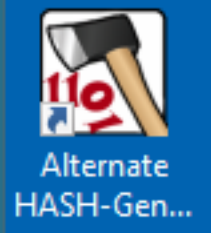


Windows 10 & Thunderbird Installation and configuration of GPG4Win and Enigmail

Fall 2019



The presentation logs into Windows.

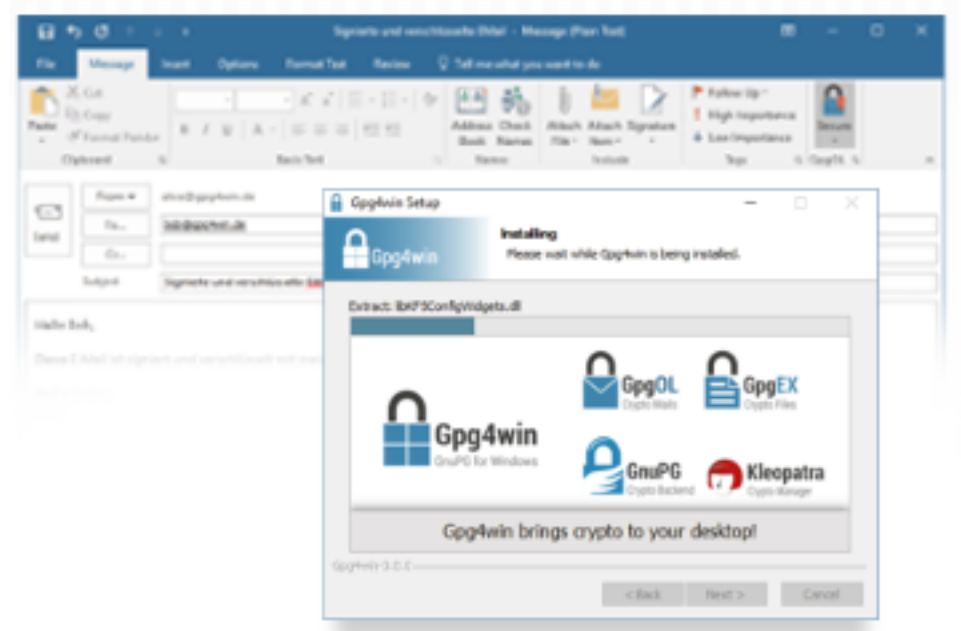


The presentation connects to "www.gpg4win.org" as shown.



Details - Change History - Change Security

The presentation selects "Download Gpg4win 3.1.10"



- 2019-07-14 **Gpg4win 3.1.10 released**
- 2019-04-30 **Detecting spoofed email signatures**

Archived News

Secure solution...

Gpg4win (GNU Privacy Guard for Windows) is Free Software
... mouse clicks.

Getting started

We help you to use Gpg4win. Learn the basics about Gpg4win and get in the world of cryptography. The best point to start is with the illustrative Gpg4win Compendium.

[Go to the Gpg4win Compendium »](#)

Join the community

Gpg4win is Free Software. Join the community! We recommend subscribing to the [Gpg4win announcement mailing list](#) to be automatically informed about new releases and other important Gpg4win news.

[Go to the community »](#)

Learn what Gpg4win is and read more about the features of our solution!

[About Gpg4win »](#)



File Edit View History Bookmarks Tools Help

Gpg4win - Get Gpg4win

https://www.gpg4win.org/get-gpg4win.html

English | Deutsch

What's new Version 3 About Gpg4win Community Support **Download**

Home » Download

Download Gpg4win 3.1.10 (2019-07-14)

You can also use this installer to update an older version. Keys and configuration will be kept.

Please donate for Gpg4win to support maintenance and development!
Pay what you want! – Thank you!

<p><i>Donate with</i></p> <p><input type="radio"/> PayPal</p> <p><input type="radio"/> Bitcoin</p> <p><input checked="" type="radio"/> Bank transfer</p>	<p>Bank transfer details:</p> <p>Receiver: Intevation GmbH IBAN: DE33 2654 0070 0539 2006 00 BIC: COBADEFFXXX (Commerzbank Osnabrück) Reference: "Gpg4win donation"</p> <p>Please contact us if you need an invoice (for more than 100,- EUR/USD only).</p> <p>After making transfer: Download Gpg4win 3.1.10</p>
--	--

Support Misc

The presentation selects "Bank transfer", then "Download Gpg4win 3.1.10" as shown.



File Edit View History Bookmarks Tools Help

Gpg4win - Thanks for download X +

https://www.gpg4win.org/thanks-for-download.html

English | Deutsch

What's new About Gpg4win Community Support Download

Opening gpg4win-3.1.10.exe

You have chosen to open:

- gpg4win-3.1.10.exe**
which is: Binary File (27.7 MB)
from: https://files.gpg4win.org

Would you like to save this file?

Save File Cancel

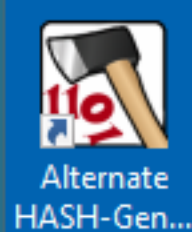
g Gpg4win.

Get started – your next steps:

Community Support Misc

- Community: Community, Contribute to Gpg4win, - Reporting Bugs, - Building of Gpg4win, - Maintaining Website, - Translating Gpg4win
- Support: Support
- Misc: Donate, License, Source Code, Wiki, Development Platform, Short Study Gpg4win, Links, Contributors, Legal Notice

The presentation selects "Save File" as shown.



File Explorer window titled "Downloads" showing a list of files. A context menu is open over the file "gpg4win-3.1.10.exe".


Name	Date modified	Type	Size
Today (2)			
gpg4win-3.1.10.exe	10/28/2019 8:00 PM	Application	28,333 KB
weather-data...		Compressed (zipp...	924 KB
Last week (1)			
Hasher(1).exe		Application	896 KB
Defender...		Application	77,742 KB
		Application	39,119 KB
		Application	39,119 KB
		Configuration sett...	6 KB
		Application	1,208 KB
		Application	1,414 KB
		Application	35,004 KB
		Application	28,189 KB

Context menu options: Open, Run as administrator, Troubleshooting compatibility, Pin to Start, Defender..., sions, Rename, Properties.

The presentation runs the gpg4win installation as administrator.

User Account Control ✕

Do you want to allow this app to make changes to your device?

 Gpg4win: The GNU Privacy Guard and Tools for Windows

Verified publisher: Intevation GmbH
File origin: Hard drive on this computer

[Show more details](#)

To continue, enter an admin user name and password.

tpreuss

CSCI1110-F2019\tpreuss

The presentation provides the administrator password to continue.



Recycle Bin



Alternate HASH-Gen...



Firefox



Mozilla Thunderbird



PUTTY

Installer Language

Please choose a language for the setup.
Bitte die Sprache des Installations-Vorgangs angeben.

English ▾

OK Cancel

The presentation selects "English" for the installation.



Recycle Bin



Alternate HASH-Gen...



Firefox



Mozilla Thunderbird



PUTTY

Gpg4win Setup

Gpg4win
GnuPG for Windows

Welcome to the installation of Gpg4win

Gpg4win is an installer package for Windows for EMail and file encryption using the core component GnuPG for Windows. Both relevant cryptography standards are supported, OpenPGP and S/MIME. Gpg4win and the software included with Gpg4win is Free Software.

Click Next to continue.

This is Gpg4win version 3.1.10
Release date 2019-07-14

The presentation selects "Next" to continue.



Recycle Bin



Alternate HASH-Gen...



Firefox



Mozilla Thunderbird



PUTTY

Gpg4win Setup Choose Components
Choose which features of Gpg4win you want to install.

