CyberSecurity Training starts with the acknowledgement that employees are the weakest cybersecurity link.

Conversely, they're also the first line of defense against cyber attacks.

We need your help!
Some Stats - macro

• The global cost of cybercrime will reach $10.5 trillion by 2025

• Greatest transfer of wealth in history
• A business falls victim to a ransomware attack every 11 seconds..healthcare/govt

• More profitable than global trade of all illegal drugs combined.

If it were measured as a country, then cybercrime would be world’s third-largest economy after the U.S. and China.

*Source: Cybersecurity Ventures 2021*
COVID-19 is changing the world of work......

......especially the cybersecurity threat landscape
Ominous Trifecta

Attack surfaces are widening

Threats are increasing

Budgets are changing

Attackers have the advantage more than ever.....
Industry analysis

- 21% Government Based
- 77% involve employees
- $1 cybercrime tools and kits
- 90% of cybercrime victims **DO NOT** report it
- Email responsible for spreading 92% of all malware
- U.S. target of 86% phishing attacks
- 70% of employees don’t understand cybersecurity

Source: 2020 Verizon Data Breach Investigations Report
2019-2020 Ransomware Attacks on Public Entities

More than 346 state and local governments broadsided by ransomware attacks

Source: The Ransomware War by PC Matic
Big Picture: CyberSecurity Encompasses hundreds of elements at different levels

Easy to get lost in the noise.....
Reality

• Changing tech behavior – culture item

• Focus on what will really mitigate risks

• Education of employees is core

• 3 primary risks emerge
3 Major Risk Points

1. **Passwords**: The most critical aspect of password security is *how* employees use their passwords.

2. **Phishing**: The focus here is on identifying indicators of phishing emails. Ransomware payload

3. **Backups**: Now more important than ever...but are they current & tested?
1) Password Dilemma

- 98% of employees **do not** have a real strategy on passwords
- 60% of employees use the exact same password for everything they access
- 1961 technology....a problem
Creating Strong Passwords

- **Develop a strategy.** #s Only going up
- Use phrases or technology
- Go Sea 5helby! (easy to remember, spaces make it very secure)
- The phrase above is magnitude of orders more secure than “D@ught3rsN@m3!*%$#@!%-2020_1”

10 to 14 digits

LastPass... 1Password Put Passwords In Their Place mSecure Password Manager
<table>
<thead>
<tr>
<th>Password Length</th>
<th>Possible Combinations</th>
<th>Time To Crack</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>45697</td>
<td>&lt;1 s</td>
</tr>
<tr>
<td>5</td>
<td>11881376</td>
<td>&lt;1 s</td>
</tr>
<tr>
<td>6</td>
<td>308915776</td>
<td>&lt;1 s</td>
</tr>
<tr>
<td>7</td>
<td>8031810176</td>
<td>~4 s</td>
</tr>
<tr>
<td>8</td>
<td>208827064576</td>
<td>~1.5 M</td>
</tr>
<tr>
<td>9</td>
<td>5429503678976</td>
<td>~45 M</td>
</tr>
<tr>
<td>10</td>
<td>1411677095653376</td>
<td>~19 H</td>
</tr>
<tr>
<td>11</td>
<td>3670344486987780</td>
<td>~1 Y</td>
</tr>
<tr>
<td>12</td>
<td>95428956661682200</td>
<td>~1.5 Y</td>
</tr>
<tr>
<td>13</td>
<td>248115287320374E4</td>
<td>~39.3 Y</td>
</tr>
<tr>
<td>14</td>
<td>645099747032972E5</td>
<td>~1,022.8 Y</td>
</tr>
<tr>
<td>15</td>
<td>167725934228573E7</td>
<td>~26,592.8 Y</td>
</tr>
<tr>
<td>16</td>
<td>436087428994289E8</td>
<td>~691,412.1 Y</td>
</tr>
<tr>
<td>17</td>
<td>113382731538515E10</td>
<td>~17,976,714 Y</td>
</tr>
<tr>
<td>18</td>
<td>2947951020001390E10</td>
<td>~467,394,568 Y</td>
</tr>
</tbody>
</table>

In 2010, an 8 character password would have taken 2.25 years to crack. The same password now would take under 2 mins to crack.

*Source: OSS.org*
MFA (multi-factor authentication)

Best Practice on sensitive datasets

Multi-Factor Authentication

Password + Verification = Access

"2 Factor"
1) Something you know
2) Something you have
Password End Game?

