

OpenPGP Tutorial

Step by Step Walkthrough Using Kleopatra

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Author:

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Change Forecast: As needed per NIST Standards

This document will be kept under revision control.

Change History

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PGPKLEO.2021.1	2023-0	Submitted	Initial Release
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Reviewer History

Reviewer's Details	Version No.	Date
Geoffrey Lewis	PGPKLEO.2021.1	2021-02-25
Nick Fuller	PGPKLEO.2023.1	2023-03-09
Benjamin Hale	PGPKLEO.2023.1	2023-03-09
Geoffrey Lewis	PGPKLEO.2023.1	2023-03-09

Table of Contents

Table of Contents	2
1. Introduction	3
2. Installation	4
3. Generating a New Key Pair	6
4. Locating, Verifying, and Exporting Public Key	9
5. Exporting and Backing Up Private Key	12
6. Importing a Public Key	13
7. Encrypting Files Sent to Equifax	15
8. Decrypting Files Sent from Equifax	17

1. Introduction

1.1. What is Pretty Good Privacy (PGP)? is a tool for keeping your data safe.

- 1.1.1. PGP was a popular program used to encrypt and decrypt email over the internet, as well as authenticate messages with digital signatures and encrypted stored files.
- 1.1.2. PGP now commonly refers to any encryption program or application that implements the OpenPGP public key cryptography standard.
- 1.1.3. PGP allows users to encrypt (scrambles) their data so no unauthorized person is unable to read the information.
- 1.2. PGP makes use of four types of keys:
 - 1.2.1. One-time session symmetric keys
 - 1.2.2. Passphrase-based symmetric keys
 - 1.2.3. Asymmetric keys (public/private key pair)
- 1.3. How is PGP implemented at Equifax?
 - 1.3.1. Equifax uses asymmetric PGP keys for PGP encryption/decryption.
 - 1.3.2. PGP encryption is performed with the public key.
 - 1.3.3. PGP decryption is performed with the private key pair for that public key.
 - 1.3.4. Authorized users must have access to the Only you and Equifax will have access to the decrypted (unscrambled) information.
- 1.4. PGP Key Requirements
 - 1.4.1. PGP key length is 2048+ bits.
 - 1.4.2. PGP key is created in RSA format.
 - 1.4.3. Public PGP key block contains both primary and sub keys.
 - 1.4.4. PGP key contains an expiration date no later than 2 years after create date.
 - 1.4.5. AEAD feature is removed (Preferred, not Required)
- 1.5. PGP Encryption Requirements
 - 1.5.1. Cipher Algorithm is AES256.
- 1.6. What will I learn in this PGP walkthrough?
 - 1.6.1. You will learn to create and apply a PGP key pair that meets Equifax requirements.
 - 1.6.2. Import and encrypt files sent to Equifax that meet its PGP encryption requirements.
 - 1.6.3. Decrypt PGP encrypted files received from Equifax.
- 1.7. Does Equifax own, maintain, or promote Kleopatra or any other OpenPGP related product?
 - 1.7.1. Equifax does use OpenPGP for all client batch file level encryption/decryption.
 - 1.7.2. Equifax does not recommend any specific OpenPGP file encryption software.
 - 1.7.3. Equifax does suggest, however, that clients choose a software package that has its own help desk so that you may receive support if you encounter any issues while using the software.

2. Installation

2.1. Download GPG4WIN from https://www.gpg4win.org/download.html , then run the install. Select your language and Click Next.

Installer	Language 🛛 🔀
-	Please choose a language for the setup. Bitte die Sprache des Installations-Vorgangs angeben.
	English 💌
	OK Cancel

2.2. When you see the screen shown below, check the 'Kleopatra' box. You can uncheck the other boxes if you wish.

🔒 Gpg4win Setup		- 🗆 X
Gpg4win	Choose Components Choose which features of Gpg4win	n you want to install.
Check the components you install. Click Next to contin	u want to install and uncheck the com ue.	ponents you don't want to
Select components to inst	all: CnuPG CpgQL CpgQL CpgEX Browser integration	Description Position your mouse over a component to see its description.
Space required: 84.9 MB		
Gpg4win-4,1,0		
	< Back	Next > Cancel

2.3. Click Next> then click Install.

🔒 Gpg4win Setup				-		×
Gpg4win	Choose Install Choose the fold	Location er in which to in:	stall Gpg4win			
Setup will install Gpg4win and select another folder.	n the following folde Click Install to start	er. To install in a the installation	different fol	der, dic	k Browse	!
Destination Folder) (Gpg4win			Brows	se	
Space required: 101.0MB Space available: 586.4GB						
9994WIR-5,1.8		< <u>B</u> ack	<u>I</u> nstall		Cance	el

- Gpg4win Setup

 Completing Gpg4win Setup
 Gpg4win has been installed on your computer.
 Click Finish to dose Setup.
 Mun Kleopatra
 Show the README file
 Go to Gpg4win's webpage
 Stack
- 2.4. Once setup is done, check the 'Run Kleopatra' box. Click Finish.

