

CPE Webcast

Encrypting PDF Files in Email Attachments: Reduce Risk, Automation & Compliance

Presented by:



Sponsored by:



Administrative Items

- **100 – 120 Minutes (Education, Demo, Q&A)**

- **Participants are muted. Please ask questions through the GoToWebinar Control Panel**

- **10% Discount to all attendees through 7/31/2013**

- **Eligible to Receive 2 CPE Credits**
 - Register at www.cpaacademy.org
 - Logged in for 100 minutes
 - Answer 6 of 8 polling questions
 - CPE Certificate will be issued in 2 – 3 days
 - iPad viewers beware

cPaperless, LLC

➤ **Paperless tools for the tax & accounting industry**

➤ **Products**



Adobe Acrobat Plug-In



Next Generation Client Portal & File Sharing



E-Signatures for Accountants (First to Market)

➤ **2,500+ Customers and 20,000+ Accountants**

➤ **Steve Dusablon**

President & CEO

(800) 716-2558 x 110

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Webcast Agenda

➤ How to manually Encrypt PDF files

- Live example
- Time consuming
- How much is it costing your firm?

➤ Compliance

- Breach of Privacy Laws & Security
- Options for secure file exchange & encrypted email
- The power of Adobe Acrobat (PDF) encryption and how it works

➤ Reduce Risk

- Password strippers & password crackers
- Best practices

➤ Automation

- CPA SafeMail demonstration

➤ Q&A

Manually Encrypting PDF Files

- **Most firms are manually encrypting PDF files**
- **Is this being done by partners, staff, admin or everyone?**
- **Do you know how time consuming, cumbersome and error prone it is?**

How Long Does It Take To Do It

Example of how most people do it

With automation it takes less than 10 seconds

Manually Encrypting PDF Files

➤ What does this cost your firm every year?

