Protecting Yourself (and others) in a Crazy Online World

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December 5, 2019

CC BY NC SA

Who am I?

- ✓ How do you know?
- ✓ How do I prove it to you?
  - ✓ Without compromising my privacy?

Identity Paradox

"On the Internet, nobody knows you're a dog."

Written by Peter Steiner and published by *The New Yorker* on July 5, 1993

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Who am I?

Ron Woerner, CISSP, CISM

- **Cybersecurity Professor, Bellevue University**
- **Chief Security Evangelist, RWX Security Solutions**

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What the $%$# are we doing here?

Agenda

- Why should I care?
- What's going on?
- Attack methods / Top issues
- Solutions
  - Awareness
  - Simple security measures
  - Protection, Detection, Response
- Where to go from here

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Crown Jewels

What’s most important to you?

Where is it?

How is it used?

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Phishing & Business Email Compromise (BEC)

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September 10, 2019

Twitter Facebook Email

Worldwide Sweep Targets Business Email Compromise

Criminal Cases Show Need to Verify Before Wiring Funds

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Business Email Compromise (BEC)
Email Account Compromise (EAC)

Sophisticated scams are carried out by fraudsters compromising email accounts through social engineering or computer intrusion techniques to conduct unauthorized transfer of funds.

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Variety of BEC

- Vendor Fraud – Invoice Payments
- Compromised or spoofed email accounts requesting a wire (ACH) transfer
- HR Requests
  - W2 or other PII
  - Changes to payroll

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How they find victims

Email Hacking

- Finding email addresses is trivial
- Inherently insecure
- Phishing, Spear Phishing, Whaling

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How they communicate with victims

Spoofed email:

From: john.smith@domain.com

Reply-To: bad.guy@scammer.com

Look-alike domain registered:

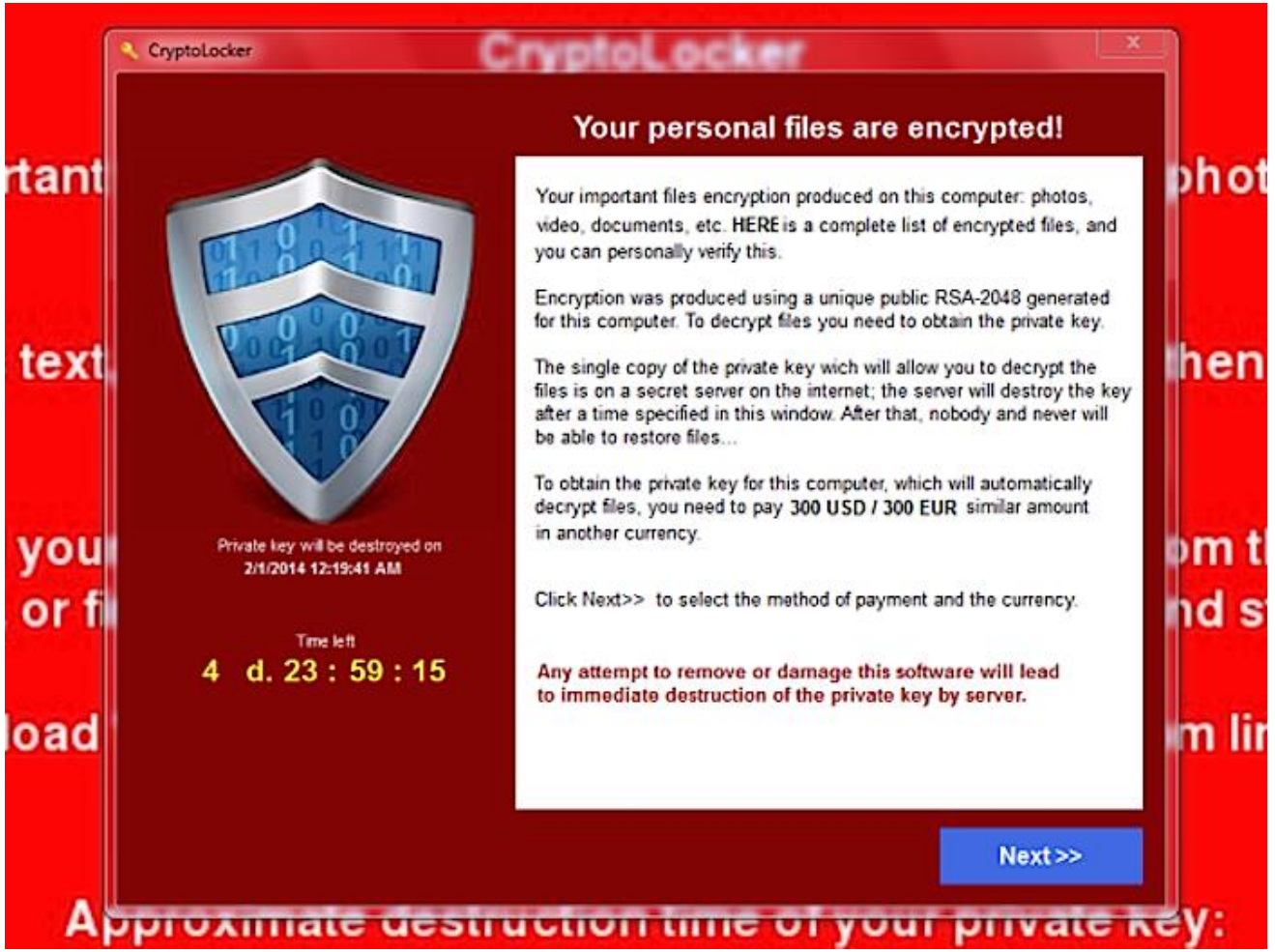
john.smith@do**m**ain.com legitimate

john.smith@do**rn**ain.com fraudulent

Compromised email account:

Phishing or malware used to steal credentials for john.smith@domain.com

Ransomware

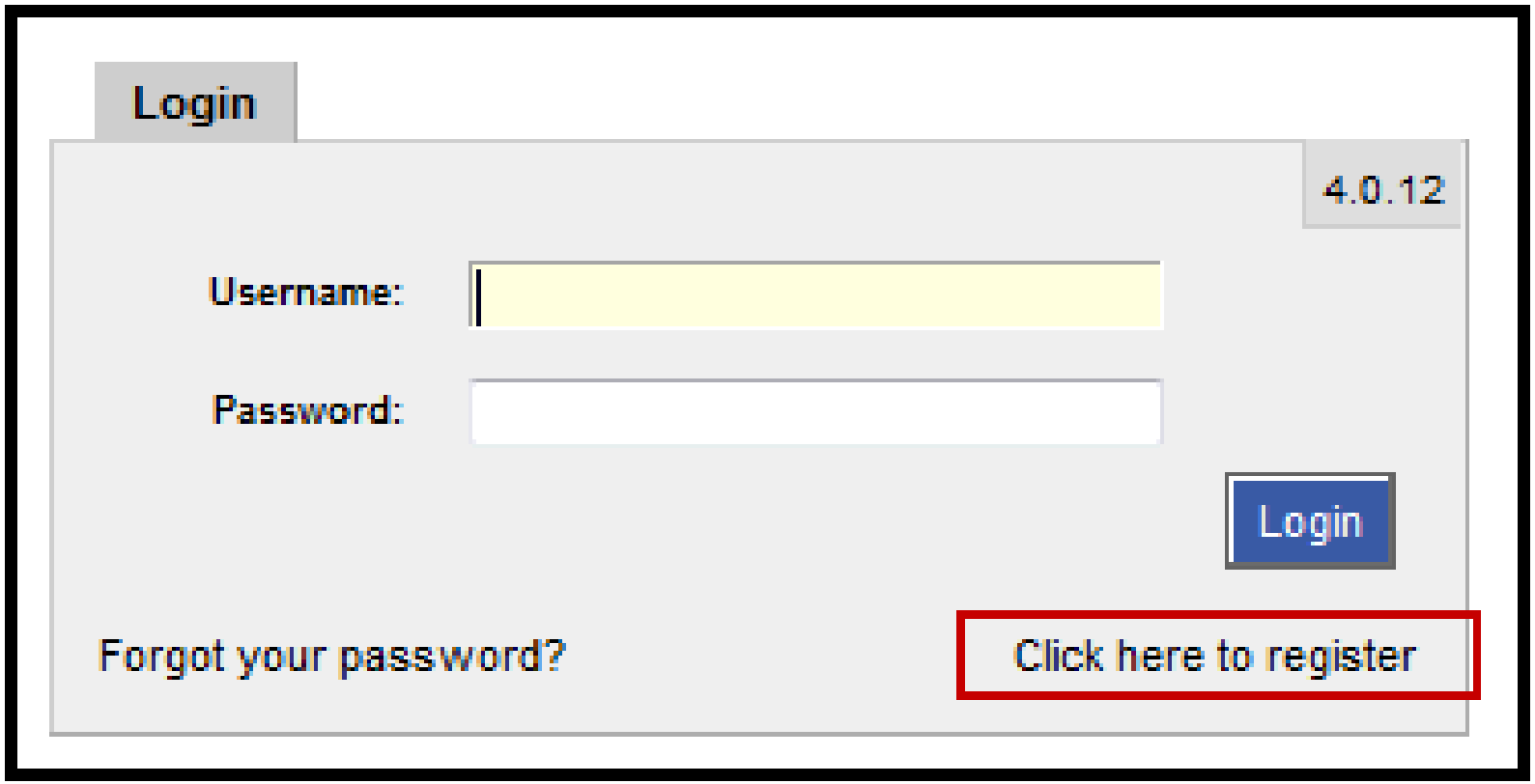


https://www.nomoreransom.org/

ran·som·ware, ransəmˌwe(ə)r/ *noun*

A type of malicious software designed to block access to a computer system until a sum of money is paid.

Stolen Credentials



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Required for Fraud

Dissecting the Psychology of the Wily Insider
https://www.peerlyst.com/posts/dissecting-the-psychology-of-the-wily-insider-ron-woerner

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What can I do?

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What You Can (Should) Do

Only You can Protect Yourself and Others

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What You Can (Should) Do

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Simple Steps for Cyber Security

- "Trust, but verify"
  Be a little skeptical
- Account Security
  - Multi-factor authentication
  - Password keepers
- "Be Prepared"
  - It's not if, but when…
- Updated your PC & apps
  - Pay a little now or a lot later
- Encrypt
  - Websites
  - Email
  - Databases

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Ransomware Defenses

- Patch - Update
- Backup data
- Active Spam & Internet Filters
- Update Anti-Virus
- Employee discretion
- Incident Response Plan

- DHS CISA: https://www.us-cert.gov/Ransomware
- CIS Facts, Threats, and Countermeasures: https://www.cisecurity.org/blog/ransomware-facts-threats-and-countermeasures/
- CIS Primer: https://www.cisecurity.org/white-papers/ms-isac-security-primer-ransomware/

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Trust, but Verify

- If it seems too good to be true…
- Trust your gut – Be a little skeptical
- When in doubt, ask - #1 way to defeat social engineering
- Procedures for transferring $
- Ask your vendors about their security
- Verify files & websites using Virus Total: virustotal.com

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Going for Help

- FBI Internet Crimes Complaint Center (IC3): https://www.ic3.**gov**/default.aspx
- DHS Cybersecurity and Infrastructure Security Agency (CISA)
- US-CERT Incident Reporting System: https://www.us-cert.gov/forms/report
- State Patrol and Local Police
- Your Bank & Insurance

