FA2022 Week 10

Operational Security

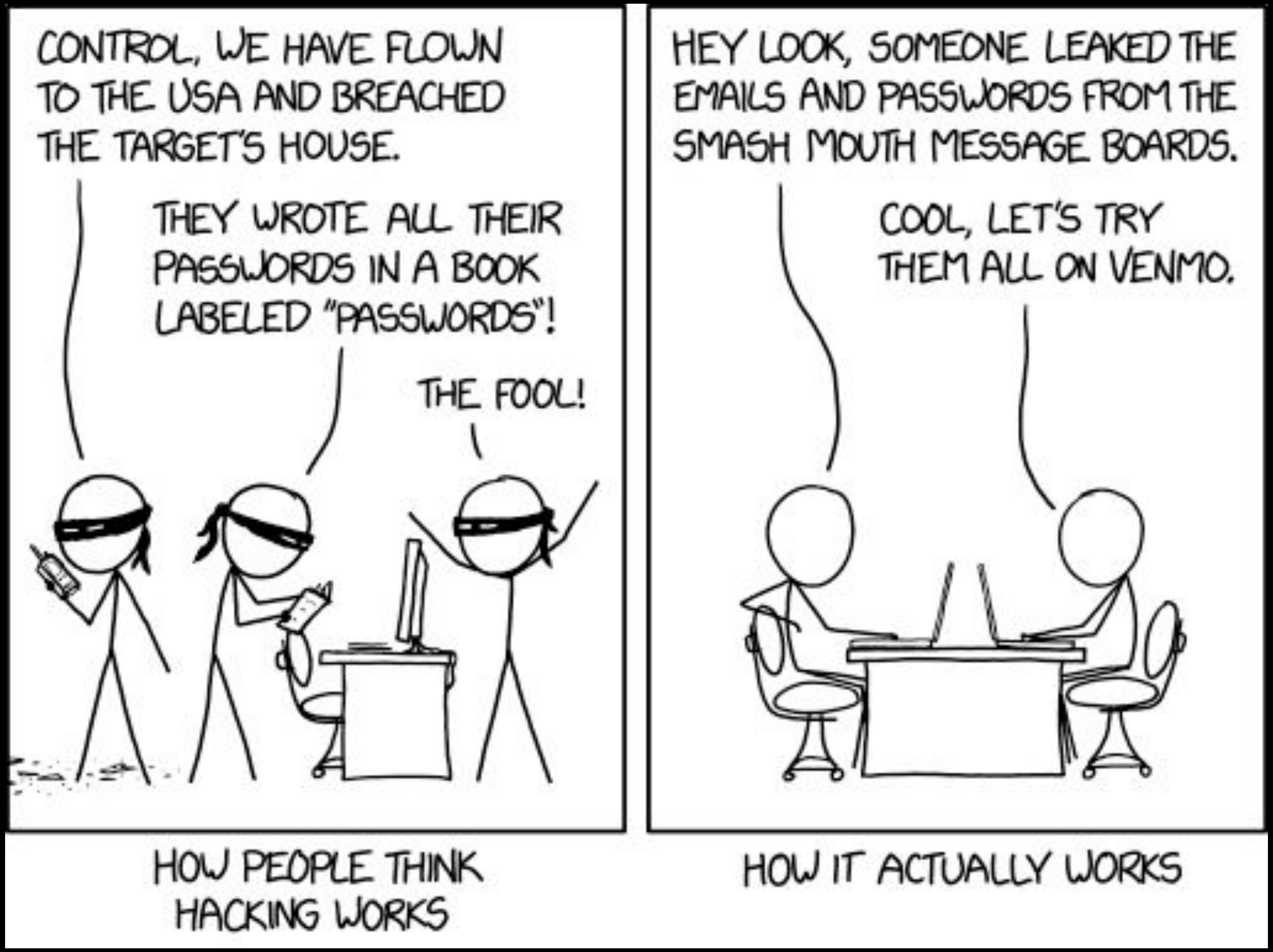
Thomas and Nora

Announcements

- BuckeyeCTF 2022
  - Starts tomorrow at 6pm and runs for the weekend!
  - Come to Siebel CS - we'll drop room number in #announcements once we figure it out
  - Free food!
  - We are going hard on this CTF - and everyone here is ready!