3. Generating a New Key Pair

3.1. Once the setup is done, you will see this screen, click New Key Pair. If you do not see the below screen, go to File \rightarrow New OpenPGP Key Pair

penr	U	Reg	ута							
а									-	
<u>C</u> ertificates	Tools	Settings	<u>W</u> indov	w <u>H</u> elp						
LQ Decrypt/Verify	import	t Export	Certify	Q Lookup on Server	Certificates	E N <u>o</u> tepad	Smartcards			
			Welcome	e to Kleopatra	Gpg4win-4	.2.0				
			Kleopatra is	a front-end for the	crypto softwar	e <u>GnuPG</u> .				
			For most ac	tions you need eith	ier a public key	(certificate)) or your own private key.			
			• Th • Th	e private key is nee e public key can be	eded to decrypt a used by other	or sign. s to verify y	your identity or encrypt to yo	ou.		
			You can lea	rn more about this	on <u>Wikipedia</u> .					
				N	ew Key Pair	Import				
	a Certificates E Recrypt/Verify	ي Certificates Iools کرتر اللہ Recrypt/Verfy Impor	<u>C</u> ertificates Iools Setting رومربوا/verify Import Eport	<u>certificates</u> Jools <u>settings</u> <u>Window</u> <u>(X)</u> <u>Export</u> <u>Export</u> <u>Certify</u> <u>Import</u> <u>Export</u> <u>Certify</u> <u>Weckomer</u> <u>Kieopatra</u> is For most ac Th You can lea	a <u>C</u> ertificates Iools <u>Settings</u> <u>Window Help</u> <u>C</u> <u>Recypt/Verfy</u> <u>Import</u> <u>Poort</u> <u>Certify</u> <u>Lookup on Server</u> <u>Welcome to Kleopatra</u> <u>Kleopatra is a front-end for the</u> <u>For most actions you need eff</u> <u>The public key can be</u> <u>The public key can be</u>	a gertificates Jools Settings Window Help Weizer Weizer Weizer Certificates Weizer Weizer Certificates Certificates Weizer Certificates Certificates Weizer Certificates Certificates Certificates Certificates Certificates Certificates Certificates Certificate	a <u>Certificates</u> Iools Settings <u>Window Help</u> <u>Recypt/Verfy</u> <u>Import</u> <u>Eport</u> <u>Certify</u> <u>Lockup on Server</u> <u>Certifique</u> <u>Ngleped</u> <u>Welcome to Kleopatra Gpg4win-4.2.0</u> Kleopatra is a front-end for the crypto software <u>Guides</u> . For most actions you need either a public key (certificate . The private key is needed to decrypt or sign. . The public key can be used by orbits to verfy. You can learn more about this on <u>Wikipedia</u> <u>Bern Key Pair</u> <u>Lockup</u> <u>Import</u> <u>Import</u>	a getticates looks Settings Window Help Becrypt/Venfy Import Deport Cettify Lookup on Server Centifyee Nglesad Signatcards Welcome to Kleopatra Gpg4win-1.2.0 Keopatra Signatcards Welcome to Kleopatra Gpg4win-1.2.0 Keopatra sis a front-end for the crypto software Grupts. Corn mot actions you need either a public key (certificate) or your own private key. • The public key can be used by other thy your dientity or encrypt to you Tou can learn more about this on Witigedia Void can learn more about this on Witigedia Lingent Lingent	a gettingter joots Settings Window Help BerophVerfy Inport Conff Lookup on Server Centragter Ngdepad Separtands Welcome to Kleopatra Gpg4win-1.2.0 Keopatra is a front-end for the crypto software GuipS. Control action you need either a public key centrafteds) or your own private key. - The private key is needed to decrypt or sign. - The public key can be und by order off your dientity or encrypt to you. Total action would be on Willipedia Weight action would be on Willipedia - The public key can be und by order willy our dientity or encrypt to you. Total action would be on Willipedia Willipedia - The public key can be und by order willy our dientity or encrypt to you. Total action would be on Willipedia Willipedia Willipedia - The public key can be und by order will und thety or encrypt to you. Total action willipedia Willipedia - The public key can be und by order willipedia Willipedia - Total actions would be the public key can be und by order willipedia - Total act	a - Certificates Tools Settings Window Help - BecryptVerfy Imoot Epool Certify Lookup on Server Certificates Ngtepad Spartcards - Welcome to Kleopatra Gpgdwin-4.2.0 Katopatra is a front-end for the crypto software (cruge). Certificates is a front-end for the crypto software (cruge). Certificate is a front-end for the crypto software (cruge). Certificate is a front-end for the crypto software (cruge). Certificate is a front-end for the crypto software (cruge). Certificate is a front-end for the crypto software (cruge). Certificate is a front-end for the crypto software (cruge). Certificate is a front-end for the crypto software (cruge). Certificate is a front-end for the crypto software (cruge). Certificate is a front-end for the crypto software (cruge). Certificate is a front-end for the crypto software (cruge). Certificate is a front-end for the crypto software (cruge). Certificate is a front-end for the crypto software (cruge). Certificate is a front-end for the crypto software (cruge). Certificate is a front-end for the crypto software (cruge). Certificate is a front-end for the crypto software (crug