Check the components you want to install and uncheck the components you don't want to install. Click Next to continue.

Select components to install:

- GnuPG
- Kleopatra
- GPA
- GpgOL
- GpgEX
- Browser integration

Space required: 101.9MB

Description
Position your mouse over a component to see its description.

Gpg4win-3.1.10

< Back Next > Cancel

The presentation selects all the components. The presentation selects "Next" to continue.

- Recycle Bin
- Alternate HASH-Gen...
- Firefox
- Mozilla Thunderbird
- PUTTY

Gpg4win Setup

Choose Install Location
Choose the folder in which to install Gpg4win.

Setup will install Gpg4win in the following folder. To install in a different folder, click Browse and select another folder. Click Install to start the installation.

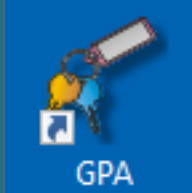
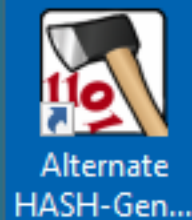
Destination Folder
 Browse...

Space required: 101.9MB
 Space available: 35.1GB

Gpg4win-3.1.10

< Back Install Cancel

The presentation does not change the destination folder. The presentation only selects "Install" to continue.



Gpg4win Setup Installation Complete
Setup was completed successfully.

Completed

Encrypt files via context menu with GpgEX.

Gpg4win-3.1.10

< Back **Next >** Cancel

Once the installation is complete, the presentation selects "Next" to continue.



Recycle Bin



Alternate HASH-Gen...



Firefox



GPA



Kleopatra



The presentation unselects all the options as shown. The presentation selects "Finish" to continue.

Gpg4win Setup

Gpg4win
GnuPG for Windows

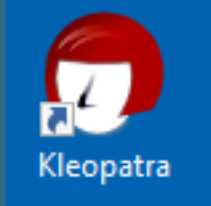
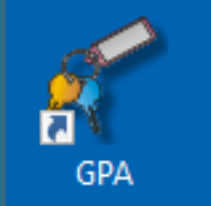
Completing the Gpg4win Setup Wizard

Gpg4win has been installed on your computer.
Click Finish to close this wizard.

- Run Kleopatra
- Show the README file

[Go to Gpg4win's webpage](#)

< Back **Finish** Cancel



File Edit View Go Message Events and Tasks Tools Help

[Gmail]

Get Messages ▾ Write ▾ Chat Address Book Tag ▾ Quick Filter Search <Ctrl+K>

tim.preuss04@gmail.com

Inbox

[Gmail]

Local Folders

Deleted

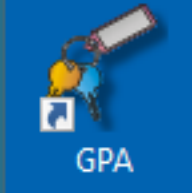
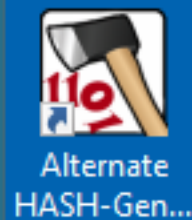
Outbox

Unread Starred Contact Tags Attachment Filter these messages <Ctrl+Shift+K>

★ Subject Correspondents Date

Once the gpg4win is installed, the presentation opens Thunderbird.

Unread: 0 Total: 0 28 Today Pane ^



File Edit View Go Message Events and Tasks Tools Help

[Gmail]

Get Messages ▾ Write ▾ Chat Address Book Tag ▾ Quick Fi

tim.preuss04@gmail.com

- Inbox
- [Gmail]
- Local Folders
 - Deleted
 - Outbox

Unread Starred Contact

★ 📎 Subject

Date

Unread: 0 Total: 0 28 Today Pane ^

✓ Menu Bar
✓ Mail Toolbar

The presentation right clicks in the light blue area to get the menu shown. The presentation selects "Menu Bar" to get the menu shown.





Recycle Bin



Alternate HASH-Gen...



Firefox



GPA



Kleopatra



Mozilla Thunderbird



PUTTY

File Edit View Go Message Events and Tasks Tools Help

[Gmail]

Get Messages ▾ Write ▾ Chat

tim.preuss04@gmail.com

Inbox

[Gmail]

Local Folders

Deleted

Outbox

Address Book Ctrl+Shift+B

Saved Files Ctrl+L

Add-ons ←

Add-on Options

Activity Manager

Chat status

Join Chat...

Message Filters

Run Filters on Folder

Run Filters on Message

Run Junk Mail Control

Delete Mail Marked

Import...

Developer Tools

Clear Recent History... Ctrl+Shift+Delete

Account Settings

Options

These messages <Ctrl+Shift+K>

Date

Unread: 0 Total: 0 28 Today Pane ^

The presentation selects "Add-on" from the "Tools" menu.



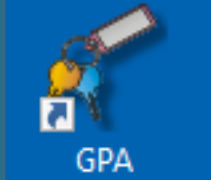
Recycle Bin



Alternate HASH-Gen...



Firefox



GPA



Kleopatra



Mozilla Thunderbird



PUTTY

File Edit View Go Message Events and Tasks Tools Help

[Gmail] Add-ons Manager

← → Find more extensions Search addons.thunderbird.net 🔍

Manage Your Extensions ⚙️ ▾

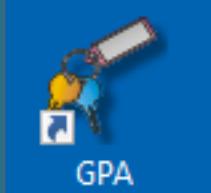
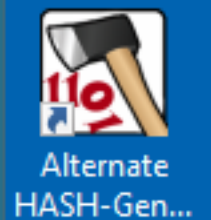
Legacy extensions must be updated to be compatible with Thunderbird 68.1.2. [Learn more...](#)

- 🌟 Recommendations
- 🧩 Extensions** ← The presentation selects "Extensions" in the Add-ons Manager.
- 🖌️ Themes

Disable Remove

⚙️ Thunderbird Options

📅 Today Pane ^



File Edit View Go Message Events and Tasks Tools Help

[Gmail] Add-ons Manager

Find more extensions

Manage Your Extensions

- Recommendations
- Extensions
- Themes

Thunderbird Options

Today Pane

Disable Remove

with Thunderbird 68.1.2. [Learn more...](#)

The presentation enters "enigmail" in the extension search box as shown.



Recycle Bin



Alternate HASH-Gen...



Firefox



GPA



Kleopatra



Mozilla Thunderbird



PUTTY

File Edit View Go Message Events and Tasks Tools Help

[Gmail] Add-ons Manager enigmail :: Search :: Add-ons

https://addons.thunderbird.net/en-GB/thunderbird/search/?q=enigmail

Register or Log in | Other Applications

Add-ons

EXTENSIONS THEMES COLLECTIONS MORE...

enigmail

Welcome to Thunderbird Add-ons. Add extra features and styles to make Thunderbird your own.

Filter Results

Search Results for "enigmail"

Sort by: **Relevance** | Most Users | Top Rated | Newest | More

Enigmail **REQUIRES RESTART** **+ Add to Thunderbird**

OpenPGP message encryption and authentication for Thunderbird and SeaMonkey.

★★★★★ (240) · 119,705 users

Mail Merge **REQUIRE**

Create and Save or Send Personalized Messages

★★★★★ (174) · 62,438 users

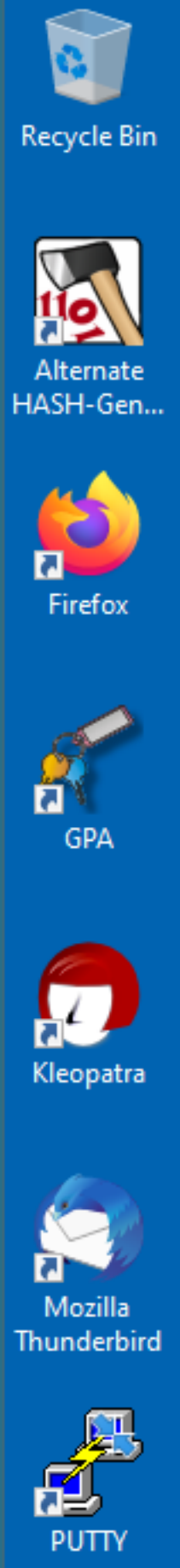
Mail Redirect **REQU**

Allow to redirect (a.k.a. ...)

