ArtistScope Portable Media (APM) Packager

How to package protected PDF using CopySafe PDF

About PDF

It is important to realize is that PDF files can be viewed and distributed using Adobe Reader and cannot be securely protected. This is even true if using Adobe Acrobat Professional. Adobe Reader resources opens the document and allows it to be printed or saved, without limitation. Even within ArtistScope Portable Media (APM), or when a normal encrypted PDF file is displayed on a web page, embedded or not, the file can be printed or saved. Previously, print could be prevented prior to the latest Adobe versions, but not anymore because Adobe has undermined any chance of protecting a vanilla (unencrypted) PDF file to enhance the sales of their very expensive document protection.

But there are cheaper and much more effective solutions for copy protecting PDF files, and ArtistScope provides the best.

CopySafe PDF

CopySafe PDF provides the most robust and secure copy protection for PDF documents on the planet. It cannot be exploited and Digital Rights Management (DRM) cannot be removed because it is embedded inside the encrypted PDF file which only the "free" CopySafe PDF Reader can open for viewing, with or without internet access.

Using CopySafe PDF with APM

You need to purchase both a CopySafe PDF and domain lock license. The domain lock license, purchased for your web site, will automatically include the "localhost" license. The domain lock will be required to display CopySafe PDF documents on web pages, because it is a web page display (viewed as html) that the APM Reader uses. Licenses can be purchased online at www.artistscope.com.

You can download from www.artistscope.com a trial CopySafe PDF Protector software. Note that it provides 3 different types of output and it is the HTML option **"Display on a web site"** that you need for APM protection.

CopySafe PDF includes its own wizard that will guide you through the PDF encryption process to produce a **.class** file. It is the **.class** file that you will use in your APM package.... encrypted for use on "localhost".

Distributing APM Files

The APM packager can be used to create media archives for different scenarios. APM files can be simply password protected with/without an expiry date, or they can be created for use with DRM that requires a Token provided by the Author after assignment or purchase of the document. Such DRM protected files enable the user to view the APM file while offline, but it will only allow use on a specific computer. Our DRM can restrict a user's access to known and verified computers only, thus preventing your APM file from being shared, or otherwise distributed without the Author's permission.

Using APM with DRM is the recommended option. This tutorial will walk through what it takes to get a PDF file converted and saved as an APM file ready for distribution with DRM protection.

Just a note before starting to look at creating an APM protected file. ALL file names must use letters and numbers only. Spaces should be replaced with either a hyphen or an underscore. Silly names normally allowed by some of today's applications will be automatically corrected. Setting your file name up properly will lead to less confusion for you later on.

Programs or files needed to create and view APM protected files are:

The **ArtistScope Web Browser** which includes the **APM Reader**, the **CopySafe PDF Reader** and the **CopySafe Web browser plugin**. The APM Reader allows the viewing of the protected files. The CopySafe PDF Reader allows the viewing of non-DRM protected PDF files. The CopySafe Web browser plugin allows the use of this proprietary browser to run the two Readers. No other browser can view our DRM Protected files. ALL of these files are "FREE" for download, installation and use from www.artistscope.com

Authors will find that using ArtistScope Portable Media is free but to employ DRM requires an active account in an APM Portal. That same APM might provide an online version of CopySafe PDF Protector to convert uploaded PDF for use with APM, or the Author can purchase their own CopySafe PDF license from www.artistscope.com

Having an Author account in an APM Portal may require the payment of a fee for posting of the files for a determined number of months. As an Author you also have use of the APM Portal's online bookstore and e-commerce facilities for selling your ebooks and media archives online.

An APM Portal account enables the author to upload and register APM files in their library, add new subscribers, assigned access Tokens, and manage/track sales and usage. Subscribers will have to login to the server to register their computer to get access to the desired or assigned Author's file(s). ONLY ONE user's computer will be allowed to view the file(s). The file(s) and token(s) cannot be distributed to another computer for viewing. Finally, these files can be viewed without the need for an Internet access connection.

Now let's review the process to accomplish all of the above and give more explanation of the use, limitations and capability of this powerful procedure.

Encrypting the PDF Document

The process displayed here describes how to use the CopySafe PDF Protector software on your desktop. If you are using an online APM Portal you may be able to use a server-side version of this software, in which case the user-guide for that process will be provided online as you upload, etc.

1. **Start the CopySafe PDF Protector software** (downloaded from www.artistscope.com)

If you are using the CopySafe PDF Protector software on your desktop, check that you have a license for "localhost". An unlicensed demo version may produce a protected PDF file that displays a watermark. If you need a domain license you can purchase one online at www.artistscope.com

Click **"Next"** to continue.

