



WEDNESDAY'S
News You Can Use

Information Security Risk and Resiliency

Presented by **Brian
Garrison**



Carl Vinson
Institute of Government
UNIVERSITY OF GEORGIA



Let's Talk ...

Topics for Today



The CIA of Information

A Brief History in Cyber Time

Threat Landscape Today

Strategies for Defense

Security Landscape Today

Foundation for Information Security

The CIA Triad



A Brief History in Cyber Time

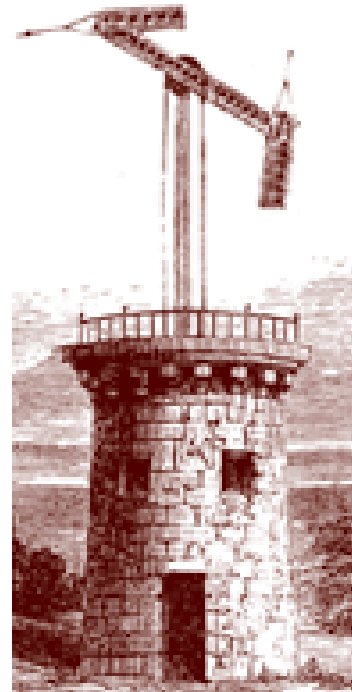
History of Cyber Crime and Hacking from
1834 - present

A Brief History in Cyber Time

French Telegraph System

1834

Thieves tap into the telegraph system to steal insider financial market information



A Brief History in Cyber Time

Wireless Telegraph Hack



Marconi with typical apparatus
Print Collector / Getty Images

1903

Public demonstration of "wireless telegraph" is hacked to embarrass the inventor

A Brief History in Cyber Time

First Stolen Computer Password

1963

MIT University creates first computer system with password to limit usage to students. Allan Scherr hacked the system to print all password punch cards.



A Brief History in Cyber Time

First Email Virus

```
BBN-TENEX 1.25, BBN EXEC 1.30
@FULL
@LOGIN RT
JOB 3 ON TTY12 08-APR-72
YOU HAVE A MESSAGE
@SYSTAT
UP 85:33:19   3 JOBS
LOAD AV   3.87  2.95  2.14
JOB TTY  USER      SUBSYS
1  DET  SYSTEM     NETSER
2  DET  SYSTEM     TIPSER
3  12  RT          EXEC
@
I'M THE CREEPER : CATCH ME IF YOU CAN
```

Photo credit Core War
<http://corewar.co.uk/creeper.htm>

1971

Ray Tomlinson is the inventor of email. He is also the first to send spam and virus via email.