3.2. Screen shown below will pop-up. Enter your name and email.

👩 Create OpenPGP Certificate - Kleopatra 🛛 🗙							
Enter a name and/or an email address to use for the certificate.							
Name							
Example Name							
Email address							
example_email@company.com							
Protect the generated key with a passphrase.							
<u>A</u> dvanced Settings							
<u>O</u> K <u>C</u> ancel							

3.3. Click Advanced Settings.

👩 Create OpenPGP Certificate - Kleopatra 🛛 🗙
Enter a name and/or an email address to use for the certificate.
Name
Example Name
<u>E</u> mail address
example_email@company.com
Protect the generated key with a passphrase.
Advanced Settings
<u>O</u> K <u>C</u> ancel

Under Key Materials, select RSA, check the "= RSA" checkbox, select 2,048 bits from the two dropdowns. 3.4.

👩 Advanced Settings ·	👩 Advanced Settings - Kleopatra				
Technical Details					
Key Material					
ا <u>R</u> SA	2,048 bits 🗸 🗸				
✓ + RSA	2,048 bits 🗸 🗸				
) <u>d</u> sa	2,048 bits 🗸 🗸				
+ Elgamal	2,048 bits \sim				
O ECDSA/EdDSA	ed25519 \vee				
+ ECD <u>H</u>	cv25519 \vee				
Certificate Usage					
Signing	Certification				
Encryption	<u>A</u> uthentication				
✓ Valid until: 3/1	L/2027 V				
	<u>O</u> K Cancel				

3.5. Under Certificate Usage, check the "Signing" checkbox, check the "Valid until" checkbox, select an expiration date that is no later than two years from the date the key pair is being created. Click OK.

🙃 Advanced Settings -	Kleopatra	×
Technical Details		
Key Material		
<u>R</u> SA	2,048 bits \sim	
🗹 + RSA	2,048 bits \sim	
○ <u>D</u> SA	2,048 bits \sim	
+ E <u>lg</u> amal	2,048 bits \sim	
CDSA/EdDSA	ed25519 $$	
+ ECD <u>H</u>	cv25519 $$	
Certificate Usage		
	Certification	
Encryption	<u>A</u> uthentication	
✓ Valid until: 3/1	/2027 🗸	
	<u>O</u> K Cancel	

3.6. You should receive the below screen showing Key Pair Successfully Created. Click Finish.



4. Locating, Verifying, and Exporting Public Key

4.1. Once you finish creation of keys, you will see this screen with an entry name of the key you have created and double click it.

🗊 Kleopatra					-	\times
<u>File View Certificates Tools Settin</u>	ngs <u>W</u> indow <u>H</u> elp					
Sign/Encrypt Decrypt/Verify Import Exp	ort Certify Lookup on	Server Certificate	s N <u>o</u> tepad S <u>m</u> artcards			
Bearch <alt+q></alt+q>				All Certificates		~~
All Certificates Imported Certifica	tes					8
Name	E-Mail	User-IDs	/alid From Valid Until	Key-ID		
Example Name example_em	ail@company.com	certified 3/	1/2024 3/1/2027	5C54 OFBF 2212 57DA		

4.2. You will see the screen shown below. Click More Details....

👩 OpenPGP Certificate - Kleopatra			×
User IDs:			
Email	Name	Trust Level	
example_email@company.com	Example Name	ultimate	
Add User ID Elag as Primary Certify	User IDs Show Certifications Revoke C	Certifications Revoke User ID	
<u>Valid from:</u> 3/1/2024			
Valid unțil: 3/1/2027			
Fingerprint: 4106 99BC D4FE 30FA 345E 20	86 5C54 0FBF 2212 57DA		
More Details Up <u>d</u> ate <u>E</u> xp	Change <u>P</u> assphrase <u>G</u> enerate F	levocation Certificate	
		Q	ose

- 4.3. You will see the screen shown below. From here you can verify the below Equifax requirements are met. If so, click Close.
 - Type = RSA
 - Valid Until date is no later than two years after Valid From date Strength = 2048 or higher
 - You see both Primary key (Primary = check) and subkey (Primary = unchecked)

e Valid F 3/1/20 3/1/20	From 2024 2024	Valid Until 3/1/2027 3/1/2027	Status good good	Strength 2048 2048	Usage Certify, Sign Encrypt	Primary ✔	Storage on this computer on this computer	
e Valid F 3/1/2(3/1/2(From 2024 2024	Valid Until 3/1/2027 3/1/2027	Status good good	Strength 2048 2048	Usage Certify, Sign Encrypt	Primary ✓	Storage on this computer on this computer	
3/1/20 3/1/20	2024 2024	3/1/2027 3/1/2027	good good	2048 2048	Certify, Sign Encrypt	¥	on this computer on this computer	
							<u> </u>	lose
								2