2. Select the PDF-HTML option
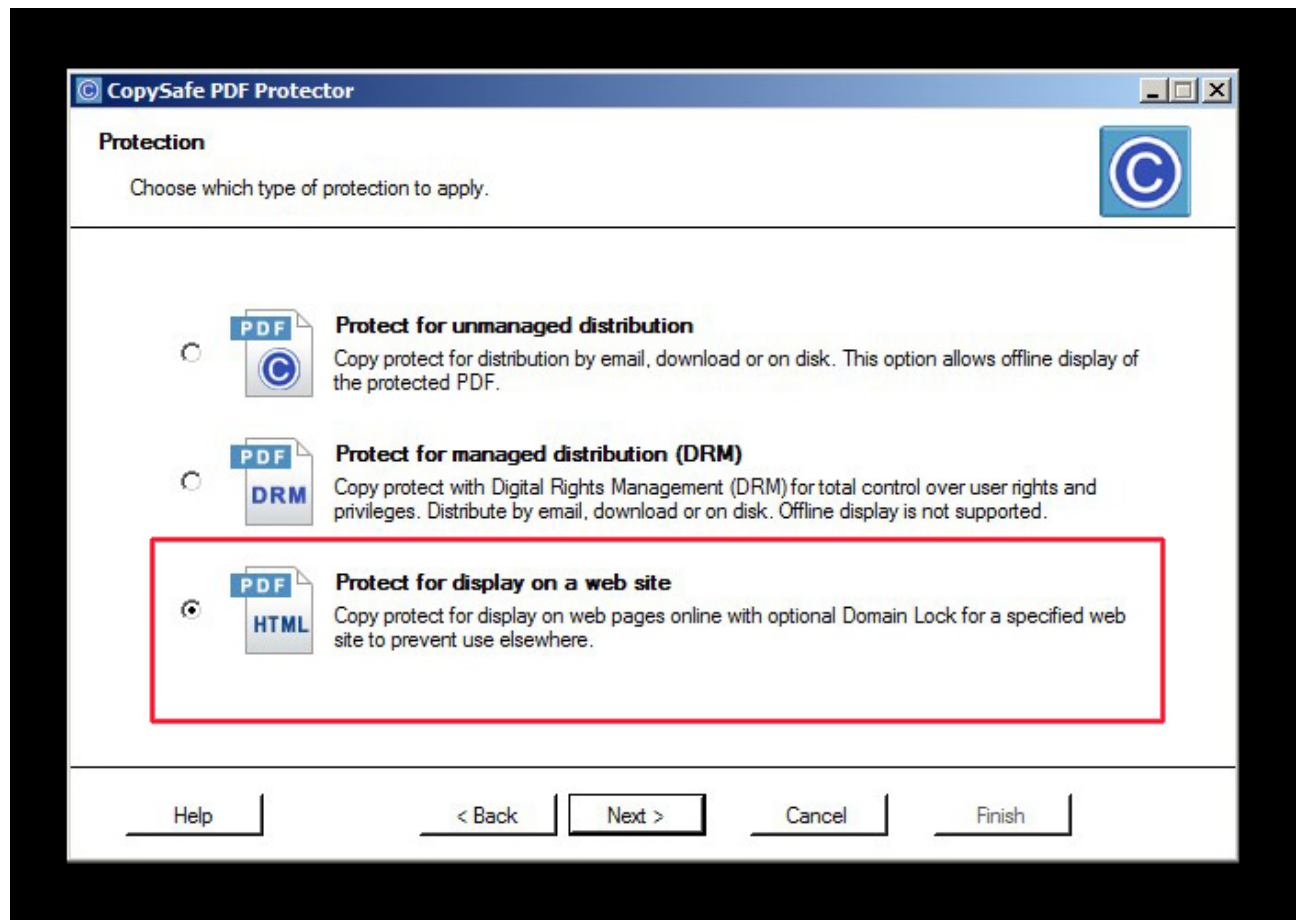
Although, you will select the third option (PDF HTML), let's briefly review all the options.

PDF - The first option (PDF) allows copy protection of PDF files for unmanaged distribution by email, download or on a disk. The offline display of these protected PDF is allowed.

PDF DRM - The second option (PDF DRM) allows copy protection for Digital Rights Management (DRM) with total control over user rights and privileges. These files require the user to be **online**.

PDF HTML – The third option (PDF HTML) copy protects the files for display on web pages online with Domain Lock for a specified web site to prevent use elsewhere. DRM for these files is provided by the method of display, either website login for online display, or in the case of APM then DRM can enable the user's computer by Token, preventing distribution to others. These files can be displayed while **offline**.

For APM select the third (PDF HTML) option because APM displays media on web pages from an embedded mini web server running at http://localhost.

Click **"Next"** to continue.

3. Select Input (Source) File (or Folder) and Output (Protected-Encrypted) Folder
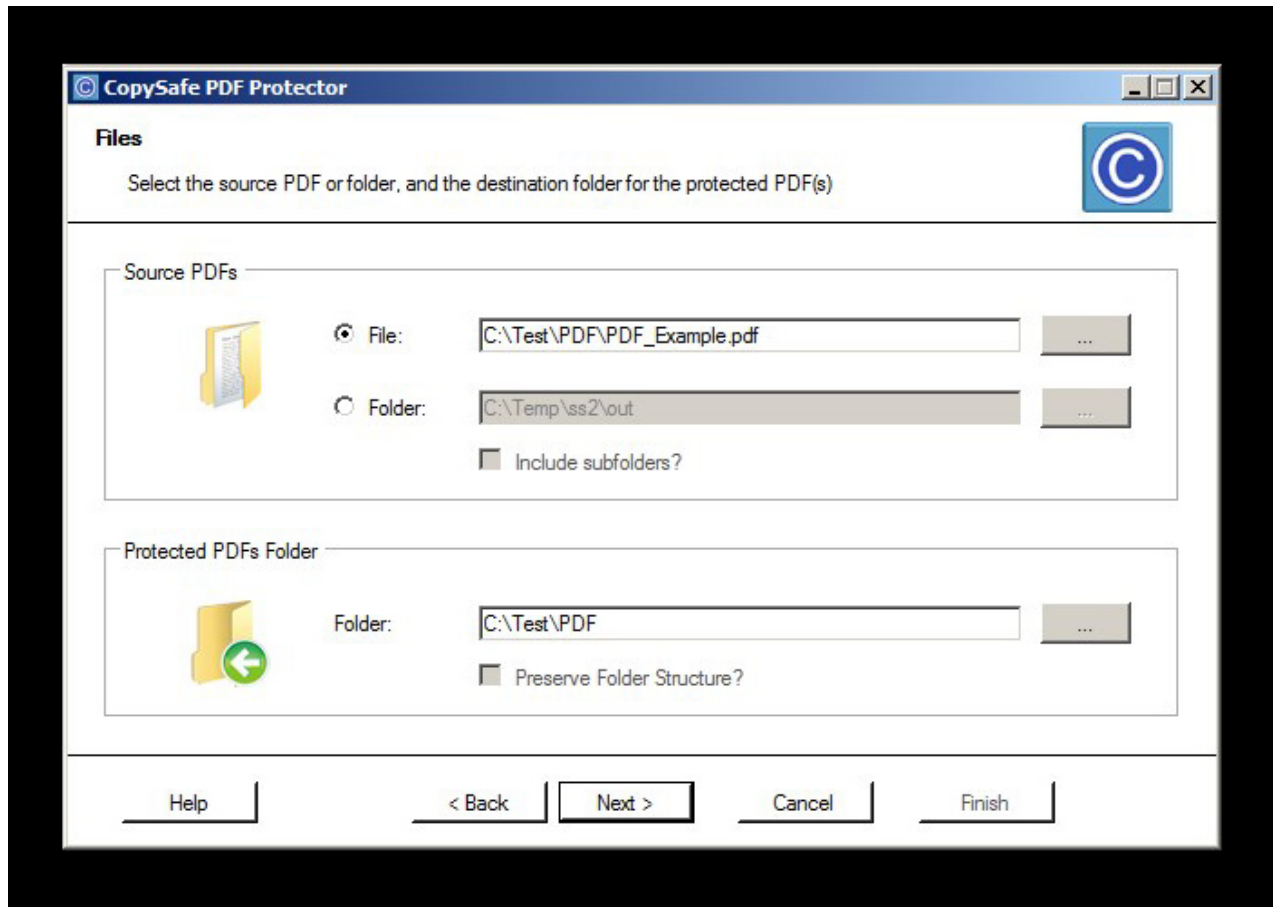