ctf.sigpwny.com

sigpwny{dont_do_dumb_stuff}

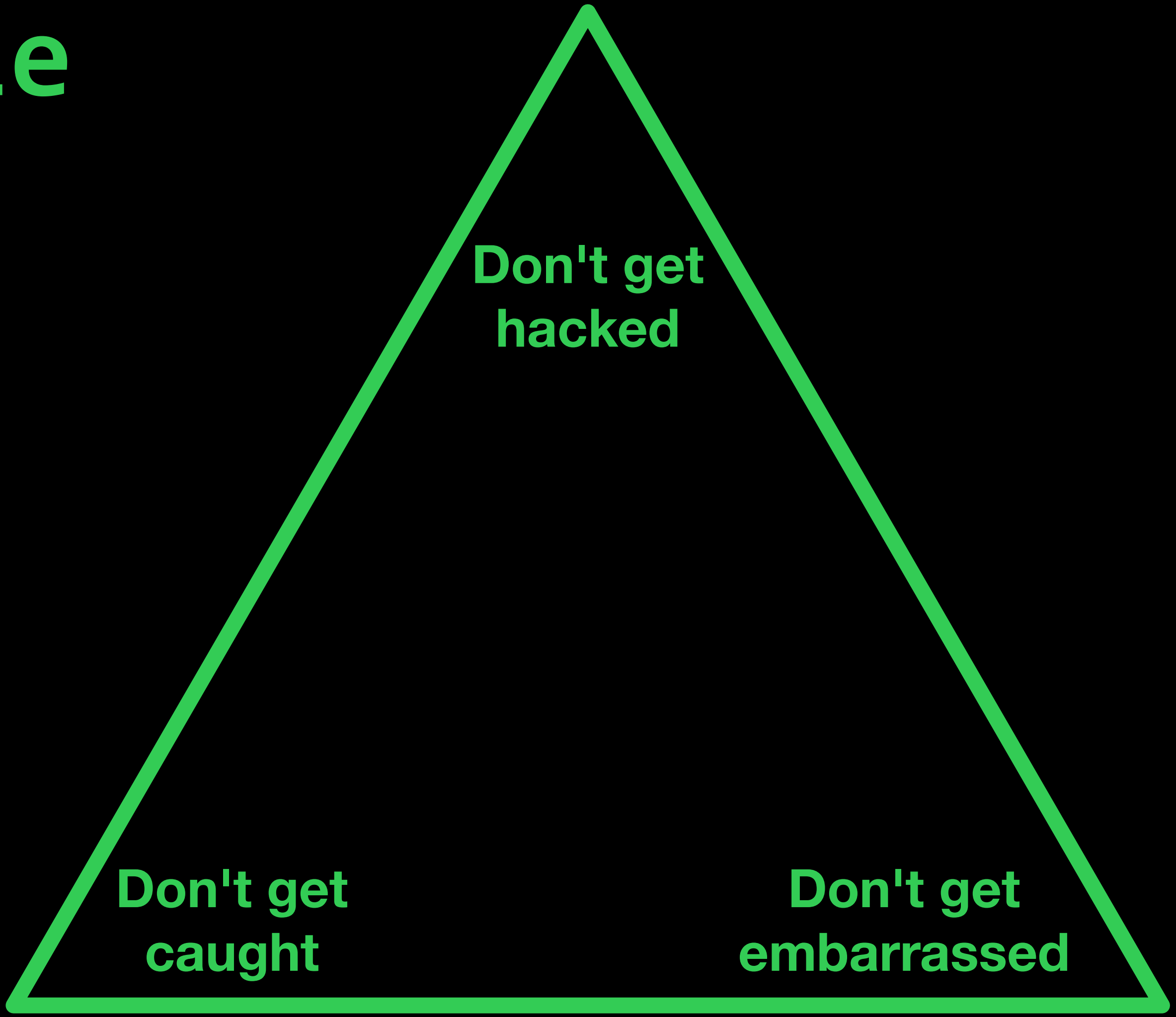

CONTROL, WE HAVE FLOWN TO THE USA AND BREACHED THE TARGET'S HOUSE.
THEY WROTE ALL THEIR PASSWORDS IN A BOOK LABELED "PASSWORDS"!
THE FOOL!
HOW PEOPLE THINK HACKING WORKS
HEY LOOK, SOMEONE LEAKED THE EMAILS AND PASSWORDS FROM THE SMASH MOUTH MESSAGE BOARDS.
COOL, LET'S TRY THEM ALL ON VENMO.
HOW IT ACTUALLY WORKS

Operational Security

"A process that identifies critical information to determine if friendly actions can be determined by enemy intelligence"

Managing your own personal security and privacy.

