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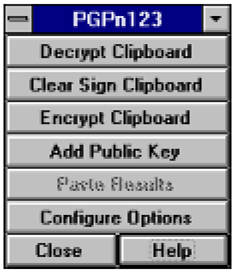


This is beta software - if you experience problems with operation or would just like to offer a suggestion, please write to alpha1@znet.com. All comments are welcome. When writing, PLEASE use our public key.

What is PGPn123?

In short, PGPn123 is yet another Windows shell for PGP. Yes, there are a few out there already, some work good, others do not. Of those that work as advertised, they can be very cumbersome. PGPn123 is our vision of what a PGP shell should be, and nothing else. You may decide you like it, then again, you may not - if not, please write anyway to tell us how it can be made better.

Unique Features

- Loads the linked application automatically. For example, if you are a Eudora user, you will click on the PGPn123 icon instead of Eudora's. PGPn123 will load Eudora and then always sit on top of it.

  Once linked with an application, it stays with it. PGPn123 always 'floats' just above the linked application. It's always real handy, there when you need it (You can minimize it to a floating icon if it's in your way).

- Keystroke macros can be sent to your application to speed up the process even more. In Eudora for example, all you need to do is place the cursor in the message body and click on the Encrypt button. A dialog box pops up where you select the recipient's key to use for encryption. After shelling to PGP, a viewer shows you what the output looks like, and lets you copy it to the clipboard. Back in Eudora, just paste it into the message body - you're finished!

- Use an internal or external viewer.

- Link to ANY Windows application. (though not on-the-fly, as yet anyway)

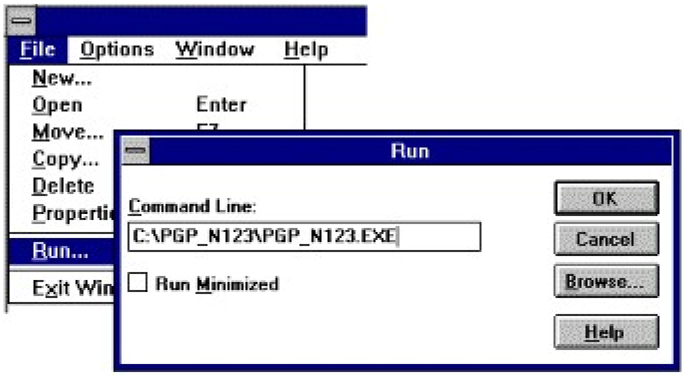
- Turn off keystroke macros for full control - Manual mode allows you to manually select and paste information to the clipboard, then process it with PGPn123. Use this when you don't want to process the entire message body or when you link to an application that doesn't respond well to the reception of foreign keystrokes. (Microsoft Word is one that comes to mind).

Installation

What to do with the files

Copy everything into a separate directory, such as C:\PGPn123. You should have:

PGP_N123.EXE	PGPn123 executable.
KEYOPS.EXE	Key operations module
BATCH.PIF	Used to run batch files created on the fly.
PGP_N123.HLP	This help file.
CTL3D.DLL	Gives most message boxes the 3D look
VBRUN300.DLL	Visual Basic's run time module.



Command Line: C:\PGP_N123\PGP_N123.EXE

Running the first time

Run PGP_N123.EXE from the Program Manager Run dialog box. The first time PGPn123 is executed, a program group and icon will be created, so this is the only time you will need to perform this step.

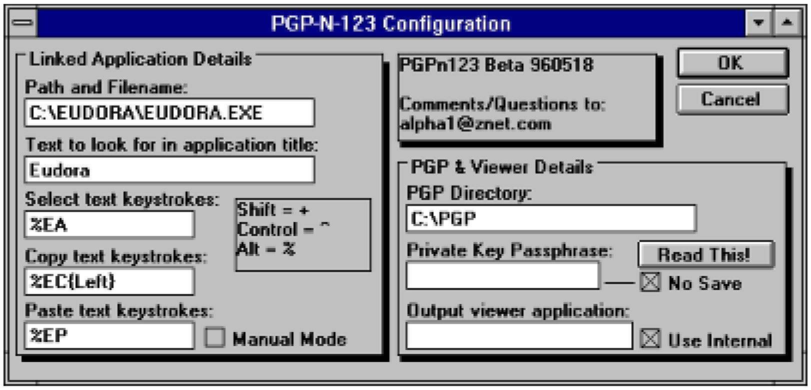
Configuration

The default configuration is for a stand-alone "clipboard" mode. There are no links other than the clipboard between applications. PGPn123 always stays on top.

