

25  
Mar Beware! The FCC Releases Audio Samples of Coronavirus  
Phone Scams

Stu Sjouwerman

NATION

# Tricksters in white lab coats and phishing emails: Be wary of coronavirus-related scams, officials warn

Jordan Culver USA TODAY

Published 8:22 p.m. ET Mar. 23, 2020 | Updated 12:23 p.m. ET Mar. 24, 2020

## Coronavirus pandemic creates 'perfect storm' for cybercriminals to exploit people working from home: Experts

*Employees unfamiliar with remote work can be particularly vulnerable.*

# WORKING FROM HOME: Cybersecurity Best Practices

Scott Richards | March 26, 2020

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IT Made Simple. Modern. Secure.

# AGENDA



General Cybersecurity Best Practices



Email Security Best Practices



Password Security Best Practices

# General Computer Security Tips



# The Big 4

1. Keep all software, apps, browsers, hardware, etc. on the most current version



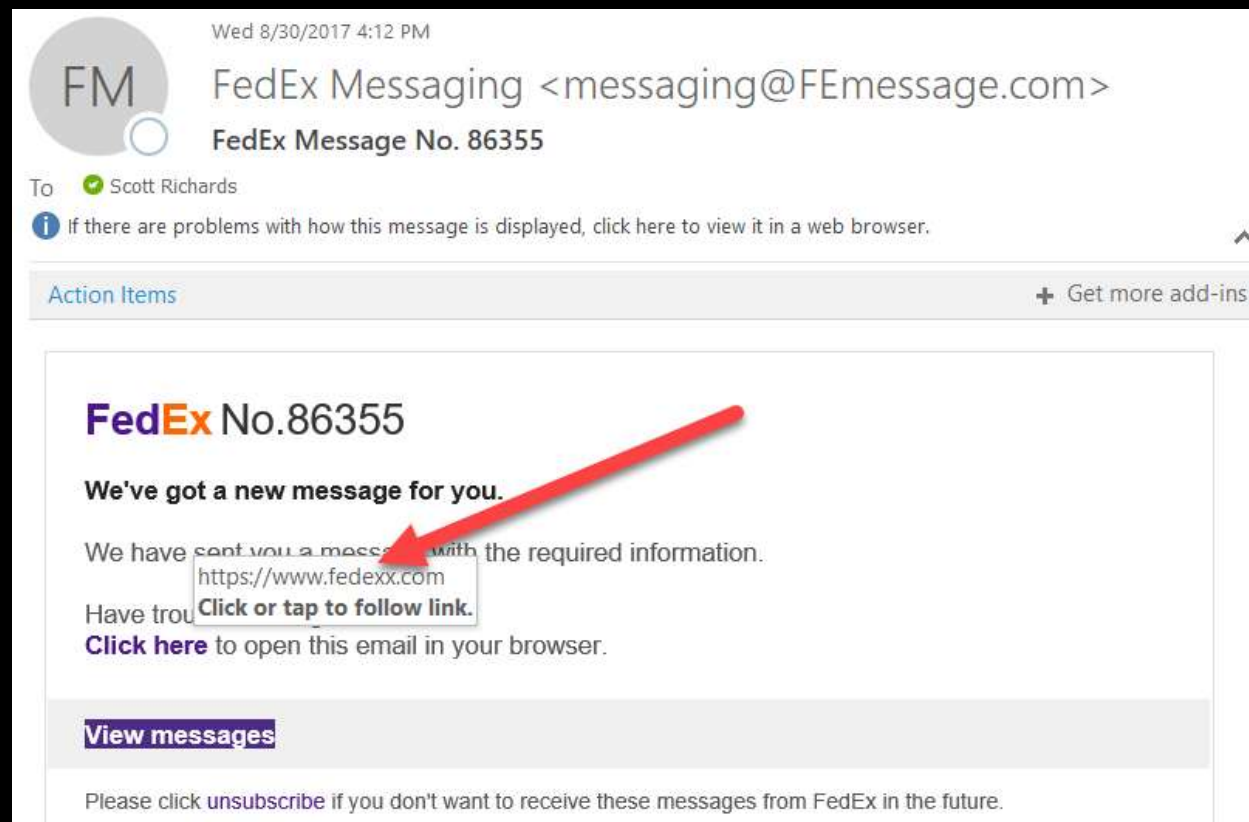
# The Big 4

## 2. Back up your files



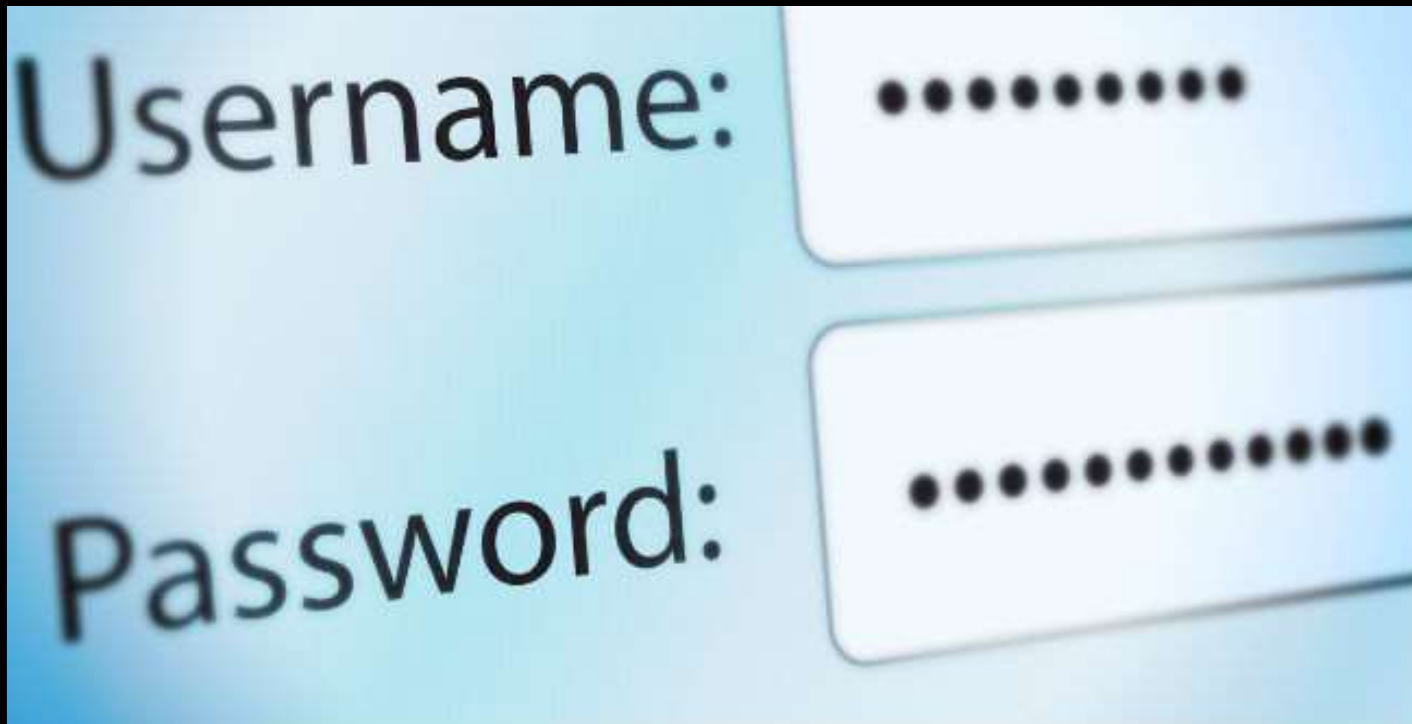
# The Big 4

## 3. Don't click on links → HOVER!



# The Big 4

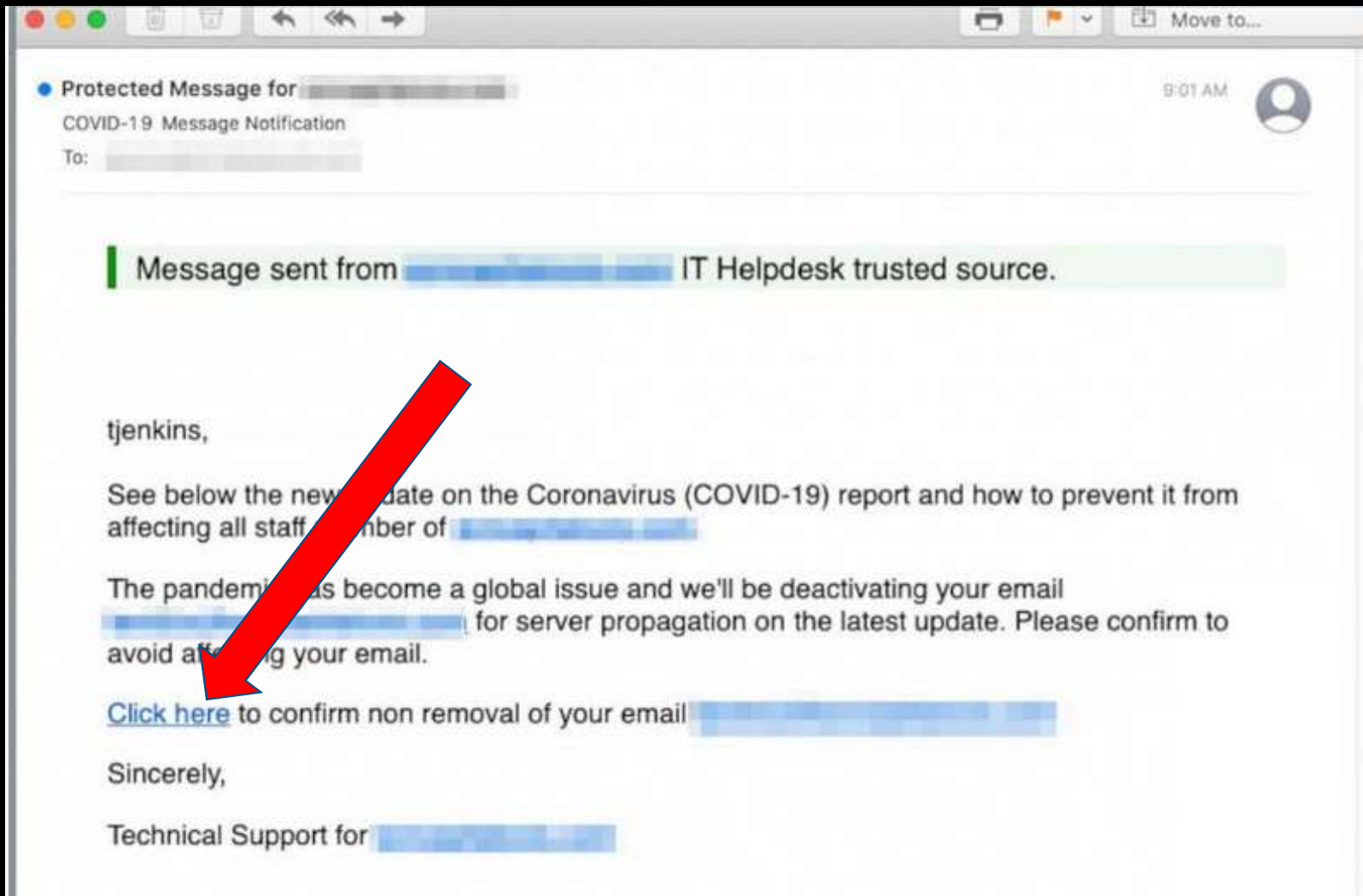
4. Be vigilant with your passwords!