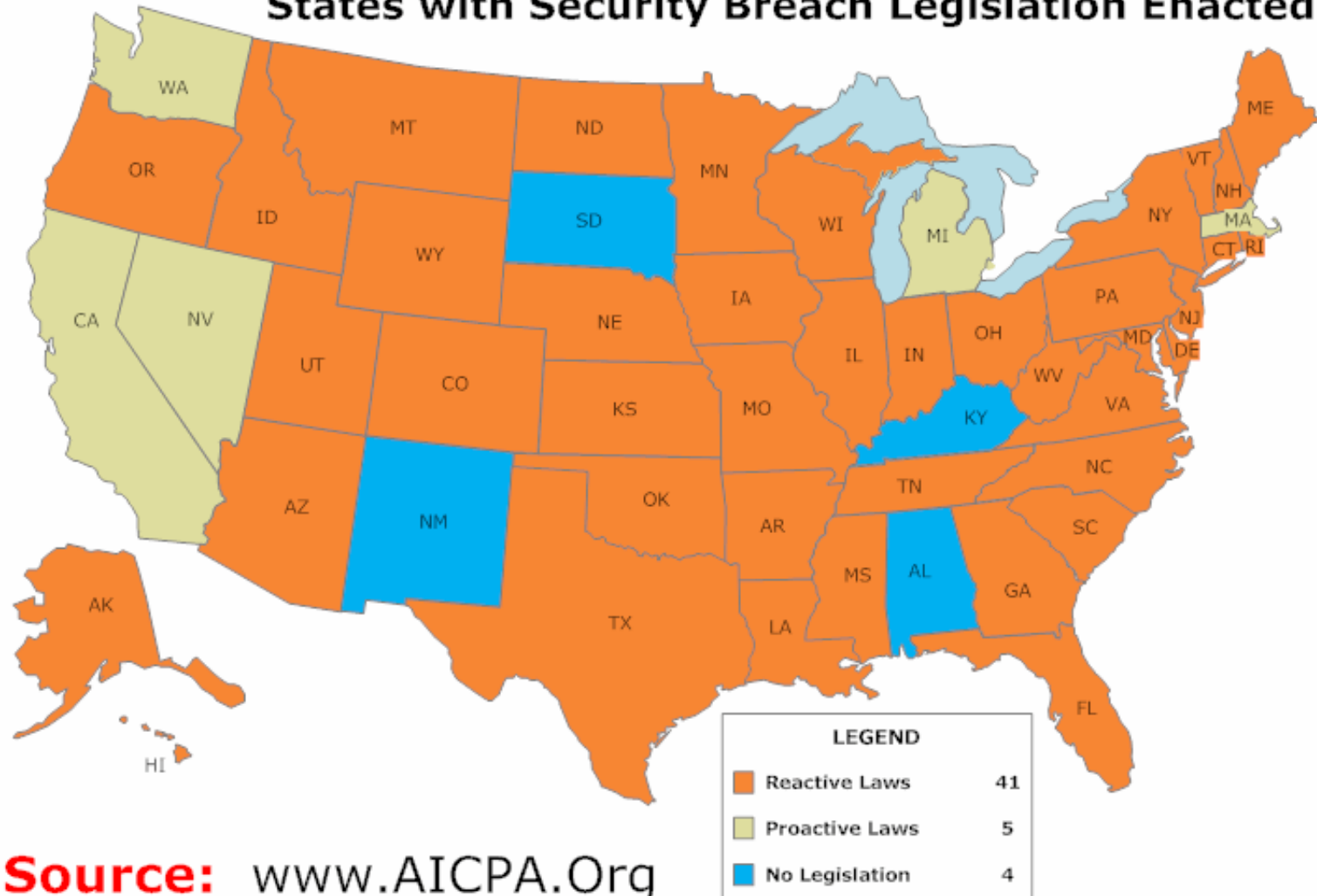
Description	250 Tax Returns	500 Tax Returns	1,000 Tax Returns	2,500 Tax Returns
<i>Minutes Per Transfer</i>	5	5	5	5
<i>Hours Per Year</i>	21	42	83	208
<i>Actual Cost</i> (\$30 per hour)	\$630	\$1,260	\$2,490	\$6,240
<i>Lost Billable Time</i> (\$150 per hour)	\$3,150	\$6,300	\$12,450	\$31,200

Webcast

Compliance

Breach of Privacy Laws

States with Security Breach Legislation Enacted



Source: www.AICPA.Org

Breach of Privacy Laws

➤ Tax & accounting firms handle confidential information

- Your firm has exposure!
- As world becomes more paper conscious, electronic transfer requests will increase
- This will magnify your exposure in the future

➤ What should you do?

- State Laws
- Federal Laws
- AICPA guidelines
- Fiduciary obligation to your clients and your firm
- Consider issue specific to the tax & accounting industry
 - For 70% of your clients, you only send confidential information once a year
 - *Clients will forget their passwords* - Will discuss in later slides
 - Ensure your file transfer solution has 1) options and 2) minimizes password issues

➤ What you choose to do

- Education on laws, encryption and security
- Evaluating the right encryption and file transfer solution for your firm



Security Dilemma

- **Secure file exchange is not easy**
- **Numerous encryption types, levels & methods of application**
- **As security increases, ease of use decreases**
 - Buy the best encryption & security, but none of your clients will use it
- **Clients will forget their passwords**
 - For 70% of your clients you only send them information once a year

**What's my
password?**



- **Important Take Away**
 - You can't control all the client variables (sophistication, OS, firewalls, etc.)
 - No solution is perfect, none will provide 100% adoption

Options for Secure File Exchange

➤ Client Portals

- Files uploaded to a server, email with link sent to client
- *Password authentication*

➤ Broad based solutions

- Files uploaded to a server, email with link sent to client
- *Password authentication*



➤ Fact: Less than 35% of your clients will adopt these systems

- Webcast: Why Client Portals & File Transfer Solutions Fail
- Please attend this webcast to learn more
- *Password authentication*