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Resources

- SCORE Library: https://omaha.score.org/browse-library-63?f%5B0%5D=im_field_topics%3A71&f%5B1%5D=content%3Asecurity
- NIST Small Business Cybersecurity Corner: https://www.nist.gov/itl/smallbusinesscyber
- FTC: Cybersecurity for Small Business: https://www.ftc.gov/tips-advice/business-center/small-businesses/cybersecurity
- SBA: https://www.sba.gov/managing-business/cybersecurity
- StaySafeOnline (NCSA): http://staysafeonline.org/
- StopThinkConnect (DHS CISA): https://stopthinkconnect.org/

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Small Business Cybersec

https://www.nist.gov/itl/smallbusinesscyber

NIST

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Information Technology Laboratory

SMALL BUSINESS CYBERSECURITY CORNER

- Cybersecurity Basics +
- Planning Guides +
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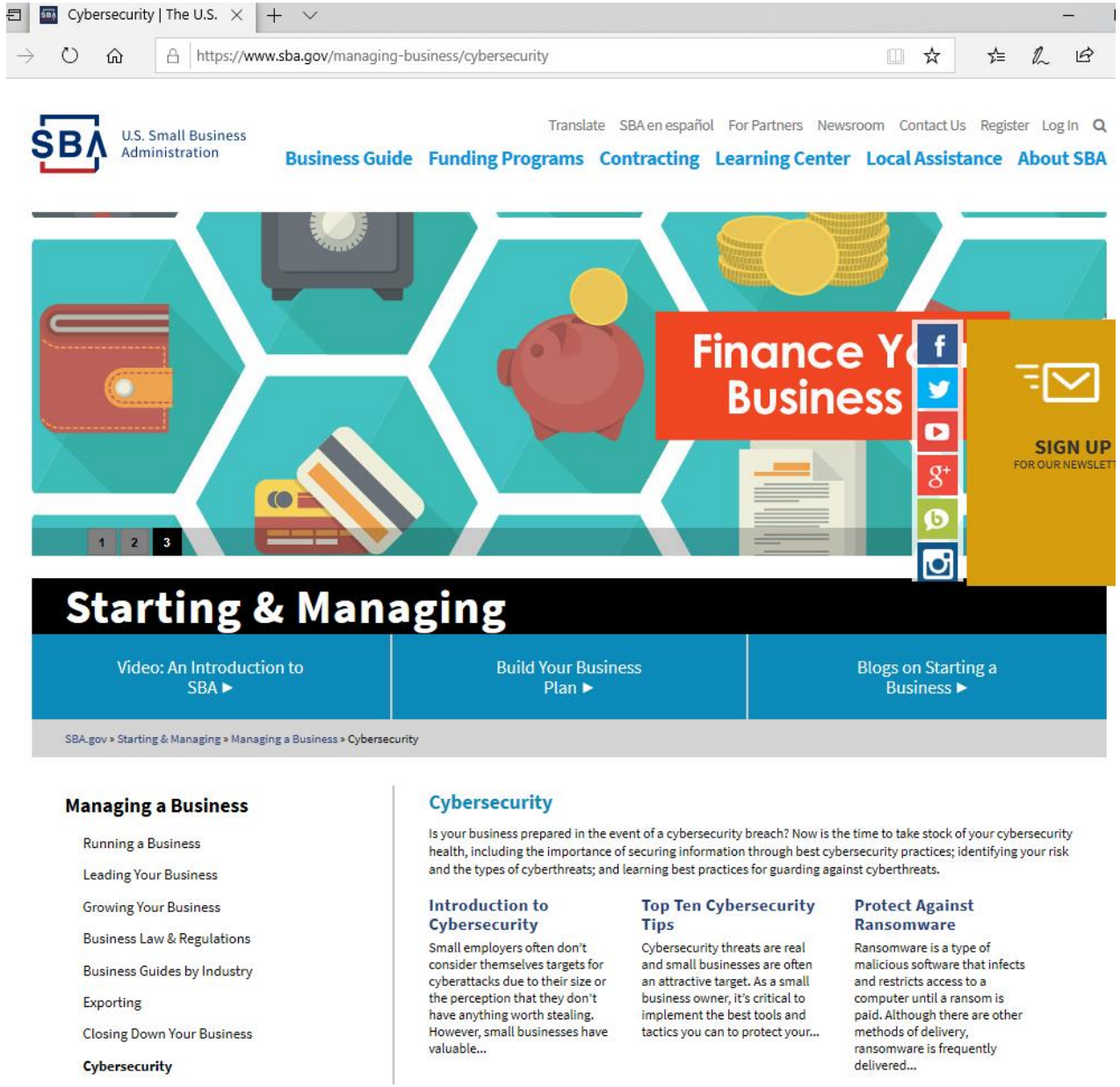
CONNECT WITH US