In the configuration window, you can specify a certain application, like Eudora, to load at startup. PGPn123 will first attempt to find the application based on the Application Title field contents. If it cannot find an application with this text in the title, it will attempt to load it by running the specified program.

Once configured, it's best to use PGPn123 to start your e-mail application, instead of loading PGPn123 afterwards. Not only is better, but since it saves a step, it's also faster and easier. In order for PGPn123 to link with an application that's already loaded, it has to search every window title on the desktop for one that contains the text you specified in the Title Text field during configuration. While this usually works fine, it's not nearly as reliable as loading it automatically during PGPn123 startup.

Configuration Window



PGP-N-123 Configuration

Linked Application Details

Path and Filename: C:\EUDORA\EUDORA.EXE

Text to look for in application title: Eudora

Select text keystrokes: %EA

Shift = +
Control = ^
Alt = %

Copy text keystrokes: %EC{Left}

Paste text keystrokes: %EP

□ Manual Mode

PGPn123 Beta 960518

Comments/Questions to:
alpha1@znet.com

PGP & Viewer Details

PGP Directory: C:\PGP

Private Key Passphrase:

☒ No Save

Output viewer application:

☒ Use Internal

Linked Application

Path and filename: This is the e-mail program you will be linking with. If the program cannot be started, PGPn123 will take advantage of the information in the next field....

Text to look for in application title: If the specified application cannot be started (usually because it is already running), every window title on the desktop is searched. If this string of text is found in any of them, PGPn123 will attempt to attach itself with that window. Comparisons are not case sensitive, and PGPn123 is pretty dumb - it will be just as happy linking up with a document titled "Eudora" as it would with the program Eudora. That's why it's best to start your e-mail program from PGPn123 instead of the other way around.

Macro Keystrokes: When you click on the Decrypt, Clear Sign, or Encrypt buttons, PGPn123 does the following:

SELECT keystrokes are sent to the linked application. This is intended to select all text within the editing window of the application where the cursor is currently positioned. COPY keystrokes are sent immediately after the SELECT keystrokes. This copies the selected text to the clipboard. See Key Commands for details on writing keystroke macros.

You may have noticed the {Left} command in the COPY keystrokes - it simulates pressing the left arrow key to non-destructively deselect the text. If you would prefer to leave the text selected, take this out. Be aware that taking it out is somewhat dangerous, since if you hit a spacebar or any other key while that window has the focus, ALL selected text will be replaced with that accidental keystroke.

The selected function is performed on the text currently in the clipboard by saving it the file PGP_N123.TXT in the PGP directory. If this is an encryption operation, the text file will be wiped after encryption is complete.

If after viewing the output of the operation, you click on the Paste Results button, the PASTE keystrokes are sent to the application, where the contents of the clipboard (placed there during the viewing phase) are pasted into the linked program.

Manual Mode: Manual mode essentially disables the keystroke macros. This may be a preferred setting for those who wish to do their own copy/paste operations. Simply put the subject text onto the clipboard, then click on the desired function. The Paste button is disabled while in manual mode.

When operating in stand-alone mode (without an attached application), manual mode is forced, since there is know way PGPn123 could know to which application the keystrokes should be sent. Without an attached application, you must operate from the clipboard.

PGP Directory: The directory where PGP.EXE can be found. In this directory, PGPn123 creates a temporary file call PGP_N123.TXT that gets passed to PGP. Output from PGP is sent to PGP_N123.ASC. After each operation, PGPn123 wipes these files. It also wipes the batch file PGP_N123.BAT which is in the PGPn123 directory and is used to launch PGP (see next item for explanation).

Private Key Passphrase: There's a button next to this field that reads: "Read This!" You must to click on that button to gain access to this field. It may as well read "Press Here If You're Not Too Smart", because that's probably the case if you actually use this "feature". If you put your private key password in here, PGPn123 will put it in it's PGP_N123.INI file, plain as day, for anyone to see if they choose to look (you can avoid this by checking the No Save box, but you will need to re-enter it next time you start PGPn123). The reason a person may want to do this is if they genuinely feel that their computer is inaccessible to others and dislike the hassle of entering their password for each and every operation requiring a private key.

PGP accepts passwords in two ways: manually from the keyboard; and in the form of an environment variable called PGPPASS. When you enter a passphrase in this field, the batch file that launches PGP is modified during creation to include two extra statements:

```
SET PGPPASS=[Your Secret Key Passphrase]
...
PGP .....
....
SET PGPPASS=;
```

This allows PGP to perform any operation requiring your private key without prompting for it. For obvious reasons, this batch file (PGP_N123.BAT) is wiped after each use.