The Opsec Triangle



Don't get hacked

Don't get caught

Don't get embarrassed

Don't Get Hacked

This one is definitely important

Not getting hacked 101 - People

- Passwords
  - Random generator or really strong pattern
  - Never Reuse!!!
- Password Manager
  - Allows for random password generation
  - Chrome Default uses Reversible Encryption!
- MFA
  - 2FA is Good, SMS is better than just password but still weak
  - YubiKey > App-Based > SMS > Just Password
- Awareness
  - "Don't click on links" is a dated term

Challenges: Password Manager, Enable MFA, Upgrade MFA

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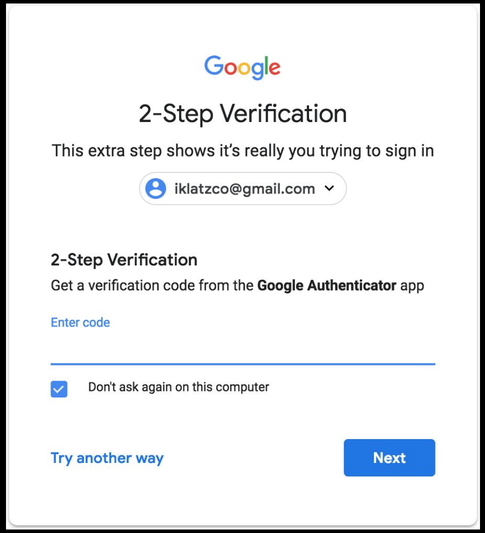

Google

2-Step Verification

This extra step shows it's really you trying to sign in

iklatzco@gmail.com

2-Step Verification

Get a verification code from the **Google Authenticator** app

Enter code

☑ Don't ask again on this computer

You can still be phished!

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Not getting hacked 101 - Orgs

- Segmentation
- Awareness training
- Make sure all org members themselves have good OpSec

- Technical Solutions

Not getting hacked 101 - Orgs

- Segmentation
- Awareness training
- Make sure all org members themselves have good OpSec

- Technical Solutions

Safe Browsing

- AdBlock
  - ublock origin
  - no downside

- Script Block
  - noscript
  - makes internet less pretty

Don't Get Embarrassed

Important for some people

The Three "Online Identity Models"

- You don't exist
  - Randomized accounts for every platform
  - No indication of who you are, watch your content
- You don't care
- You are a celebrity

The Three "Online Identity Models"

- You don't exist

- You don't care
  - Most people do this one
  - Society is becoming more accepting of this one

- You are a celebrity

The Three "Online Identity Models"

- You don't exist

- You don't care

- You are a celebrity
  - Good for recruiters, protects against impersonation
  - Watch what you say, really strong "Don't Get Hacked" measures

Don't Get Caught

If you are worried about this, you may already be too far gone

Personal Data = Radioactive Waste

- Easy to generate and store in the short term
- Almost impossible to dispose
- Requires very long term planning to manage
- What will happen to data from Twitter/Facebook in 5+ years?

Challenges: Find something embarrassing, Delete Your Account

Secure Communication

- Use end-to-end encrypted messaging apps for the important stuff
    - (Signal) (WhatsApp, Telegram are iffy)
- Use a reputable VPN that you pay for, for illegal stuff
- Don't do illegal stuff
- Use the school VPN or Algo

Challenges: Signal

If you get caught

Know your rights

Know the law

GET A LAWYER

SHUT THE HELL UP

Privacy

- Lock down your accounts
- Minimum access
    - Does everyone need to see your Linkedin
- Create an "Asset / Identity Map"

Challenges: Private Payments

Edit Before Deleting

- Many websites will continue to store all your data after you delete your account.

- Sometimes you can defeat them by editing first, then deleting your account.

Challenges: Delete Your Account

General Tips

Am going to speed through these so we can do challenges.