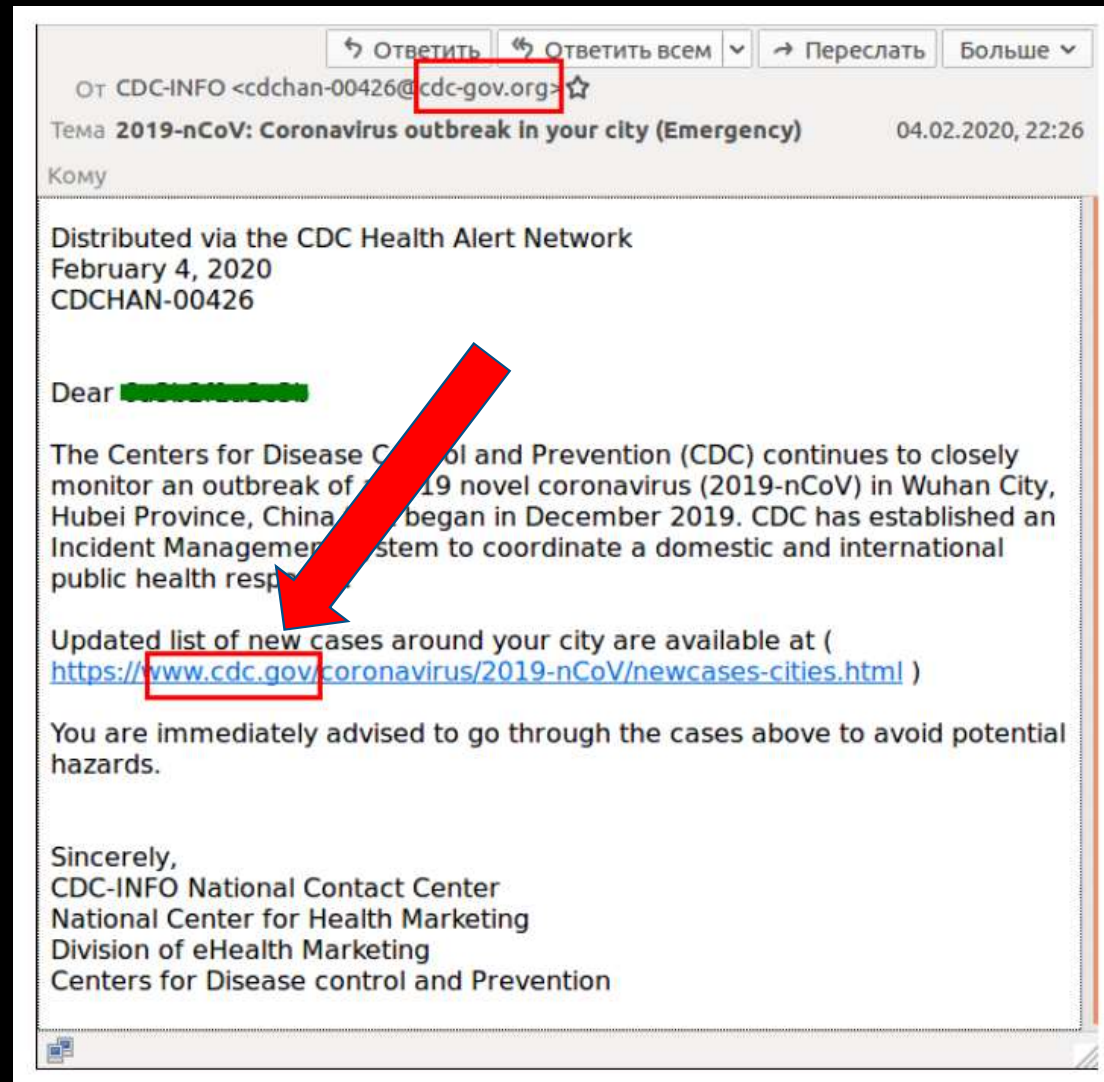


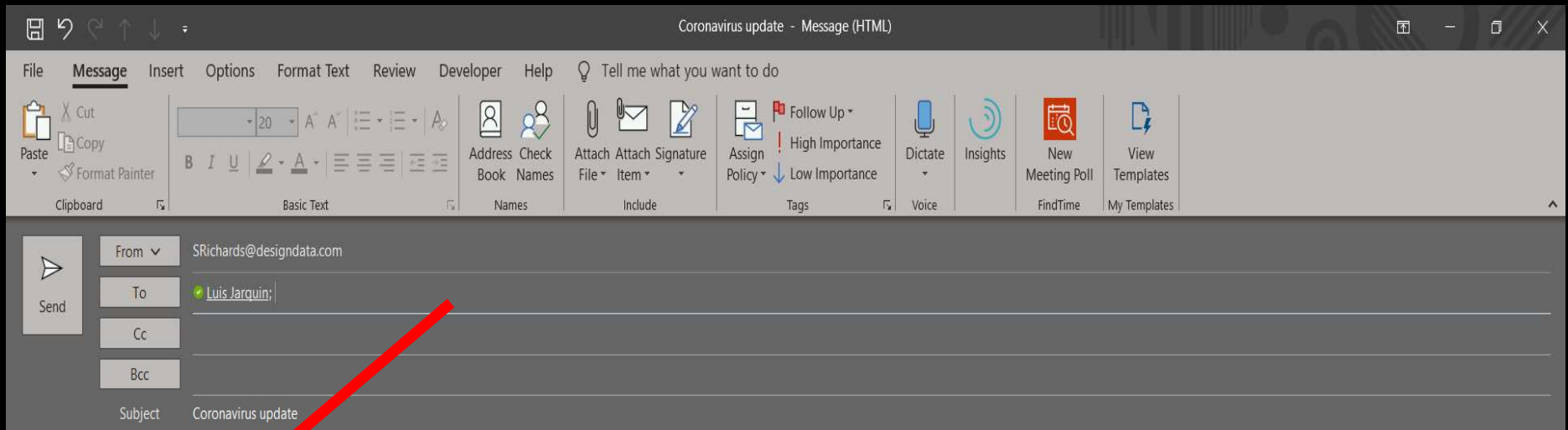


# Email Security Best Practices



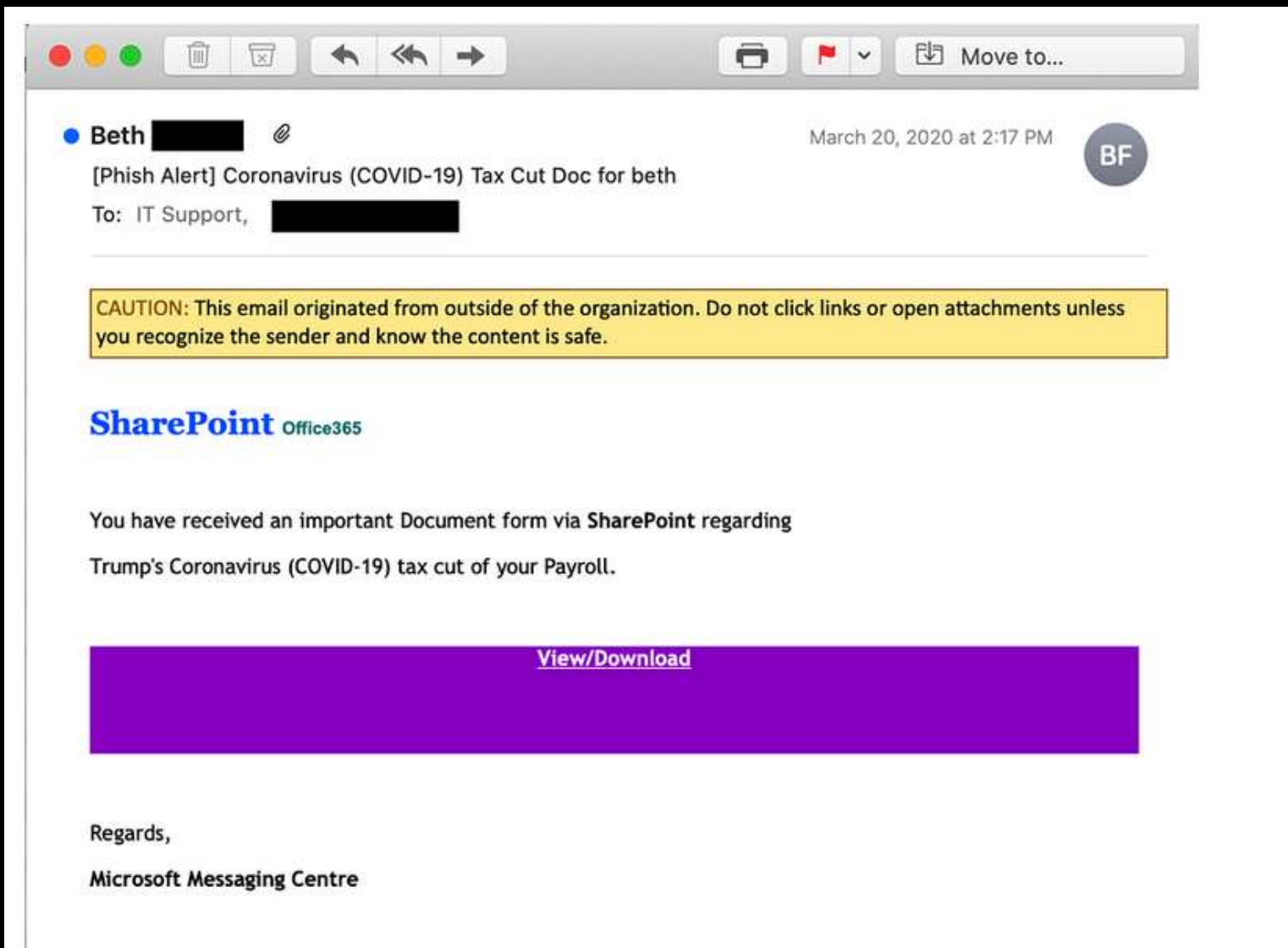






The outbreak of Coronavirus is a rapidly developing situation and is likely to affect many travel plans over the coming months. We strongly recommend that anyone travelling or planning to travel takes guidance from the Foreign and Commonwealth office:

<https://eff.org/coronavirus-covid-19-information-for-the-staff>



# Your dilemma...

How do I know which ones to click on and which ones are dangerous?

