

pass4thewin

phil

get the slides

<https://x4m3.rocks/talks/pass4thewin.pdf>



# whoami

Phil

I change platforms frequently (Windows / OS X / Linux / Android / iOS)

Hate to waste time on setting up my machines

Want an easy way to handle passwords

Used Chrome's password manager for a long time

# passwords?

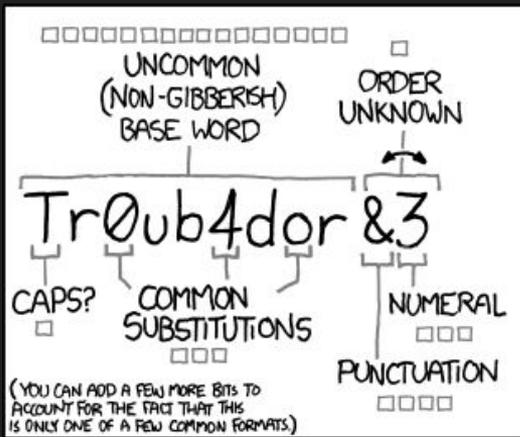
Hard to remember for humans

Short password: easy to remember but easy to break

Long password: hard to break but hard to remember

People are lazy (*we all are*), so we end up with this top 10 list of most used passwords:

1	123456
2	123456789
3	picture1
4	password
5	12345678
6	111111
7	123123
8	12345
9	1234567890
10	senha



~ 28 BITS OF ENTROPY

$2^{28} = 3 \text{ DAYS AT } 1000 \text{ GUESSES/SEC}$

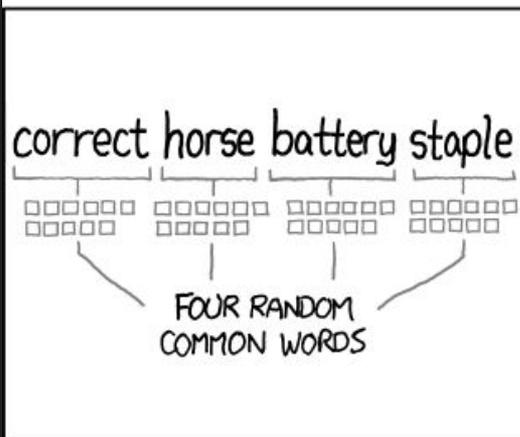
(PLAUSIBLE ATTACK ON A WEAK REMOTE WEB SERVICE: YES, CRACKING A STOLEN HASH IS FASTER, BUT IT'S NOT WHAT THE AVERAGE USER SHOULD WORRY ABOUT.)

DIFFICULTY TO GUESS: **EASY**

WAS IT TROMBONE? NO, TROUBADOR. AND ONE OF THE 0s WAS A ZERO?

AND THERE WAS SOME SYMBOL...

DIFFICULTY TO REMEMBER: **HARD**



~ 44 BITS OF ENTROPY

$2^{44} = 550 \text{ YEARS AT } 1000 \text{ GUESSES/SEC}$

DIFFICULTY TO GUESS: **HARD**

THAT'S A BATTERY STAPLE.

CORRECT!

DIFFICULTY TO REMEMBER: YOU'VE ALREADY MEMORIZED IT

THROUGH 20 YEARS OF EFFORT, WE'VE SUCCESSFULLY TRAINED EVERYONE TO USE PASSWORDS THAT ARE HARD FOR HUMANS TO REMEMBER, BUT EASY FOR COMPUTERS TO GUESS.