4.4. From the below window, click Export.

👩 OpenPGP Certificate - Kleopatra		2	×
<u>U</u> ser IDs:			
Email	Name	Trust Level]
example_email@company.com	Example Name	ultimate	
Add User ID Elag as Primary Certify	User IDs Show Certifications Revoke C	ertifications Revoke User ID	
<u>V</u> alid from: 3/1/2024			
Valid un <u>t</u> il: 3/1/2027			
Fingerprint: 4106 99BC D4FE 30FA 345E 208	6 5C54 0FBF 2212 57DA		
More Details Up <u>d</u> ate <u>Exp</u>	ort Change <u>P</u> assphrase <u>G</u> enerate R	evocation Certificate	
		Close	

4.5. You should be able to see your public key. Copy the entire key block and Paste the PGP Key Block into any document editor NotePad++, Word, Wordpad, etc.) that allows you to Save As a .txt file.

```
👩 Export - Kleopatra
                                                                       \times
 ----BEGIN PGP PUBLIC KEY BLOCK-----
Comment: User-ID: Example Name <example_email@company.com>
Comment: Valid from:
                          3/1/2024 9:36 AM
                          3/1/2027 12:00 PM
Comment: Valid until:
Comment: Type:
                    2,048-bit RSA (secret key available)
Comment: Usage:
                   Signing, Encryption, Certifying User-IDs
Comment: Fingerprint:
                          410699BCD4FE30FA345E20865C540FBF221257DA
mQENBGXh9eEBCADNBEONKg6PGFQbBv2W6cIKJg+esH3JlzGWSNKb4CnWmlwVv2M0
XMtmVu6JuiFc600TLRrR5CSIy5auPzfDi+fEcT72ePfcmBRM8yePk8TTDhGxIH4G
+g0IoQqnm6D417qelm6/CywWSIeZ6GV/P47L9Cjx6kZqJwVaSgGdtMS386AdFfyj
hHC9DLuH9//pZDbBxMHIl0P2ix2BQvtz9XzrjwM2r20eW2qWq+L/em19JNLcjhv9
H8P7JNHIRaZhdsQUSu35jTZlfI5XaxZ+NxI/olQvQdKXHhNAYHfMNpKAFfe7npaJ
9e6qULWEcoGQlIXc6q74RafYECh/2s2Zc79LABEBAAG0KEV4YW1wbGUqTmFtZSA8
ZXhhbXBsZV91bWFpbEBjb21wYW55LmNvbT6JAVcEEwEIAEEWIQRBBpm81P4w+jRe
IIZcVA+/IhJX2qUCZeH14QIbAwUJBaO8PwULCQgHAqIiAqYVCgkICwIEFqIDAQIe
BwIXgAAKCRBcVA+/IhJX2gQpB/9IGWn45Qfk/3JiAzAaAOGfjWevXM80bBII64kx
n8aVc3Kd1rFRmTVck7WF2n4jmTp/IERztzUIP04J5fwPG2FKvL8lDtXh6SQc6GIc
/5iconCB9K07cPa59GQE5PmG17I8vp4FhC6s2V1jaXhqu4HR5IKfIXwsguEvkh4E
JfMigauSbTxcqyjekwSskZjZpkA6/NciRBRLh4ePCTfA9vR+zkLaJRjZ5jWr9GJu
WMN7+Oso7dnLgMYW007m2vT/QVlrHodDrRXDpvetm4mK/X0ngl4Yp17WQBH290oh
Br4CELFQWSYrnOFZ13pGzvxmXjrNMcuz3es5gaECglavy3vCuQENBGXh9eEBCACr
5UVxB5Wo/kxrFaCXPbgA4Br5oMa8pmfI3d7BpxUkM1fyNbObogI25P/NO3Uxhk9D
miKz3e5AHsI1xg1p10tCyRJNvKcwGFIum4PjbBZrSu1xfePhd+YaUOlIycvswSbd
qWfmWNUto7E2NvfTx7UXMpwPbYQBZsBepdJTBFWshVBh0p1tj6hnt2mCTc15a3yd
+sKVXrK4OLZoJOJnlHxLt+3+CVGIjoUE6RcvZv4tG+DV4Izv7ROK30giFQvVzGyJ
zXiWC+qqLGorWulprtnj05/LDGQHXyzrwWGs45wpAZjtJlfBR6RTONFk7HJ+ittk
idpSFDk5HdDrHoYpFjNHABEBAAGJATsEGAEIACYWIQRBBpm81P4w+jReIIZcVA+/
IhJX2gUCZeH14QIbDAUJBaO8PwAKCRBcVA+/IhJX2nwpB/jnYGH3mi4izIlqN/Tk
M1Q6ahwT5DoQ3qImG+NHz+G19hezaYhW+/JLFoiNO/09W1ZFvAN3aFA7aNZpVWr8
NI27b+XksGm2Q2ZmkTGmq5cSMb7sPfb557T7g19JWjDqmPQ1jz9/PMyZM63pAKaF
6kPVEoR2iKGhLTbnBoTfbfknREvm3XdHdwZGUj+ABKzA+HtIH5M+c7UnGGkxdjTe
8HRNn529K5B0i5riS8MpZwn1h41o2XQ8Kf2mP2S1myX0qezQCgteZ8tv6jLxjcDk
y9taJGWQHAs5fSGLYUYygwxkbCgYA4cpVKuyE2aRokwYTKB90mMnKyWpQ//cRPaR
Cao=
=VOfv
----END PGP PUBLIC KEY BLOCK-----
                                                                  Close
```