Select the source PDF file to encrypt and the folder to save the protected or encrypted (.class) file(s). Batch processing is supported if you select the folder containing multiple PDF files. All PDF files found in that source folder will be encrypted and saved to the output folder.

More than one protected PDF can be packaged into an APM file. In fact APM files can include multiple and various types of media (anything that can be displayed on a web page). Each media can be displayed on its own page in which case the index.html page could simply be an index with hyperlinks to the other pages.

Click **"Next"** to continue.

4. Select Domain Lock
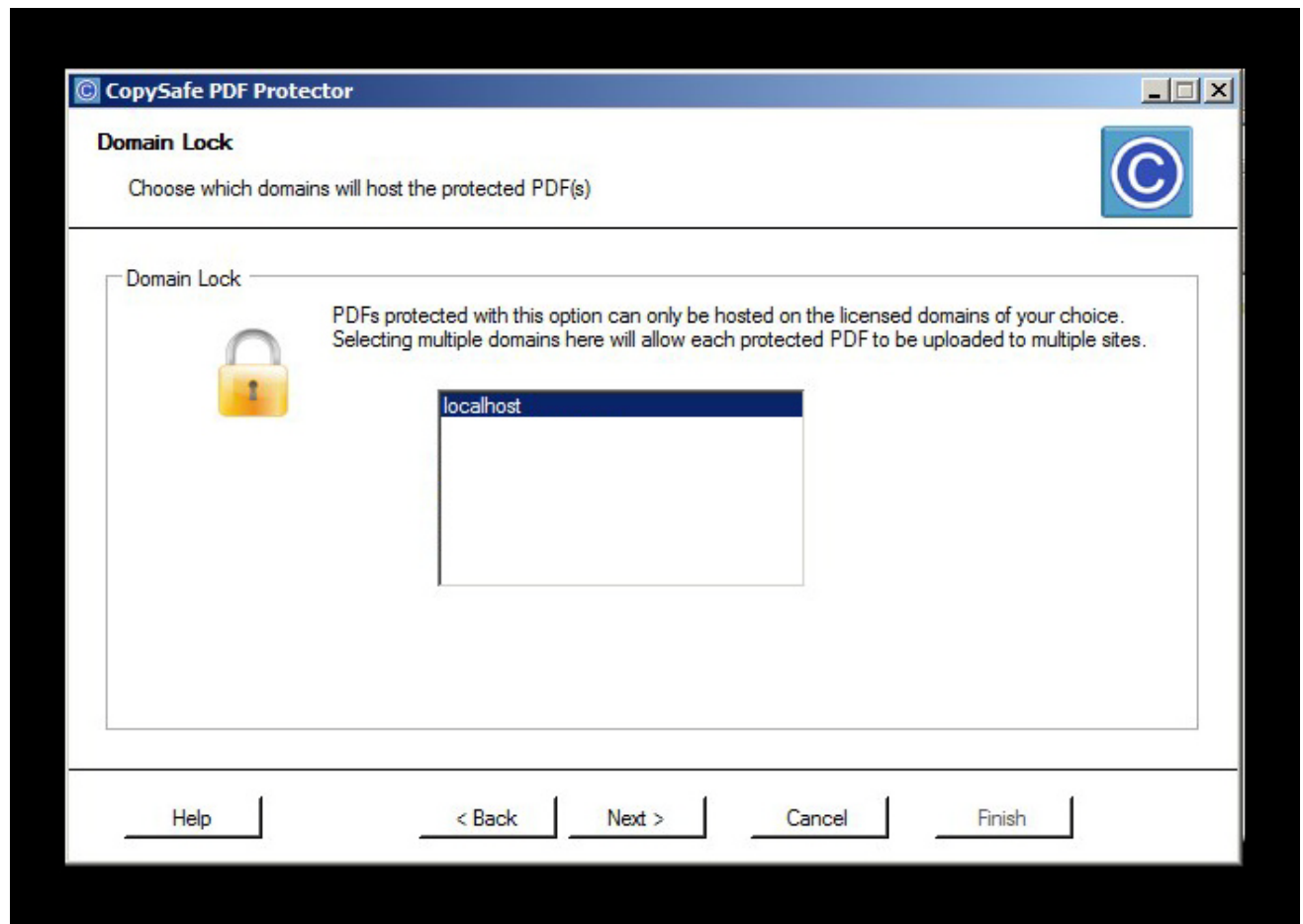
If you have a license to use the CopySafe PDF Protector your web site (domain) will be listed here. With all licenses purchased, an extra license for "localhost" is included, and it is the "localhost" domain that you need to select for packaging your APM protected/encrypted file(s).

Click **"Next"** to continue.

