

## RE: .pdf security using ASP.NET security...

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<http://www.derkeiler.com/Newsgroups/microsoft.public.dotnet.framework.aspnet.security/2002-07/0545.html>

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**Date:** 07/25/02

From: [michmo@online.microsoft.com](mailto:michmo@online.microsoft.com) (Mike Moore (MS))

Date: Thu, 25 Jul 2002 03:55:04 GMT

Hi Laurent,

### QUESTION

I am wondering if using the `aspnet_isapi.dll` to handle PDF files security access (or even JPG files, GIF, DOC, XLS, etc...) using ASP.NET security option could cause a performance hit, security issue for the Web Server etc... What are the impact (security, server impact, performance)?

### ANSWER

Part 1 -- how to enable `aspnet_isapi.dll` to handle these files.

IIS has a list of Application Mappings which dictate whether a particular file type (meaning file extension) needs to be processed or if it can be sent as is. HTM, BMP and PDF files are examples of files types that are not generally listed in the IIS application mappings. Therefore, IIS sends these files based only on IIS security.

To have these files processed by `aspnet_isapi.dll`, do the following:

- \* Open Internet Information Services
- \* Go to properties for your web folder
- \* On the "Directory" or "Virtual Directory" or "Home Directory" tab, click "Configuration"
- \* On the "App Mappings" tab, review the list of current mappings, particularly the entry for .ASPX
- \* Create a similar entry for each file type you want handled by ASP.NET such that each file type is mapped to `aspnet_isapi.dll`.

Now these files will be processed on the server by `aspnet_isapi.dll` before being sent to the client.

Note: in `machine.config`, in the `httpModules` section, there are a series of entries that tell `aspnet_isapi.dll` what to do with various file types. One of these entries is simply an asterisk (meaning all remaining file types that don't have their own specific entry). This entry will govern how

ASP.NET handles these additional file types. By default, it will use System.Web.StaticFileHandler for these file types.

## Part 2 -- Performance

Files that have no app mapping in IIS are handled with minimal overhead. IIS has its own security, such as whether the folder (and the file) have been granted IIS read access. If it passes this test, then IIS attempts to read the file. Then the file system checks NTFS permissions. If it passes NTFS, then IIS sends the file.

Files that do have app mappings require all the same steps, plus more. IIS must call a function in the mapped application for that application to process the request. In this case aspnet\_isapi.dll.

aspnet\_isapi.dll has a sequence of steps (modules) for request pre-processing (before the handler) and post-processing (in this case the handler is StaticFileHandler). The list of modules is in the machine.config file in the httpModules section. The good news is that all this takes less time than one might think.

Without going into the modules too deeply, here are some of the tasks which the DLL and the modules perform

- authentication
- authorization
- check the cache
- associate this user's session data with this request
- create and set properties for a series of objects including:  
Application, Session, Server, Request, and Response objects

aspnet\_isapi.dll runs pretty quick, but it does add significant overhead compared to static files that are not mapped to any application.

Thank you, Mike Moore  
Microsoft ASP.NET Developer Support

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