

8.1 Restricting Viewing and Editing with Security

Distributing your finished PDF document to others may feel like sending your 5-year old daughter off to kindergarten for the first time. You want your child to meet other children, but you also need to protect her from talking to strangers, going to the wrong school, losing her lunch money to bullies, or even from telling other children your personal family secrets. Fortunately, there are several different ways you can protect PDF documents by setting the built-in security options.

Document security is an increasingly important factor in PDF work flow, particularly for documents that will be shared through e-mail, CD-ROMs, intranets, or the Internet. There are



MORE SECURITY

There are lots of security add-on options for Acrobat PDF files. As of this writing, we know of at least 11 companies that provide security features that can be integrated into PDF documents. These companies include Entrust Technologies, FileOpen Systems, and Appligent.

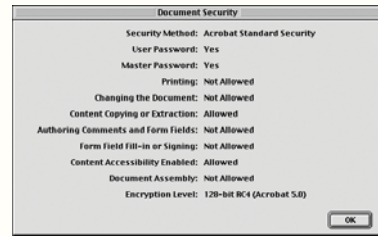
many different levels of security needed for PDF documents. For example, companies may send advance notice of new documents to their retail sales partners. The company doesn't want others to be able to open these documents. Another company may send a price sheet that they want to protect from someone altering the prices. An author may want to post a chapter from her book, but doesn't want anyone to be able to extract the text or graphics to use in their own documents. A publishing house may distribute books as PDF files, but not allow the books to be printed.

Acrobat lets you set a password at two different levels. The User password is required to allow people to open the document. Once the document is open, a Master password is required to change the security settings. In Acrobat version 5, the type of security encryption has been increased. This makes it harder for someone to break into a document. It also allows users to share documents between peo-

ple or locations with less fear of unauthorized viewing, printing, or editing. (Remember, no security solution is foolproof, but we'll cover that later.) Acrobat security settings can be specified when you first create a PDF file or at any time after the file has been created. Once you set the security restrictions, the tools and menu items related to the restricted features are dimmed in the tool bar and the main menu. This means that these tools are no longer accessible in the document.

PROTECTING WITH PASSWORDS

A PDF file can be protected with two passwords. A lower-level User password is set as the password required to open the document. A higher-level Master password is set as the password required to change any of the security options. You cannot choose the same password as both the User and the Master passwords. If a file has been protected with both a User and a Master password, you can use either one to open the file. If you open a file with a User password, you'll still need to enter the Master password in order to change the security options. Any restrictions on modifying and printing the document remain in effect. If you open a file with the Master password, you can also change the security options and all modifying and

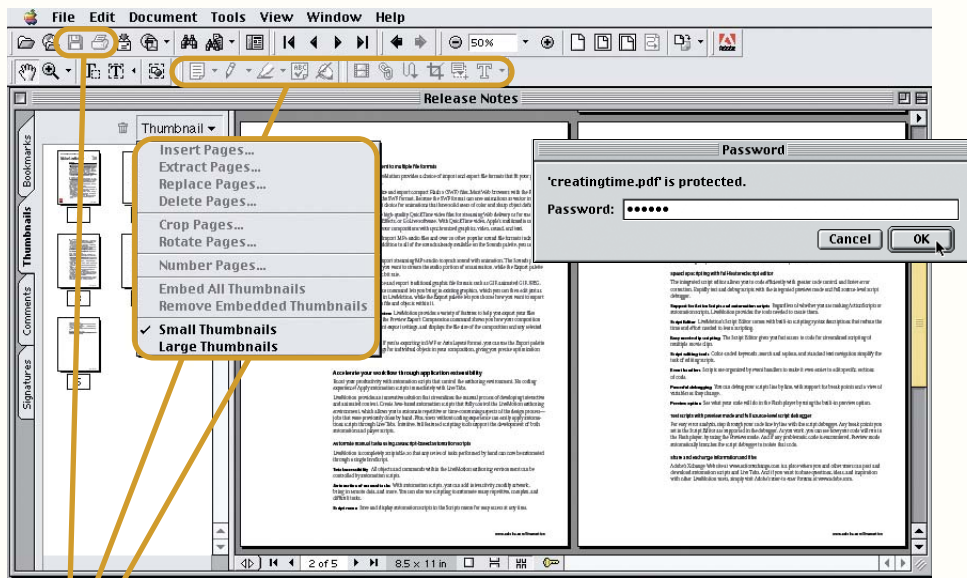


Document Security options control which features are active for a particular document, in either Acrobat or Acrobat Reader.