5. **PDF Conversion is Finished**
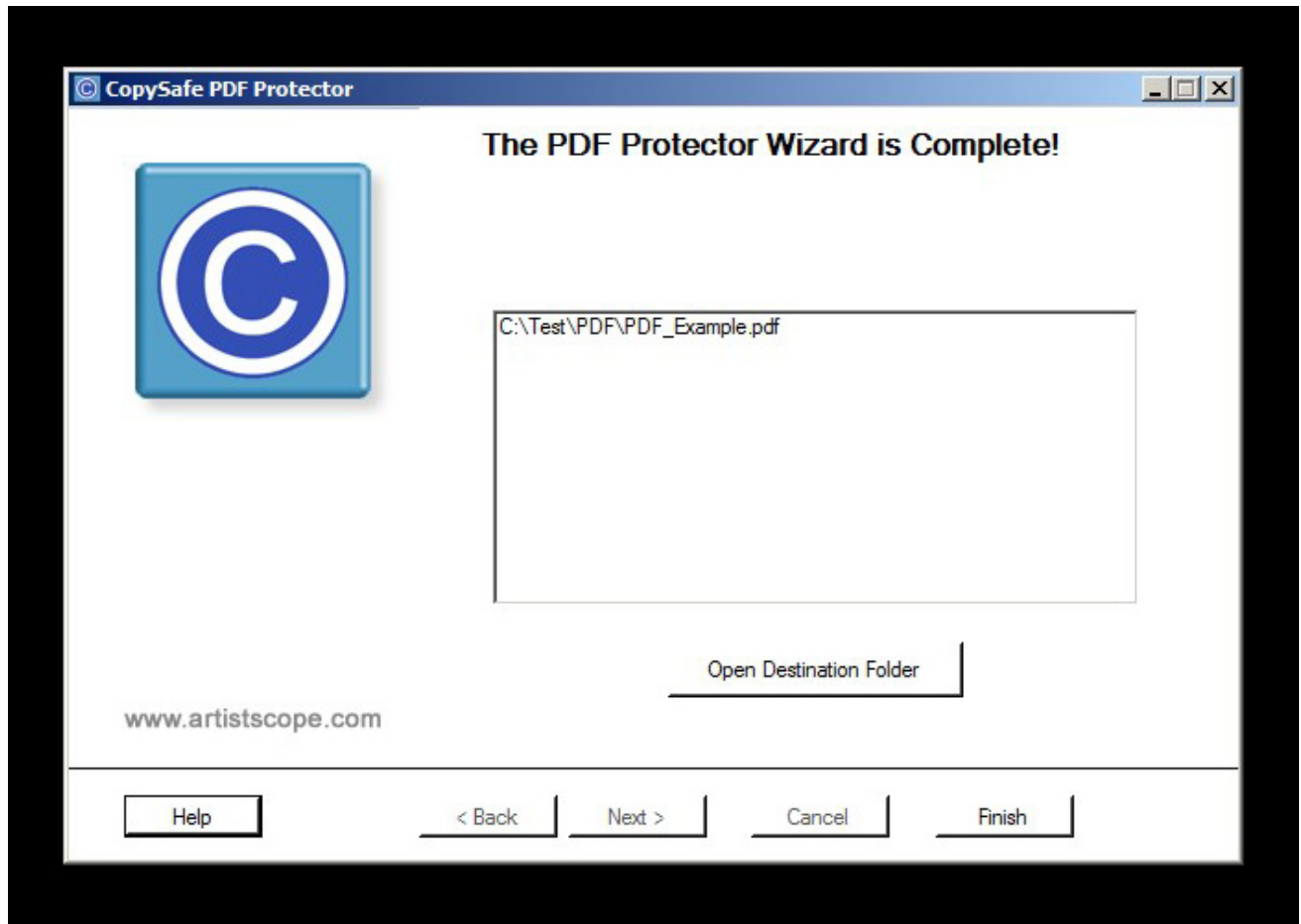
You are now ready to prepare the file(s) for your APM media archive.

You may include one or many PDF files to include in a single APM file.

Click **"Open Destination Folder"** to view your newly encrypted PDF (.class) file(s). The file(s) will contain the same name from the Source Folder or File but with a .class extension.

Preparing the APM Template

A template is provided by ArtistScope for displaying a single protected PDF (.class) file. This template can be used for any CopySafe PDF file to publish APM files containing **one** protected PDF file. However, many files can be included in an APM file. Each PDF file uses its own html page, and the index.html is used as the menu, with hyperlinks to each of the other document's page. This tutorial will concentrate on publishing a single CopySafe PDF document for the APM Reader.

1. **Select and Copy the PDF_Example.class file**
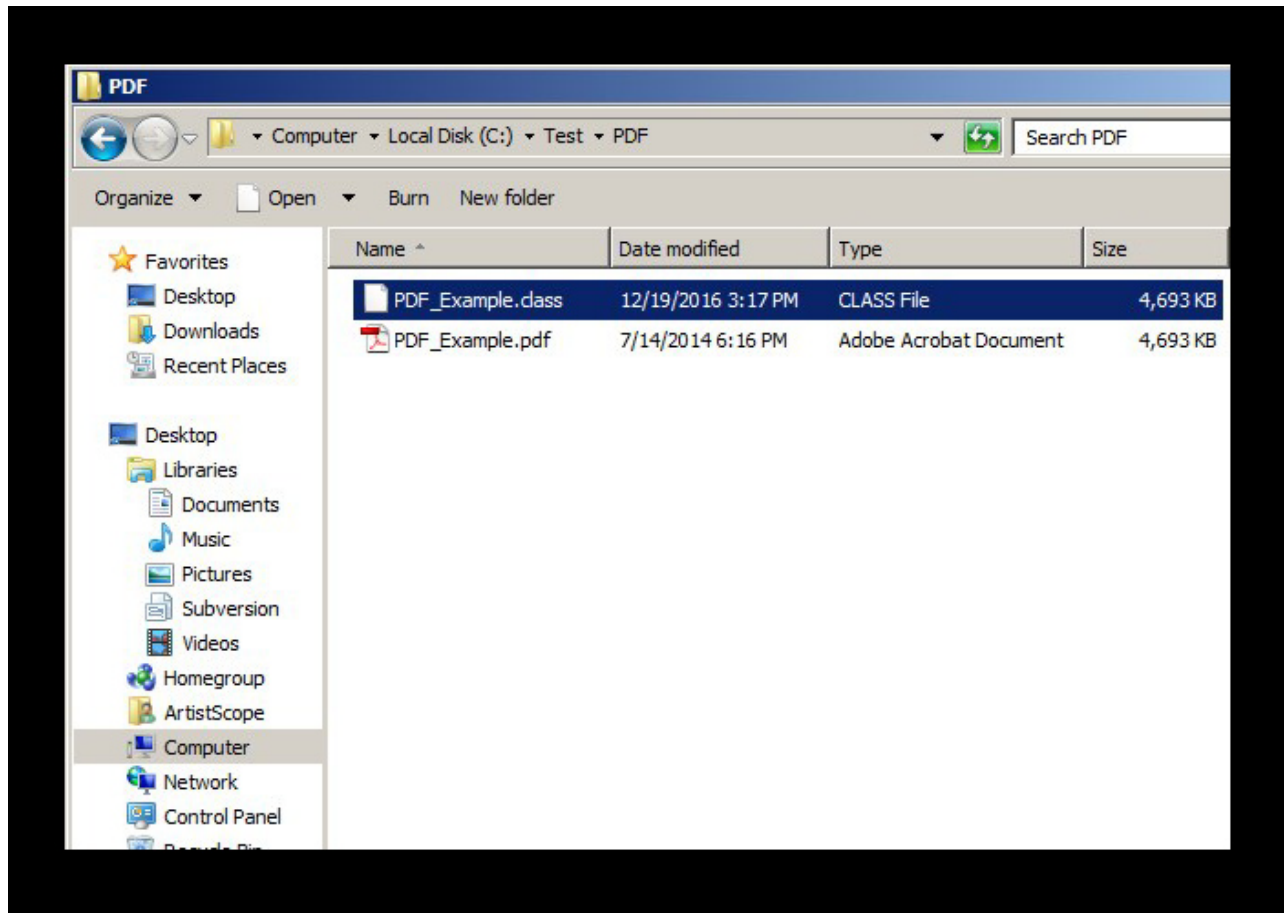
Right click on the PDF_Exmple.class file to **"copy"** it to the clipboard, or
Highlight and use the Ctrl +C keys to **"copy"** it to the clipboard.