Overlap

A Lot of these things apply to all sections of opsec

- Three Identity Models, Personal Data = Radioactive Waste, Awareness etc…

Think about how advice from one thing can be applied elsewhere

Risk / Threat Modeling

- Who are you?
  - International Espionage Agent
  - Drug Dealer
  - Student, Security Researcher
  - DevOps at _______ Big Tech
- What are actual threats to you? Don't waste time on small stuff
- Make a model!
  - Spreadsheet
  - Graph, drawing, etc…

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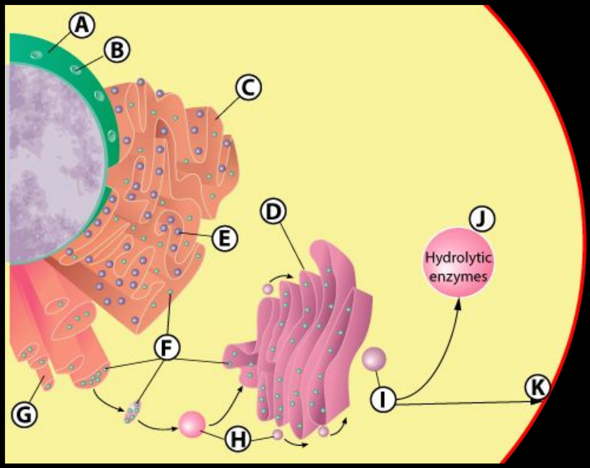
EOTW / SHTF Plans

What happens when the world ends / Sh*t hits the fan

Your world ending != the world ending

- Go Bag
- Cash
- Backups

Compartmentalization



Have different emails with **different purposes**

- Informal Emails
- Professional Email
- Security Email
- That one old yahoo email you still haven't deleted

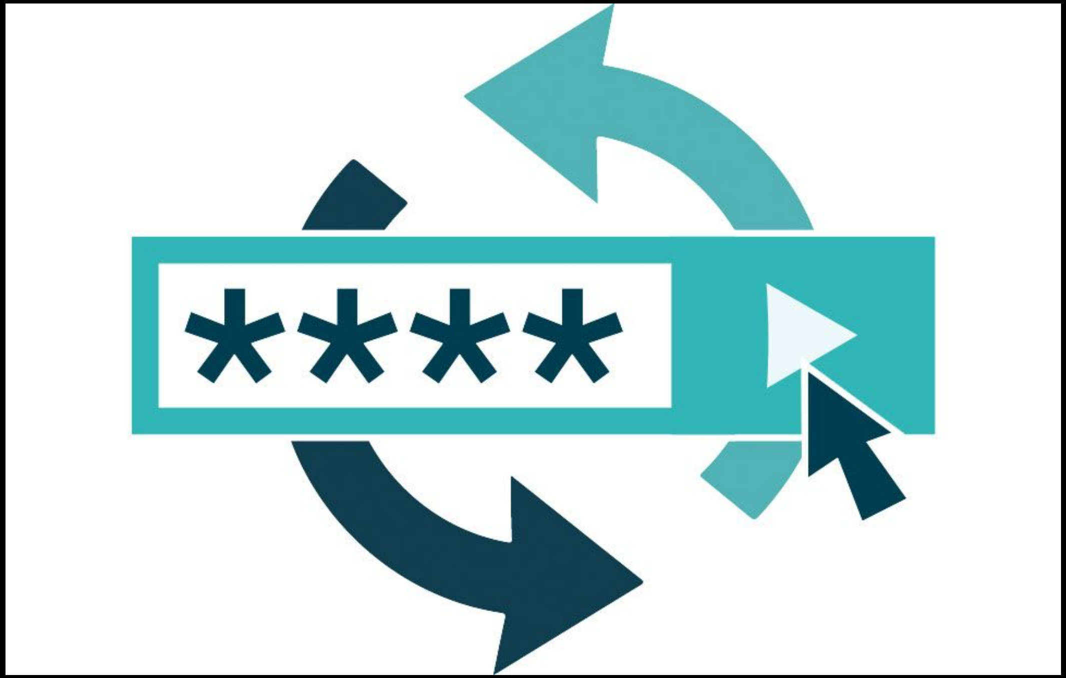
Have multiple roots of trust (run an SMTP on your own domain)

- 100% all about your threat model

Rotation

Rotate passwords occasionally

Rotate identities



Security Fatigue

This is tiring

Diminishing returns

Security vs Convenience (i.e. Random Passwords & Mobile)

It's easy to get depressed when you learn about or work in security.

Watch out for the slippery slope fallacy — just because one thing is bad doesn't mean we should stop trying to make things better (voting records & birthdates).

Next Meetings

2022-11-04 - **Tomorrow**

- BuckeyeCTF starts
- Come play CTF with everyone! You're ready >:)

2022-11-06 - **This Sunday**

- Grad Student talk with Akul Goyal
- Intrusion deletion with machine learning

2022-11-10 - **Next Thursday**

- Python jails with Pete
- Learn how to break out of pyjails!

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