Dark Web – Selling for less than $0.01 per email address & password:

Yahoo | 100K | Email:Pass | Decrypted | Instant Delivery

USD 10.75 (including 0.76 transaction fee)
Ƀ 0.0079
In stock
Vendor SunTzu583 [+4][0] Level 1 (10s)
Class Digital
Delivery • Instant Delivery

Also available:
Yahoo | 145K | Email:Pass | Decrypted | Instant Delivery
USD 13.75 Ƀ 0.0108

60% of employees use the exact same password for everything they access
Surface Web

- Yahoo!
- Google
- Reddit
- CNN.com
- Bing

4%

Deep Web

- Academic databases
- Medical records
- Financial records
- Legal documents
- Some scientific reports
- Some government reports
- Subscription only information
- Some organization-specific repositories

96% of content on the Web (estimated)

Dark Web

- TOR
  - Political protest
  - Drug trafficking
  - and other illegal activities

https://192.118.120.1

whonix

epic privacy browser

globus

Tails

the amnesic incognito live system

Tor

SILK ROAD

1 gram pure MDMA crystal $0.69 add to cart

report this item

1 gram pure MDMA crystal $0.69 add to cart

report this item
2020 Explosion in Dark Web Marketplaces

- Business Fullz
- Personal Fullz
- Ransomware Tools
- Remote Access Trojans (RATs), Exploit kits, Hacking Tools
- Remote Desktop Protocol Credentials
- Credit Card Credentials & cloned ATM Debit Cards
- Social Media Accounts
- Hacker University  
  ----degree costs $125
- TV & Movie Streaming Accounts and Pizza Points
- Cryptocurrency

......and of course
- Drugs
- Human Trafficking
Dark Web Examples: CYBERCRIME-AS-A-SERVICE

**SMS Bomber** - SMS Spamming Blaster Service - Smartphone Sabotage - Negative Attack

1,000 SMS Flooding Service (default @22hrs or @7hrs auto) NEGATIVE STRIKE!!! *** What is sms flood and what is...

Sold by [Redacted] - 3 sold since February 26, 2020

- **Vendor Level:** 2
- **Trust Level:** 1

<table>
<thead>
<tr>
<th>Features</th>
<th>World Wide</th>
<th>World Wide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantity Left</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ends In</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Features:**
  - Default - 1 day - USD + 0.00

- **Purchase Price:** USD 18.90

- **Quantity:** 1
- **Buy Now**
- **Queue**

- **0.002050 BTC**

---

**Instant Delivery** - USA Dominos Accounts with 60+/120+ Points for a Free Pizza *ONLY 1.99$!*

**Instant Delivery** - USA Dominos Accounts with 60+/120+ Points for a Free Pizza *ONLY 1.99$!*

- **Vendor Level:** 6
- **Trust Level:** 6

<table>
<thead>
<tr>
<th>Features</th>
<th>United States</th>
<th>World Wide</th>
<th>Escrow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Class</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantity Left</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ends In</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Features:**
  - 60 to 120 points - 1 days - USD + 0.00 / item

- **Purchase Price:** USD 1.99

- **Quantity:** 1
- **Buy Now**
- **Queue**

- **0.000216 BTC / 0.046193 LTC / 0.030925 XMR**
## Dark Web Market Rates – January 2021

### Credit Card with CVV Numbers

<table>
<thead>
<tr>
<th></th>
<th>VISA/MASTERCARD</th>
<th>AMEX/DISCOVER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>US</td>
<td>UK</td>
</tr>
</tbody>
</table>

### Telephone Denial of Service (TDOS) Attacks

<table>
<thead>
<tr>
<th>Number of Calls</th>
<th>Time Period</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,000</td>
<td>48-hour period</td>
<td>$56.70</td>
</tr>
<tr>
<td>5,000</td>
<td>60-hour period</td>
<td>$94.50</td>
</tr>
<tr>
<td>7,000</td>
<td>72-hour period</td>
<td>$132.30</td>
</tr>
<tr>
<td>10,000</td>
<td>96-hour period</td>
<td>Contact seller for price</td>
</tr>
</tbody>
</table>

### PayPal Accounts

<table>
<thead>
<tr>
<th>Avg. Price</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>US $50</td>
<td>$500</td>
</tr>
<tr>
<td>UK $60</td>
<td>$600</td>
</tr>
<tr>
<td>AU $80</td>
<td>$800</td>
</tr>
<tr>
<td>CA $100</td>
<td>$1,000-2,000</td>
</tr>
<tr>
<td>AUS $200</td>
<td>$1,500-4,500</td>
</tr>
<tr>
<td>NL $250-300</td>
<td>$2,500-8,500</td>
</tr>
<tr>
<td>GR $300-500</td>
<td>$5,000-13,000</td>
</tr>
</tbody>
</table>

### Fullz Data

<table>
<thead>
<tr>
<th>Origin</th>
<th>Avg. Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>$30-40</td>
</tr>
<tr>
<td>UK</td>
<td>$35-50</td>
</tr>
<tr>
<td>CA</td>
<td>$30-45</td>
</tr>
<tr>
<td>AUS</td>
<td>$17-50</td>
</tr>
<tr>
<td>IT</td>
<td>$20-25</td>
</tr>
<tr>
<td>SWED</td>
<td>$20-25</td>
</tr>
<tr>
<td>FR</td>
<td>$20-25</td>
</tr>
<tr>
<td>DE</td>
<td>$20-25</td>
</tr>
<tr>
<td>IE</td>
<td>$20-25</td>
</tr>
<tr>
<td>MX</td>
<td>$15-20</td>
</tr>
</tbody>
</table>

### Business Fullz Data

Includes: Bank Acct Numbers, Employee Identification Number (EIN), Certificate of Business, Corporate Officers’ Names, Birth Dates, SSN.)  