2. Paste the PDF_Example.class file to your template folder
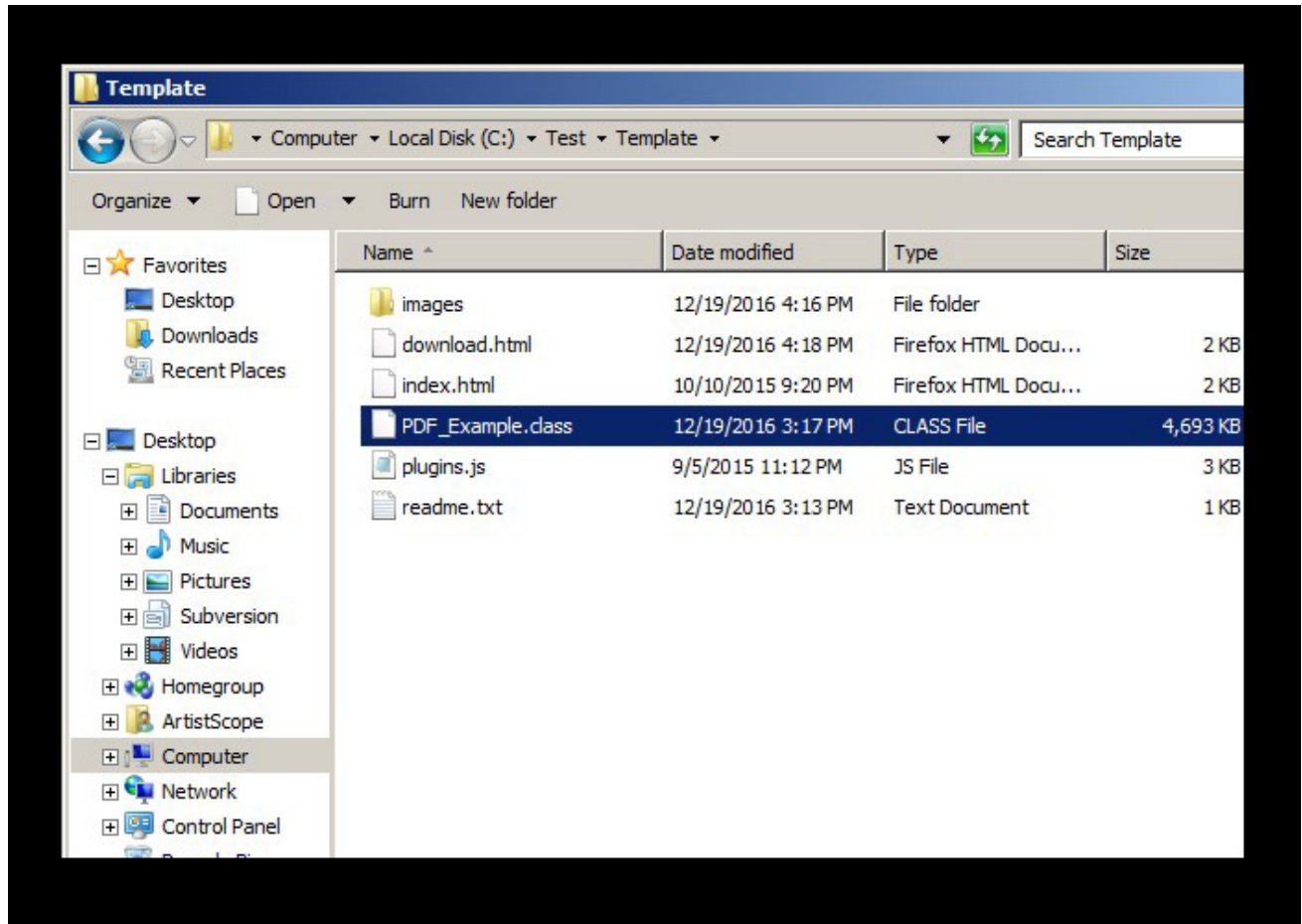
Right click to **"paste"** to the destination folder, or
Highlight and use the Ctrl + V keys to **"paste"** the file to the destination folder.

Everything found in your template folder will be included in the APM file, so remove files that are no longer needed, like the last .class file that you packaged.