**DON'T CLICK ON ANYTHING RELATED TO CORONAVIRUS!**

1. Go to a trusted web site
2. Turn on the TV or radio



# NEW! Fake file attachments that are really images...

The screenshot displays an Outlook email window with two messages. The left message, titled "\*\*\*External\*\*\* - Invoice PPH13000 from...", shows a PDF icon for an attachment named "Inv\_PPH13000\_from\_Pet...". A tooltip for this attachment displays a long URL: "https://data.us18.list-manage.com/track/click?u=aa0e38819cb5c55fd96fd12d&iid=ebfd8d5232&v=c556019296". A blue arrow points from this URL to the text "Fake file attachments which are really images" centered below the email. The right message, titled "Find attached", shows a PDF icon for an attachment named "INVOICE\_2018070156\_.pdf".

file a

\*\*\*External\*\*\* - Invoice PPH13000 from...

Inv\_PPH13000\_from\_Pet...  
113 KB

Download Save to OneDrive

Invoice Due 06/30/18  
PPH13000 Amount Due: \$4944.00

Dear Customer:

Your invoice-PPH13000 for 4944.00 is attached. Please remit payment at your earliest convenience.

Thank you for your business - we appreciate it very much.

Sincerely,

Account Receivables  
866-823-1588

Find attached

INVOICE\_2018070156\_.pdf

Hi

Kindly see attached for your reference and confirm.

Awaiting your early feedback.

Thank you !

**Air Export Operations (LAX)**  
711 Glasgow Avenue  
Email: ...

Track shipments at our customer service site: [http://](http://...) ...

Please take a minute to complete a brief customer survey:  
<http://www.l...com/etools/survey.asp>

Fake file attachments which are really images

Hair, anyone?





Remember...

“It's not paranoia if they're really out to get you.”

-- Harold Finch, “Person of Interest”

# “3 Golden Rules” of Email Security

## 1. NEVER click on any link until:

- You’ve HOVERED over ALL links to verify they are legitimate
- You’ve employed the other email “best practices” in this training

## 2. NEVER click on an attachment until you’ve verified that the email is legitimate

- See “Email Best Practices” later in this presentation

## 3. SLOW DOWN and actually READ your emails!



Hover, hover, hover!

Let's take a look!

The consequences...

“So what’s the worst thing that can happen if I click on one of these Coronavirus links (or any other suspicious links)?”

# 1. Ransomware

**Ooops, your files have been encrypted!**

### What Happened to My Computer?

Your important files are encrypted.

Many of your documents, photos, videos, databases and other files are no longer accessible because they have been encrypted. Maybe you are busy looking for a way to recover your files, but do not waste your time. Nobody can recover your files without our decryption service.

### Can I Recover My Files?

**S**ure. We guarantee that you can recover all your files safely and easily. (But you have not so enough time.)

You can try to decrypt some of your files **for free**. Try now by clicking <Decrypt>. If you want to decrypt all your files, you need to **pay**.

*You only have 3 days to submit the payment. After that the price will be doubled. Also, if you don't pay in 7 days, you won't be able to recover your files forever.*

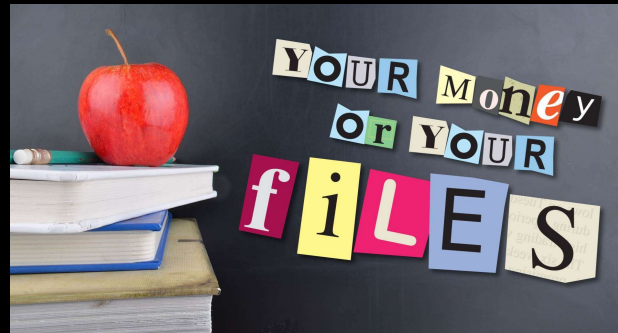
### How Do I Pay?

**Payment will be raised on**  
5/15/2017 16:25:02  
Time Left  
02:23:58:28

**Your files will be lost on**  
5/19/2017 16:25:02  
Time Left  
06:23:58:28

# Ransomware

- Restricts access to victim's infected computer
- Demands victim pay money to restore access to files
- **40,000** attacks per day
- Takes an average computer **6 trillion years** to crack the encryption!



## Ransomware 2.0 (Feb, 2020)



YOU: “We have a backup of our data, so we’re not paying the ransom!”

HACKER: “OK, no problem. Hope you enjoy having your competitors and the general public see all of your data!”

Imagine every email you and your employees have ever written out there on the Internet!

# Coronavirus Mobile Phone Ransomware

- WATCH OUT for Android ransomware posing as a coronavirus update application.
  - Will encrypt and lock the user's phone, demanding Bitcoin in ransom.