Don't think you can get around the security options by saving a copy of the file. The security options stay in place for the new file.

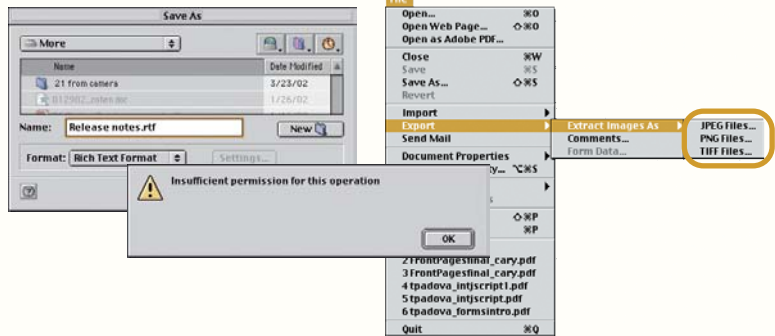
When a user password had been set, the password dialog box appears as the file is opened. The user must enter the correct password to open the file.

The Document Security dialog box shows which options in the document are allowed or not allowed.



Document Security causes certain tool bar icons and menu options to become unavailable.

Even commands that appear to be allowed, such as saving text, will be denied.



printing restrictions can be turned off. (That's why we call the Master password the high-level security option.)

The most common method of securing a document is to set only the Master password. This lets anyone open the document without any restrictions, but only the master can change the security settings. If a User password has been set, but there is no Master password, then anybody who opens the document can change the security settings. Obviously, this type of security would be pointless. Yet we receive many PDF documents that have precisely this sort of brain-dead security setting. We also get a lot of documents that have very specific security settings, but no Master password at all. In these cases, anyone can march right in and change the security options.

i PASSWORD CHOICES

The longer a password, the harder it is to break into a document. Nonsense combinations of letters such as "zxcv" are harder to decipher than real words. Also, mixing cases, numbers, and symbols such as "Zx\$2" is even more secure. Whatever password you choose, don't pick one like the password we found in a PDF file from a company we'll call "Acme Software." Someone set the Master password for a document we got from them as "Acme."

ry settings, but no Master password at all. In these cases, anyone can march right in and change the security options.

Please be cautious and fastidious about documenting, tracking, and storing the passwords to your documents. If a password is lost or forgotten, there is no easy way to recover it. There are third-party solutions out there that will attempt to recover a password from a document, but this could take days or weeks, if recovery is successful at all. Legitimate password-recovery companies

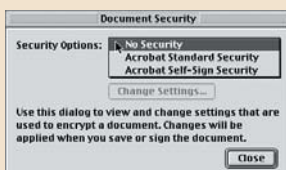
also require verification that you or your organization are the legal owners of the secured files and that the password recovery solutions will not be used for illegal activity. In general, the longer the password—the more difficult and longer the recovery.

At the basic software level, Acrobat does provide a measure of built-in protection. If you need added security, there are companies such as FileOpen and Appligent that offer plug-ins, add-ons, and server-based solutions that increase PDF security. Just as in real life, tighter PDF security comes with a price tag that might include usability issues. Digital rights management solutions for eBooks are an example of security measures that often result in an unusable document. Many eBook users complain that when they upgrade system software, the eBook file is no longer recognized or that they can't transfer it to a new computer or PDA. We're all for protecting intellectual property, but the cost in time and frustration may simply not worth the added security.

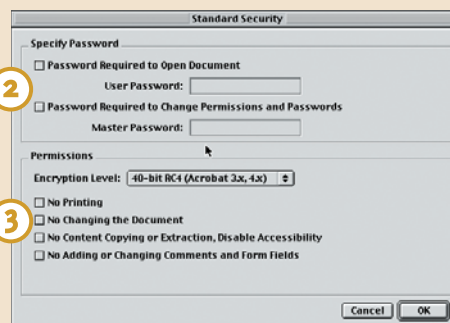
With that said, let's get on with the basics. Acrobat has two basic built-in security options; Standard Security and Self-Sign Security. Both are accessed from File>Document Security, and both choices contain numerous options for restrictions and levels of document encryption.

