

Passwords

Why are they important?

-discuss.

Passwords: often the weakest link

A password should be....

- Difficult to guess
- Easy to remember

On October 4th 2013, Adobe reported that its systems had been penetrated by attackers who stole 38 million user accounts and passwords.

BBC reported that "123456" was the most popular password among the compromised Adobe users. About 1.9 million people used the sequence.

The most common passwords of 2013

- 123456
- 123456789
- password
- admin
- 12345678
- qwerty
- 1234567
- 111111
- photoshop
- 123123
- 1234567890
- 000000
- abc123
- 1234
- adobe1
- macromedia
- azerty
- iloveyou
- aaaaaa
- 654321

The most common passwords of 2016

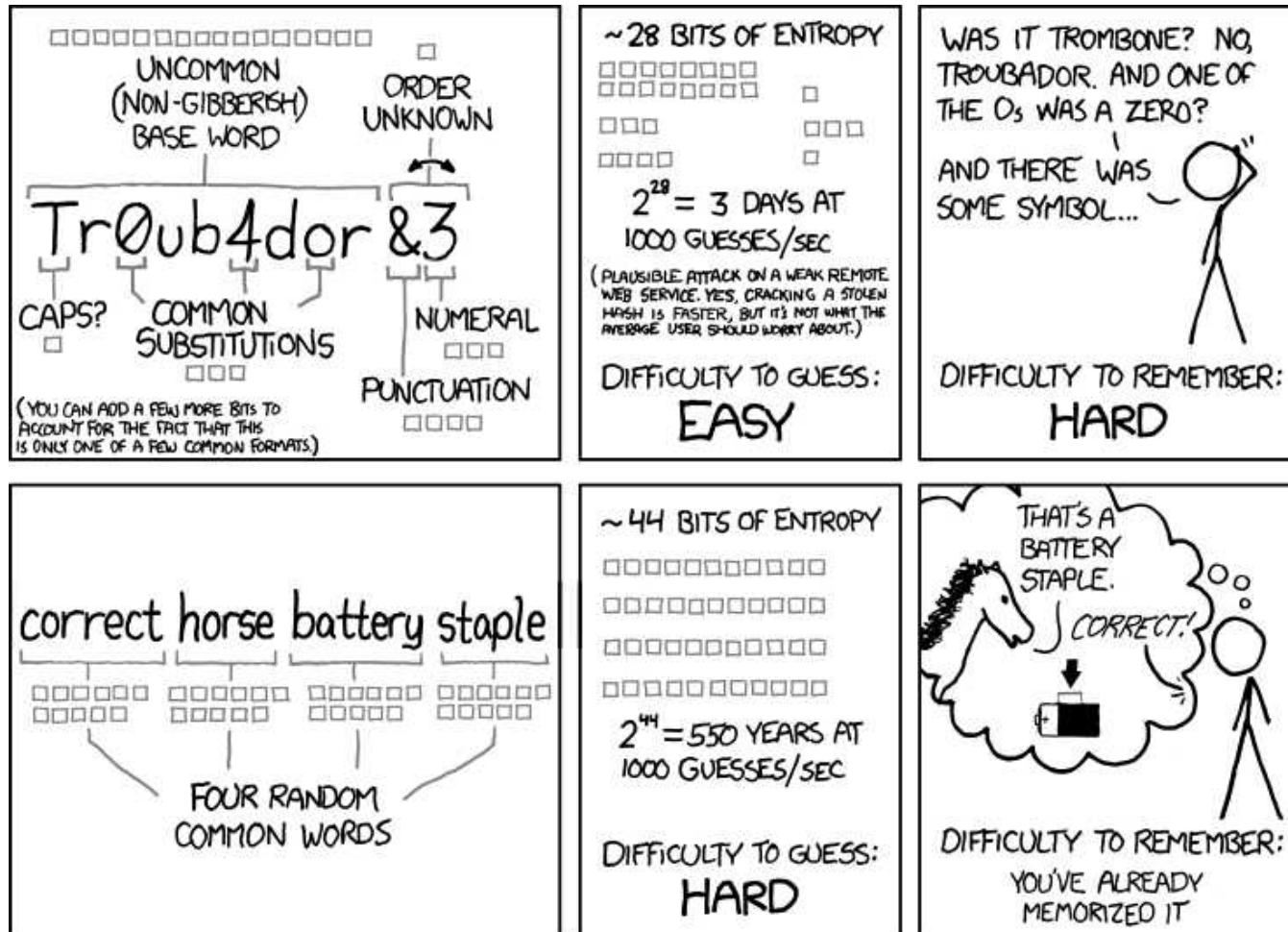
- 123456
- password
- 12345678
- qwerty
- 12345
- 123456789
- football
- 1234
- 1234567
- baseball
- welcome
- 1234567890
- abc123
- 111111
- 1qaz2wsx
- dragon
- master
- monkey
- letmein
- login

In three years, nothing much had changed.

“A password-cracking expert has unveiled a computer cluster that can cycle through as many as 350 billion guesses per second. It's an almost unprecedented speed that can try every possible Windows passcode in the typical enterprise in less than six hours.”

[<https://arstechnica.com/security/2012/12/25-gpu-cluster-cracks-every-standard-windows-password-in-6-hours/>, 2012]

A famous and overused comic



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.

Good passwords / passphrases

- ... should be 8 characters at the bare minimum (preferably longer)
- ... should not be a common word and should not be a common phrase
- ... should not contain a date, a name, or other things that can be associated with you.
- ... should not be a suggestion when you type in the first few characters into Google
- Consider combining upper case, lower case, symbols, and numbers. But, as in the comic: several unconnected words all lower case might be both easier to remember and harder to guess.
- Do not choose a password that is a simple transformation of a word, eg. pa2w01d
- Do not re-use passwords! Really, NEVER.

Some methods...

- The song method
- The book method
- Memorable sentence
- Multilinguistic

Song method

- Think of a catchy line of a song
“All I wanna say is that they don’t really care about us”
- Take the first letter of each word
“Alwsittdrcau”
- Add some numbers and punctuation
“Alwsittd’rcau!1996”

The Book Method

- “Liberating life is impossible without a radical woman’s revolution, which would change men’s mentality and life.”
- Lliiwarwrwwcmmal
- Lliiwarw’r,wwcm’m&l.

Multi-linguistic method

- Choose a word you know in 4 languages
Azadî Libertad özgür Freedom
- Mash them together
AzaLibFreezgür
- Add numbers and punctuation
@zaLibFreezgür2012
- Or...
Any sentence in Kurdish!

Final thoughts about passwords

- If you use “Correct Horse Battery Staple” then be sure to choose different types of words, words that are not associated with each other, in a non-grammatical order, and preferably in a mix of languages.
- There are some useful password generators and password managers out there, but be careful to choose one that is open source, does not save your passwords or “phone home” to any server. One good option is Master Password App...

<http://masterpasswordapp.com>