92 matching results

Today Pane

The presentation selects "Add to Thunderbird" option for Enigmail.



File Edit View Go Message Events and Tasks Tools Help

https://addons.thunderbird.net/en-GB/thunderbird/search/?q=enigmail

Add-ons

EXTENSIONS THEMES COLLECTIONS MORE...

Welcome to Thunderbird

Filter Results

CATEGORY >> All Add-ons

WORKS WITH >> Any Thunderbird All Systems

TAG >> All Tags

92 matching results

Add Enigmail?

Add Cancel

The presentation selects "Add" to add enigmail.

	Enigmail	OpenPGP message encryption and decryption for Thunderbird and SeaMonkey.	★★★★★ (240) - 119,705 users	+ Add to Thunderbird
	Mail Merge	REQUIRES RESTART Create and Save or Send Multiple Individual and Personalized Messages from a Draft	★★★★★ (174) - 62,438 users	+ Add to Thunderbird
	Mail Redirect	REQUIRES RESTART Allow to redirect (a.k.a. "remail") mail messages to other		+ Add to Thunderbird

Today Pane



Recycle Bin



Alternate HASH-Gen...



Firefox



GPA



Kleopatra



Mozilla Thunderbird



PUTTY

File Edit View Go Message Events and Tasks Enigmail Tools Help

[Gmail] Add-ons Manager enigmail :: Search :: Add-ons

https://addons.thunderbird.net/en-GB/thunderbird/search/?q=enigmail

Register or Log in | Other Applications

Add-ons

EXTENSIONS THEMES COLL

Welcome to Thunderbird Add-ons. A

Filter Results Search

CATEGORY Sort by

Enigmail Setup

It looks like you started Enigmail for the first time on this computer. In order to use Enigmail you need to install GnuPG.

Looking for GnuPG ...

Done Cancel

Personalized Messages from a Draft

★★★★★ (174) - 62,438 users

Mail Redirect **REQUIRES RESTART**

Allow to redirect (a.k.a. "remail") mail messages to other

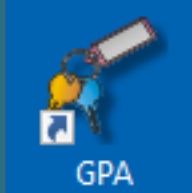
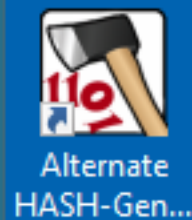
+ Add to Thunderbird

+ Add to Thunderbird

+ Add to Thunderbird

Today Pane ^

The presentation watches the screen.



File Edit View Go Message Events and Tasks Enigmail Tools Help

[Gmail] Add-ons Manager enigmail :: Search :: Add-ons

https://addons.thunderbird.net/en-GB/thunderbird/search/?q=enigmail

Register or Log in | Other Applications

Add-ons

EXTENSIONS THEMES COLL

Welcome to Thunderbird Add-ons. A

Filter Results Search

CATEGORY All Add-ons

Sort by:

Enigmail Setup

It looks like you started Enigmail for the first time on this computer. In order to use Enigmail, you need to first set it up properly. This assistant will guide you through the setup process.

Looking for GnuPG ... ✓

✓ Enigmail is now properly configured and ready to use. For further information about using Enigmail please visit [our homepage](#).

Done

+ Add to Thunderbird

+ Add to Thunderbird

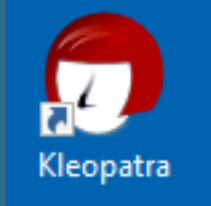
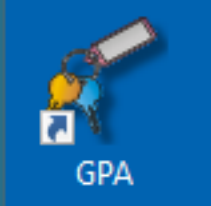
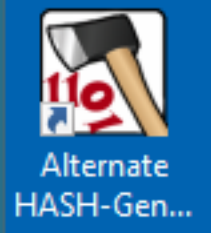
Mail Redirect REQUIRES RESTART + Add to Thunderbird

Personalized Messages from a Draft
★★★★★ (174) · 62,438 users

Allow to redirect (a.k.a. "remail") mail messages to other

28 Today Pane ^

The presentation selects "Done" to continue.



File Edit View Go Message Events and Tasks Enigmail/p=p Tools Help

[Gmail] Add-ons Manager

The presentation closes the Add-on Manager.



Find more extensions enigmail

nsions

must be updated to be compatible with Thunderbird 68.1.2. [Learn more...](#)

ncryption and authentication

Disable Remove

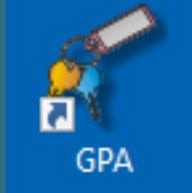
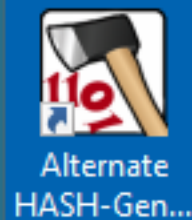
Lightning

An integrated calendar for Thunderbird

Disable Remove

Thunderbird Options

Today Pane ^



File Edit View Go Message Events and Tasks Enigmail/p=p Tools Help

[Gmail]

Get Messages ▾ Write ▾ Chat

tim.preuss04@gmail.com

- Inbox
- [Gmail]
- Local Folders
 - Deleted
 - Outbox

★ | 📎 | Subject

Unread: 0 Total: 0 28 Today Pane ^

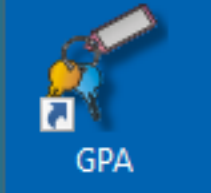
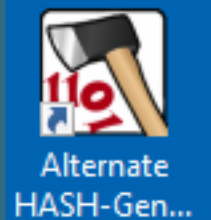
Key Management
Preferences



The presentation selects "Preferences" under the Enigmail/p=p menu.

You may get a wizard to setup your first key pair. The choice is yours. You may cancel the wizard and follow the presentation.

Another option is complete the wizard, then return to this screen to configure your enigmail.



File Edit View Go Message Events and Tasks Enigmail/p=p Tools Help

[Gmail]

Get Messages Write Chat Address Book Tag Quick Filter Search <Ctrl+K>

tim.preuss04@gmail.com

Inbox

[Gmail]

Local Folders

Deleted

Outbox

Filter these messages <Ctrl+Shift+K>

Subject Correspondents Date

Enigmail/p=p Preferences

Account Compatibility About

Account Security

Store Messages Securely for these accounts

tim.preuss04@gmail.com - TPreuss04 <tim.preuss04@gmail.com>

Store messages securely

Enable privacy protection

Attach my key to outgoing messages

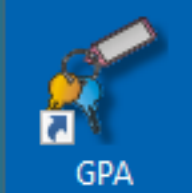
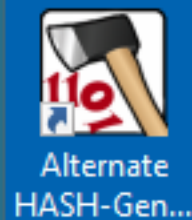
Enable protected message subjects

Show a warning when a message loses security through a reply or forwarding

Close

Unread: 0 Total: 0 [28] Today Pane ^

The presentation sets the "Account" tab as shown.