3. Open index.html and correct the PDF file name

```
10  <body bgcolor="EEEEEE" leftmargin="0" topmargin="0" marginwidth="0" marginhe
11  <script type="text/javascript">
12
13  if (pluginlist.indexOf("CopySafe PDF Reader")!=-1){
14  //  document.write("You have CopySafe PDF Reader installed");
15  } else {
16      window.location = "download.html";
17  }
18  </script>
19
20  <object id='csviewer' type='application/x-artistscope-pdfreader5'
21      codebase='download.html' width='800' height='750'>
22      <param name='Document' value='PDF_Example.class' />
23      <param name='PrintsAllowed' value='0' />
24      <param name='PrintAnywhere' value='0' />
25      <param name='AllowCapture' value='0' />
26      <param name='AllowRemote' value='0' />
27      <param name='Language' value='' />
28      <param name='Background' value='EEEEEE' />
29  </object />
30
31
32  </body>
33  </html>
```

Using Notepad (or a similar text editor), select the **index.html** file and edit the <param name= 'Document' value = ''> to use the correct .class file name that is to be used.

If necessary, change the width and height setting that governs the size of the document display on the web page.

Other elements, such as header and corporate logo, can be added to these web pages. Experienced web designers may even include a frameset with side menu. However, for the purpose of this exercise, until you see it working, we will keep it simple.

Save **index.html** and then start the APM Packager.

Packaging a New APM File

By now you should have the CopySafe PDF .class file and your template folder ready.

1. Start the APM Packager
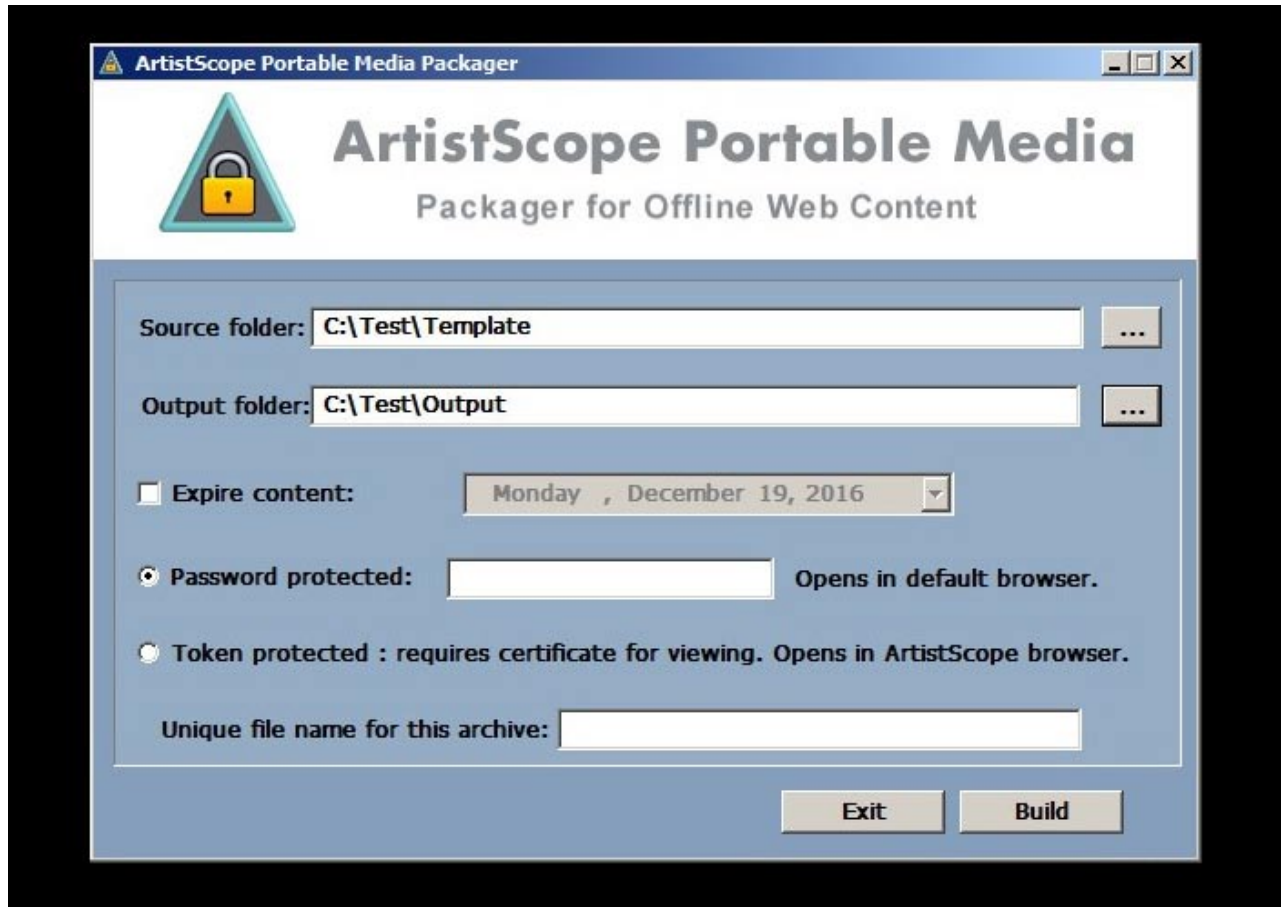
Select the **Source folder** containing your template.
Select the **Output folder** where you want the new APM file(s) saved.

You have the option of using **Password Protection** or **Token Protection**.

Password Protection: Should be self-explanatory. However, to create an APM file that does not require a password, select Password Protection but leave the password entry blank. If only Password protection is required you can finish the project by clicking the "Build" button.

Token Protection: Select to apply DRM so that the APM file(s) cannot be shared, or otherwise distributed without authorization.

We will use Token Protection. Proceed to the next page.