Credit: Wendy Szwerc

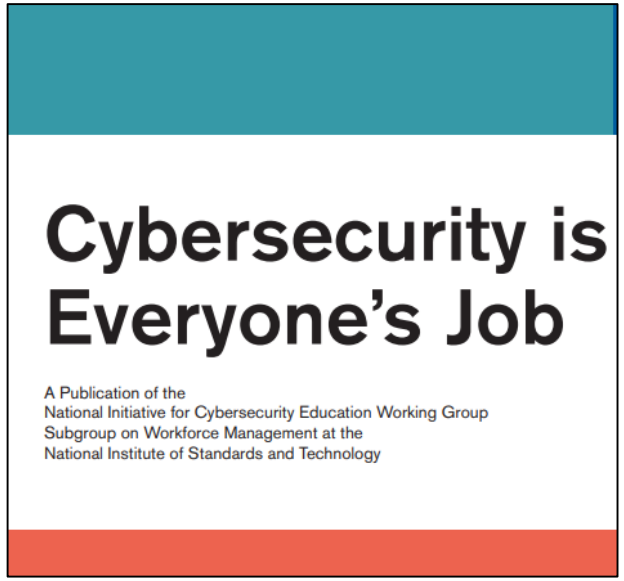
The vast majority of smaller businesses rely on information technology to run their businesses and to store, process, and transmit information. Protecting this information from unauthorized disclosure, modification, use, or deletion is essential for those companies and their customers.

https://www.ftc.gov/tips-advice/business-center/small-businesses/cybersecurity



https://www.sba.gov/managing-business/cybersecurity

http://www.dhs.gov/stopthinkconnect



https://www.nist.gov/sites/default/files/documents/2018/10/15/cybersecurity_is_everyones_job_v1.0.pdf