➤ Encrypted Email

- Using encrypted email is the only way to get 90% adoption



Options for Encrypted Email

- **Your clients know how to use Email**
- **Server based encrypted Email**
 - ZixMail, Smarsh, Ziptr
 - Email text body and attachments go to a web server instead of email
 - Client receives an email notification to login and read message / download files
 - *Password authentication*
- **Outlook security certificates**
 - *No passwords*
 - Requires Outlook, purchase certificates and public key transfer
 - Expensive & impossible to deploy in the tax & accounting industry
- **Still no answer. This isn't easy!**
- **Encrypted PDF files in Email attachments**
 - Very effective if done properly, achieving 90% adoption
 - Focus of today's webcast

The Power of PDF Encryption

➤ Encryption

- Anyone can manually apply with Acrobat Standard or Professional, or Acrobat alternatives
- Encrypts all document contents with RC4 or AES password based encryption
- 40-bit, 128-bit or 256-bit encryption available
- Application is time consuming, cumbersome & error prone (can be automated)

➤ Files sent through regular email as attachments

➤ Decryption

- Client only needs Adobe Acrobat Reader (FREE Version)
- One of the most widely distributed FREE software applications in the world
- Pre-installed on most computers & devices, and easily downloadable

➤ Your firm can leverage this to your benefit

- Easy to use - clients are familiar with it
- Most people already have the software
- FREE



Best Practices for Evaluation

- **Will my clients adopt it?**
- **Is it compliant?**
- **Is it easy to use and efficient for my staff?**
- **Is it affordable?**
- **If the solution does not meet these criteria, you are probably wasting your money!**