File Edit View Go Message Events and Tasks Enigmail/p=⊖ Tools Help

[Gmail]

Get Messages ▾ Write ▾ Chat Address Book Tag ▾ Quick Filter Search <Ctrl+K>

tim.preuss04@gmail.com

Inbox

[Gmail]

Local Folders

Deleted

Outbox

Filter these messages <Ctrl+Shift+K>

Subject Correspondents Date

Enigmail/p=⊖ Preferences

Account Compatibility About

Enigmail Junior Mode

- Automatically decide if Junior Mode should be used
- Force using S/MIME and Enigmail
- Force using p=⊖ (Pretty Easy Privacy)

OpenPGP Compatibility

- Lookup keys on server automatically

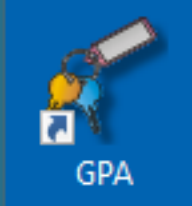
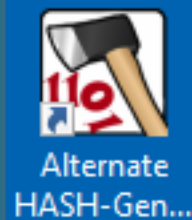
View Log

Close

Unread: 0 Total: 0 [28] Today Pane ^

The presentation configures the "Compatibility" tab as shown. This is important to change the setting to be the same as shown.

Once done, the presentation selects "Close" to continue.



File Edit View Go Message Events and Tasks Enigmail Tools Help

[Gmail]

Get Messages ▾ Write ▾ Chat

tim.preuss04@gmail.com

- Inbox
- [Gmail]
- Local Folders
 - Deleted
 - Outbox

Quick Filter Search <Ctrl+K>

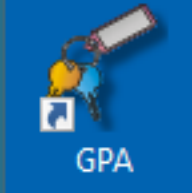
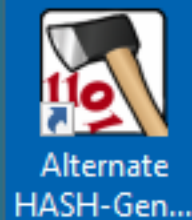
Filter these messages <Ctrl+Shift+K>

Date

Unread: 0 Total: 0 28 Today Pane ^

Setup Wizard
Decrypt to folder >
Key Management
Edit Per-Recipient Rules
Preferences
Help
About Enigmail

The presentation selects "Preferences" option under "Enigmail".



File Edit View Go Message Events and Tasks Enigmail Tools Help

[Gmail]

Get Messages ▾ Write ▾ Chat Address Book Tag ▾ Quick Filter Search <Ctrl+K>

tim.preuss04@gmail.com

- Inbox
- [Gmail]
- Local Folders
 - Deleted
 - Outbox

Enigmail Preferences

Basic Sending Transfer Settings

Basic Settings

Files and Directories

GnuPG was found in C:\Program Files (x86)\GnuPG\bin\gpg.exe

Override with Browse...

Passphrase Timeout

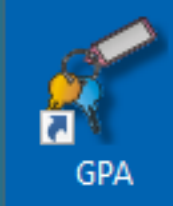
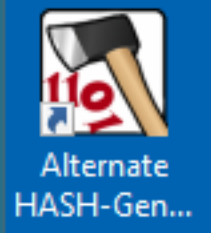
Remember passphrase for minutes of inactivity (before needing to re-enter it)

Display Expert Settings and Menus

OK Cancel

Unread: 0 Total: 0 28 Today Pane ^

The presentation selects "Display Expert Settings and Menus" option.



File Edit View Go Message Events and Tasks Enigmail Tools Help

[Gmail]

Get Messages Write Chat Address Book Tag Quick Filter Search <Ctrl+K>

tim.preuss04@gmail.com

- Inbox
- [Gmail]
- Local Folders
 - Deleted
 - Outbox

Enigmail Preferences

Basic Sending Key Selection Advanced Keyserver Transfer Settings

Basic Settings

Files and Directories

GnuPG was found in C:\Program Files (x86)\GnuPG\bin\gpg.exe

Override with Browse...

Passphrase Timeout

Remember passphrase for minutes of inactivity (before needing to re-enter it)

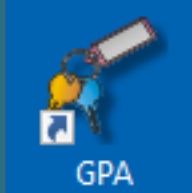
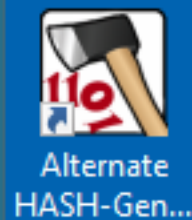
Hide Expert Settings and Menus

Reset

OK Cancel

Unread: 0 Total: 0 [28] Today Pane ^

The presentation does not make any changes to the "Basic" tab settings as shown.



File Edit View Go Message Events and Tasks Enigmail Tools Help

[Gmail]

Get Messages Write Chat Address Book Tag Quick Filter Search <Ctrl+K>

tim.preuss04@gmail.com

Inbox

[Gmail]

Local Folders

Deleted

Outbox

Enigmail Preferences

Basic Sending Key Selection Advanced Keyserver Transfer Settings

General Preferences for Sending

Use default encryption settings Help

Manually configure encryption settings

Encrypt/sign replies to encrypted/signed messages

Automatically send encrypted

Never

If possible

To send encrypted, accept

Only trusted keys

All usable keys

Confirm before sending

Never

Always

If encrypted

If unencrypted

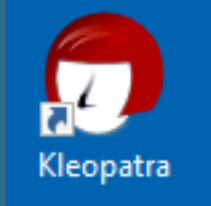
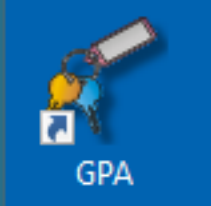
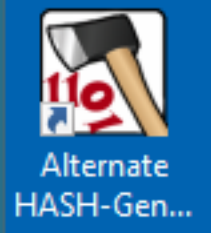
If rules changed the default encryption setting

See also account specific Enigmail settings (see Account Settings -> OpenPGP Security)

OK Cancel

Unread: 0 Total: 0 [28] Today Pane ^

The presentation changes the "Sending" tab as shown.



File Edit View Go Message Events and Tasks Enigmail Tools Help

[Gmail]

Get Messages Write Chat Address Book Tag Quick Filter Search <Ctrl+K>

tim.preuss04@gmail.com

Inbox

[Gmail]

Local Folders

Deleted

Outbox

Enigmail Preferences

Basic Sending Key Selection Advanced Keyserver Transfer Settings

How should we choose the keys?

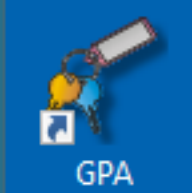
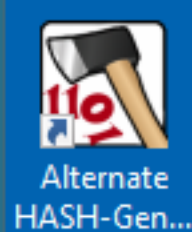
- By Per-Recipient Rules
- By Email Addresses according to the key manager
- Manually if Keys are Missing
- Always (also) Manually

Edit Rules ...

OK Cancel

Unread: 0 Total: 0 [28] Today Pane

The presentation does not change anything in the "Key Selection" section.



File Edit View Go Message Events and Tasks Enigmail Tools Help

[Gmail]

Get Messages Write Chat Address Book Tag Quick Filter Search <Ctrl+K>

tim.preuss04@gmail.com

- Inbox
- [Gmail]
- Local Folders
 - Deleted
 - Outbox

Enigmail Preferences

Basic Sending Key Selection **Advanced** Keyserver Transfer Settings

More Options

- Encrypt subject by default (PGP/MIME encrypted message only)
Subject text to protect encrypted messages: Encrypted Message
- Re-wrap signed HTML text before sending
- Add Enigmail comment in OpenPGP signature
- '--' is a signature separator
- Use '<' and '>' to specify email addresses
- Only download attachments when opened (IMAP only)

Additional parameters for GnuPG

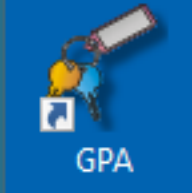
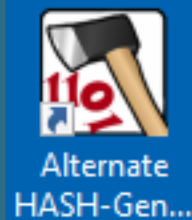
Reset Warnings

OK Cancel

Unread: 0 Total: 0 [28] Today Pane

The presentation sets the "Advanced" tab as shown.