3 STANDARD SECURITY

- 1 Add security to a document using the Document Security options. Choose File>Document Security to open the dialog box. Choose Acrobat Standard Security from the Security Options list. The Standard Security dialog box opens.



- 2 Set the user password to enable the basic password security feature. All users must enter a given password to access the file. Passwords are case sensitive.
- 3 The 40-bit encryption offers backwards compatibility with Acrobat 3.x and 4.x. It provides four options for document permissions.



SETTING STANDARD SECURITY

The Standard Security option is the most common and easiest type of security to apply. It is used with documents that will be distributed to people you do not know.

Step 1 Open the Security Options

Open a PDF in Acrobat 5 and choose File>Document Security. Choose Acrobat Standard Security from the Security Options list. This will automatically open the Standard Security dialog box.

i TOTAL SECURITY

In case your mother never warned you, there are nasty, evil people out there. Just because you add security to a document doesn't mean that someone (like a 12-year old kid) won't try to hack into your document. There are constant reports of security flaws discovered in Acrobat and other electronic media. If your life's work would be lost if someone breached your document's security, then don't distribute it as a PDF file.

Step 2 Enter the Passwords

If you want to restrict certain Acrobat features, such as editing and printing, select Master Password and then type that password into the Master Password field. To restrict opening of the document to only those who have a password, select User password and then type that password in

the User Password field. Passwords are case sensitive.

Step 3 Set the Encryption Level

Use the Encryption Level list to set the complexity of the encryption of the document. The 40-bit encryption is a weaker level of encryption that is also used with Acrobat 3 and 4 documents. This setting should be used

if you anticipate that the document will be opened by Acrobat 4 or Acrobat Reader 4. The 128-bit encryption is stronger, and works only with Acrobat 5 or Acrobat Reader 5. A document with 128-bit encryption settings cannot be opened by Acrobat version 4 or 3.

Step 4 Control the Permissions

Although the two encryption levels are worded differently, the results are similar. However, the 128-bit encryption does provide a finer control over the options.

Enable Content Access for the Visually Impaired allows the document to be read by screen readers or other such devices. When this option is turned on, the security of the document is lowered.

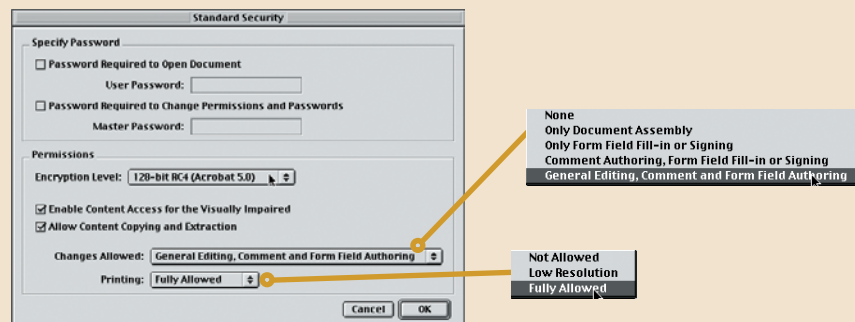
Allow Content Copying and Extraction lets the user select and copy text and graphics. It also lets them extract images or save the document in a text format. Turn this off if you don't want others using your text or images in their own work.

The Changes Allowed list lets you choose what type of changes can be made. The options go from bottom to top in order of increasing level of restriction.

The Printing list lets you choose three options for printing. Fully allowed lets the user print with complete fidelity to the original images. Low Resolution limits the printing to the screen resolution of images and fonts.

4 Once you have chosen the encryption level and whether you need compatibility with Acrobat 4, you can select from a variety of permissions for the document.

These are the options for setting 128-bit permissions. The permissions for both encryption levels are similar; but worded differently. 128-bit encryption is slightly more flexible.



RESTRICTING ACCESS WITH DISTILLER

You can also secure documents at the same time they are created. Start Distiller, and choose Settings>Security. You will be given the same 40-bit encryption dialog box that you see when setting document security in Acrobat. If you want to apply 128-bit security to your documents, you must first create a custom Job Options set. Start by choosing which set of Job Options you want to base your custom settings on (eBook, Print, Screen, etc.) and then select Settings>Job Options>Compatibility Acrobat 5.