The Power of PDF Encryption

Adoption

100%

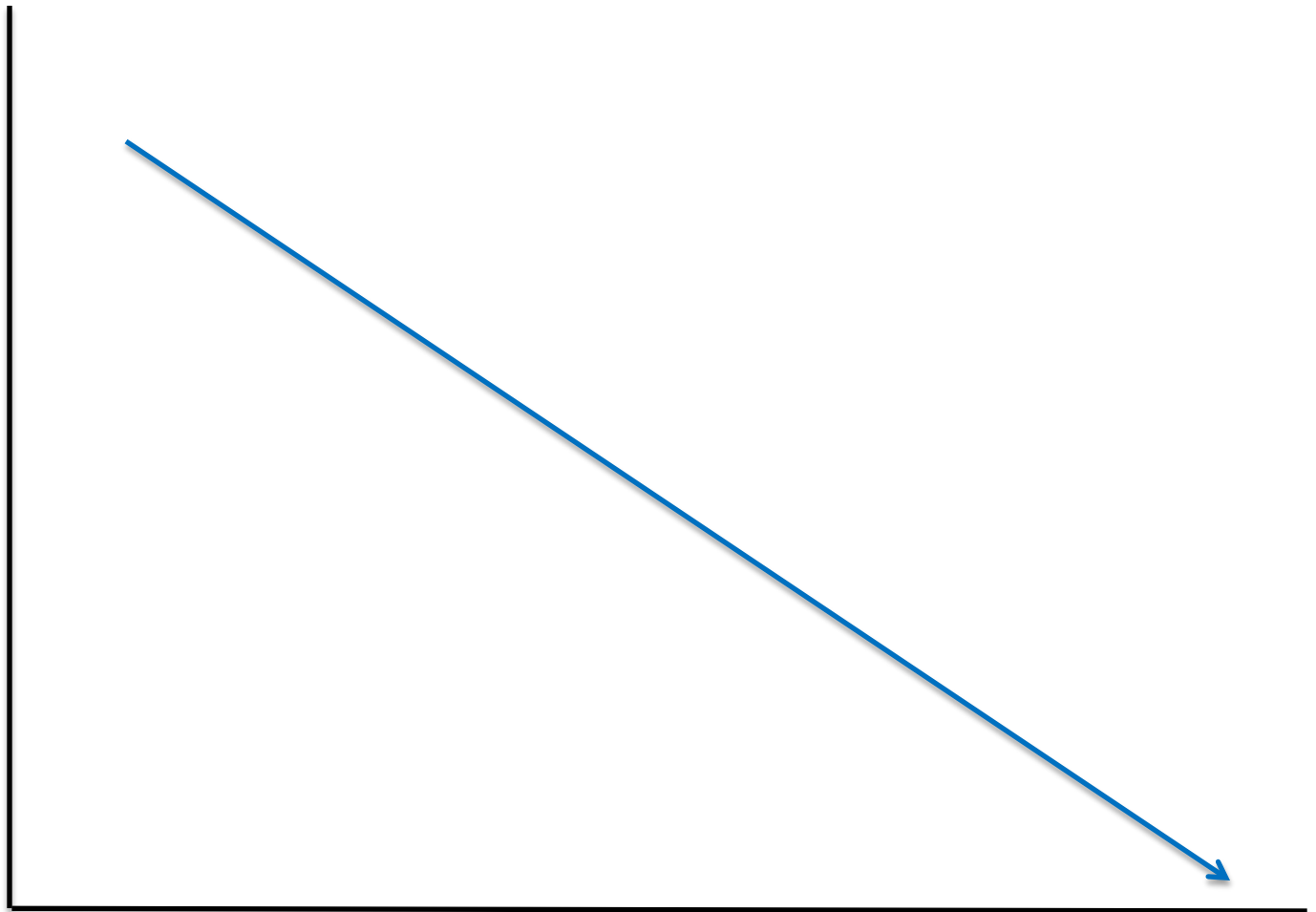
50%

0%

Low

High

Security



The Power of PDF Encryption

Adoption

100%

~~Email~~

~~Send as Link~~

Encrypted
PDF Files

50%

~~ZixMail,
Smartmail or Ziptr~~

~~Client Portal
& File Share~~

0%

~~Outlook
Security
Certificates~~

Low

High

Security

Problems With PDF Encryption

- **No solution is perfect, nor will it obtain 100% adoption**
- **Time consuming**
- **Error prone**
- **Subject to password strippers and crackers**
- **Does not encrypt text body of email, just the attachments**
- **Can't send Excel or Word files in their native format**
- **Clients can't remove passwords**
- **Some MAC users struggle with "Preview" application**

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How PDF Encryption Works

How PDF Encryption Works

The image shows the Adobe Acrobat Pro interface with the Document Properties dialog box open. The Security tab is selected, and the Security Method is set to No Security. The Can be Opened by dropdown is set to Password Security. The Document Restrictions Summary shows various permissions are allowed.

Document Properties

Description **Security** Fonts Initial View Custom Advanced

Document Security

The document's Security Method restricts what can be done to the document. To remove security restrictions, set the Security Method to No Security.