You may create your own subject heading.



File Edit View Go Message Events and Tasks Enigmail Tools Help

[Gmail]

Get Messages Write Chat Address Book Tag Quick Filter Search <Ctrl+K>

tim.preuss04@gmail.com

Inbox

[Gmail]

Local Folders

Deleted

Outbox

Enigmail Preferences

Basic Sending Key Selection Advanced **Keyserver** Transfer Settings

Specify your keyserver(s):

sweden.minnesota.edu,vks://keys.openpgp.org, hkps://hkps.pool.sks-keyservers.net, hkps://pgp.mit.edu

Example: keys.openpgp.org, pool.sks-keyservers.net

Always use first keyserver

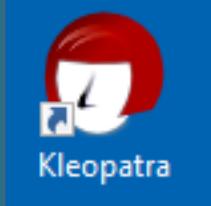
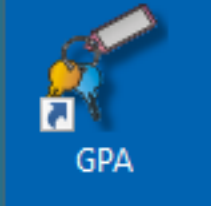
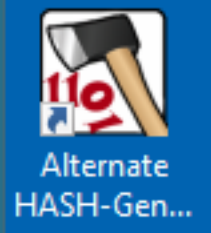
Automatically download keys for signature verification from the following keyserver:

sweden.minnesota.edu

OK Cancel

Unread: 0 Total: 0 [28] Today Pane ^

The presentation adds "sweden.minnesota.edu" as shown. This must be done in both lines as shown.



File Edit View Go Message Events and Tasks Enigmail Tools Help

[Gmail]

Get Messages Write Chat Address Book Tag Quick Filter Search <Ctrl+K>

tim.preuss04@gmail.com

- Inbox
- [Gmail]
- Local Folders
 - Deleted
 - Outbox

Enigmail Preferences

Basic Sending Key Selection Advanced Keyserver **Transfer Settings**

Transfer your key to another Autocrypt-enabled device. [\(What is Autocrypt\)](#)

Initiate Autocrypt Setup

Export (backup) and Restore your Enigmail settings including your OpenPGP keys.

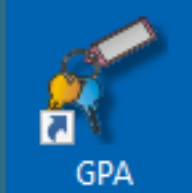
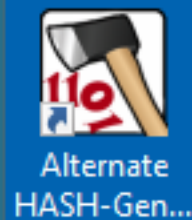
Export Settings and Keys

Restore Settings and Keys

OK Cancel

Unread: 0 Total: 0 [28] Today Pane ^

The presentation selects "OK" at the Transfer Settings tab to continue.



File Edit View Go Message Events and Tasks Enigmail Tools Help

[Gmail]

Get Messages ▾ Write ▾ Chat ▾

tim.preuss04@gmail.com

Inbox

[Gmail]

Local Folders

- Deleted
- Outbox

Decrypt/Verify

- Automatically Decrypt/Verify Messages
- Clear Saved Passphrase
- Reload Message
- Sender's Key
- Decrypt to folder
- Key Management
- Manage SmartCard ...
- Edit Per-Recipient Rules

Preferences

Help

Debugging Options

Setup Wizard

About Enigmail

Search <Ctrl+K>

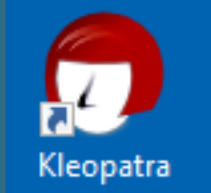
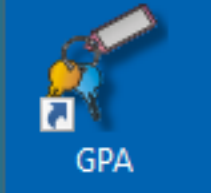
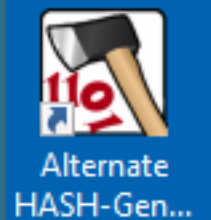
Filter these messages <Ctrl+Shift+K>

Correspondents

Date

Unread: 0 Total: 0 28 Today Pane ^

The presentation selects "Key Management" under Enigmail.



File Edit View Go Message Events and Tasks Enigmail Tools Help

[Gmail]

Get Messages Write Chat Address Book Tag Quick Filter Search <Ctrl+K>

tim.preuss04@gmail.com

Inbox

[Gmail]

Local Folders

Deleted

Outbox

Filter these messages <Ctrl+Shift+K>

Subject Correspondents Date

Enigmail Key Management

File Edit View Keyserver Generate

Search for keys New Key Pair

Name	Key
> Tim Preuss <tim.preuss@minnesota.edu>	9E11
> TPreuss <tim.preuss02@gmail.com>	A52
> tpreuss <tim.preuss03@gmail.com>	497
> tpreuss <tim.preuss04@gmail.com>	F097
> VeraCrypt Team <veracrypt@idrix.fr>	EB55

The presentation selects "New Key Pair" under the Generate tab.

Unread: 0 Total: 0 [28] Today Pane

Generate OpenPGP Key

Account / User ID: TPreuss04 <tim.preuss04@gmail.com> - tim.preuss04@gmail.com

Use generated key for the selected identity

No passphrase

Passphrase: [] Passphrase (repeat): []

Key expiry: Advanced...

Key type: RSA

Key size: 4096

[Generate key] [Cancel]

Key Generation

NOTE: Key generation may take up to several minutes. Key generation is in progress. Actively browsing or other activity will replenish the 'randomness pool' and speed up key generation when completed.

[Progress bar]

The presentation sets the "Advanced" tab settings as shown.

Key type: RSA
Key Size: 4096

Search <Ctrl+K>

Filter these messages <Ctrl+Shift+K>

Correspondents

Date

Display All Keys by Default

- Key ID
 - 9E11F91840C381E1
 - D57AB965A89D116E
 - A52A817FD6A10FD1
 - 49728EB540F67DDD
 - F0979B0ED3D86FC9
 - FDF6F3891FBDF156**
 - EB559C7C54DDD393

Unread: 0 Total: 0 [28] Today Pane



Generate OpenPGP Key

Account / User ID ▾

Use generated key for the selected identity

No passphrase

Passphrase Passphrase (repeat)

Key expiry

Key expires in ▾ Key does not expire

Key Generation

NOTE: Key generation may take up to several minutes to complete. Do not exit the application while key generation is in progress. Actively browsing or performing disk-intensive operations will replenish the 'randomness pool' and speed-up the process. You will be alerted when key generation is completed.

The presentation enters the key expiration as shown. The presentation enters the pass phrase as shown. Remember, the pass phrase must be in your password keeper program.

Quick Filter

Tags Attachment

Correspondents

Unread: 0 Total: 0 Today Pane ^

Mozilla Thunderbird

PUTTY

Generate OpenPGP Key

Account / User ID: TPreuss04 <tim.preuss04@gmail.com> - tim.preuss04@gmail.com

Use generated key for the selected identity

No passphrase

Passphrase: [Masked] Passphrase (repeat): [Masked]

Key expiry: Advanced...

Enigmail Confirmation

Generate public and secret key for 'TPreuss04 <tim.preuss04@gmail.com>'?

Key Generation

NOTE: Key generation may take up to several minutes to complete. Do not exit the application while key generation is in progress. Actively browsing or performing disk-intensive operations during key generation will replenish the 'randomness pool' and speed-up the process. You will be alerted when key generation is completed.

[Progress bar]

Quick Filter: Search <Ctrl+K>

Tags: Attachment Filter these messages <Ctrl+Shift+K>

Correspondents Date

Unread: 0 Total: 0 Today Pane

The presentation selects "Generate Key" to continue.

Mozilla Thunderbird

PUTTY

```
C:\Users\preuss>dir c:\* /s_
```

← This command on the command prompt will help the random number generator.