4.0.	Delete all Comment. lines prior to saving.			
📝 *new	1 - Notepad+ +	- 0	×	_
<u>F</u> ile <u>E</u> dit	<u>S</u> earch <u>V</u> iew Encoding Language Settings Tools <u>M</u> acro <u>R</u> un <u>P</u> lugins <u>W</u> indow <u>2</u>	+	•	×
🕞 🚽 🗄	n n n n n n n n n n n n n n n n n n n			
📙 new 1	8			
1	BEGIN PGP PUBLIC KEY BLOCK			^
2	Comment: User-ID: Example Name <example_email@company.com> Comment: Valid from: 3/1/2024 9:36 AM</example_email@company.com>			
4	Comment: Valid until: 3/1/2027 12:00 PM			
5	Comment: Type: 2,048-bit RSA (secret key available) Comment: Usage: Signing, Encryption, Certifying User-IDs			
7	Comment: Fingerprint: 410699BCD4FE30FA345E20865C540FBF221257DA			
8				
10	mQENBGXh9eEBCADNBEONKg6PGFQbBv2W6cIKJg+esH3J1zGWSNKb4CnWm1wVv2M0			
11	XMtmVu6JuiFc600TLRrR5CSIy5auPzfDi+fEcT72ePfcmBRM8yePk8TTDhGxIH4G			
13	hHC9DLuH9//pZDbBxMHI10P2ix2BQvtz9XzrjwM2r20eW2gWg+L/em19JNLcjhv9			
14	H8P7JNHIRaZhdsQUSu35jTZ1fI5XaxZ+NxI/olQvQdKXHhNAYHfMNpKAFfe7npaJ			
16	zxhhbxBszV9lbWFpbEBjb21wYW55LmNvbT6JAVcEEwEIAEEWIQRBBpm81P4w+jRe			
17	IIZcVA+/IhJX2gUCZeH14QIbAwUJBa08PwULCQgHAgIiAgYVCgkICwIEFgIDAQIe			
18	DWINGAARCERDEVAT/INDZEGUDD/SIGWNASQIK/SUIAZAAAOGIJWEVXM8UDBIIO4KX n8aVc3Kd1rFRmTVck7WF2n4jmTp/IERztzUIPO4J5fwPG2FKvL8lDtXh6SQc6GIc			
20	/5iconCB9K07cPa59GQE5PmG17I8vp4FhC6s2V1jaXhqu4HR5IKfIXwsguEvkh4E			
21	JIM1gauSbTxcqyjekwSskZjZpkA6/Nc1RBRLh4ePCTfA9vR+zkLaJRjZ5jWr9GJu WMN7+Oso7dnLgMYWOO7m2vT/OV1rHodDrRXDpvetm4mK/X0ng14yp17WOBH290oh			
23	Br4CELFQWSYrnOFZ13pGzvxmXjrNMcuz3es5gaECglavy3vCuQENBGXh9eEBCACr			
24	5UVxB5Wo/kxrFaCXPbgA4Br5oMa8pmfI3d7BpxUkM1fyNbObogI25P/NO3Uxhk9D miKz3e5AHsI1xc1n10fCvRJNvKcwGFIum4PihB2rSu1xfePhd+YaU01TvcvswShd			
26	qWfmWNUto7E2NvfTx7UXMpwPbYQBZsBepdJTBFWshVBh0p1tj6hnt2mCTc15a3yd			
27	+sKVXrK4OLZoJOJnlHxLt+3+CVGIjoUE6RcvZv4tG+DV4Izv7R0K30giFQvVzGyJ zviWC+aalcarWulprtmi05/LDCOHVuzruWCa45un2zitlfBP6BTONEV7Hitittk			
29	idpSFDk5HdDrHoYpFjNHABEBAAGJATSEGAEIACYWIQRBBpm81P4w+jReIIZcVA+/			
30	IhJX2gUCZeH14QIbDAUJBaO8PwAKCRBcVA+/IhJX2nwpB/jnYGH3mi4izIlqN/Tk			
31 32	MIQoanwr5Dog3gimg+nHz+Gi9nezainw+/JLroino/O9wi2roAn3arA/an2powr8 NI27b+XksGm2Q2ZmkTGmq5cSMb7sPfb557T7g19JWjDqmPQ1jz9/PMyZM63pAKaF			
33	6kPVEoR2iKGhLTbnBoTfbfknREvm3XdHdwZGUj+ABKzA+HtIH5M+c7UnGGkxdjTe			
34	8HRNn529K5B015r1S8MpZwnlh4lo2XQ8Kf2mP2SlmyX0qezQCgteZ8tv6jLxjcDk y9taJGW0HAs5fSGLYUYyqwxkbCqYA4cpVKuyE2aRokwYTKB90mMnKvWp0//cRPaR			
36	Cao=			
37	=VOfv			
39				
		1175 0	10.10	~
Normal tex	at Tile length : 2,122 lines : 39 Ln : 2 Col : 1 Sel : 313 6 Windows (CR LF)	011-8	INS	

4.6. Delete all" Comment:" lines prior to saving.

4.7. Save as a .txt file using a file naming convention that includes your company name PGP Key Fingerprint. PGP Key Fingerprint can be copied from Kleopatra.