Security Method: No Security

Can be Opened by: Password Security

Certificate Security
Adobe LiveCycle Rights Management

Document Restrictions Summary

Printing: Allowed

Changing the Document: Allowed

Document Assembly: Allowed

Content Copying: Allowed

Content Copying for Accessibility: Allowed

Page Extraction: Allowed

Commenting: Allowed

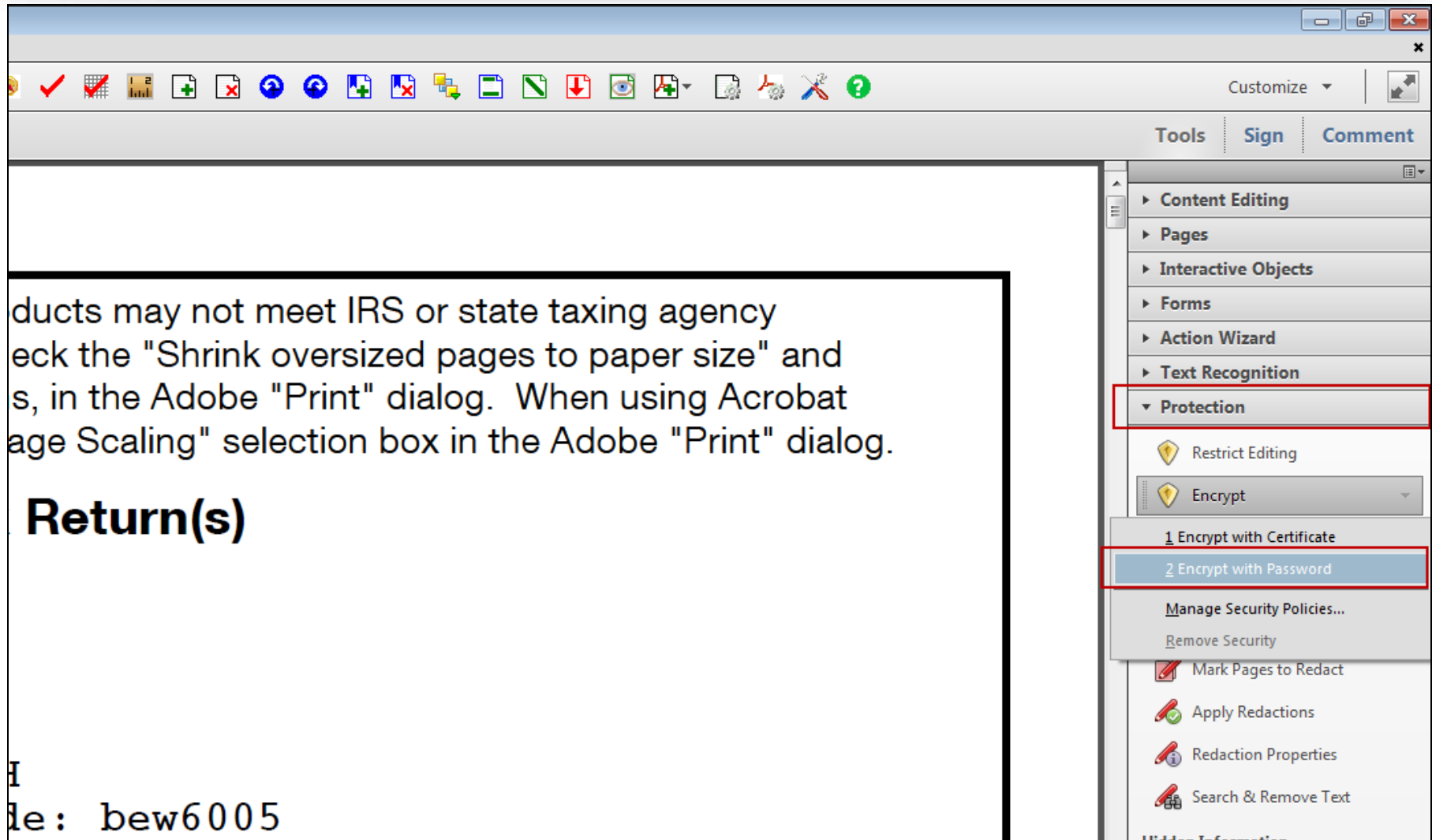
Filling of form fields: Allowed

Signing: Allowed

Creation of Template Pages: Allowed

Prepared for

How PDF Encryption Works



The screenshot shows the Adobe Acrobat interface. The main content area displays a document page with the following text:

ducts may not meet IRS or state taxing agency
eck the "Shrink oversized pages to paper size" and
s, in the Adobe "Print" dialog. When using Acrobat
age Scaling" selection box in the Adobe "Print" dialog.