Generate OpenPGP Key

Account / User ID **TPreuss04 <tim.preuss04@gmail.com> - tim.preuss04@gmail.com**

Use generated key for the selected identity

No passphrase

Passphrase [.....] Passphrase (repeat) [.....]

Key expiry **Advanced...**

Enigmail Confirmation

? Key generation completed! Identity <tim.preuss04@gmail.com> will be used for signing.

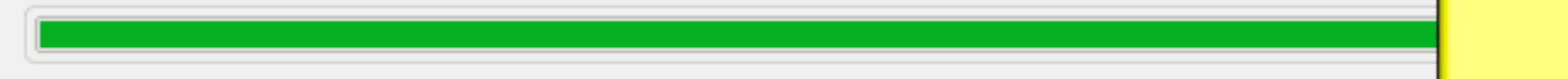
We highly recommend to create a revocation certificate for your key. This certificate can be used to invalidate your key, e.g. in case your secret key gets lost or compromised. Do you want to create such a revocation certificate now?

Generate Certificate

The presentation selects "Generate Certificate" to continue.

Key Generation

NOTE: Key generation may take up to several minutes to complete. Do not exit the application while generation is in progress. Actively browsing or performing disk-intensive operations during key generation will replenish the 'randomness pool' and speed-up the process. You will be alerted when key generation is completed.



Quick Filter [Search <Ctrl+K>]

Tags [Attachment] Filter these messages <Ctrl+Shift+K>

Correspondents [Date]

Unread: 0 Total: 0 [28] Today Pane ^



Create & Save Revocation Certificate

This PC > Documents > revocation_fall2019

Search revocation_fall2019

Organize ▾ New folder

Name	Date modified	Type
tim.preuss04@gmail.com (0xC521402FA6...)	10/28/2019 8:14 PM	OpenPGP Text File

File name: tim.preuss04@gmail.com (0x3DF4542430A3865CD0FEBD1710ADB4EB2ECCB410) rev.asc

Save as type: ASCII Armored Files (*.asc)

Save

The presentation saves the revocation certificate in a safe place.

Search <Ctrl+K>

Filter these messages <Ctrl+Shift+K>

Correspondents

Date

Keys by Default

ID

F91840C381E1

AB965A89D116E

A817FD6A10FD1

28EB540F67DDD

9B0ED3D86FC9

Unread: 0 Total: 0 Today Pane

Mozilla Thunderbird

PUTTY

Generate OpenPGP Key

Account / User ID ▾

Use generated key for the selected identity

No passphrase

Passphrase Passphrase (repeat)

Key expiry

Enigmail Alert

The revocation certificate has been successfully created. You can use it to invalidate your public key, e.g. in case you would lose your secret key.

Key Generation

NOTE: Key generation may take up to several minutes to complete. Do not exit the application while key generation is in progress. Actively browsing or performing disk-intensive operations during key generation will replenish the 'randomness pool' and speed-up the process. You will be alerted when key generation is completed.

Quick Filter

Tags Attachment

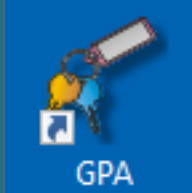
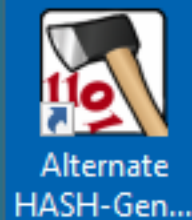
Correspondents Date

Unread: 0 Total: 0 Today Pane ^

The presentation selects "Close" to continue.

Mozilla Thunderbird

PUTTY



File Edit View Go Message Events and Tasks Enigmail Tools Help

[Gmail]

Get Messages Write Chat Address Book Tag Quick Filter

tim.preuss04@gmail.com

Inbox

[Gmail]

Local Folders

Deleted

Outbox

Unread Starred Contact Tags Attachment

★ Subject

Enigmail Key Management

File Edit View Keyserver Generate

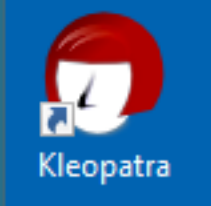
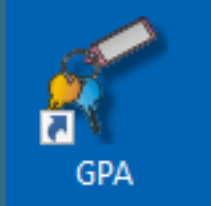
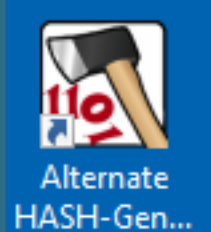
Search for keys Display All Keys

Name	Key ID
> Tim Preuss <tim.preuss@minnesota.edu>	9E11F9
> tim.preuss04@gmail.com	D57A
> TPreuss <tim.preuss02@gmail.com>	A52A8
> tpreuss <tim.preuss03@gmail.com>	49728
> tpreuss <tim.preuss04@gmail.com>	F0979E
> TPreuss04 <tim.preuss04@gmail.com>	FDF6F
> TPreuss04 <tim.preuss04@gmail.com>	10ADB4ED2ECCD410
> VeraCrypt Team <veracrypt@idrix.fr>	EB559C7C54DDD393

Unread: 0 Total: 0 [28] Today Pane ^

- Copy Public Keys to Clipboard
- Export Keys to File
- Send Public Keys by Email
- Upload Public Keys to Keyserver ←
- Refresh Public Keys From Keyserver
- Upload to your provider's Web Key Directory
- Sign Key
- Set Owner Trust
- Add to Per-Recipient Rule
- Disable Key
- Revoke Key
- Delete Key
- Manage User IDs
- Change Expiration Date
- Change Passphrase
- Generate & Save Revocation Certificate
- Add Photo
- Key Properties

The presentation right clicks on the key. On this menu, the presentation selects "Upload Public Keys to Keyserver".



File Edit View Go Message Events and Tasks Enigmail Tools Help

[Gmail]

Get Messages Write Chat Address Book Tag Quick Filter Search <Ctrl+K>

tim.preuss04@gmail.com

Inbox

[Gmail]

Local Folders

Deleted

Outbox

Unread Starred Contact Tags Attachment Filter these messages <Ctrl+Shift+K>

Subject Correspondents Date

Enigmail Key Management

File Edit View Keyserver Generate

Search for keys Display All Keys by Default

Name	Key ID
> Tim Preuss <tim.preuss@minnesota.edu>	9E11F91840C381E1
> tim.preuss04@gmail.com	D57AB965A89D116E
> TPreuss <tim.preuss02@gmail.com>	A52A817ED6A10FD1
> tpreuss <tim.preuss@minnesota.edu>	
> tpreuss <tim.preuss@minnesota.edu>	
> TPreuss04 <tim.preuss04@gmail.com>	
> TPreuss04 <tim.preuss04@gmail.com>	
> VeraCrypt Team <veracrypt@veracrypt.org>	

Key Upload

Enigmail Information

Successfully uploaded 1 key.

Close

Cancel

The presentation selects "Close" to continue.

- Recycle Bin
- Alternate HASH-Gen...
- Firefox
- GPA
- Kleopatra
- Mozilla Thunderbird
- PUTTY

File Edit View History Bookmarks Tools Help

sweden.minnesota.edu

sweden.minnesota.edu

Minnesota State Community and Technical College M State Information Technology Academic Department Moorhead MN Latitude 46.848296 Longitude -96.750837

Welcome to the sweden web site. This site primarily provides instructional support for classes taught at Minnesota State Community and Technical College, Moorhead MN. This site does provide information for selected Minnesota State University Moorhead Information Technology classes. We do have some items that may interest visitors, however no permission is given to damage this site.

The primary class support site is the [brazil web site](#). This site serves as a backup to brazil and support for encryption activities.