	, , ,	, , ,					
👩 OpenPGP Ce	rtificate - Kleopatra						×
User IDs:							
Email		Name	Trust Level				٦
example_email	@company.com	Example Name	ultimate	e			
							_
<u>A</u> dd User ID	<u>F</u> lag as Primary <u>Certify</u>	VUser IDs Show Certifications	<u>Revoke Certifications</u>	Revoke User <u>I</u> D			
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Valid un <u>t</u> il: 3/1/2	027 🖉						
Fingerprint: 4106 9	99BC D4FE 30FA 345E 20	86 5C54 0FBF 2212 57DA					
More Details	Update Ex	port Change Passphrase	Generate Revocation Ce	ertificate			
_			_			Close	
						Ciose	
🥁 Save As							×
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Organize 👻 New	v folder					- •	?
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S Computer Name	e:						
🧊 3D Objects							
Desktop							
Documents							
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Pictures							
Videos							
🛀 Windows (C:)							
I Network							
File name:	Example Company PGP Fit	ndernrint 410600BCD4EE20EA245E2	0965C540EBE221257DA	-			
Save as type:	Normal text file (*.txt)	gerprint_+100350CD4rE50rA343E20	005C340F0F221237DA				~
sare as the l	the contract of the contract						
∧ Hide Folders			Ap	pend extension	Save	Cancel	

4.8. Forward the key to your Equifax MFT point of contact as an email attachment.

5. Exporting and Backing Up Private Key

NOTE: Keep your private key secret, NEVER share a private key!!! However, it's recommended by Kleopatra developers to back up your private key, in case of computer failure, theft or accidental deletion.

5.1. Right click on the PGP key entry, then click Backup Secret Keys...

🕤 Kleopatra	E	Certify		_		×
<u>F</u> ile <u>V</u> iew <u>C</u> ertificates <u>T</u> ools <u>S</u> ettings <u>W</u> indow <u>H</u> elp	≜=	Revoke Certification				
Sign/Encrypt Decrypt/Verify Import Export Certify Lookup on Server		Trust Root Certificate Distrust Root Certificate				
		Change Certification Power				
Search <alt+q></alt+q>		Change End of Validity Period			Γ	~
L. All Certificates Imported Certificates		Change Passphrase				•
Name E-Mail User-II		Add User ID				
Example Marine example_email@company.com certified	1	Add Oser ID				
	≜=	Revoke Certificate				
	Û	Delete	Del			
	E,	Export	Ctrl+E			
	æ,	Backup Secret Keys				
	Ş	Print Secret Key				
		Publish on Server	Ctrl+Shift+E			
	Ē	Details				

5.2. Click the folder icon, then choose file name and saving location.

👩 Secret Key Backup)			×
\leftarrow \rightarrow \checkmark \uparrow		v ۵	Search Screenshots	Q
Organize 🔹 Ne	w folder			• ?
 Quick access Document Download Pictures Music Screenshots TXTs Videos This PC 	Keys			
File <u>n</u> ame:	Example_Name_0x221257DA_SECRET.asc			~
Save as <u>t</u> ype:	Secret Key Files (*.asc *.gpg *.pgp)			~
∧ Hide Folders			Save	Cancel

IMPORTANT NOTE: Equifax does not recommend any specific File

Encryption Software. We do suggest, however, that you choose a software package that has its own help desk so that you may receive support if you encounter any issues while using the software.

6. Importing a Public Key

6.1. To send Equifax an encrypted file, you must import and certify both the Equifax SFG UAT PGP Key and SFG PRD PGP Key. Equifax should provide you the keys as email attachments. Download both keys from your email and save on your local drive.

6.2	. Go to Kleopatra	File Imp	ort							
O	Kleopatra								-	×
<u>F</u> ile	<u>View</u> <u>Certificates</u> <u>T</u> ools <u>S</u> etting	js <u>W</u> indow <u>H</u>	<u>l</u> elp							
	<u>N</u> ew OpenPGP Key Pair New S/ <u>M</u> IME Certification Request	Ctrl+N	Q on Server	Ertificates	E. N <u>o</u> tepad	Smartcards				
Q	Lookup on Server	Ctrl+Shift+I								
	Import	Ctrl+I	Import a ce	rtificate fron	n a file 👔			All Certificates	i i	 \sim
	<u>E</u> xport <u>B</u> ackup Secret Keys <u>P</u> rint Secret Key Publish <u>o</u> n Server	Ctrl+E Ctrl+Shift+E	User certific	-IDs Va ed 3/1/	lid From 2024	Valid Until 3/1/2027	Key 5C54 OFBF	D 2212 57DA		8
ŭ La	<u>D</u> ecrypt/Verify <u>S</u> ign/Encrypt Sign/Encrypt <u>F</u> older									
	C <u>r</u> eate Checksum Files <u>V</u> erify Checksum Files									
	<u>C</u> lose	Ctrl+W								
	<u>Q</u> uit	Ctrl+Q	<u> </u>							

6.3. Go to the directory where you saved the keys and select them. Change the file type to any type in order to view the keys.