Return(s)

I
le: bew6005

The right-hand side of the interface shows the 'Tools' panel with the 'Protection' section expanded. The 'Protection' section is highlighted with a red box. Within this section, the 'Encrypt' dropdown menu is open, and the 'Encrypt with Password' option is highlighted with a red box. Other options visible in the 'Protection' section include 'Restrict Editing', 'Manage Security Policies...', 'Remove Security', 'Mark Pages to Redact', 'Apply Redactions', 'Redaction Properties', and 'Search & Remove Text'.

How PDF Encryption Works

1) Document Open Password

- Use for Client Password
- Applies the encryption selected below

2) Permissions / Edit Password

- Locks file from editing, printing, etc.
- Use to open from your sent items folder

3) Encryption Type

- Recommend 128-bit or 256-bit AES
- Encrypt all document contents

Password Security - Settings

Document Open

Require a password to open the document

Document Open Password: Not Rated

Permissions

Restrict editing and printing of the document. A password will be required in order to change these permission settings.

Printing Allowed:

Changes Allowed:

Enable copying of text, images, and other content

Enable text access for screen reader devices for the visually impaired

Change Permissions Password: Not Rated

Options

Compatibility: Encryption Level: 128-bit AES

Encrypt all document contents

Encrypt all document contents except metadata (Acrobat 6 and later compatible)

Encrypt only file attachments (Acrobat 7 and later compatible)

All contents of the document will be encrypted and search engines will not be able to access the document's metadata.

Help OK Cancel

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Reduce Risk

Password Strippers & Crackers

1) Document Open Password

- Can **NOT** be removed
- Can be guessed through brute force attacks

2) Permissions / Edit Password

- Removed in < 1 second
- Cause of misconception of PDF files

3) Encryption Type

- Be careful of DMS solutions that apply 64-bit

Password Security - Settings

Document Open

Require a password to open the document

Document Open Password: Not Rated

i No password will be required to open this document.

Permissions

Restrict editing and printing of the document. A password will be required in order to change these permission settings.

Printing Allowed:

Changes Allowed:

Enable copying of text, images, and other content

Enable text access for screen reader devices for the visually impaired

Change Permissions Password: Not Rated

Options

Compatibility: Encryption Level: 128-bit AES

Encrypt all document contents

Encrypt all document contents except metadata (Acrobat 6 and later compatible)

Encrypt only file attachments (Acrobat 7 and later compatible)

i All contents of the document will be encrypted and search engines will not be able to access the document's metadata.

Help OK Cancel

Password Strippers & Crackers

Configured for

- 8 digits only
- Uppercase, lowercase & numbers
- 218,340,105,584,896 combinations
- 35+ years

The screenshot displays a password cracker interface with the following elements:

- Brute-force Attack: English** (Section Header)
- Password Length:** 8 to 8 characters
- Symbol Set:** Lower, Upper, Numbers
- Passwords to check:** 218,340,105,584,896
- Complexity:** A color-coded progress bar.
- Add new attack here.** (Text)
- Attack Progress** (Section Header)
- Attack:** Brute-force Attack: English
- Password Length:** 8 to 8 characters
- Symbol Set:** Lower, Upper, Numbers
- Estimated completion time:** 35 years, 4 mon.
- Drag attacks from this list:** A list of attack categories including Basic Attacks, Modifiers, and Combine Attacks.
- Brute-Force Attack Settings:** Configuration options for Minimum Length (8), Maximum Length (8), Language (English), and checkboxes for Lowercase, Uppercase, and Numbers.

Password Strippers & Crackers

Configured for

- 8 – 12 digits
- Uppercase, lowercase, numbers & special characters
- 13,605,133,066,289,930,723 combinations
- 2.5 MM+ years