Viewer Application: If you would prefer to use an external viewer like Notepad, enter it here and uncheck the Use Internal box.

Key Commands

Key	Code	Key	Code
Backspace	{BACKSPACE} or {BS} or {BKSP}	Break	{BREAK}
Caps Lock	{CAPSLOCK}	Clear	{CLEAR}
Del	{DELETE} or {DEL}	Down Arrow	{DOWN}
End	{END}	Enter	{ENTER} or ~
Esc	{ESCAPE} or {ESC}	Help	{HELP}
Home	{HOME}	Ins	{INSERT}
Left Arrow	{LEFT}	Num Lock	{NUMLOCK}
Page Down	{PGDN}	Page Up	{PGUP}
Print Screen	{PRTSC}	Right Arrow	{RIGHT}
Scroll Lock	{SCROLLLOCK}	Tab	{TAB}
Up Arrow	{UP}	F1	{F1}
F2	{F2}	F3	{F3}
F4	{F4}	F5	{F5}
F6	{F6}	F7	{F7}
F8	{F8}	F9	{F9}
F10	{F10}	F11	{F11}
F12	{F12}	F13	{F13}
F14	{F14}	F15	{F15}
F16	{F16}		

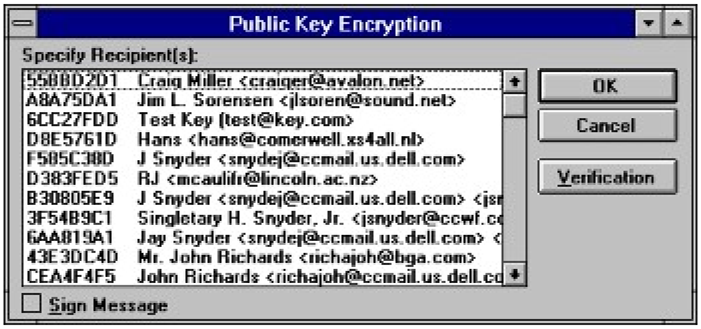
To specify keys combined with any combination of Shift, Ctrl, and Alt keys, precede the regular key code with one or more of the following codes:

Key	Code
Shift	+
Control	^
Alt	%

To specify that Shift, Ctrl, and/or Alt should be held down while several other keys are pressed, enclose the keys' code in parentheses.   For example, to have the Shift key held down while E and C are pressed, use "+(EC)".   To have Shift held down while E is pressed, followed by C being pressed without Shift, use "+EC".
To specify repeating keys, use the form {key number};   you must put a space between key and number.   For example, {LEFT 42} means press the Left Arrow key 42 times; {h 10} means press h 10 times.

Encrypting Messages

In the linked application, for example Eudora, type the body of the message. When finished, make certain the text cursor (as opposed to the mouse cursor) is placed in the message body. Click on PGPn123's Encrypt Message button. If you have properly configured PGPn123, the entire message body will be selected, copied to the clipboard, then saved to a temporary file (which is later wiped). PGPn123 will launch PGP in a minimized window to get a list of public keys available in your default public key ring. The list is placed into a list box, from which you may pick one, or several recipients for the message. *Hint: Click with the Control key depressed to make multiple selections.*



558BD2D1	Craig Miller <craiger@avalon.net>
A8A75DA1	Jim L. Sorensen <jlsoren@sound.net>
6CC27FDD	Test Key (test@key.com>
D8E5761D	Hans <hans@comerwell.xs4all.nl>
F585C38D	J Snyder <snydej@ccmail.us.dell.com>
D383FED5	RJ <mcaulifr@lincoln.ac.nz>
B30805E9	J Snyder <snydej@ccmail.us.dell.com> <jsr
3F54B9C1	Singletary H. Snyder, Jr. <jsnyder@ccwf.cc
6AA819A1	Jay Snyder <snydej@ccmail.us.dell.com> <
43E3DC4D	Mr. John Richards <richajoh@bga.com>
CEA4F4F5	John Richards <richajoh@ccmail.us.dell.co

If you wish to add your signature to the file before it is encrypted, check the Sign Message box. If you have more than one secret key, your default key will be used to sign the message. See Key Operations for information on how to specify your default key.

To verify that you are encrypting the right information, you can click on the Verification button. A message box with the first 512 bytes of your message will appear for your examination. If the wrong information is displayed, it means that your message did not get copied to the clipboard properly.

