# End User Security Awareness Training

Presenter name – Khaing Linn Htun Date – 24 / 5 / 2024



#### Our Focus





Using strong passwords and a password manager



Enabling multi-factor authentication



Recognizing and reporting phishing



Updating software

#### Passwords: Keys to Your Digital Castle





Long At least 12 characters in length

**Unique** Never reuse passwords

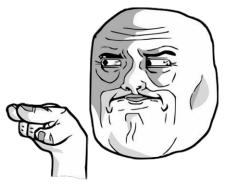


**Complex** Combination of character types

### 20 Most Common Passwords of 2024

Rank	2020	2021	2022	Rank	2020	2021	2022
1	123456	123456	password	11	1234567	qwerty123	1234567
2	123456789	123456789	123456	12	qwerty	000000	1234
3	picture1	12345	123456789	13	abc123	1q2w3e	1234567890
4	password	qwerty	guest	14	Million2	aa12345678	000000
5	12345678	password	qwerty	15	000000	abc123	555555
6	111111	12345678	12345678	16	1234	password1	666666
7	123123	111111	111111	17	iloveyou	1234	123321
8	12345	123123	12345	18	aaron431	qwertyuiop	654321
9	1234567890	1234567890	col123456	19	password1	123321	7777777
10	senha	1234567	123123	20	qqww1122	password123	123

Watching you by hacker



## **Creating Long and Complex Passwords**

Begin with a Long Phrase (at least 12 characters)	Integrate Varying Capitalization	Add Symbols	Add Numbers
Mary had a little lamb	maryHaDalittleLAMB	maryH@Dalittle(LAMB)	maryH@Dalittl <mark>3</mark> (LAM8)
Singing in the rain	siNgingIntHerAiN	&iNg!ngIn+HerAiN	&iN9!ngIn+h3rA n
Make a difference	MakEadiFfereNcE	M@kEadiFfereN <e< td=""><td>M@kE<mark>4</mark>d1Ff<mark>3</mark>reN<e< td=""></e<></td></e<>	M@kE <mark>4</mark> d1Ff <mark>3</mark> reN <e< td=""></e<>
Basking in the sun	bAskIngiNtHesUn	bA\$kIng!ntHesUn	8A\$kIng!NtHe5Un
Memorize this	meMoRizEthIs	m#MoRizEthI&	M#M <mark>0</mark> R1zEthI&
i			L

#### **Managing Passwords**

Keep your passwords in a secure location

Do NOT use paper or sticky notes
Do NOT store passwords in clear-text on your computer - Word, Excel, etc.

Utilize a password manager (aka vault)

Microsoft EdgeChrome?

Benefits of a password manager

- One strong password to access them all
  Passwords are stored securely
- Auto-fill username/password on websites
- Sync between desktop, laptop, and mobile





### Password length <-> time to crack

Time for an attacker to brute force passwords.

Are <u>you</u> in the yellow or green?

Number of Characters	Numbers Only	Lowercase Letters	Upper and Lowercase Letters	Numbers, Upper and Lowercase Letters	Numbers, Upper and Lowercase Letters, Symbols
4	Instantly	Instantly	Instantly	Instantly	Instantly
5	Instantly	Instantly	Instantly	Instantly	Instantly
6	Instantly	Instantly	instant	Instantly	Instantly
7	Instantly	Instantly	2 secs	7 secs	31 secs
8	Instantly	Instantly	2 mins	7 mins	39 mins
9	Instantly	10 secs	1 hour	7 hours	2 days
10	Instantly	4 mins	3 days	3 weeks	5 months
11	Instantly	2 hours	5 months	3 years	34 years
12	2 secs	2 days	24 years	200 years	3k years
13	19 secs	2 months	1k years	12k years	202k years
14	3 mins	4 years	64k years	750k years	16m years
15	32 mins	100 years	3m years	46m years	1bn years
16	5 hours	3k years	173m years	3bn years	92bn years
17	2 days	69k years	9bn years	179bn years	7tn years
18	3 weeks	2m years	467bn years	11tn years	438tn years

## **Enabling Multi-Factor Authentication**



#### Microsoft authenticator



#### Something You Know

- Password
- PIN
- Passcode
- Pattern



#### Something You Have

- Authentication code via text/email/phone/token
- Verification request from a mobile app
- USB plugged into the device attempting to access the account
- Smart card or keys