The screenshot displays a password cracker interface. At the top, a grey header bar contains the following information: **Brute-force Attack: English**, Password Length: 8 to 12 characters, Symbol Set: Lower, Upper, Symbols, Numbers, and Passwords to check: -3,605,133,066,289,930,723. A complexity bar is visible on the right side of the header. Below the header, there is a large empty area with the text "Add new attack here." In the center, an "Attack Progress" window is open, displaying: Attack: **Brute-force Attack: English**, Password Length: **8 to 12 characters**, Symbol Set: **Lower, Upper, Symbols, Numbers**, and Estimated completion time: 2,509,895 years. 10 mon. On the right side, a panel titled "Drag attacks from this list:" contains a tree view with categories: Basic Attacks (Dictionary, Xieve, Brute-force, Known Password/Part, Previous Passwords), Modifiers (Change Casing, Reverse Password), and Combine Attacks (Join Attacks, Append Attacks). Below this is the "Brute-Force Attack Settings" section, which includes: Minimum Length: 8, Maximum Length: 12, Language: English, and checkboxes for Lowercase, Uppercase, Numbers, Symbols, and Space. There are also fields for "Custom characters:" and "Pattern:" and a "Recover >>" button.

Brute-force Attack: English
Password Length: 8 to 12 characters
Symbol Set: Lower, Upper, Symbols, Numbers
Passwords to check: -3,605,133,066,289,930,723
Complexity:

Add new attack here.

Attack Progress

Attack: **Brute-force Attack: English**
Password Length: **8 to 12 characters**
Symbol Set: **Lower, Upper, Symbols, Numbers**
Estimated completion time: 2,509,895 years. 10 mon.

Drag attacks from this list:

- Basic Attacks
 - Dictionary
 - Xieve
 - Brute-force
 - Known Password/Part
 - Previous Passwords
- Modifiers
 - Change Casing
 - Reverse Password
- Combine Attacks
 - Join Attacks
 - Append Attacks

Brute-Force Attack Settings

Minimum Length: 8 Maximum Length: 12
Language: English
 Lowercase Uppercase Numbers
Advanced <<
 Symbols Space
Custom characters:
Pattern:
Recover >>

Password Strippers & Crackers

Risks of embedding password hints in email text body

What Lacerte Does

Dear STEVE DUSABLON,

Attached is a PDF copy of your Tax Return.

The file is a password protected PDF. The password to open the file is based on the following:

PASSWORD INSTRUCTIONS

The password is made up of:

Last 4 digits of your EIN and 5 digit Billing Zipcode As an example, if you have EIN 12-3456789 with an address in zip code 98765 the resulting password is 678998765

IF YOU DO NOT HAVE A PDF READER

If you do not have a PDF reader, you can download the latest Adobe Reader by clicking on the link below. If clicking does not work, copy/paste the URL into your browser window.

Download the Adobe Reader here: <http://get.adobe.com/reader>

Sincerely,

Password Strippers & Crackers

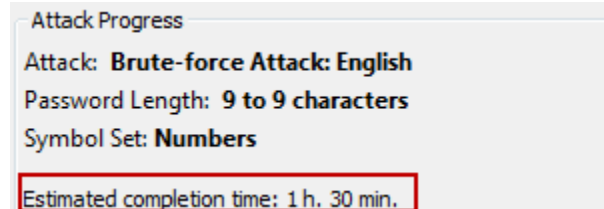
Risks of embedding password hints in email text body

Lacerte Tax

- Last 4 digits of your EIN and 5 digit Billing Zip code
- 9 digits all numbers
- Provides password hint in email text body

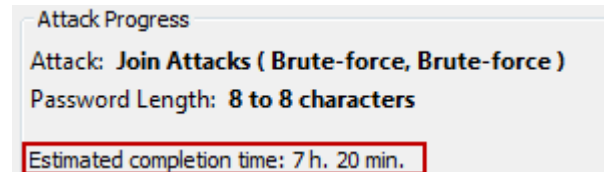
Full SSN or EIN with no spaces or dashes

- 9 digits all numbers



DMS and File Cabinet Solutions

- First 4 of last name followed by last 4 of SSN / EIN
- 8 digits
- First 4 are letters (upper or lower)
- Last 4 are numbers
- Some use 64-bit encryption



