

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?

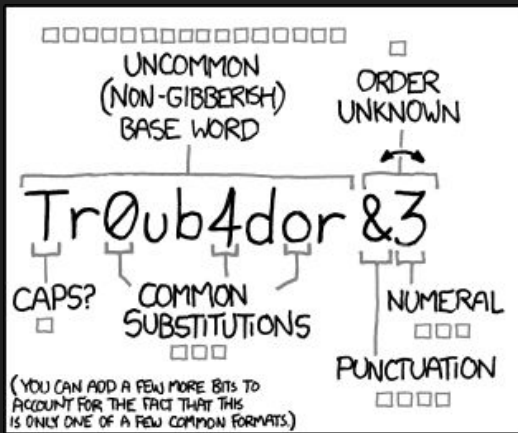
Hard to remember for humans

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

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

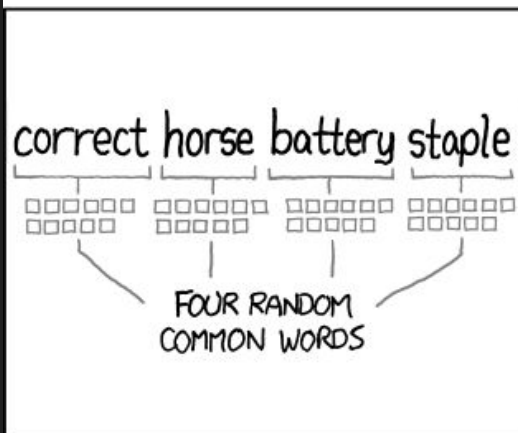
(PLAUSIBLE ATTACK ON A WEAK REMOTE WEB SERVICE: YES, CRACKING A STOLEN HASH IS FASTER, BUT IT'S NOT WHAT THE AVERAGE USER SHOULD WORRY ABOUT.)

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

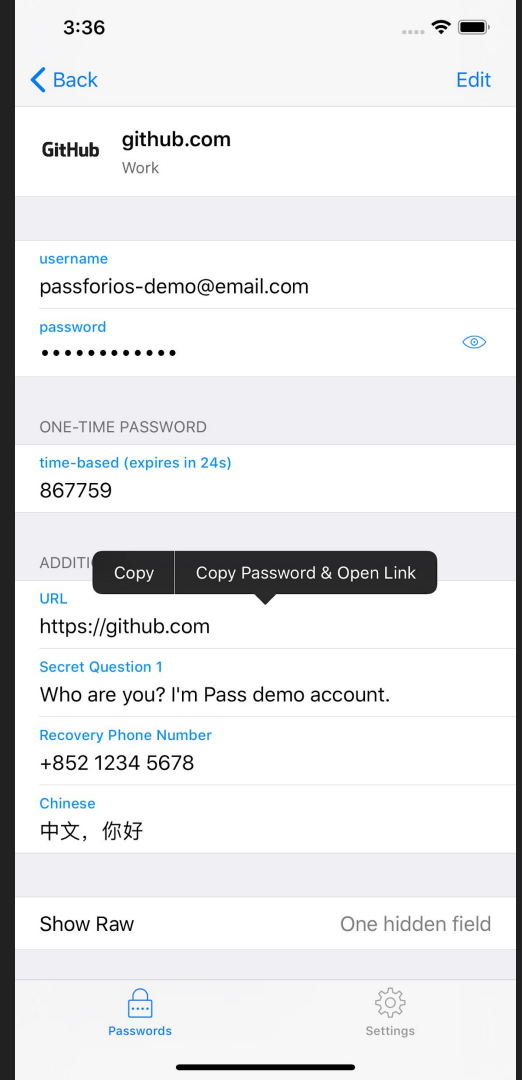
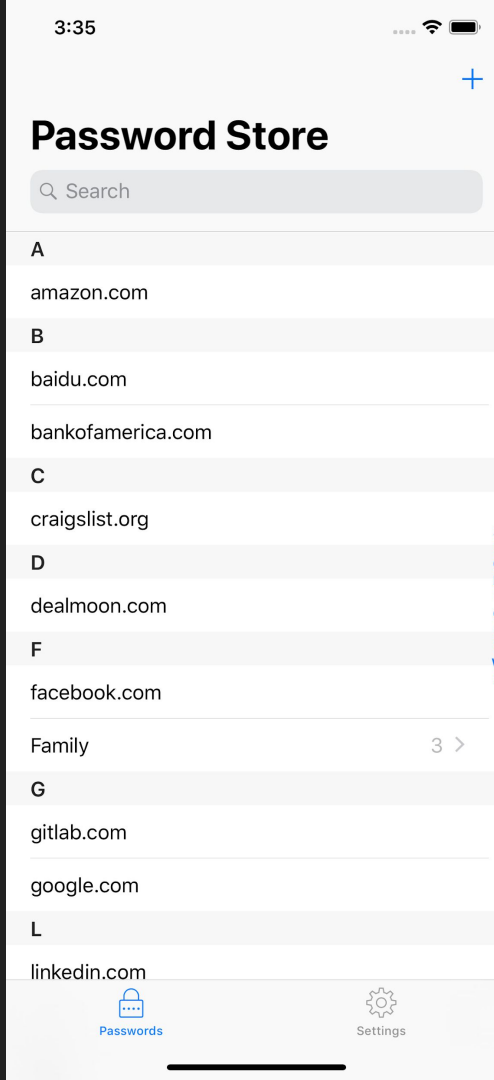
Extensions for browsers / desktop environments