Most visitors will find more information about Minnesota State Community and Technical College at <http://www.minnesota.edu> . Additional information about Minnesota State University Moorhead may be found at <http://www.mnstate.edu/> .

Class Key Server

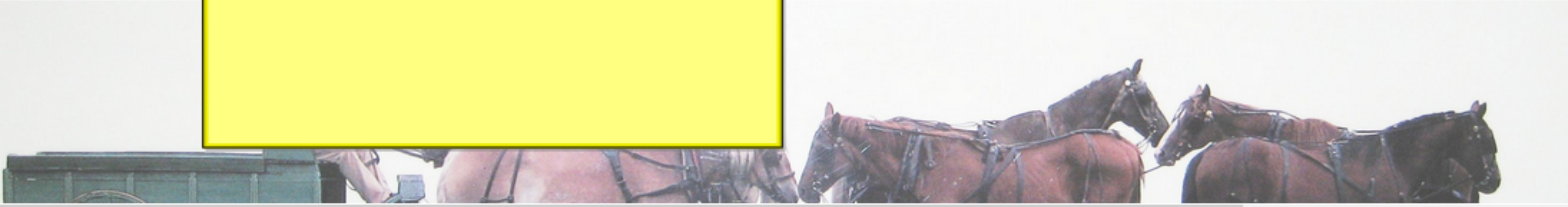
[Fall Classes](#)

[Spring Classes](#)

[General Interest](#)

New Student Information

The presentation opens the web site "sweden.minnesota.edu" and selects "Class Key Server".



- Recycle Bin
- Alternate HASH-Gen...
- Firefox
- GPA
- Kleopatra
- Mozilla Thunderbird
- PUTTY

SKS OpenPGP Key Server

MSCTC/MSUM Key Server Training Site

Extract a key

You can find a key by typing in some words that appear in the userid (name, email, etc.) of the key you're looking for, or by typing in the keyid in hex format ("0x...")

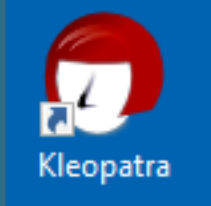
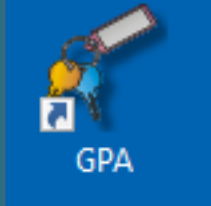
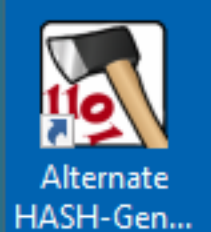
Search for a public key

String	<input type="text" value="tim.preuss04"/>
Show PGP Fingerprints	<input type="checkbox"/>
Show SKS full-key hashes	<input type="checkbox"/>
Get regular index of matching keys	<input type="radio"/>
Get verbose index of matching keys	<input checked="" type="radio"/>
Retrieve ascii-armored keys	<input type="radio"/>
Retrieve keys by full-key hash	<input type="radio"/>

Submit a key

You can submit a key by simply pasting in the ASCII-armored version of the key and clicking on submit.

The presentation enters partial email address on the key server as shown.



Search results for 'tim preuss04'

Type bits/keyID cr. time exp time key expir

```

pub 4096R/2ECCB410
uid TPreuss04 <tim.preuss04@minnesota.edu>
sig sig3 2ECCB410 2019-10-28
sub 4096R/7CDD64B2 2019-10-28
sig sbind 2ECCB410 2019-10-28

pub 2048R/A89D116E 2019-10-28
sig revok A89D116E 2019-10-28

uid tim.preuss04@gmail.com
sig sig3 A89D116E 2019-10-28

```

The key id hyperlink will display the public key. The presentation selects the link.

- Recycle Bin
- Alternate HASH-Gen...
- Firefox
- GPA
- Kleopatra
- Mozilla Thunderbird
- PUTTY

Public Key Server -- Get "0x10adb4eb2eccb410 "

-----BEGIN PGP PUBLIC KEY BLOCK-----
 Version: SKS 1.1.5
 Comment: Hostname: sweden

```
mQINBF231wgBEACxGtJteInI8Y/H8ZWyQXVafemNEekSnCdntL4zCkQJnEz fusQ5f1DT0wPn
TTqovN71xLW1VUfAzuCxEx/+vAfZ/HZ3jmL1JQHdi9LpsF6/ANmrjXNBkIicKYIYT/mRYk6b
CpKhvWZKNy2WkCXNAsVnQLN1EoEL7Mt8dvX7WGCqEJHCM1xVqR1cAV7dA2FcJjQMghW5kLxt
7SEmzYr9fvmxX3qMUTGZQuuZ21IjxIdlWF8ZLEtNJRO5jJ2g7WXvH1aRziYHkQ5ywZmU82M
to0odOCuuhA2Ho/C9Rw1Q/5Jkh8Kg88FMjh8zQzqvXG4UVPwPrUbOce0EPiIrXZz0pGT5ACa
g1FeUzILJuoXvWqIfvRj1dZrID3NCf800eRMwdbL9djK2NbdvIDtT4CGNui9gNXv/RpKJh4
H3upor41qIlgxK7zq5wyda/8NZz+LH27S1993tyDADURZ9hYY4GRJuuUIXzm+8qe00sbrJS
X7Tnum//SuToy1HtvVawxo15tSePwFjuahLyKEI+8H1i1Pda3cr7b1WdYfWLCOG0cHEPoxGh
OMJ6GJ7buJrDLAa3coNwHgFTEtIcoSs8z6XuYsP8IVsfpap1csbYV5eZw1D1PPiGQRSd4Pm5
oQN6DP3DighS1uFoNdd+dclkt7U6j5QGxzreZ6dKf3bS0ow8CQARAQABtCJUUhJldXNzMDQg
PHRpbS5wcmV1c3MwNEBnbWFpbC5jb20+iQJUBBMBCAA+FiEPPFRUJDCjhlzQ/r0XEK206y7M
tBAFA1231wgCGyMFCQBPgGAFcwkIBwIGFQoJCAcCBYCAwECHgECF4AACgkQEK206y7MtBDy
tw//Zb2DjUmIZZs7zRgTr2fkbVopC2SCVJjSzBQ0VeNboKCDfbdgfUeHMAVfpGvCAhCKvn/u
nyXWGiuxte4RBJEcIyHtkINEa74RC43RYBR/kS1QgQy9n2QKTHArDWHFrvVp61OHbp6q9YAb
n8uZRyoQuBwy0PxDM1UC9mUJtgr2r+tVgkYbwOA/KGjMHxtG2E/Hax8rIRHGdrnejoKGAuHn
GWfBORCAC5HwnqWrtLRodWrtlv1P7xZBa4huVfb/Wqkw8k9AkxNPmp1alBqK/cP6Rm00Bwf2
Vzn5OLFVDjW1ESuePhNjYr9ISEyRn0Fn55JT081Md1CNj18Z1FZ18mrmyu6Ma4CgFxp73nUy
3WNbHYV0K36I66OPSx7Qj2oKfxoNVDL99wEnxcYrAlakpUw12IXptvuGn6S4D6Hppnvh5A1A
kAp5QOesVPPmsJma/+ZPnc/+e+FSoyFeePa9b1IVpLHY1POemZPILbPs8419U/lqntfstL3YS
iiUIMJSGTky4dj1TmjGhRho+MABPd3uTOXwTrqCTfh43eStzMVyCO9NfmZCLTKpKaaCoIFRY
s61sSBPIUCF500y20j0Wj91m37uK/qd4LUJHEz+R5gZ/zvKo+QsZtLqqtC10Veb3Lsp2U3R
6vxMyMYcV5jwcM8U6Tx9mOV1VkuDOMqUIgK2YC5Ag0EXbeXCAEQAOmWXTtjkgChielzXKse
uq6yM/sa5szk+eNyYk9rZ4I7rmKVpWypjxhOpPuieGj00x4p7siHjkoyh7ynRRgjeOM/3hNC
yBf3ZaSiAZoAVmX2ek21GjakF3RrygDp2xtT+rZ+zAPTGHnxXVqkfmZVmJy2j+hcuSSLiG5B
yNLhotdBclvyn7av0aiQOC4OXqQf4o/BPq0ojP2FA0pb11QuNLXpP/fDGJzbFaevHfwSGTNE
NCw+Ejfl/phaJaWwfnjedgytnd/mMZTq2I1VGx3O1Rk4FHS03UXpS/4RTW2Et3bGAc3yBNDA
bWGP/bu02Q7s80e2MTdEe5TC4mKtt8m+XtXayZnbJOX/tAn303/iPOLYEvuMYAbUhGt2AMzD
6UqCXvUc/1VCKZ3Ln1pnDoZYPKStQc/oVbqOc9LWC2k/HPZ8MqqAHDxNpN42M3JOM1B+vbfk
0dsRcOoQKpmVtyUJFRsNmAs10EgFpbcG1PFJf6V8FJLfwmbwTTDSBIOZ6tREEEt7QXglkwVn
savG7xgxPlFt6MTi2Qshjgt0KOG5r1Rwjm9TDDGZUe88cLI443INVT/d048IkILiiIKz8bXX
uByDAzvamvPLPBB144zwlJ4mmGS+ctZe55f/IyT0aw1Ds7DNRtFUH8hZzlFTKn9YF+GQgyzV
xEYD7gRZb12mDpDxABEBAAGJAjwEGAEIACYWIQQ99FQkMKOGXND+vRcQrbTrLsy0EAUCXbeX
CAIbDAUJAE8aAAAKCRAQrbTrLsy0EEy1D/96LK1+82unLmwNQyB9JZ0b6C+6xi5SEyArZ+Vi
9TQxk141YuxqcDg49YJxn0s/kcubTw7vVF2dlcybsyMHijVWzOtBG4RQlwhoSu4ul1WYfVF0
xHMNYIhf67mOdLH3NEOCLpntGgXO0P2ULCnJLdjBxURh3dUNHdt5CFFR001SHbNhGab+SfnZ
v9166Z6LZwvlg7soVCFdbvHqRQXyRqMKMinC7hF9nHq1GFhaQvojiEf2USWT3uEevohPKCo
aRpQWdK2x9N2wgLL06uMWDftEEDFUqY1SCXqDo01Ytx5IcKAwKwmRFKEWq6AXjjoTnAZX0HJ
83uSNqclTeolzkYUABb9MSczfQKxqK0M11R2Nx9qpWxNce7p/21CYTg9FVDTZ5BNg0EoPpuH
```