PDF Encryption Best Practices

➤ Document Open Password

- Can NOT be removed, but can be guessed
- Use for clients password
- Use 8 – 12 characters
- Include combination of uppercase, lowercase, numbers & special characters

➤ Permissions Password

- IMPORTANT: Only use if Document Open password is also used
- Easily removed
- Use as your backdoor access to files in your Sent folder
- Adhere to strong password requirements

➤ Apply 128-bit or 256-bit AES encryption

- Neither have been broken

PDF Encryption Best Practices

- **Avoid using password hints in email text body**
 - Allows hackers to configure password strippers

- **If using standardized passwords**
 - Create standard convention (first 4 last name + last 4 of SSN)
 - Communicate with clients before sending files (phone or email)
 - You can store in CPA SafeMail password manager for future use
 - Resend from Outlook if they forget

- **Randomly or manually generated & send in secondary email**
 - Risk of both being intercepted in transfer is remote
 - Risk is that someone has access to your clients email account
 - They have bigger issues
 - No solution is perfect, nor will it provide for 100% adoption
 - Our Opinion: This an acceptable level of risk to your firm

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Automation



CPA **SafeMail**

Secure Document Exchange

CPA SafeMail

- **Secure and compliant document exchange solution**
- **Easy to use for clients and staff**
 - Client Portal, Drop Box and encrypted email
 - Results in 90% adoption rates
- **Build for the tax & accounting industry**
 - Automates workflow
 - Automates PDF encryption
 - E-Signatures (Engagement Letters, §7216 consent, Form 8879)
 - Join webcast
 - No Login required
 - *No password authentication*
- **Use as an addition too your existing Portal**

CPA SafeMail

Client



Staff



Drop Box
(No Login)



Portal
35%



Encrypted
PDF File
90%



E-Signatures



PRODUCT DEMONSTRATION

Webcast Summary

➤ Encrypted PDF files in email attachments

- Great solution for secure file transfer
- Not perfect, time consuming, cumbersome, error prone, and can have risks

➤ Compliance

- Breach of Privacy Laws – your firm has exposure
- Client Portals & File Sharing solutions will not meet your needs
- Using Encrypted email is the way to achieve 90% adoption
- Leverage the power of Adobe (PDF) encryption

➤ Reduce Risk

- Adhere to best practices to mitigate the risk of password strippers / crackers

➤ Automation with CPA SafeMail

- Complete file transfer solution
- Automates PDF encryption
- Automates workflow processes
- Ensures enforceability of best practices
- Easy to use for staff & clients
- Affordable



System Requirements

➤ Staff

- Microsoft Outlook 2007 or 2010
- Microsoft Office 2007 or 2010
- Internet Connection
- Adobe Acrobat Reader (Free version)
 - Standard or Professional required to modify a PDF file before sending
- Citrix or Terminal Server compatible

➤ Clients

- Internet Connection
- Any Email System
- Adobe Acrobat Reader 7.0 or higher (Free version)

Next Steps

➤ **FREE 30 Day Trials**

Available to all members of your firm!


➤ **Contact Us:**

Web: www.cPaperless.com

Email: sales@cPaperless.com

Phone: (800) 716-2558 x 100

Pricing

 CPA SafeMail <small>Secure Document Exchange</small>	Annual Price Per User						
	1	2 - 4	5 - 9	10 - 24	25 - 49	50 - 99	100+
CPA SafeMail Features <ul style="list-style-type: none"> ✓ Automated File Preparation ✓ Automated PDF Encryption ✓ Automated Password Management (APM) ✓ Client Portal ✓ Simple Send ✓ Client Drop Box ✓ Unlimited clients, bandwidth and data transfer ✓ 30 day online storage ✓ SAS 70 Type II Data Facility 	\$250	\$175	\$150	\$120	\$90	\$75	Contact Sales
Optional Unlimited Online Storage Additional cost per user	\$100	\$75	\$55	\$45	\$35	\$25	Contact Sales

Q&A