# SharePoint IFilter for Rights Protected Document

Adobe Experience Manager 6.3 forms

## Legal Notices

Microsoft Windows full-text search engines like the Desktop Indexing Service and the SharePoint Index server provide native text search for document formats such as txt, doc, and docx. This implies that you cannot use these search engines to perform full text search on rights protected PDF documents from the document security service. Adobe Experience Manager (AEM) Forms now allows you to configure and use the IFilter service to allow your SharePoint users to perform full-text search on rights protected PDF documents.

This package contains the **SharePoint IFilter for rights protected document** solution. This IFilter is used with SharePoint and allows SharePoint to search for the text within PDF documents which have been Rights protected using document security server with Mutual Authentication support.

# Supported Platforms

| Application | Operating System |
|---|---|
| Microsoft Office SharePoint Server 2013 | Windows Server 2008 x64 SP1 |
| Microsoft Office SharePoint Server 2010 | Windows Server 2008 x64 SP1 |
| FAST Search Server 2010 for SharePoint (FAST Search Server) | Windows Server 2008 x64 SP1 |
| AEM Forms | All supported platforms. For details, see Supported Platform Combinations. |
| Adobe Acrobat / Reader 10.1.4 and 11 | Windows Server 2008 x64 SP1 |

# Configure IFilter

This section details the steps to set up IFilter (to index and search rights protected PDF documents) with FAST Search Server, while using mutual authentication with the document security server.

**Note:** The configuration steps described in this section need to be carried out on a system where FAST Search Server is installed.

## Prerequisites

1. **Install the client certificate used to authenticate against AEM Forms server on FAST Search Server**.

   To ensure that the client certificate has been installed successfully, do one of the following:

   - Open a rights protected PDF document using Adobe Reader or Acrobat

   - Access the document security end-user web application. Go to https://[hostname]:[port]/edc/Login.do and ensure that the authentication uses the client certificate by default.

2. **Enable Windows Search Service on FAST Search Server**.

   To configure the Windows Search Service, follow the steps in the following article:

   http://www.win2008workstation.com/win2008/enable-windows-search-service

   To ensure that Windows Search Service has been enabled, check that mssprxy.dll is present in C:\windows\system32 directory.

## Client Certificate Configuration

When you install a client certificate (by double-clicking the certificate), it is typically installed in the personal store of the current user. However, the IFilter service requires that:

1. The client certificate must be installed in the personal store of LOCAL_MACHINE.
2. The IFilter solution has permissions to access the certificate.

To make the configuration changes to the installed certificate, a Certificate Configuration tool, WinHttpCertCfg.exe, from Microsoft has to be used. This tool is part of Windows Server Resource Kit Tools and can be downloaded from:

http://www.microsoft.com/en-us/download/details.aspx?id=17657

For further details on WinHttpCertCfg.exe, see:

http://msdn.microsoft.com/en-us/library/windows/desktop/aa384088(v=vs.85).aspx

### Configure Client Certificate for IFilter Service

After you have downloaded and installed the Windows Server Resource Kit Tools, use the Certificate Configuration tool (WinHttpCertCfg.exe) present in the C:\Program Files (x86)\Windows Resource Kits\Tools directory to configure the client certificate as required by the IFilter solution.

1. Export the client certificate installed earlier from Internet options or the Certificate Manager Tool (Certmgr.msc) to a PFX file.

   Ensure that the private key is also exported.

**Note:** Ensure that you use the same name of the PFX file created above, in all the subsequent steps described in the document.

2. To install the client certificate in the personal store of LOCAL_MACHINE, open the command prompt in elevated mode (with administrator privileges) and execute the following command:

   ```
   WinHttpCertCfg.exe -i <PFX file name>.pfx -c LOCAL_MACHINE\My -a <Account> -p <PFX password>
   ```

   where

   <PFX file name> is the client certificate exported in previous step

   <Account> is the user account on the machine being configured

   <PFX password> is the password which is used to import the certificate and the private key

   Example

   ```
   WinHttpCertCfg.exe -i <Exported client certificate file name> -c LOCAL_MACHINE\My -a username -p password
   ```

3. To grant IFilter service permissions to access the client certificate, open the command prompt in elevated mode (with administrator privileges) and execute the following command:

   ```
   WinHttpCertCfg.exe -g -c LOCAL_MACHINE\MY -s <SubjectStr> -a "LOCAL SERVICE"
   ```

   where

   <SubjectStr> is a case-insensitive search string for finding the first enumerated certificate with a subject name that contains this substring.

   Example

   ```
   WinHttpCertCfg.exe -g –c LOCAL_MACHINE\MY -s smith -a "LOCAL SERVICE"
   ```

## Client Certificate Registry Setting

SharePoint indexing/crawling service uses the client certificate to authenticate against document security Server. This client certificate needs to be specified in the registry.