#### Something You Are

- Fingerprint scan
- Facial recognition
- Retina scan
- Voice verification

#### passwords exposed



#### **2FA - two-factor auth**

What is 2FA?	<ul> <li>"Beyond" a username and password</li> <li>Second form to prove it is you</li> <li>Typically, out-of-band</li> </ul>
"Your one-time	<ul> <li>SMS (Not as Secure)</li> <li>Phone call (Not as Secure)</li> </ul>

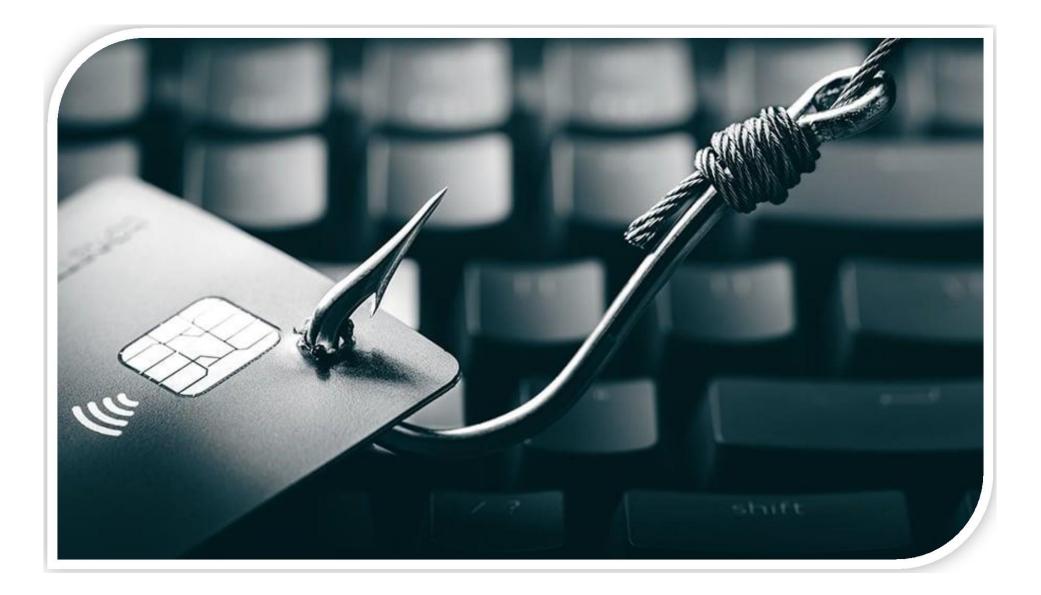
### **MFA Success Stories**

Automated bot attacks prevented with SMS code or on-device prompts	Bulk phishing attempts thwarted by MFA	Difficult, targeted attacks stopped by MFA
1000/	000/	700/
100%	96%	76%

## **Tips, Best Practices and Considerations**

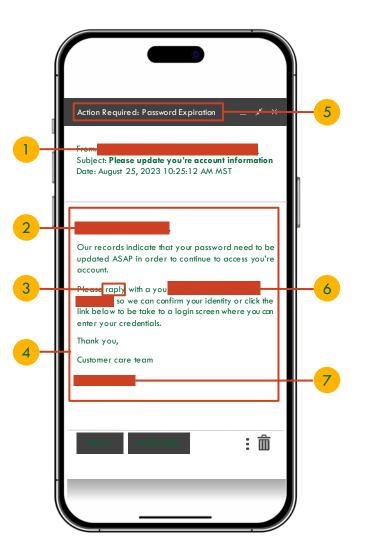
Availability	Prioritization	Diligence
<ul> <li>Not every account or device offers MFA.</li> <li>Stay abreast of security updates that may enable the functionality</li> <li>Common types of accounts that offer MFA: <ul> <li>Banking / Credit Card</li> <li>Insurance / Medical</li> <li>Email</li> <li>Social Media</li> <li>Stores / Online Shopping</li> </ul> </li> </ul>	<ul> <li>Financial</li> <li>Health</li> <li>Personal Contacts</li> </ul>	<ul> <li>Continue to use long, unique, and complex passwords.</li> <li>Update your password if you are aware of potential compromise</li> <li>If you receive multiple illegitimate MFA requests!</li> <li>Do not approve requests!</li> <li>Contact the service or platform and alert IT immediately.</li> <li>Change your password for the account</li> </ul>