# password manager

Tool to store passwords

Remember only one (strong) password to unlock the manager

Let the password manager generate strong passwords



~~~

Sync and cross-platform

# pass

<https://passwordstore.org>

Command line password manager

Inspired by Unix philosophy (uses system tools, stores passwords in files)

Uses **gpg** for encryption / decryption

Uses **git** for syncing

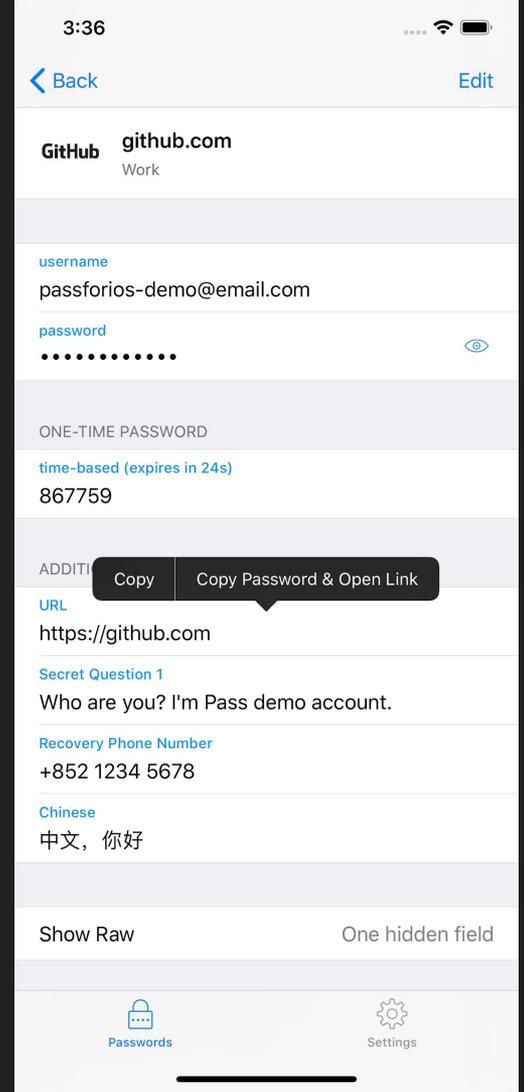
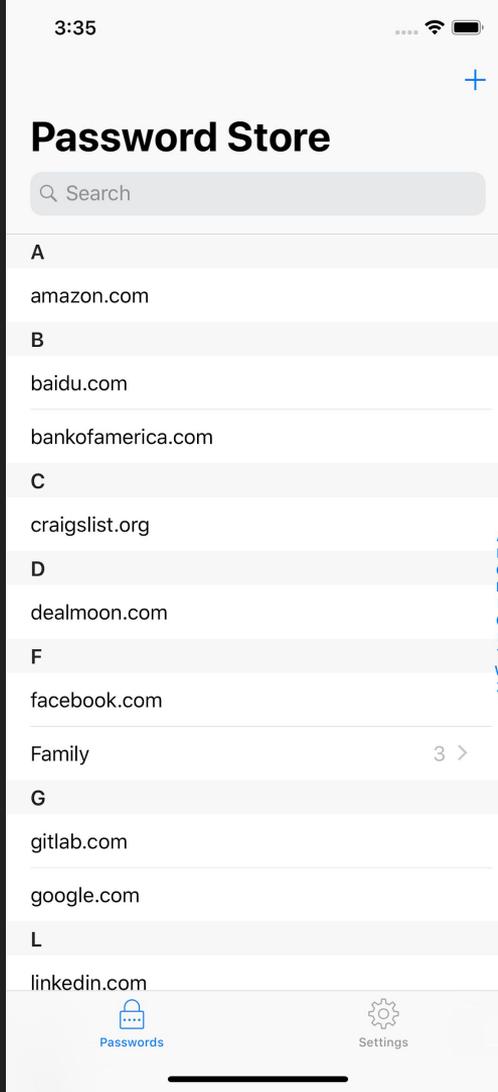
Extensions for browsers / desktop environments

Language: Bash

Platform: Linux / OS X

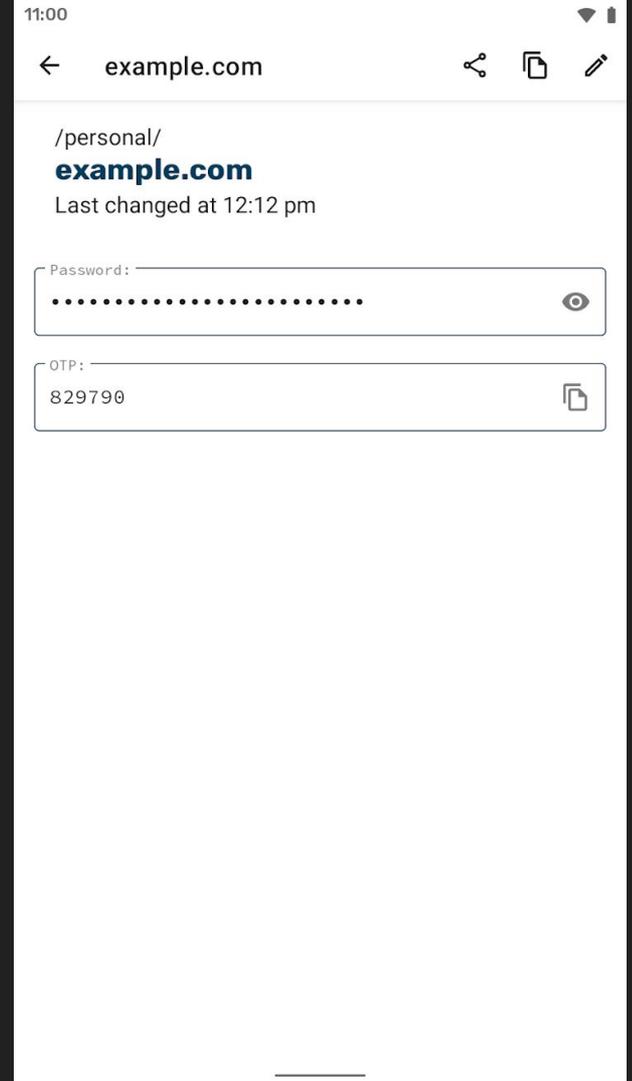
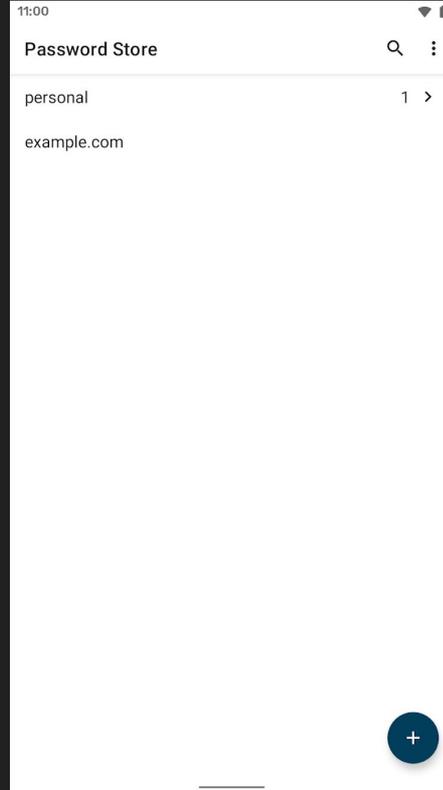
# passforios

[Website](#)



# Android Password Store

[GitHub repo](#)

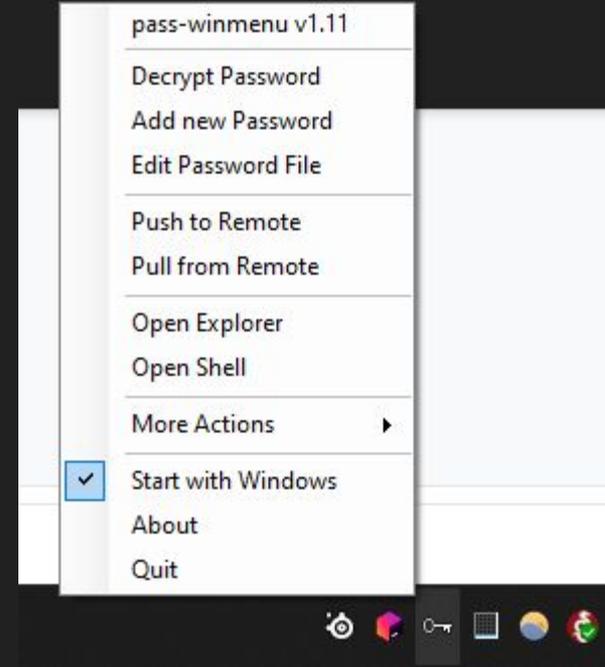


# Windows?

pass-winmenu <https://github.com/geluk/pass-winmenu>

- + keyboard shortcut to get password
- gpg fails sometimes
- can require some setup
- git syncing has been difficult

I just wanted to use **pass** on Windows...



# pass4thewin

pass for the windows platform

Designed for existing **pass** users who use windows

Built-in crypto with **sequoia-pgp** library

Uses **git** for syncing + built-in git add, rm, commit

Language: Rust

Platform: Windows

# commands

insert / generate

move / delete

show (clipboard, qrcode)

edit