## 2. Keylogger

- Surveillance technology: monitors and records every keystroke
- Used to steal personally identifiable information (PII), login credentials and sensitive enterprise data.



# How do hackers fool you?

- “Phishing ” (aka “Spray and Pray”)
  - **156 million** phishing emails are sent every day
    - **16 million** (10%) get through protection software!



# Where are Coronavirus phishing emails originating?

- #1 country:



- #2 country:



- Followed by China, India and Russia.

How do hackers fool you?

*91%* of cyber security attacks  
start with a phishing email!

# How do hackers fool you?

## ○ “Spear phishing” attack:

- More targeted type of phishing
- Perpetrator already knows information about target before making a move
  - Use this info to gain trust



# PHISHING VS SPEAR PHISHING



## Approach

Spray and pray

Targeted attack

## Targeting

Broad and automated

Specific employee  
and/or company

## Hacking Level

Not very sophisticated

Requires advanced  
techniques

## The Attack

Usually obvious

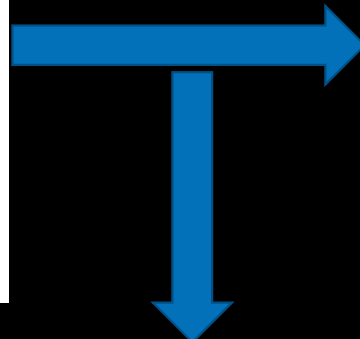
Harder to detect

## What They Are After

Usernames, passwords,  
credit card details, etc.

Confidential information,  
business secrets, etc.

# The MASTER spear phishing attack



# How does your machine get infected?

Two primary ways:

1. You open attachments containing the malware
2. You click on links that download the malware





# Email Security Best Practices

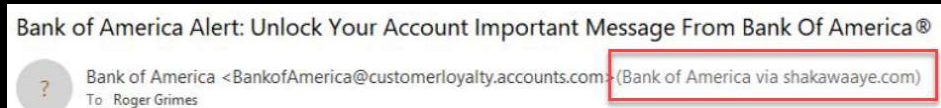
## ALWAYS:

### 1. Beware of threatening language

- e.g. “Click here in the next 24 hours or your account will be deactivated.”

### 2. Check “From” and “To” fields

- “Disconnected email addresses”



### 3. Legitimate companies will never ask for personal information via email.

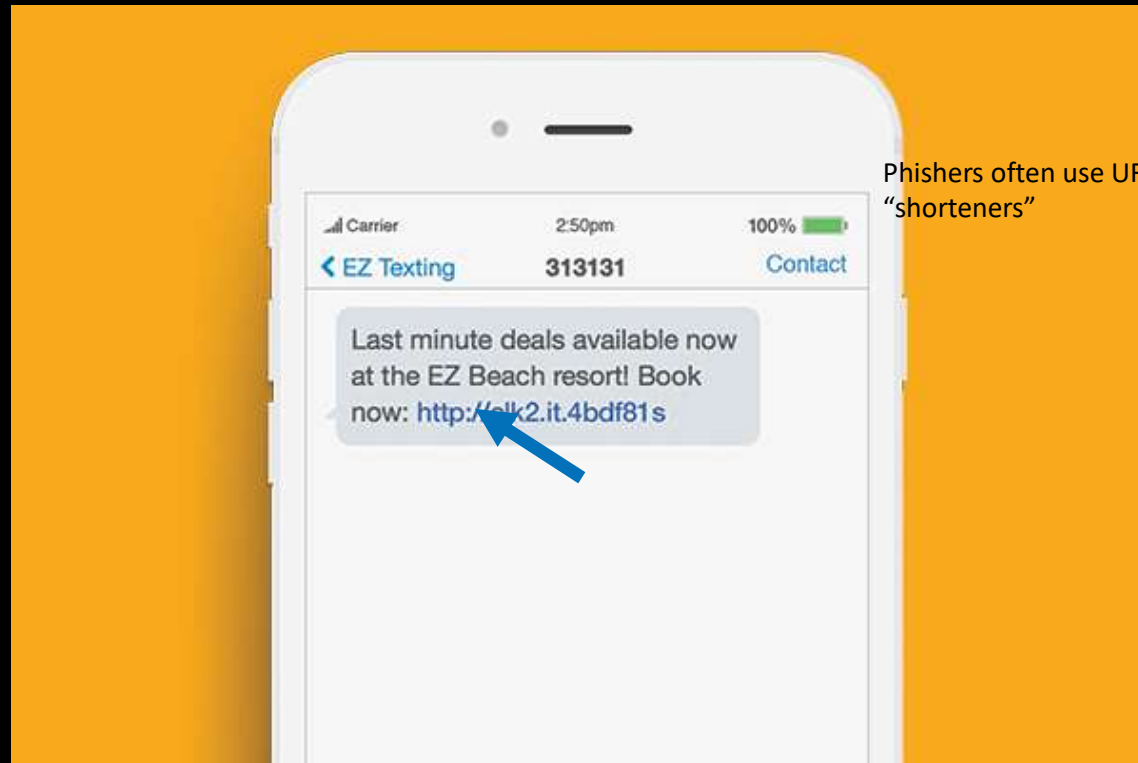
### 4. Don't believe everything you see!