2) Select Token Protection

NOTE - To use Token Protection you will need an Author Token. The APM Packager checks for an Author Token file and only allows Token Protection if it is found. Each Author has a unique ID which the packager uses to prefix the file(s) built. Therefore, there will be no confusion and no chance of exploiting APM files created by another Author.
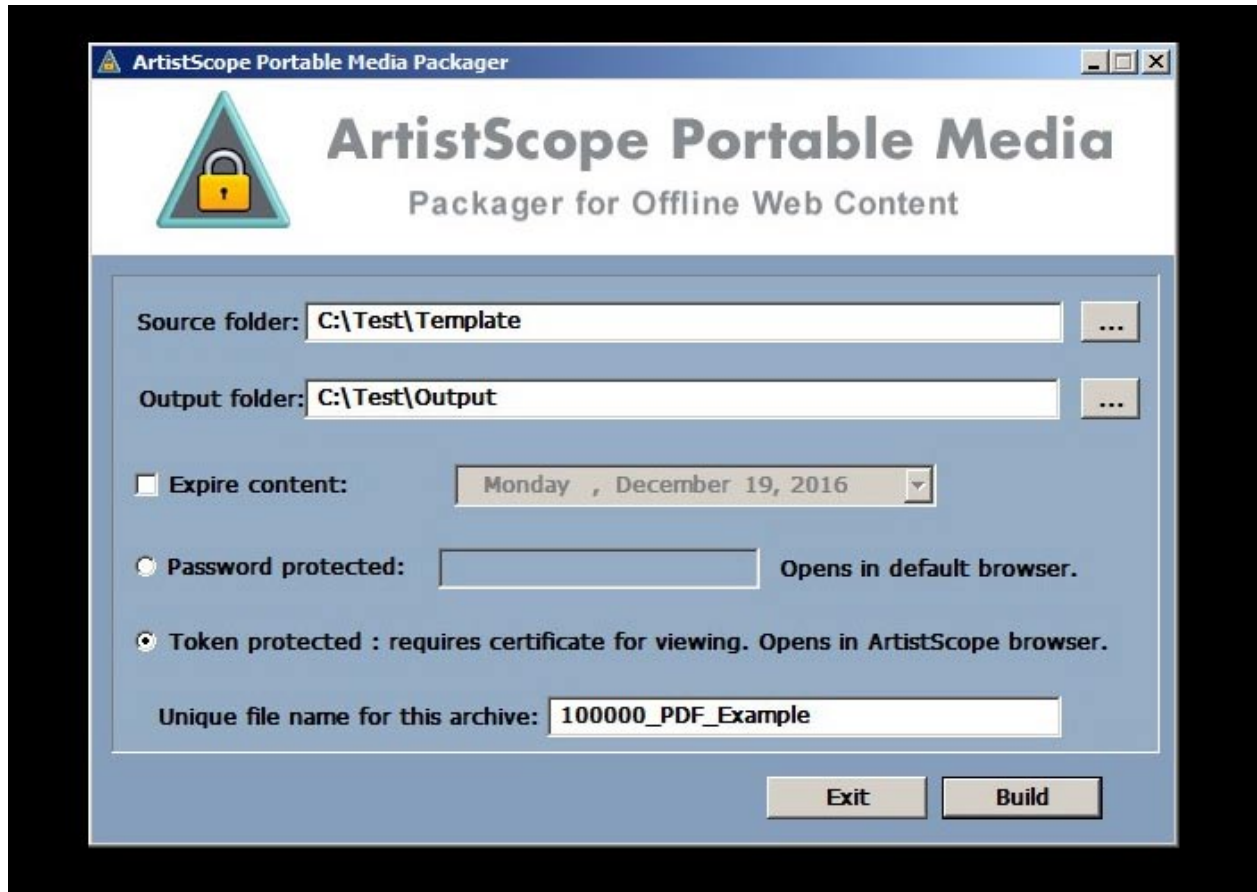
File names: File names must use letters and numbers only. Spaces should be replaced with either a hyphen or an underscore. Silly names normally allowed by some of today's applications will be automatically corrected. The APM packager will automatically add the file extension of .apmf.

Uploading for Token Management: Token Management for APM is provided from an online portal where Authors can upload/add APM files and users can log in to retrieve/purchase Tokens suitable for the computer that they are using. Remember, APM protection locks the protected file to just ONE computer, so retrieve the token on the computer you wish to view the file from. Read all about Tokens on the following pages.

APM Token Management

APM Token Management can be managed from an online portal provided by ArtistScope. ArtistScope maintains APM services for demonstration purposes and for APM Authors. Both sites use encrypted databases and Secure Sockets Layer (SSL). As many authors publish both PDF and video for online courses, the APM Token Management service for Authors is integrated with the same portal that ArtistScope provides for CopySafe PDF Authors.

File(s) for APM Token Management

When packaging file(s) with the APM Packager, there will be 2 output files: (the 100355 is the Author's id)

100355_test_archive.apmf	9/28/2016 3:50 PM	ASPSmedia	19,194 KB
100355_test_archive.txt	9/28/2016 3:50 PM	Text Docum...	1 KB

Only the smaller .txt file will be permitted as an upload by users as it provides all the information that is required, ie: correct file name and byte size of the APM file. Authors do not have to upload large files of 2-200 Mb. Subscribers can be directed to download the main APM file from services better designed to provide download services. In fact APM files can be distributed by email, download or on CD.

It makes no difference because the same APM file can be distributed to all users. Only the users with a Token authorized by the Author will be able to open the APM file. For online courses, APM files are perfect. Authors can distribute their full course on CD or USB and then provide Tokens after the subscriber pays for the course, or reaches the next level in their course. The true media file name is embedded inside the encrypted media archive so that the media file can be renamed after creation.

APM Author Account

Authors can subscribe for APM management on a monthly basis, by paying an initial one-time setup fee plus a number of months rental in advance. Cancellation, or expiry, of an author account does not affect the life of Access Tokens already distributed to subscribers.

Authors can then log into their account and download an Author license file that enables the creation of **Token Protected** files and provides the prefix for APM file names. The APM Packager is activated for Token Protection by copying the Author's license to the same folder as the APM Packager, usually found at **C:\Program Files (x86)\ArtistScope Portable Media Packager**.

When APM files are registered in an Author's database, the Author can then assign Tokens to new or existing subscribers. Subscribers can collect tokens for the current computer being used by logging in with the ArtistScope browser.

Using the APM Token Management Portal

As an Author, after logging, in you will be provided with the following features:

My APM Archives provides a list for subscribers to download Tokens for the APM file that they are permitted to use. By logging in while using the ArtistScope web browser, their unique computer ID can be detected so that it can be used in the Token that they request here.