**Bonus:** otp 2fa

- + pass4thewin: built-in
- pass: need plugin

## TODO:

- implement rest of the commands
- improve existing commands to match with `pass`
- better git support
- don't ask the password of the private key every time
- internal: rewrite as lib with cli on top of it

If you find something that could be improved or useful to add, please tell me!

# pass4thewin

<https://github.com/x4m3/pass4thewin>

- build from source
- prebuilt binary

should be okay for an everyday use (but not guarantees)

open source, MIT license

# workshop

## 1. Linux

- install pass
- pgp key creation
- create password store
- setup git syncing
- first commands (insert, show, generate, edit)
- push to git repo

## 2. Windows

- get pgp key and clone git repo
- install pass4thewin
- setup password store
- insert & display otp

# linux setup

install pass: <https://passwordstore.org/#download>

generate pgp key: <https://www.redhat.com/sysadmin/creating-gpg-keypairs>

export private pgp key:

<https://makandracards.com/makandra-orga/37763-gpg-extract-private-key-and-import-on-different-machine>

create private git repo: <https://github.com/new>

# windows setup

- windows terminal: <https://github.com/microsoft/terminal>
- git: <https://git-scm.com>
- install pass4thewin: <https://github.com/x4m3/pass4thewin>
- edit windows path:  