### **Recognizing and Reporting Phishing**

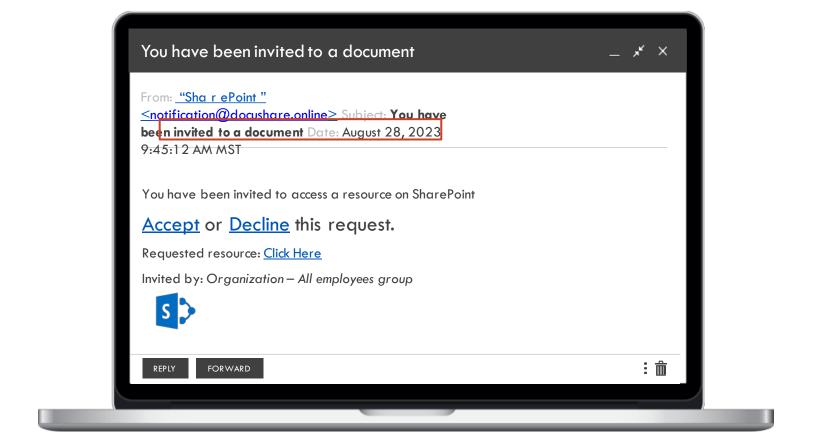


## Phishing

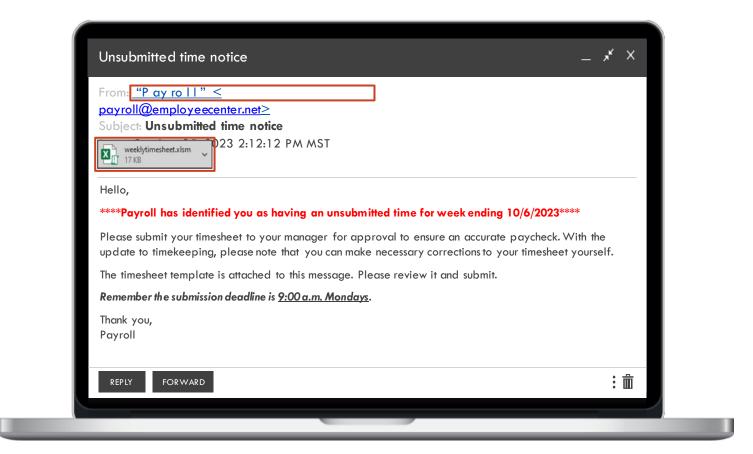
- Unofficial or unfamiliar sender address
- **2** Generic greeting
- 8 Misspelled words and grammatical errors
- Unprofessional or atypical formatting
- **5** Language intends to urge immediate action
- **6** Unusual request for sensitive information
- Links that are shortened or mask the destination



### Sophisticated Phishing



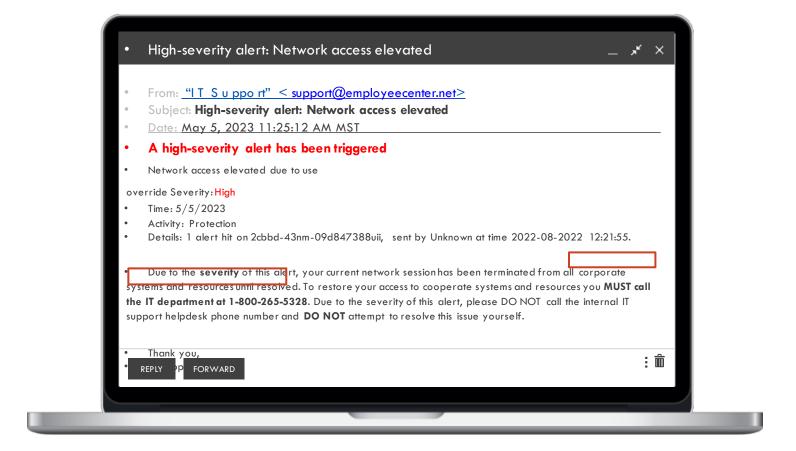
#### Phishing Attachments



## Phishing For Replies

From: <u>"Ted d y" <teddy@sharecloud.us< u="">&gt; Subject: <b>Join our disc golf crew!</b></teddy@sharecloud.us<></u>	
Date: August 25, 2023 1:25:12 AM MST	
Hello there!	
We're putting together a disc golf crew to ge drinks!	together after work for some fun and
If you're interested shoot me a reply with you registered for the team!	r <mark>name and employee ID s</mark> o I can get you
We play Wednesday afternoons for 5:30 p.	.m. until we decide to stop.
Looking forward to hearing back from you!	
-Teddy	
	: @

#### **Coordinated Attack**



### Smishing Examples

I found this old pic of us! What year was this? <u>http://tinyurl.com/84</u> 692tjk ------ - O 12:00

Amazon: Congratulations. You came 1st in today's Amazon Fitness Watch Raffle! Click the link to arrange delivery: g3gibhggela;bu8GdYsPhgal36 Ogw

Message...