As of January 2017 the ArtistScope browser includes the APM Reader, the CopySafe PDF Reader and the CopySafe Web browser plugin.

Registering APM Files for Token Management

Click the **APM Archives** link, under **My account:** to view a list of your (the Author's) APM files, shown below**.**

Click the **Add New Media Archive** link to upload your desired APM .txt file.

Only the .txt version is allowed to be uploaded here. It represents everything that is needed, including the correct file name and the byte size of the main APM file.

Select the .txt file to upload.

Media Archive : Upload

File uploaded: 100000_PDF_Example.txt   (0.01 Kb)

Next

Click **"Next"** to continue.

If the file name already exists you will have the option to overwrite the old file with the new file size.

APM File : Upload

An APM file using that file name already exists.

Overwriting this file may affect the file already in use by your subscribers.

Subject:	PDF Example
APM file:	100355_PDF_Example.apmf
Group:	Kendo Group
Active:	Yes
Last updated:	2017-01-14 20:40
Old filesize:	4856246 bytes
New filesize:	4856246 bytes

These settings can be changed by using the Edit option in your Archive index.

Edit   Update

If the file name is new, you will be presented with a form that requires some minimal information for the convenience of your subscribers.

APM Token Management   Welcome: ~~~~~~~~~~~

APM File : Upload

Process file: 100355_PDF_Example.txt for 100355_PDF_Example.apmf at 4.63 Mb

If the download link to the real APM file can be listed here it will save your users some time. This link and further instructions will be included in the sample file that gets sent by email and downloaded from their APM index.

* Required

ⓘ Full download: *   [   ] include the http://

ⓘ Group: *   [Kendo Group ▼]

ⓘ Subject: *   [PDF Example   ]

ⓘ Summary: [   ]

ⓘ Description: [   ]

ⓘ Visible: *   [Yes ▼] Yes = visible in the user's GROUP index

                        [Continue]

When finished inputting the required information, click **"Continue"** to save the new record.

APM Token Management   Welcome: ~~~~~~~~~~~

Media Archives

To add or edit a media archive click the link in the Edit column

Group: [All my media archives ▼]   Add New Media Archive | Edit Tokens

Active	Edit	Author	Group	Subject	Filename	Filesize	Dated	Upated	🗑
☑	100002	100355	Kendo Group	MyArchive	100355_MyArchive.apmf	19.19 Mb	2016-09-14	2016-09-28 23:40	☐
☑	100011	100355	Kendo Group	PDF Example	100355_PDF_Example.apmf	4.74 Mb	2017-01-14		☐

                                                                    [Delete selected]

Clicking on the column heading will sort the column by ASCending or DESCending order.

To create Tokens for your subscribers click the link for **"Edit Tokens"**.

Creating and Editing Tokens

Tokens are required by subscribers to have permission to open each DRM protected APM file. Tokens are assigned individually or by Group permissions by the Author.

Group Permissions

Group permissions apply to all subscribers enabling them access to any APM file that belongs to the same Group. So to allow your subscribers to access a series of APM files, simply add the APM files to the same Group as the subscriber(s). When the subscriber logs in, they can download a **Token for each** of those APM files.

Individual Tokens

To limit access to APM files per incident, an Author can assign Tokens for individual APM files to individual subscribers. One Token for each APM file/subscriber.

For individual Tokens to be enforced, the subscribers must belong to a different Group than the Group of the APM file.

New Users versus Existing Users

When creating or editing a Token, an Author has the option of sending an email from the server with download/login instructions. If a subscriber does not already exist, the **"Add Token for New User"** will create the new login. Otherwise, use the form for **"Add Token for Existing User"**. Either way, a token will be created and be available for the subscriber the next time they log in.

Tokens can be created but not sent by the Author to the subscriber until the subscriber's Computer ID is known. The subscriber needs to log in with the **ArtistScope browser** to collect their Tokens. This registers their computer ID at the same time.

Collecting Assigned Tokens - *This information is for subscribers only.*

Authors can only collect Tokens that they have assigned to their own account. When a subscriber logs in and then clicks the link for **"My APM Tokens"**.

Here subscribers can collect any Tokens that have been assigned to them. To collect a Token, select the APM file (as seen in the red square) and then click **"Get Token"**.

The Token file will be provided as a download and also sent by email in ZIP format. The Tokens are ZIPPED to encourage the subscriber to download/save them to their computer rather than trying to open them from a mail account. Also, some web browsers may not provide the download of a **.token** file, but rather try to display the encrypted content of the Token file which will be confusing to most subscribers.

For a Token to work, the subscriber needs to save the file to same folder that contains the APM file they want to open, then unzip the Token ZIP to produce the **.token** file. The APM Reader will look for a Token file when the APM file is protected by DRM.

Remember, this version of APM protection allows the viewing of protected files without Internet Access.

<h1 style="text-align:center;color:red">SUMMARY OF PROCEDURE STEPS</h1>

Encrypting the PDF Document

If you need a domain license, purchase one online at **www.artistscope.com**

1) **Start the CopySafe PDF Protector software**
   Check that you have a license for "localhost".
   Click **"Next"** to continue.
2) **Select the PDF-HTML option**
   Click **"Next"** to continue.
3) **Select Input (Source) File (or Folder) and Output (Protected-Encrypted) Folder**
   Click **"Next"** to continue.
4) **Select Domain Lock ("localhost")**
   Click **"Next"** to continue.
5) **PDF Conversion is Finished**
   Click **"Open Destination Folder"** to view your newly encrypted PDF **(.class)** file(s).

Preparing the APM Template

1) **Select and Copy the .class file to the Clipboard**
2) **Paste the .class file to your template folder**
3) **Open index.html and edit/correct the PDF file name**
   If necessary, change the width and height setting that governs the size of the document display on the web page.
   Save **index.html** and then start the **APM Packager**.

Packaging a New APM File

1) **Start the APM Packager**
   Select the **Source folder** containing your template.
   Then, select the **Output folder** where you want the new APM file(s) saved.
2) **Select Token Protection**