OpenPGP TUTORIAL - Kleopatra Updated 03/08/2023

5.4. Click O	pen.					
Select Certificate	File					\times
$\leftarrow \rightarrow \land \uparrow$			~ Ū	Search Keys		م
Organize 🔹 Ne	ew folder				↓ 	•
🕹 Quick access		Name	Date modif	ied	Туре	S
		equifax_MFT_PRD_Public_PGP_0xF48B2A8C_Exp_04202026.asc	2/29/2024 1	:44 PM	OpenPGP Te	ext File
Documents	*	equifax_MFT_UAT_Public_PGP_0xB9F317AF_Exp_04202026.asc	2/29/2024 1	:44 PM	OpenPGP Te	ext File
	7	Example_Name_0x221257DA_SECRET.asc	3/1/2024 10):15 AM	OpenPGP Te	ext File
 Music Screenshots TXTs 						
This PC 🕩 Network	1					
	<)
	File <u>n</u> ame:	equifax_MFT_UAT_Public_PGP_0xB9F317AF_Exp_04202026.asc	~	Any files (*)		~
				<u>O</u> pen	С	ancel

6.5. Click Certify.



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6.6	. Click	Certify again.	
	Certify Ce	rtificate: EFX MFT PGP UAT 2026-04-20 - Kleopatra	Х
	Verify the fin Note: Only t	gerprint, mark the user IDs you want to certify, and select the key you want to certify the user IDs with. he fingerprint clearly identifies the key and its owner.	_
	Eingerprint:	0F83 6951 0463 08ED D401 FE09 F2D3 C3F4 B9F3 17AF	
	Certify with:	Example Name <example_email@company.com> (certified, created: 3/1/2024)</example_email@company.com>	
	EFX M	FT PGP UAT 2026-04-20 < mftsupport@equifax.com>	
	Advance	ced	-
		Certify 🚫 Cance	I

6.7. Repeat steps 6.1 - 6.5 as needed.

Encrypting Files Sent to Equifax 7.

7.1. Go to Settings \rightarrow Configure Kleopatra \rightarrow GnuPG System \rightarrow S/MIME. Ensure "Use cipher algorithm NAME" is AES256. If not, Type AES256 in the free text field and click OK.

👩 Configure - Kleopatra										×
	GnuPG Sys	tem								
	OpenPGP	S/ <u>M</u> IME	<u>P</u> rivate Keys	Network	Smartcards	Public <u>K</u> ey	/5			
Directory Services	Ortiger									^
	Options C	Never cons	ult a CRL							
Appearance		enable-crl	checks"							
		Do not che	ck CRLs for root	certificates						
•		Check valid	$\operatorname{dit}_{\underline{V}}$ using OCSP							
Crypto Operations		Do not che	ck certificate poli	cies						
	<u>u</u>	se cipher algo	rithm NAME		AES256					
S/MIME Validation	"c	default_pubke	y_algo"		RSA-3072					
	Options c	ontrolling the	configuration —							
b <u>—</u> ≜	"f	aked-system-	țime"							
Smart Cards	N	umber of cert	ificates to include		-2				-	
	"c	compliance"								
GnuPG System	Options co	ontrolling the	diagnostic outpu	t						
	⊻	erbose			0				-	
		<u>B</u> e somewh	at more quiet							
		"no- <u>g</u> reetin	g"		0. No. 1					
	2	et the debugg	ing level to		u - None					~
	∱ <u>R</u> eset	Defa	ults		<u>√ о</u> к		Cancel	✓ <u>A</u> pply	度	<u>H</u> elp

7.2. From the home screen, click Sign/Encrypt....

Kleopatra	I.												_		
<u>V</u> iew	<u>C</u> ertificates	Tools	Settings	<u>W</u> indov	v <u>H</u> elp										
Σ	ĽÄ	₽₹			Q		Ē								
/Encrypt	2ecrypt/Verity	Import	Export	Ce <u>r</u> tify	ookup on Serve	er Certific <u>a</u> tes	N <u>o</u> tepad	Smartcards	i						
earch <a< td=""><td>lt+Q></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>All Ce</td><td>rtificates</td><td></td><td></td><td></td></a<>	lt+Q>										All Ce	rtificates			
	Certificates I	imported Ce	rtificates	Importe	d Certificates									[8
	Ni	ame				E-Mail			User-IDs	Valid Fr	om	Valid Until		К	ey-
Exan	nple Name			e	cample_email	@company.co	m	ce	rtified	3/1/2024	<u>ا</u>	3/1/2027	5C	54 OFBI	F 2
Name Example Name			e	E-Mail example_email@company.com					Valid Fr 3/1/2024	From Valid Until 24 3/1/2027		5C	Key 5C54 OFBF		

