

SOLVING YOUR PASSWORD MANAGEMENT PROBLEMS

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TODAY'S AGENDA

- The Password Problem
- Password Mistakes
- Worst Passwords 2019
- Guess-ability?
- What is Entropy?
- Big Targets!
- Reusing Passwords
- Security vs Convenience
- Demo



THE PASSWORD PROBLEM

- * Passwords are annoying!**
- * Avoid the temptation. Don't take the "easy" way out.**
- * There is another easy way. It's just not what you're thinking.**

THREE BIG PASSWORD MISTAKES

- * **Choosing guessable passwords**
- * **Reusing passwords**
- * **Assuming security requires inconvenience**

WORST PASSWORDS OF 2019

- * 12345
- * 123456
- * 123456789
- * test1
- * password
- * 12345678
- * zinch
- * g_czechout
- * asdf
- * qwerty
- * 1234567890
- * 1234567
- * Aa123456.
- * iloveyou
- * 1234
- * abc123
- * 11111
- * 123123
- * dubsmash
- * test
- * princess
- * qwertyuiop
- * sunshine
- * BvtTest123
- * 1111
- * ashley
- * 00000
- * 000000
- * password1
- * monkey

GUESS-ABILITY

EASILY GUESSABLE PASSWORDS

- * **Common Words:** sunshine
- * **Adding Numbers:** sunshine1
- * **Changing Characters:** \$()nsh1n31
- * **Patterns:** qwertyuiop, 1234567890, poiuyt
- * **Quotes:** "If music be the food of love, play on." – Shakespeare
- * **Names:** William Henry Gates III (aka Bill Gates)

GUESSABLE?

- * You're not fighting people. You're fighting machines!**
- * Brute-force searches are getting better**
- * Let's look at the statistics!**

GUESSABLE?

Estimating Password
Cracking Times -
Source: [https://
www.betterbuys.com/
estimating-password-
cracking-times/](https://www.betterbuys.com/estimating-password-cracking-times/)

Amount of Time to Crack Passwords

"abcdefg" 7 characters	 .29 milliseconds
"abcdefgh" 8 characters	 5 hours
"abcdefghi" 9 characters	 5 days
"abcdefghij" 10 characters	 4 months
"abcdefghijk" 11 characters	 1 decade
"abcdefghijkl" 12 characters	 2 centuries



ENTROPY IS YOUR FRIEND

- * Entropy - Lack of order or predictability
- * Character Set:
 - * pR8t@g()N1\$t (a version of protagonist)
- * Length:
 - * studio wanted catalog unshaved
- * Randomness:
 - * qCF8jEwt2x*W
 - * Generated by password manager



BIG TARGETS! DO YOU RECOGNIZE THESE NAMES?

* Facebook

* IRS

* And the list goes
on and on and on
and on.... You get
the point!

* Target

* MySpace

* eBay

* UPS

* Equifax

* Yahoo

REUSING PASSWORDS - DON'T DO IT!

- * Password lists stolen, leaked, and hacked
- * Attacker breaks into one stolen account
- * Tries same credentials on other accounts:
Amazon, Chase, eBay, Facebook, Gmail,
PayPal, and so on

MORAL OF THE STORY?

LET TECH DO THE WORK!

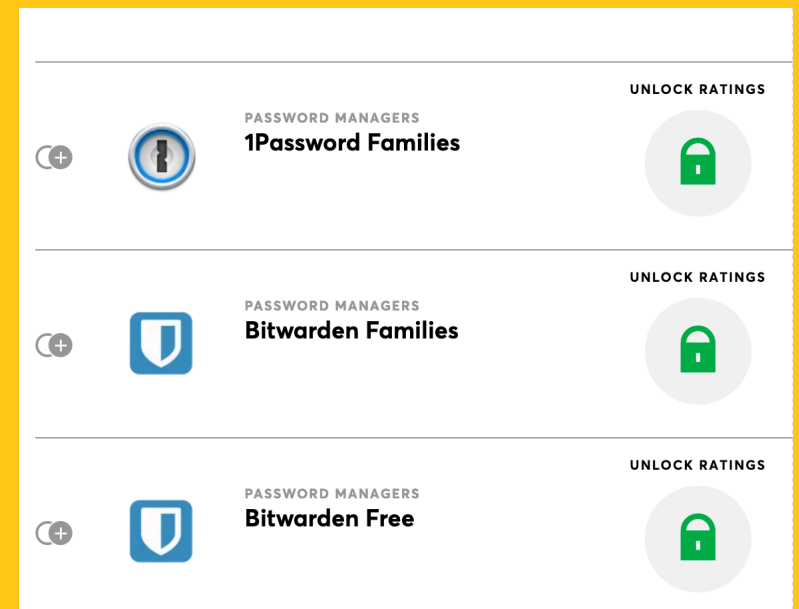
SECURITY VERSUS CONVENIENCE

PASSWORD MANAGER RANKINGS

1. **1Password for Families - \$60/yr**
2. **Keeper Password Manager - \$60/yr**
3. **Bitwarden for Families - \$12/yr**
4. **Bitwarden (Free Edition) - \$0/yr**
5. **LastPass Premium - \$36/yr**

* **Source - Consumer Reports:**

**<https://www.consumerreports.org/products/password-managers-200399/>
[password-managers-200401/view1/](https://www.consumerreports.org/products/password-managers-200401/view1/)**



DEMO TIME!

RESOURCES

- * **Bitwarden's Site:** <https://bitwarden.com/>
- * **Bitwarden Help Center:** <https://bitwarden.com/help/>
- * **Importing Data from LastPass:** <https://bitwarden.com/help/article/import-from-lastpass/>
- * **On-premises Hosting:** <https://bitwarden.com/help/hosting/>
- * **What is the right way to share passwords?** <https://bitwarden.com/blog/post/whats-the-right-way-to-share-passwords/>
- * **Getting Started with Bitwarden Organizations:** <https://bitwarden.com/help/article/getting-started-organizations/>
- * **Estimating Password Cracking Times:** <https://www.betterbuys.com/estimating-password-cracking-times/>
- * **Consumer Reports Rankings:** <https://www.consumerreports.org/products/password-managers-200399/password-managers-200401/view1/>

QUESTIONS?

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