<https://www.architectryan.com/2018/03/17/add-to-the-path-on-windows-10>

optional: to type `pass` instead of `pass4thewin` all the time

<https://gist.github.com/x4m3/9cf04f8b5fdc8e26e255ce6e46aa141b>

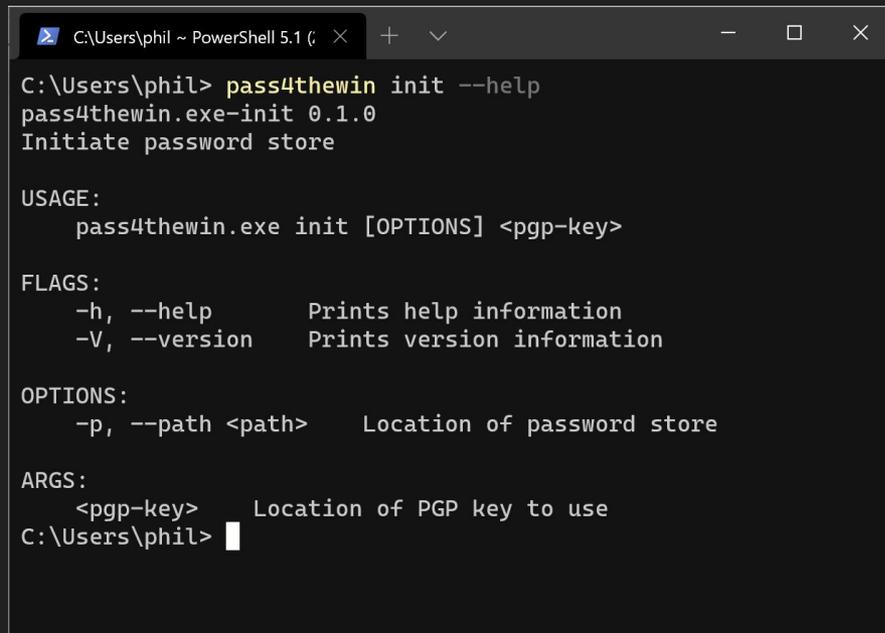
# pass4thewin init

clone your git repo first

`pgp-key`: location of your pgp key

`--path`: location of password store

`~\.password-store`: default path



```
C:\Users\phil ~ PowerShell 5.1 (C:\Program Files\PowerShell\PowerShell) x + v - □ ×
C:\Users\phil> pass4thewin init --help
pass4thewin.exe-init 0.1.0
Initiate password store

USAGE:
    pass4thewin.exe init [OPTIONS] <pgp-key>

FLAGS:
    -h, --help            Prints help information
    -V, --version         Prints version information

OPTIONS:
    -p, --path <path>    Location of password store

ARGS:
    <pgp-key>            Location of PGP key to use
C:\Users\phil> █
```

# pass4thewin commands

insert

generate

show

show -c (for clipboard)

show -q (for qrcode)

edit

# pass4thewin otp

2FA: 2 factor authentication

OTP: One time password

TOTP: Time based one time password

Use OTP when available and not the SMS method



Insert as password, and use `pass4thewin otp code my-otp`

`otpauth://totp/philippe.loctaux%40epitech.eu?secret=JBSWY3DPEHPK3PXP&issuer=Epitech`

thank you

<http://philippeloctaux.com>