Language: Bash

Platform: Linux / OS X

# passforios

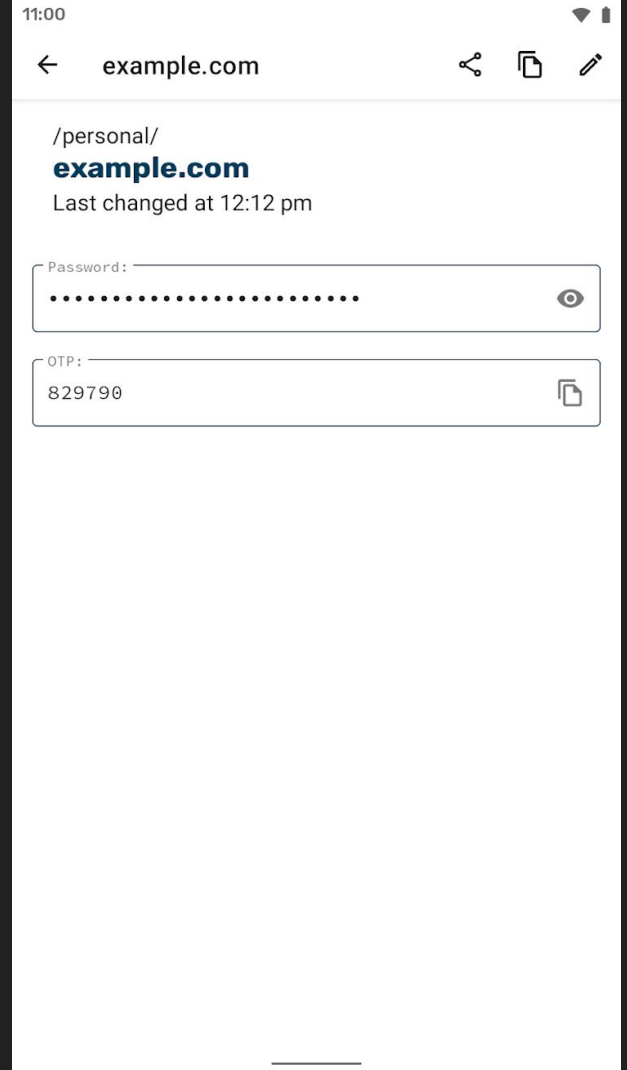
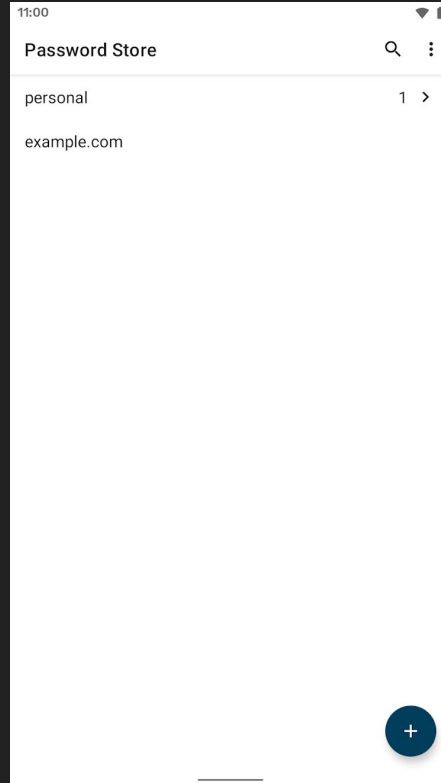
[Website](#)