# Email Security Best Practices

## OTHER TIPS:

1. Be careful what you post online!
2. Do not reply to or forward suspicious emails. Either DELETE, or contact designDATA for help.
3. Watch out for zeros instead of the letter O; ones instead of the letter "l"
  - o [G00gle.com](#)
4. Now trending: [citìbank.com](#)

# Smishing (SMShing)



# URL Expander

The screenshot displays the ExpandURL website interface. At the top, the logo "ExpandURL" is visible. Below it, a blue banner contains the text "Over 5 Million Shorter". The main heading "Expand U" is partially visible. A search result is shown for the URL "HTTPS://TINYURL.COM/TOYXCW". The result includes a thumbnail of the target website, a table of metadata, and an "EXTRA INFORMATION" section. A red arrow points from the search input field to the URL "https://tinyurl.com/toyxcw".

ExpandURL.net is a s  
prior to clicking, you'll  
Extra information will  
have more of an idea

To start, just enter any shortened URL into the field below.

<https://tinyurl.com/toyxcw>

RESULTS FOR HTTPS://TINYURL.COM/TOYXCW	
Title:	Managed IT Services and Consulting
Short URL:	<a href="https://tinyurl.com/toyxcw">https://tinyurl.com/toyxcw</a>
Redirects:	1 (show details)
Long URL:	<a href="https://www.designdata.com/">https://www.designdata.com/</a>

EXTRA INFORMATION	
Meta	outsourced IT services: data center with access to private and public cloud
Description:	consulting, training & more

What to do if...

...you think you are having **ANY** type of security issue:

**Contact the designDATA Service Desk!**



# Password Security Best Practices



# January 15, 2019: Verizon Data Breach Report

81%

of hacking-related breaches  
used either stolen or weak passwords.



Think your password is safe?



**File With 1.4 Billion Hacked And Leaked Passwords Found On The Dark Web**

**117 million LinkedIn emails and passwords for sale on the Dark Web!**



# The Magic password length

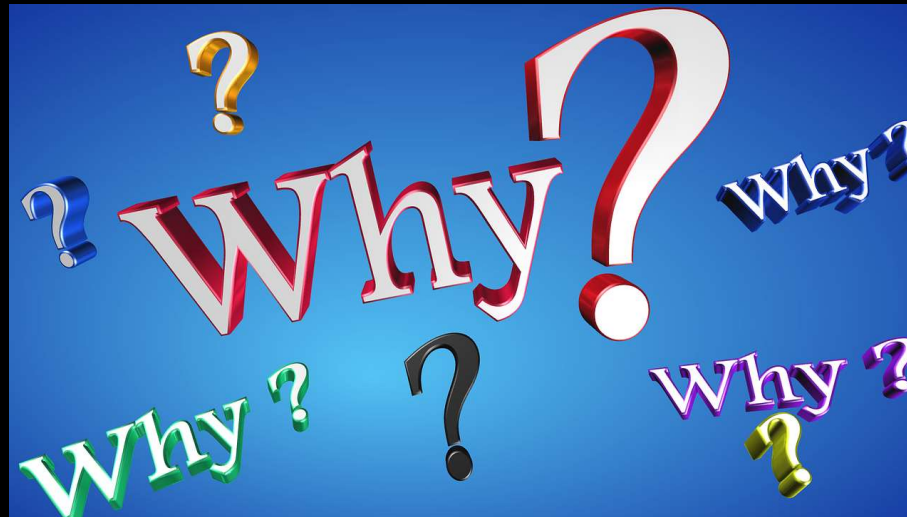
- POLL 1: How long does your password need to be to make it MUCH harder to be hacked?
  - A. 8 characters
  - B. 12 characters
  - C. 15 characters
  - D. 30 characters

# The Magic password length

- POLL 1: How long does your password need to be to make it MUCH harder to be hacked?
  - A. 8 characters
  - B. 12 characters
  - C. 15 characters
  - D. 30 characters

## POLL 2: How many passwords do I need to be safe?

- To be truly safe, you should use a different password for EVERY account.



# A hacker gained access to 100 million Capital One credit card applications and accounts

By Rob McLean, [CNN Business](#)

