PGP, GPG, and Enigmail... Oh My!

Jack Rosenthal

25 January 2016
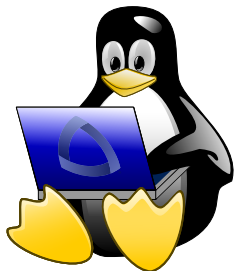
Colorado School of Mines
Linux Users Group

Pretty Good Privacy

- PGP is a data encryption, decryption, and signing program. It follows the OpenPGP standard.

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How it Works
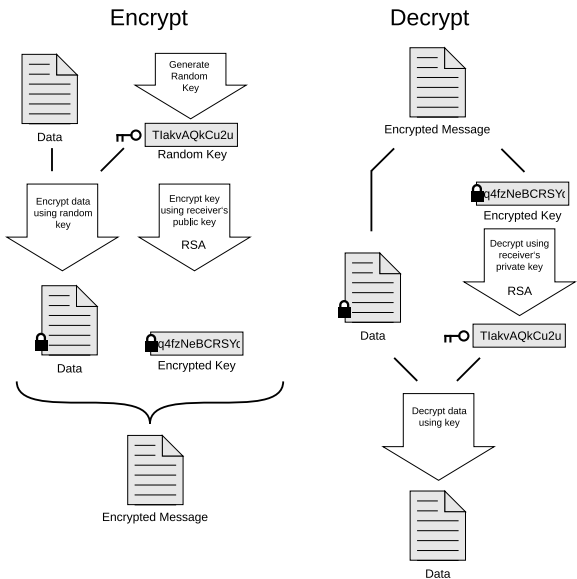
GnuPG

- Free implementation of OpenPGP standard
- Typically interfaced through `gpg` command line tool, but various GUI's are available
- Probably already on your system as most package managers (`pacman`, `apt`, etc) require it for package verification
- See `man gpg` for all of its options

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Web of Trust

How can I trust PGP content someone sends me?

Phil Zimmermann, PGP creator

As time goes on, you will accumulate keys from other people that you may want to designate as trusted introducers. Everyone else will each choose their own trusted introducers. And everyone will gradually accumulate and distribute with their key a collection of certifying signatures from other people, with the expectation that anyone receiving it will trust at least one or two of the signatures. This will cause the emergence of a decentralized fault-tolerant web of confidence for all public keys.

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Making your own PGP key

1 `$ gpg --gen-key`

2 gpg will ask you a number of questions... answer them

3 After making a secure passphrase, you will have to wait a few minutes for it to generate a key. During this time, you may want to browse the web, or do something else to increase system entropy, as this will speed up the prime number generation.

4 `$ gpg --list-keys` and make sure your new key is there

5 Upload your key to a keyserver like pgp.mit.edu
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3 Revoked public keys:

4 Store a physical (e.g., printed) copy of the revocation certificate in a lock box

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   - can still verify signatures made by you in the past
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   - do not affect relying on the large, potentially unreliable stores keys (You must use a responsible and quick garbage take)
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Integrating GnuPG with your email client

- Thunderbird: Install the Enigmail addon. The GUI is pretty self explanatory.
- Mutt: See
  `http://dev.mutt.org/trac/wiki/MuttGuide/UseGPG`
- Android: Use K9 mail and install APG
- Other email clients: Google it

When setting up your email client, please use PGP/MIME, as *inline PGP is considered harmful*.