# Android Password Store

[GitHub repo](#)

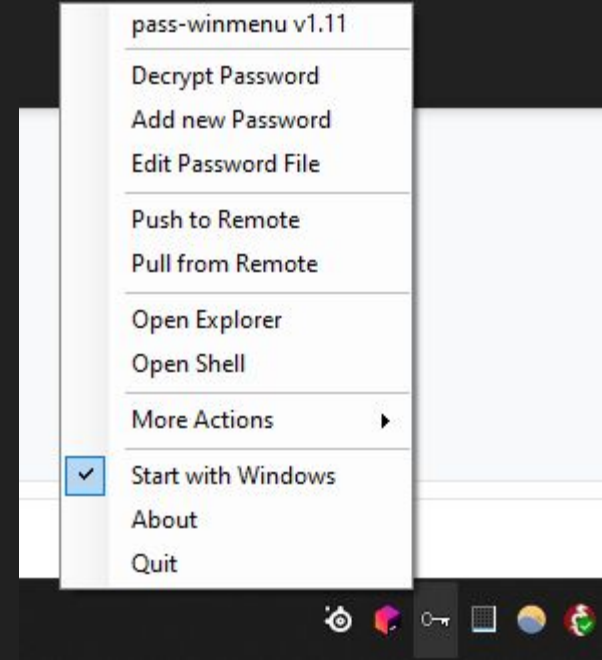


# Windows?

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://makandrakards.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>

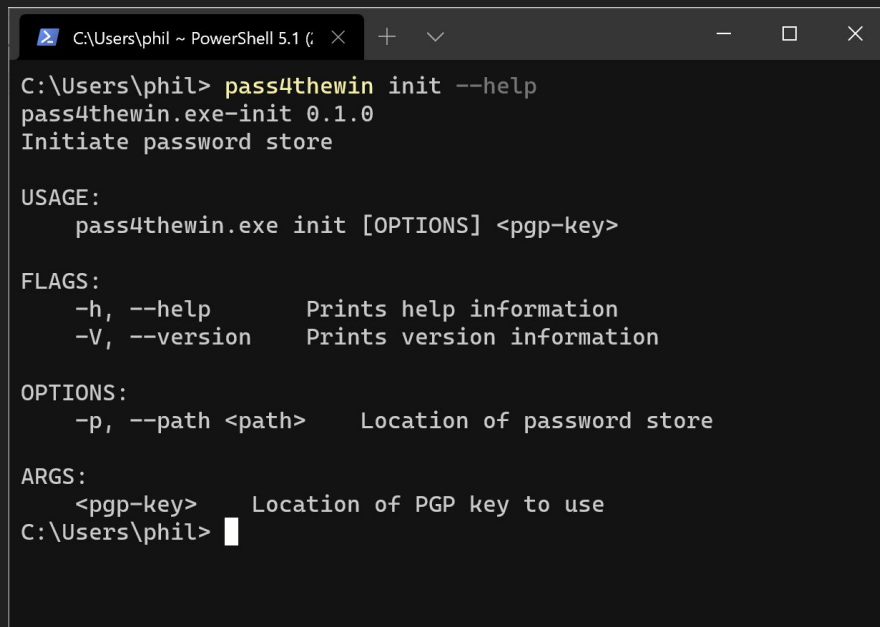
# pass4thewin init

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) [X] + v [X]
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>