To configure the certificate, add a registry setting:

**Type**: REG_SZ

**Name**: Thumbprint SHA1 Hash

**Registry Location**: HKLM\Software\Adobe\LiveCycle IFilter\Certificate Settings.

**Value**: <Thumbprint SHA1 Hash of the client certificate>

To obtain the SHA1 Hash value:

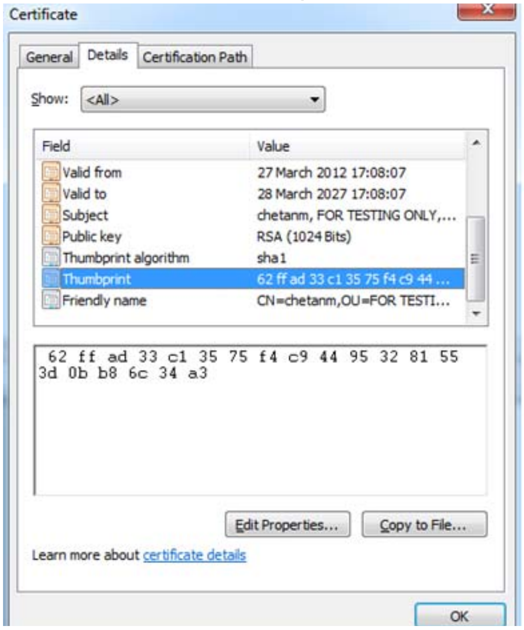
a). Open certmgr.msc or Internet Options in Internet Explorer.

The list of certificates installed on the system are displayed.

b). Double-click the client certificate for which you need to obtain the SHA1 Hash value.

The Certificate dialog displays.

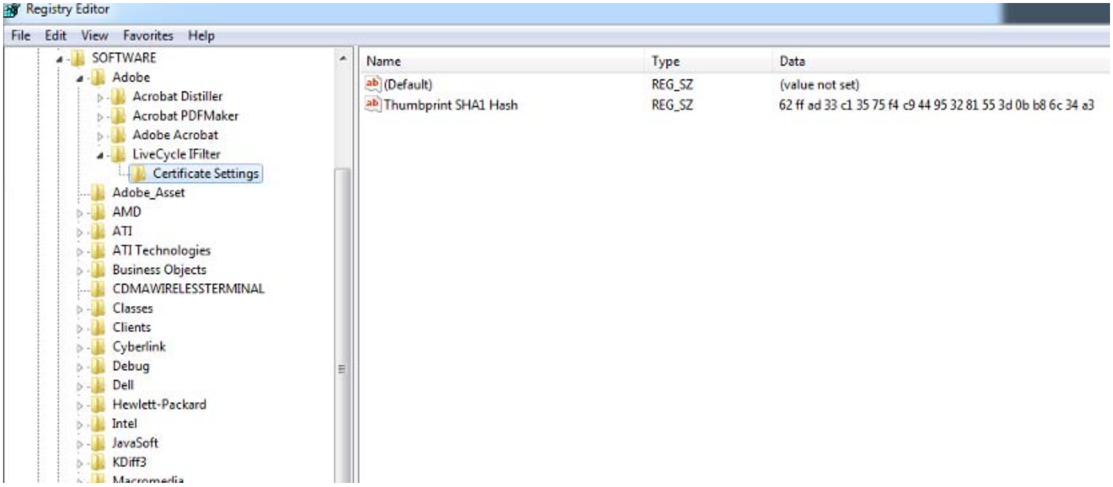
c). In the Certificate dialog, click the Details tab and select the Thumbprint field.



| Field | Value |
|---|---|
| Valid from | 27 March 2012 17:08:07 |
| Valid to | 28 March 2027 17:08:07 |
| Subject | chetanm, FOR TESTING ONLY,... |
| Public key | RSA (1024 Bits) |
| Thumbprint algorithm | sha1 |
| Thumbprint | 62 ff ad 33 c1 35 75 f4 c9 44 ... |
| Friendly name | CN=chetanm,OU=FOR TESTI... |

```
 62 ff ad 33 c1 35 75 f4 c9 44 95 32 81 55
3d 0b b8 6c 34 a3
```

d). Copy the value of the Thumbprint field and paste this value in the registry field Thumbprint SHA1 Hash at HKLM\Software\Adobe\LiveCycle IFilter\Certificate Settings.



| Name | Type | Data |
|---|---|---|
| (Default) | REG_SZ | (value not set) |
| Thumbprint SHA1 Hash | REG_SZ | 62 ff ad 33 c1 35 75 f4 c9 44 95 32 81 55 3d 0b b8 6c 34 a3 |

**Note:** Ensure that while copying the Thumbprint value from the certificate, no extra spaces or characters are copied.

# Configure FAST Search Server for SharePoint to use IFilter

To configure FAST Search Server to use IFilter, follow the steps in the article: http://msdn.microsoft.com/library/ff795798.aspx

You can now use FAST Search Server to index and search rights protected PDF documents.