OpenPGP TUTORIAL - Kleopatra Updated 03/08/2023

	5 51	•				
Select One or More Files	to Sign and/or Encrypt					\times
$\leftarrow \rightarrow \checkmark \uparrow$			Search Kleo	patra TIF		٩
Organize New folde	er			t === t === ▼		?
- Quick access	Name	Date modified	Туре	Size		
	Keys Fingerprints 3/1/2024 10:28 AM File folder					
🧢 This PC	Screenshots	3/1/2024 10:27 AM	File folder			
🧊 3D Objects	Example File.txt	3/1/2024 10:28 AM	Text Document		1 KB	
E. Desktop						
🗄 Documents						
🖊 Downloads						
Music						
Pictures						
Videos						
🔩 Windows (C:)						
< Network						
File <u>n</u> ar	ne: Example File.txt		 All Files (*) 			\sim
			0000		Cancel	
			Open		Cancel	

7.3. Select the file you want to encrypt and click Open.

7.4. From the below screen, uncheck "Sign as", uncheck "Encrypt for me", check "Encrypt for others", click on the people icon to the right and select the public key you want to use for encryption.

👩 Sign/Encrypt Files - K	leopatra	×
Sign / Encrypt F	iles	
Prove authenticity (sign)		
Sign as:	Example Name <example_email@company.com> (certified, created: 3/1/2024)</example_email@company.com>	\sim
Encrypt		
Encrypt for <u>m</u> e:	Example Name <example_email@company.com> (certified, created: 3/1/2024)</example_email@company.com>	~
Encrypt for <u>o</u> thers:	Please enter a name or email address	\$
Encrypt with password.	Anyone you share the password with can read the data.	
Output		
Please select an action.		
Encrypt / Sign each file	separately.	
	Next	<u>C</u> ancel

OpenPGP TUTORIAL - Kleopatra Updated 03/08/2023

7.5. Click Encrypt.

n Sign/Encrypt Files - Kle	eopatra	×				
Sign / Encrypt Fi Prove authenticity (sign)	les					
Sign as:	Example Name <example_email@company.com> (certified, created: 3/1/2024)</example_email@company.com>	\sim				
Encrypt						
Encrypt for <u>m</u> e:	Example Name <example_email@company.com> (certified, created: 3/1/2024)</example_email@company.com>	\sim				
Encrypt for <u>o</u> thers:	Example Name <example_email@company.com> (certified, OpenPGP,</example_email@company.com>	\$				
Please enter a name or email address						
Encrypt with password. A	Anyone you share the password with can read the data.					
Output						
Output <u>files</u> /folder:						
/Example File.txt.gpg						
Encrypt / Sign each file separately.						
	E <u>n</u> crypt <u>C</u> ance	el				

8. Decrypting Files Sent from Equifax

8.1. Once you receive the file that Equifax encrypted with the public PGP key you provided, ensure the file has a .pgp, .PGP, .gpg, or .GPG file extension.

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0	Kleopati	ra										_	×
Eil	e <u>V</u> iew	Certificates	<u>T</u> ools <u>S</u> etting	gs <u>W</u> ii	ndow <u>H</u> elp								
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Sig	n/Encrypt	Decrypt/Verif	y <u>I</u> mport <u>Expo</u>	rt Ce <u>r</u> ti	fy Lookup on Serve	r Certific <u>a</u> tes	N <u>o</u> tepad	Smartcar	ds				
	Canada	Altrop										All Cartificator	~
	A	Certificates	Imported Certificate	es Im	ported Certificates							Air Certificates	8
			Name			E-Mail			User-IDs	Valid From	Valid Until	Key-ID	
	Exa	mple Name			example_email(@company.com	m		certified	3/1/2024	3/1/2027	5C54 OFBF 2212 57DA	

8.2. Go to Kleopatra and click Decrypt/Verify...

Select One or More Files to	Decrypt and/or Verify					×		
\leftarrow \rightarrow \checkmark \uparrow \blacksquare > This PC > Documents > Kleopatra TIF > \checkmark \checkmark \circlearrowright Search Kleopatra TIF								
Organize New folder				1 v		?		
1.0.11	Name	Date modified	Туре	Size				
Quick access	Keys Fingerprints	3/1/2024 10:28 AM	File folder					
🧢 This PC	Screenshots	3/1/2024 10:34 AM	File folder					
🧊 3D Objects	Example File.txt	3/1/2024 10:28 AM	Text Document		1 KB			
E Desktop	Example File.txt.gpg	3/1/2024 10:34 AM	OpenPGP Binary Fi.		1 KB			
Documents								
Downloads								
J Music								
Pictures								
Videos								
😍 Windows (C:)								
🥩 Network								
File name:	Example File.txt.gpg		→ All Files (*)			\sim		
_					Canad			
			<u>O</u> pen		Cancel			

8.3. Select your encrypted file and click Open.

8.4. Once you see the success screen below, click Save All. The decrypted file will be located in the designated folder where the original file was saved.

Decrypt/Verify Files - Kleopatra	×
Output folder:	<
All operations completed.	
	100%
Example File.txt.gpg \rightarrow Example File.txt: Decryption succeeded. Embedded file name: 'Example%20File.txt' Note: You cannot be sure who encrypted this message as it is not signed. Recipient: <u>Example Name <example email@company.com=""> (5C54 0FBF 2212 57DA)</example></u>	<u>Show Audit Log</u>
	Save All Discard