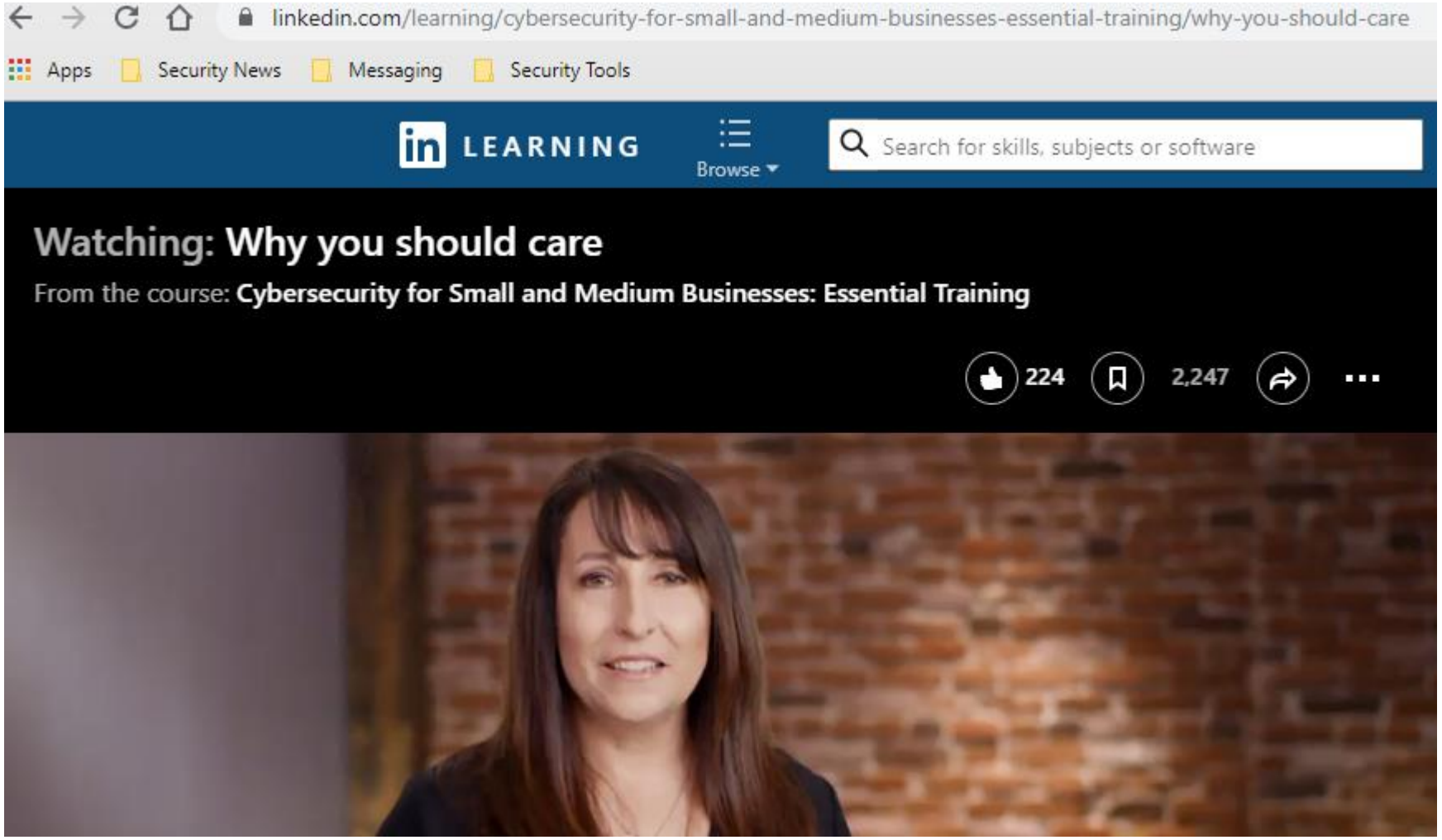
StaySafeOnline.org
National Cyber Security Alliance

http://staysafeonline.org/

INFRAGARD
MEMBERS ALLIANCE
IOWA

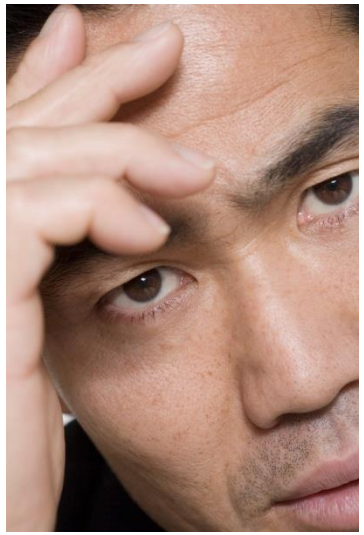
https://www.infragardiowa.org/

LinkedIn Learning



https://www.linkedin.com/learning/cybersecurity-for-small-and-medium-businesses-essential-training/

Who owns the Headache?



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Questions???

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