The following section describes a set of steps to follow if you are unable to get your IFilter solution up and running.

# Troubleshooting IFilter

This section details sequential steps you need to follow if you are unable to index rights protected PDF documents using the IFilter solution. The section describes a set of scenarios to test. If you do not get the expected results, you need to follow the troubleshooting steps to resolve the specific issue.

**Important:** The steps described in this section must be carried out sequentially.

# Opening rights protected PDF documents in Acrobat/Reader

On the Fast Search Server, open an rights protected PDF document (in Acrobat/Reader) which uses Mutual Authentication.

## Expected result

The document should open without requiring any explicit authentication.

## Troubleshooting

If the document does not open.

1. Verify the server configuration.
2. Verify that the user whose certificate is installed on the system has required permissions to open the document.

# Run iFiltTst on an unprotected document

Run iFiltTst on an unprotected document using the command ifilttst.exe /i <file-name> /v 3 /d.

**Note:** iFiltTst is an IFilter Test Suite and can be downloaded from the Microsoft Website.

Along with iFiltTst.exe another file iFiltTst.ini is present in the same directory. This ini file defines the tests to be run on the document. This file is a necessary pre-requisite for running iFiltTst cases. Test No. 1 is sufficient for sanity testing. Tests 2 - 6 can be commented out in the iFiltTst.ini file.

## Expected results

1. iFiltTst.exe should not display any error message on the console.
2. A non-zero size <file-name>.dmp file should be created. The dmp file should contain text of the unprotected PDF document.

## Troubleshooting

1. Ensure that the command prompt running iFiltTst.exe has administrative privileges.
2. Ensure that mssprxy.dll is present on the system at C:\windows\system32.

   This is part of the Windows Search Service. If this dll is not present, then enable Windows Search Service as described in Prerequisites section of this document.
3. Ensure that the IFilter service is running on the system.
   a). To view the list of services running on the system, open the Microsoft Management Console. To open the console, type services.msc in the Windows Run dialog box and click OK.

b). Verify that the IFilter service is listed in the Microsoft Management Console and the status is set to Started.

# Run iFiltTst on protected PDF document

Run iFiltTst on a rights protected PDF document using the command ifilttst.exe /i <file-name> /v 3 /d.

**Note:** iFiltTst is an IFilter Test Suite and can be downloaded from the Microsoft Website.

Along with iFiltTst.exe another file iFiltTst.ini is present in the same directory. This ini file defines the tests to be run on the document. This file is a necessary pre-requisite for running iFiltTst cases. Test No. 1 is sufficient for sanity testing. Tests 2 - 6 can be commented out in the iFiltTst.ini file.

## Expected results

1. iFiltTst.exe should not display any error message on the console.
2. A non-zero size <file-name>.dmp file should be created. The dmp file should contain the text contents of the PDF document.

## Troubleshooting

1. Ensure that the command prompt running iFiltTst.exe has administrative privileges.
2. Ensure that Apache Proxy is disabled in IFilter.

   The registry value HKLM\Software\Adobe\PDF Filter\LiveCycle Rights Management\Http Proxy Settings\HttpProxyEnable should either be absent or set to 0.

   HttpProxyEnable is of type REG_DWORD.
3. Ensure that the user whose certificate is installed on the system has Copy permission on the rights protected PDF document.
4. Ensure the firewall settings are not blocking network traffic to document security server.
5. Ensure that the IFilter service is running on the system.

   a). To view the list of services running on the system, open the Microsoft Management Console. To open the console, type services.msc in the Windows Run dialog box and click OK.

   b). Verify that the IFilter service is listed in the Microsoft Management Console and the status is set to Started.

# Run Indexing for protected PDF document

Upload an rights protected PDF document on the SharePoint server and run indexing.

## Expected results

1. The crawl logs should indicate that the indexing of the rights protected PDF documents is successful.
2. The contents of the rights protected PDF document should be searchable.

## Troubleshooting

1. Ensure you are able to index/search unprotected PDF documents.

   If you are unable to index/search unprotected PDF documents, follow the instructions at:

   Configure Client Certificate for IFilter Service.
2. Ensure the firewall settings are not blocking network traffic to document security server.
3. Ensure that the IFilter service is running on the system.
   a). To view the list of services running on the system, open the Microsoft Management Console. To open the console, type services.msc in the Windows Run dialog box and click OK.

   b). Verify that the IFilter service is listed in the Microsoft Management Console and the status is set to Started.
4. If warning messages related to Timeouts are seen in the crawl logs of the FAST Search Server for rights protected PDF documents then try increasing the timeout value of crawler.

   This can be done by changing Timeout value in <FAST-Search-Folder>\etc\processors ifilterconverter.xml and restarting the crawler service.

# Known Limitations

1. During a Crawl on FAST Search Server, if any corrupted files are found in the crawl, the crawl operation may not be performed on some non-corrupt files as well.

## Resolution

If the non-corrupt files are crawled again, crawling would be successful.