OK

Google Security: Changes were recently made to your Google account. <u>Log in</u> to configure your settings.

Unusual activity detected in your online banking. Please log in at <u>http://bit.do/dg2Q</u>to secure your account.

### When You Catch a Phish

What to do when you suspect a message is phishing



#### Anywhere

- Do not click interactive elements in the • message
- Do not reply to or forward the email ٠
- Do not click, open or ٠ download attached files
- Do not follow the message's ٠ instructions
- Notify the purported sender using a ٠ new email or alternate method
- When authenticity is not established, ٠ delete the message immediately



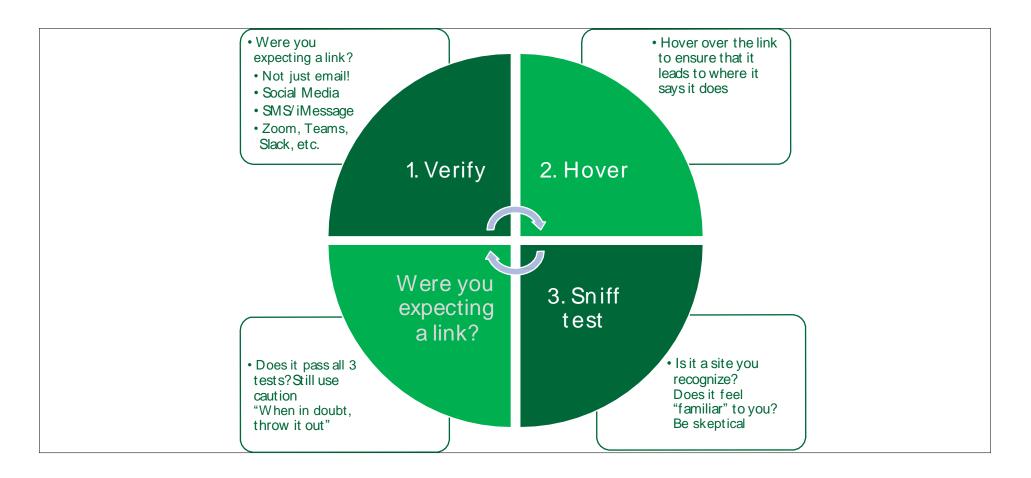
Follow your organization's policy, which may include reporting it to your technical support team



#### At Home

- Report the message to the purported sender and, if possible, the email provider
- Block the sender's email address or phone • number

### Is the link safe in 4 steps



Link expander www.linkexpander.com

#### **Other Email Scams**



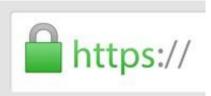
### General Tips & Privacy



- Do <u>NOT</u> connect unknown or unauthorized media (or devices)
- Programs can run when plugged in without you doing anything
- Examples
  - USB/flash drives
  - SD or micro-SD cards
  - $\circ$   $\,$  CDs or DVDs  $\,$
  - External hard drives
  - Cell phones <- Often forgotten

## **Encryption**







- Can help protect <u>your</u> data
- Can also "help" an attacker, e.g. ransomware
- Protecting data sent or received
- × HTTP ✓ vs. HTTPS
  - Wireless -> WPA2 (AES) recommended
  - Protecting devices
    - Helpful if device is lost/stolen
    - Often associated with phone PIN/passcode
    - Microsoft Windows BitLocker
    - Apple MacOS FileVault

### Internet Safety Quick Tips

<u>Never</u> click or install anything based on a pop-up from a website

"Trusted" websites can & have hosted malware, aka malvertising

Local news? WSJ, Forbes, ESPN, Yahoo, etc. Limit browsing to business relevant sites?

Avoid public: Wi-Fi, computers (hotels, libraries), charging, etc.

Do <u>NOT</u> assume a site is legitimate simply because of the "padlock"



Not secure or Dangerous

## **Enable updates straight from the source**



Automation: Enable **updates straight from the source** 



**Be suspicious of pop-up windows** that urgently demand software updates via download.



Avoid pirated and unlicensed software, as they often serve as a tool to spread malware.



Do not click **links in emails pushing for application, software or device updates**. Navigate directly to the source and check for updates.

## Key Cybersecurity Behaviors



#### To stay safe online, make these behaviors part of your regular routine





Create Backups

Learn From Security Awareness Training



Avoid Using Public WiFi



Use a VPN

## Thank You...

