is selected.

Lowering Admin Rights

We ask that the COM+ account has Admin rights because MS Office will not generally work   
otherwise. However people have been reporting (we still haven’t tested it ourselves) that MS Office   
actually needs the following permissions on 64-bit machines:

*C:\Windows\Temp – Modify*  
*C:\Windows\syswow64\config - Read*  
*C:\Windows\syswow64\config\systemprofile – Read*

*C:\Windows\syswow64\config\systemprofile\AppData – Modify*  
*C:\Windows\syswow64\config\systemprofile\Desktop – Modify*

And the following on 32-bit machines:

*C:\Windows\Temp – Modify*  
*C:\Windows\system32\config - Read*  
*C:\Windows\ system32\config\systemprofile – Read*  
*C:\Windows\ system32\config\systemprofile\ApplicationData – Modify (TODO: or AppData?)*  
*C:\Windows\ system32\config\systemprofile\Desktop – Modify*

So you can try setting these permissions and lowering the account privileges. Thanks to the guys at   
quickenloans.com for reporting this to us.

Registry Entries

If you are still having problems you may try the following to troubleshoot:

1. Add a DWORD registry entry called PrintHookLog to

HKLM\Software\WebSupergoo\ABCpdfNET\7 and set it to one.

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2. On 64-bit machine also add it to

HKLM\Software\Wow6432Node\WebSupergoo\ABCpdfNET\7.

3. Monitor you windows temp directory, normally C:\Windows\Temp for files called

spy\_xxxx.log where xxxx is a PID. See if you can work out any possible problem by looking at   
the content of these files, this is normally a popup that is blocking the Office app, or send   
them over to us for further analysis.

4. Remember to delete these registry entries or to set them to zero to avoid clogging your

temp area with the spy log files.

ABCpdf installation

If installing ABCpdf manually make sure that:

 ABCpdf.dll is in the GAC (gacutil –i ABCpdf.dll) or in the same directory as the service

executable.

 ABCpdfCE.dll is in %SystemRoot%\system32.   
 PrintHook32.dll is in %SystemRoot%\system32 for 32-bit machines. For 64-bit machines

PrintHook32.dll and PrintHook64.dll should both be in %SystemRoot%\system32 and  
PrintHook32.dll should also be in %SystemRoot%\SysWOW64.