This is the public key for tim.preuss04@gmail.com.

Command Prompt

```
Microsoft Windows [Version 10.0.18362.449]
(c) 2019 Microsoft Corporation. All rights reserved.
```

```
C:\Users\preuss>
```

This is the presentation home directory.

Entering the following command
cd %USERPROFILE%

Command Prompt

```
Microsoft Windows [Version 10.0.18362.449]  
(c) 2019 Microsoft Corporation. All rights reserved.
```

```
C:\Users\preuss>cd AppData
```

The presentation enters the hidden directory "AppData".

Command Prompt

```
10/28/2019 08:05 PM          22 S.gpg-agent.browser
10/28/2019 08:05 PM          22 S.gpg-agent.extra
10/28/2019 08:05 PM          22 S.gpg-agent.ssh
03/28/2019 09:22 PM          22 S.uiserver
11/14/2018 01:44 PM        4,404 swdb.lst
08/01/2018 11:25 AM       49,152 tofu.db
10/28/2019 08:13 PM        1,640 trustdb.gpg
07/31/2018 02:16 PM           0 trustdb.gpg.lock
      19 File(s)          81,986 bytes
      5 Dir(s)  37,526,540,288 bytes free
```

```
C:\Users\preuss\AppData\Roaming\gnupg>dir private-keys-v1.d\*
```

```
Volume in drive C has no label.
Volume Serial Number is BEB1-3CC0
```

```
Directory of C:\Users\preuss\AppData\Roaming\gnupg\private-keys-v1.d
```

```
10/28/2019 08:13 PM    <DIR>          .
10/28/2019 08:13 PM    <DIR>          ..
10/28/2019 08:06 PM          977 253D17AA4B6FCF6AE6EDCEE58A202047F05953DB.key
07/31/2018 04:58 PM       2,070 3AEB2C746B0AECDB2C32E3EDA7DE261484F536CD.key
07/31/2018 04:57 PM       2,070 8BE899371A994664896C4848333FD428717203F6.key
10/28/2019 08:13 PM          331 937155B4B6BA35133FE7287AA3C076ECFAE64EFC.key
10/28/2019 08:13 PM          339 C6183F8F488450FCAA1A61717B6DBAEDE5317D6C.key
10/28/2019 08:06 PM          977 D53DD1DF77F60C92EBFB9F8757622DF3A4F511F4.key
      6 File(s)          6,764 bytes
      2 Dir(s)  37,526,736,896 bytes free
```

```
C:\Users\preuss\AppData\Roaming\gnupg>
```

Command Prompt

```
10/28/2019 08:05 PM          22 S.gpg-agent.ssh
03/28/2019 09:22 PM          22 S.uiserver
11/14/2018 01:44 PM         4,404 swdb.lst
08/01/2018 11:25 AM        49,152 tofu.db
10/28/2019 08:13 PM         1,640 trustdb.gpg
07/31/2018 02:16 PM           0 trustdb.gpg.lock
          19 File(s)          81,986 bytes
          5 Dir(s)  37,526,540,288 bytes free
```

```
C:\Users\preuss\AppData\Roaming\gnupg>dir private-keys-v1.d\*
Volume in drive C has no label.
Volume Serial Number is BEB1-3CC0
```

```
Directory of C:\Users\preuss\AppData\Roaming\gnupg\private-keys-v1.d
```

```
10/28/2019 08:13 PM    <DIR>      .
10/28/2019 08:13 PM    <DIR>      ..
10/28/2019 08:06 PM          977 253D17AA4B6FCF6AE6EDCEE58A202047F05953DB.key
07/31/2018 04:58 PM     2,070 3AEB2C746B0AECDB2C32E3EDA7DE261484F536CD.key
07/31/2018 04:57 PM     2,070 8BE899371A994664896C4848333FD428717203F6.key
10/28/2019 08:13 PM          331 937155B4B6BA35133FE7287AA3C076ECFAE64EFC.key
10/28/2019 08:13 PM          339 C6183F8F488450FCAA1A61717B6DBAEDE5317D6C.key
10/28/2019 08:06 PM          977 D53DD1DF77F60C92EBFB9F8757622DF3A4F511F4.key
          6 File(s)          6,764 bytes
          2 Dir(s)  37,526,736,896 bytes free
```

```
C:\Users\preuss\AppData\Roaming\gnupg>type private-keys-v1.d\3AEB2C746B0AECDB2C32E3EDA7DE261484F536CD.key
(21:protected-private-key(3:rsa(1:n513: ||«ú&&s: ¯Ä, D||
C:\Users\preuss\AppData\Roaming\gnupg>
```