Click on OK to have PGP encrypt your plaintext. The output will simultaneously be placed onto the clipboard and loaded into the viewer. You need not manually copy the text from the viewer (internal or external) to get it onto the clipboard - it's already there. The only time you would do this is if for some reason you didn't want to paste the entire output. Just manually select what you want, then copy it to the clipboard - the current contents will be replaced with your selection.

At this point, your plaintext message is still present in the message body. Use your mouse to select the entire body, or choose Edit|Select All from the application's menu. Click on PGPn123's Paste Results button. The selected message body will be entirely replaced with the PGP's output (or your selection from it).

Keep in mind however, that if you have chosen to work in manual mode, you will first need to select and copy the message body to the clipboard, do the encryption, then manually place it back into the body of the message, replacing the plaintext.

Clear Signing Messages

In the linked application, for example Eudora, type the body of the message. When finished, make certain the text cursor (as opposed to the mouse cursor) is placed in the message body. Click on PGPn123's Clear Sign Message button. If you have properly configured PGPn123, the entire message body will be selected, copied to the clipboard, then saved to a temporary file.

You will be prompted by PGP for your passphrase to unlock your secret key. The signed message output will simultaneously be placed onto the clipboard and loaded into the viewer. You need not manually copy the text from the viewer (internal or external) to get it onto the clipboard - it's already there. The only time you would do this is if for some reason you didn't want to paste the entire output. Just manually select what you want, then copy it to the clipboard - the current contents will be replaced with your selection.

At this point, your unsigned message is still present in the message body. Use your mouse to select the entire body, or choose Edit|Select All from the application's menu. Click on PGPn123's Paste Results button. The selected message body will be entirely replaced with the PGP's signed message output (or your selection from it).

Keep in mind however, that if you have chosen to work in manual mode, you will first need to select and copy the message body to the clipboard, sign the message, then manually place it back into the body of the message, replacing the plaintext.

Decrypting Messages and Checking Signatures

PGP   handles encrypted and signed messages in the same way. If it is encrypted with your public key, PGP uses your private key to decrypt it. If it is a signed message, PGP checks the signature against the signers public key on your public key ring. PGP itself will tell you whether there was a signature, and if so, whether it checked-out as good. Make sure you pay attention to the PGP messages, as the output is the same regardless of signature integrity.

In the linked application, for example Eudora, open a window with the signed and/or encrypted message. Move the text cursor to the body of the message by clicking in the message body. Click on PGPn123's Decrypt Message button. If you have properly configured PGPn123, the entire message body will be selected, copied to the clipboard, then saved to a temporary file.

If the message was encrypted with you as the recipient, PGP will prompt you for your secret key passphrase. The plaintext message output will simultaneously be placed onto the clipboard and loaded into the viewer. You need not manually copy the text from the viewer (internal or external) to get it onto the clipboard - it's already there. The only time you would do this is if for some reason you didn't want to paste the entire output. Just manually select what you want, then copy it to the clipboard - the current contents will be replaced with your selection.

At this point, your encrypted and/or signed message is still present in the message body. In Eudora, it is not possible to replace the message body of a received message without creating a reply, as to what you do with the plaintext - that's up to you. You might very well want to create a reply, pasting the plaintext into the reply's message body.

Click your mouse in the new message body, then click on PGPn123's Paste Results button. The plaintext result will be pasted into the message body, ready for quoting or whatever.

Keep in mind however, that if you have chosen to work in manual mode, you will first need to select and copy the message body to the clipboard, decrypt the message, then manually place it into a new message or reply.

Alpha1's Public Key

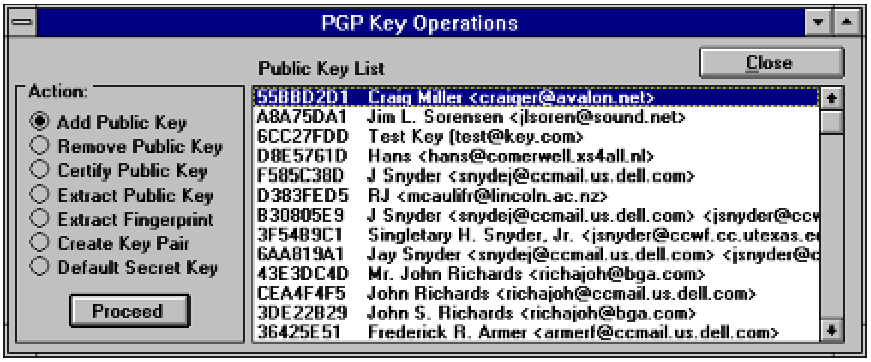
```
-----BEGIN PGP PUBLIC KEY BLOCK-----
Version: 2.6.2

mQCNAzGI+awAAAEEALRA45WJJ2NFUjVoYzKCc/cRs5bwK4o8Hiyo4vuMA6n1pYSQ
s6PQvI++PwxedI6gG2YTbp165w0OtIZmzz9GuW+QwowdVViWgPM5KJumBMK9fWkp
lZldCrlc3tNOoovXZbS2kCMxn9LKytiYapdiNR4PMHRm7XD6EEDlIgTrKJhRAAUT
tA9hbHBoYTFAem5ldC5jb20=
=n2ZF
-----END PGP PUBLIC KEY BLOCK-----
```