Updated 8:46 AM ET, Tue July 30, 2019

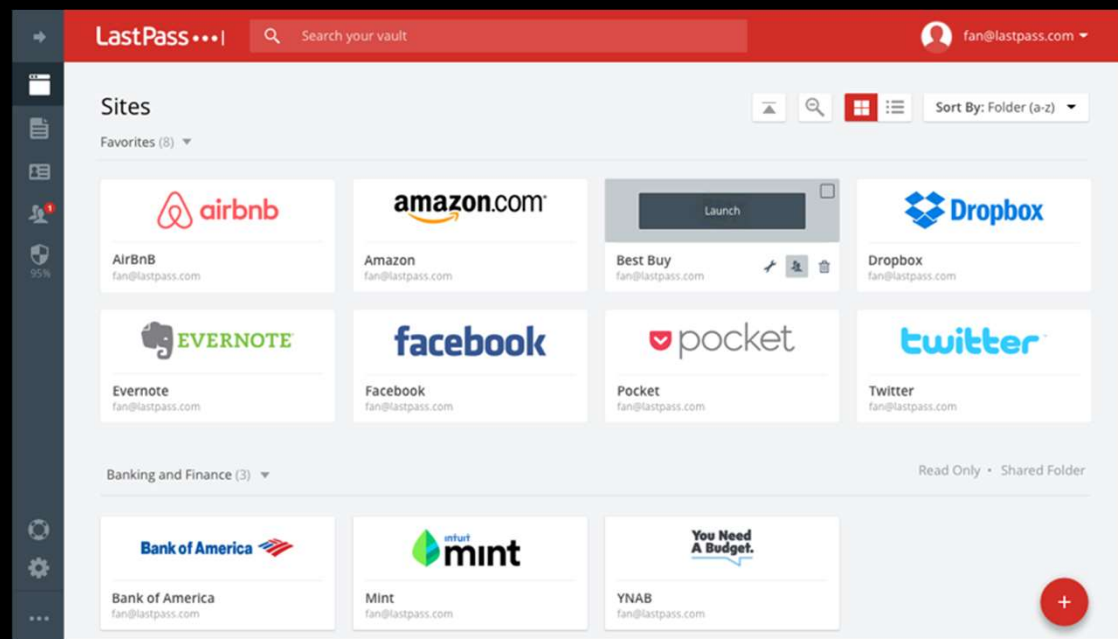


So what's the solution?



# Password Manager!

- Unique, complex passwords for every account
- Don't have to memorize any passwords!
- Fills in users/passwords for you!

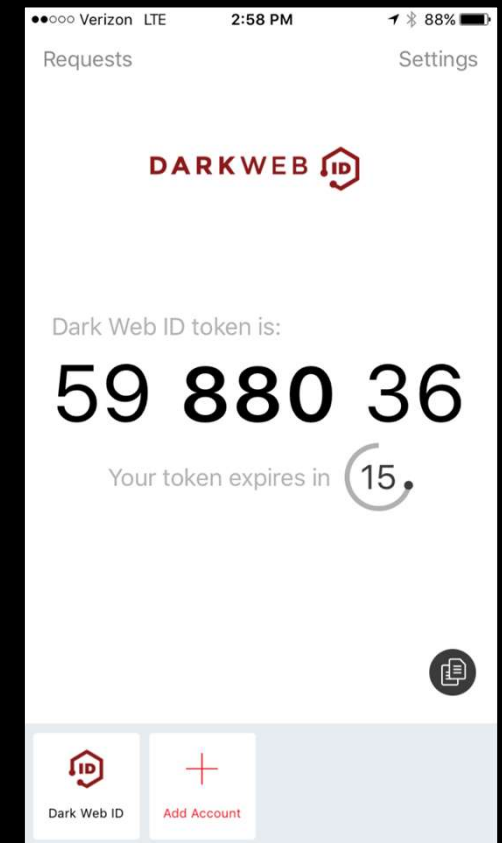
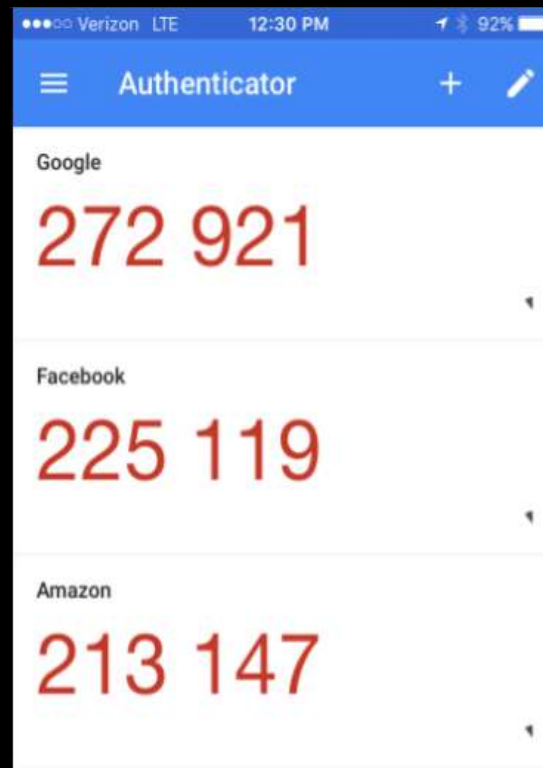
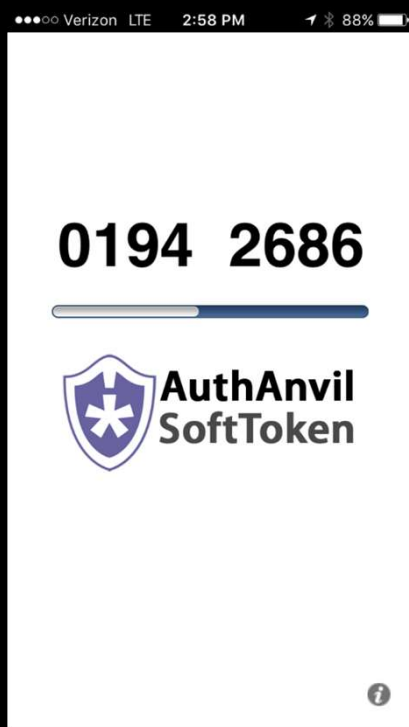


# Another great technology: 2 Factor Authentication

- Need TWO pieces of information to log into an account



# 2 Factor Authentication->Authenticator Apps





Let's take a look!

# Password Manager and 2-Factor Authentication

# Password Security Best Practices



# Key websites

- How secure is your password?  
<https://lastpass.com/howsecure.php>
- Has your email address been exposed in a data breach?  
<https://haveibeenpwned.com/>
- Has your password been exposed in a data breach?  
<https://haveibeenpwned.com/Passwords>