If you have based this new set on one of the “canned” Acrobat job options, then it will ask you to name and save this new set in the Job Options folder. Now, when you select Settings>Security, you’ll see the dialog box for 128-bit encryption. You can also apply these security settings to the job options assigned to Watched Folders.

i SEARCH & SECURITY

If you want users to be able to use the Catalog and Search functions on documents that don't allow content extraction, they must be sure to select the Certified Plug-ins Only option in their Options preferences. You may need to include instructions on how to change the preferences. Choose Edit>Preferences>General>Options. Check the box by Start Up>Certified Plug-ins only and restart Acrobat.

REMOVING SECURITY

There are times when you need to remove the security from a document. We remove security settings (especially the User password) when we’re opening, closing, and making changes to a document. As long as you know the Master Password, removing security is easy. Go to File>Document Security. When

the initial dialog box appears, select No Security from the Document Security pull-down menu. If you did not use the Master Password to open the document, a dialog box appears that asks for the Master Password. Acrobat will also ask if you are sure that you want to remove the security. Choose Yes, and the security is lifted.

SETTING SECURITY FOR BATCH PROCESSING

If you’d like to apply the same security settings to a group of PDF files, you can use Acrobat’s built-in batch processing capabilities. Whatever you do, don’t run the pre-made sequence that ships with Acrobat 5 labeled “Set Security to No Changes.” While it will indeed set the security on all the chosen documents to No Changes, it does not add a Master password to keep someone from changing the Security Options (brain-dead security).

Fortunately, it’s not too hard to create your own batch processing security setting.

Step 1 Create a New Batch Sequence

Choose File>Batch Processing>Edit Batch Sequences. In the Batch Sequence dialog box, click the New Sequence button. Enter a name for the sequence and click OK.

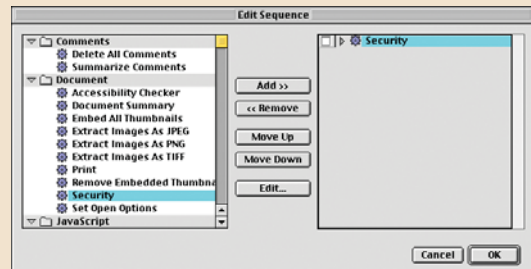
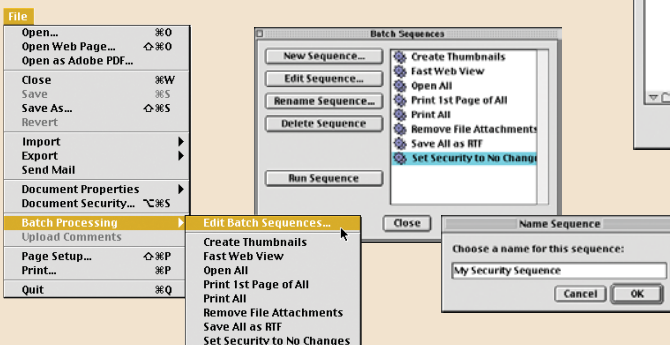
Step 2 Add Security to the Sequence

In the Batch Edit Sequence dialog box that

ADDING BATCH SECURITY

1 You can create your own batch processing setting for setting security options. Choose File>Batch Processing>Edit Sequences.

Click the New Sequence button and name your new sequence. Then click OK.



2 Select Security in the left pane and click the Add button. Then select the setting on the right side and click the Edit button.



opens, click the Select Commands button and then choose Security in the Document group in the left pane. Then click the Add button. This adds the Security listing to the right side of the dialog box. You now need to define the security options.

Step 3 Define the Security Options

Select the Security listing and click the Edit button. This opens the Document Security dialog box. Choose Acrobat Standard Security and

click the Change Settings button.

This opens the Standard Security dialog box. Define the security options you want for your batch sequence—make sure you enter a Master password. Click OK as many times as necessary to close the dialog boxes. The new

sequence appears in the Batch Processing submenu. See the Batch Processing section in the previous chapter for more on running batch sequences.



ENCRYPTION

Acrobat uses the RC4 method of security from RSA Corporation to secure PDF files. When you use Acrobat Self-Sign Security, your document is automatically encrypted at 128-bit RC4.

3

Choose Acrobat Standard Security from the Security Options, and then click the Change Settings button.

Set the Standard Security options for the batch sequence.