<table>
<thead>
<tr>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>$35-60</td>
</tr>
</tbody>
</table>
AVAILABLE CORONA VIRUS VACCINE $250

Vendor: [Redacted]

Dear Valued Clients, IMPORTANT NOTICE>>>>>WE DO 100% REFUND or RE-SHIPMENT FOR ANY UNDELIVERED PACKAGE.“STEALTH” SHIPPING WORLDWIDE.

We offer the best AVAILABLE CORONA VIRUS VACCINE $250 at good and interested prices. ORDER NOW AND GET EXTRA BONUS ON REGULAR DEMANDS: OUR PRIORITY IS BASED ON MUTUAL TRUST. We offer Stealth and Discreet deliveries 100% guarantee. All our packages are at least double vacuum-sealed to ensure that our clients receive their package in perfect condition.

Contact me on wick: [Redacted]

WE OFFER OVERNIGHT DELIVERIES WITHIN THE USA AND EXPRESS DELIVERIES WORLDWIDE.

Our Customers’ satisfaction is our Top Priority.

Please when placing your order, make sure you provide us with the exact address where the delivery will be done.

For Fast and Easy Communication, please kindly download the wick me app from your App store or Google play and message us through our Wick App below.

Contact me on wick: [Redacted]

Price: B 0.012908 (250,000,0000 USD)

S & H:
- USPS
  - 0.001033 (20,000,0000 USD)
- UPS
  - 0.001033 (20,000,0000 USD)
- OVERNIGHT DELIVERY
  - 0.001291 (25,000,0000 USD)

Accepted Crypto Currencies:
- Bitcoin
- [Redacted]

Ships From: United States
Ships To: Worldwide

COVID-19 Antibody Test Kit

COVID-19 (SARS-CoV-2) Antibody Test Kit

Sold by [Redacted] - 11 sold since March 26, 2020
Vendor level 6 Trust level 6

Features
- Physical Package: 73
- Origin Country: Never
- Ships to: Europe World Wide Escrow

Registered Shipping - 10 days - USD + 11.25 / order

Purchase price: USD 44.98

On 1 Buy Now Buy Now Buy Now Queue

0.004933 BTC / 1.071532 LTC / 0.702864 XMR
2) Phishing

- Method of fraudulently acquiring sensitive information via trickery.
- Your employees are the primary targets, they need to be prepared, informed, weaponized as your first line of defense.
- Training employees how to recognize and react to phishing (emails, txt or phone) is your best security ROI.
Phishing
WHAT YOU NEED TO KNOW
SCAMMERS ARE AFTER YOUR
- Passwords
- Financial Info
- Identity
- Money

WHY DO WE FALL FOR THESE SCAMS?
- Urgency
- Desire to please
- Curiosity
- Complacency
- Greed
- Fear

PROBABILITY THAT A PHISHING MESSAGE SUCCEEDS
1 out of 10!

WATCH OUT FOR
- Spelling & Grammar Errors
- Sender Address
- Things That Sound Too Good to be True

BEWARE OF UNSOLICITED MESSAGES
- Attachments
- Links
- Login Pages

Email
Text (Smishing)
Phone (Vishing)
Internal Phishing Campaigns

DO hover over links verify its location
DO NOT click on unknown links
DO NOT reply to suspicious requests

Amazon.com <shipment-tracking@amazon.us>
Your Amazon Order of $100 Gift Card

To PHI BURNS

Thank you for shopping with us. You ordered "$100 Amazon Gift Card". We'll send a confirmation when your items ship.

Details
Order #111078-987546321-6566623

Arriving: Wednesday, May 9

View or manage order

http://www.badlinky.com:3335?rid=8c2bnhj
Click to follow link

Ship to:
THOMAS BURNS
785 OVERLAND ROAD...

Total Before Tax: $100.00
Estimated Tax: $0.00
Gift Card: Order Total: $100.00

5% - 30
3) Backups

- Backup has never been more important!
- No security measure is 100% reliable.
- Even the best hardware fails.
- Is your backup:

  Recent?
  Off-site & Secure?
  Encrypted?
  Tested?
8 Take Aways

- Use extreme caution when clicking any hyperlink within an email.
- Stay on latest version of operating systems (PC & Phone) and maintain all key security patches (to the extent possible).
- Only use business email for business. Many nefarious groups tap shopping sites email data.
- Only use business web browsing for business. Many shopping sites have a poor track record for controlling plugins and other code running on their sites.
- Do not use online email at work (while on a networked device). Many security layers are bypassed by opening external mail on network.
- Encrypt mission critical data stores on PC’s, Servers and ALL portable data which includes iphones, USB thumb drives, tablets, laptops, etc.
- Ensure core Servers & PC’s are backed up on a regular schedule
- Ensure virus/malware control are up to date and active on all PC’s that are used – home & work – any data at rest (thumbs, cloud storage, etc.)

https://haveibeenpwned.com/