Wiping Files

As you probably know, DOS does not actually delete files, but simply marks the space they once occupied as now available. This makes it possible to undelete files containing possibly sensitive information.   A common practice to get around this, is it overwrite the file with random garbage before deleting it, rendering it's recovery irrelevant.

Worthy of note however, is that whether it's PGP's internal wiping procedure, or PGPn123's procedure, a file may never be touched if it resides on a drive that is cached by a memory caching utility such as Smartdrive, or a hardware caching device. For this reason, we once again warn against using PGPn123's features to automate the entry of your secret key. Even if you check the No Save box, the password is written to a batch file during the next operation (for the purpose of passing it to PGP). Due to the drive caching issue, this file, though wiped after use, may indeed still contain your passphrase if the cache did not see fit to write to the hard drive before the file was deleted.

Key Operations



Action:

- ● Add Public Key
- ○ Remove Public Key
- ○ Certify Public Key
- ○ Extract Public Key
- ○ Extract Fingerprint
- ○ Create Key Pair
- ○ Default Secret Key

Public Key List

```
55BBD2D1   Craig Miller <craiger@avalon.net>
A8A75DA1   Jim L. Sorensen <jlsoren@sound.net>
6CC27FDD   Test Key (test@key.com>
D8E5761D   Hans <hans@comerwell.xs4all.nl>
F585C38D   J Snyder <snydej@ccmail.us.dell.com>
D383FED5   RJ <mcaulifr@lincoln.ac.nz>
B30805E9   J Snyder <snydej@ccmail.us.dell.com> <jsnyder@ccw
3F5489C1   Singletary H. Snyder, Jr. <jsnyder@ccwf.cc.utexas.e
6AA819A1   Jay Snyder <snydej@ccmail.us.dell.com> <jsnyder@c
43E3DC4D   Mr. John Richards <richajoh@bga.com>
CEA4F4F5   John Richards <richajoh@ccmail.us.dell.com>
3DE22B29   John S. Richards <richajoh@bga.com>
36425E51   Frederick R. Armer <armerf@ccmail.us.dell.com>
```

Add Public Key_

To add a public key in the Key Operations window, select Add Public Key, then click on Proceed. This option takes the data in the clipboard and sends it to PGP. Because of this technique, if you have not previously copied the public key block to the clipboard, PGP will not find a key and will give you an error message.

Remove Public Key

Select Remove Public Key, then highlight the public key you wish to remove. Click on Proceed. PGP will prompt you for confirmation before removing the key.

Certify Public Key

Select Certify Public Key, then highlight the public key you wish to sign. By signing a public key, you are certifying that it does in fact belong to the listed owner. As a general rule, the more signatures present on a key, the more certain you can be of it's ownership. Click on Proceed. PGP will ask for confirmation before proceeding.

Extract Public Key

Select Extract Public Key, then highlight the key you wish to extract. Click on Proceed. PGP will create and ASCII armored copy of the key, and PGPn123 will place it into the viewer. From there, you can copy and paste it anywhere you wish. The key itself is not removed - this only makes a copy of the key.

Extract Public Key Fingerprint

Select Extract Fingerprint, then highlight the key you wish to fingerprint. Click on Proceed. PGP will create a file with the key fingerprint, and PGPn123 will place it into the viewer. From there, you can copy and paste it anywhere you wish. The key itself is not removed - this only extracts a fingerprint of the key for easy verification of its authenticity.

Create Key Pair

Select Create Key Pair. Click on Proceed. PGP will prompt you for the length of key you wish to create. After making a selection, a pair of complementary keys will be created, one secret key and one public key.

Default Secret Key

Select Default Secret Key. The list box with be loaded with your secret key ring. If there are two or more secret keys, select the one you wish to use. Click on Assign, to mark that key as the default. From this point forward, when you sign a message, it is this default key which will be used to make the signature. It is not necessary to set a default key if there is only one secret key.