Threat Landscape Today

Major threats today and trends in attacks

Threat Landscape Today

Colonial Pipeline

2021

Ransomware prompted shut down of gasoline supply along most of the US east coast

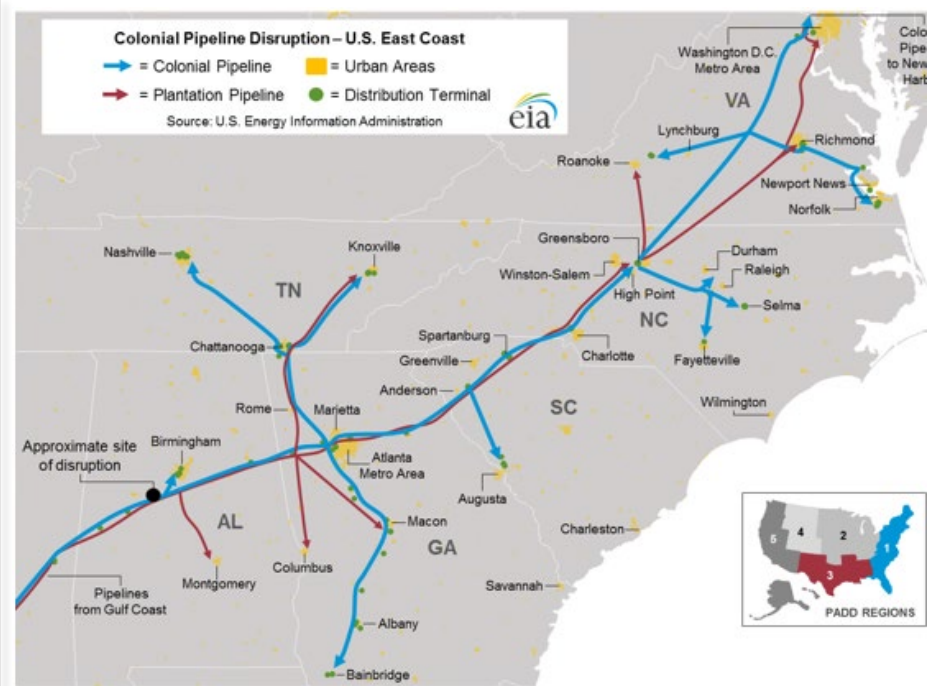


Image credit: US Energy Information Administration

Threat Landscape Today

2021 Top Cyber Crimes

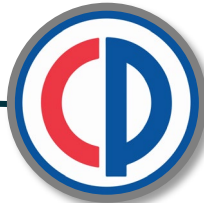


CNA Financial
Ransom: \$40M
PII data

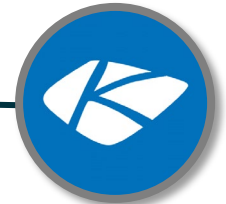


Quanta Computers
Ransom: \$50M
Intellectual Property

Colonial Pipeline
Ransom: \$4.4M



Kaseya
Ransom: \$70M



Brenntag Chemical
Ransom: \$4.4M
Corporate data



Ireland HSE
Ransom: \$20 M
HIPAA and PII data

Acer
Ransom: \$50M

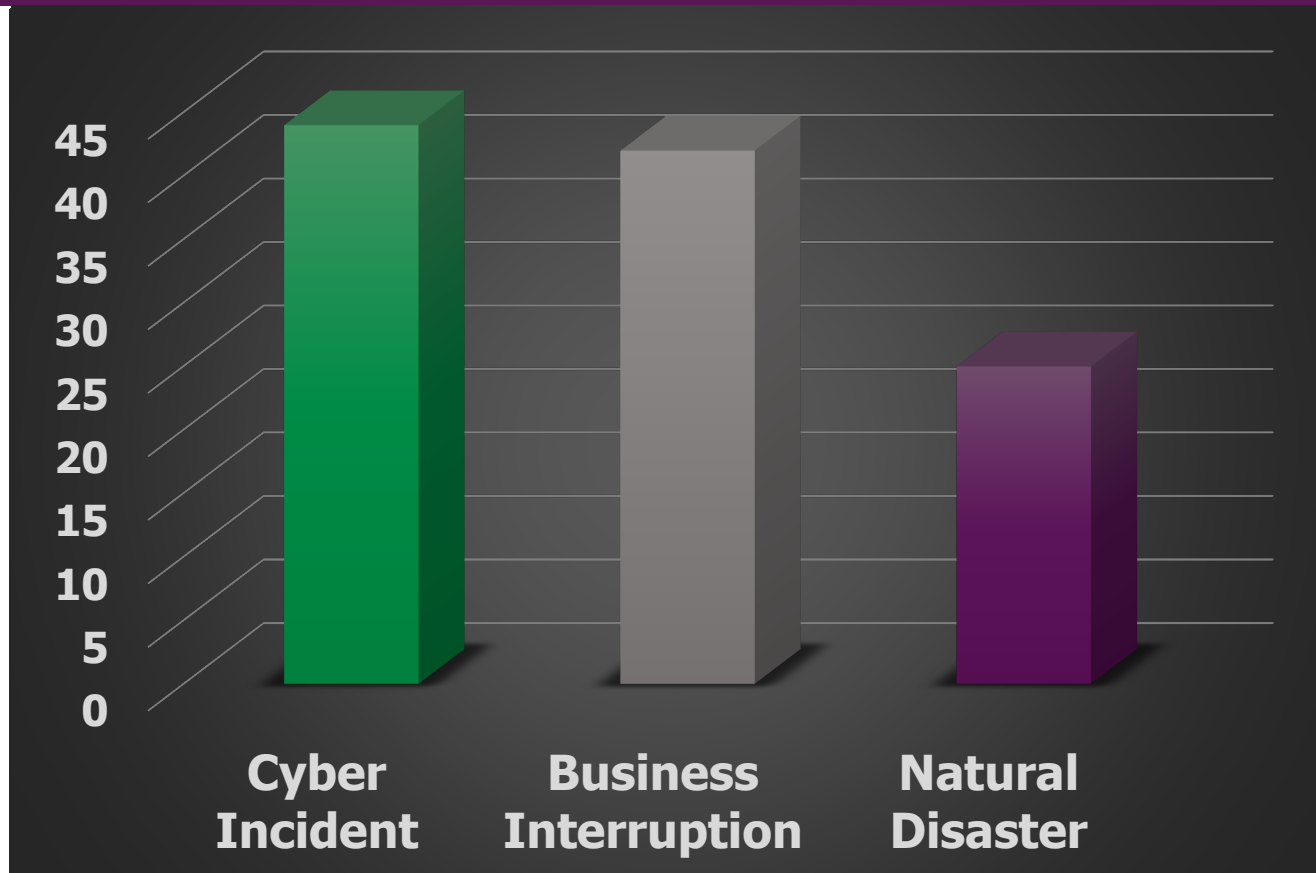


JBS Foods
Ransom: \$20M



Threat Landscape Today

Top Concerns for Businesses



Threat Landscape Today

Ransomware is Driving Factor

- Trend is for double-extortion attacks:
Encrypted Data AND Stolen Data
- Critical infrastructure is high-value target
- Education and health care targets on the rise
- RaaS available as monthly subscription | Low cost of \$40/computer

Threat Landscape Today

Cyber Threat Trends in 2021

93%

Percent company networks that a cybercriminal can penetrate

\$1.85M

Average 2021 cost of recovery from a successful ransomware attack

37%

Percent businesses that experienced a ransomware attack in 2021

36%

Percent cyber-attacks that include phishing emails

Strategies for Defense

A discussion based on the CIA Triad principles



Strategies for Defense

Inventory & Risk

1. Understand your most important and valuable data
 1. Who has access?
 2. Is the data backed up?
 3. Is data security proportionate to the value of the files?
2. Ensure staff knows safe handling procedures

Strategies for Defense

Securing Your Systems

- Separation of Duties
- Multi-factor authentication (MFA)
- Identify Privileged Users (and send them on vacation!)



Strategies for Defense

Principle of Least Privilege

Each person should:

- Have the minimum access needed for their work
- Share the minimum information needed for their task

Strategies for Defense

Principle of Least Privilege

Van Buren v. United States, 141 S. Ct. 1648 (2021)

Officer Van Buren caught for unauthorized access to license plate database and selling the information

Prosecuted under the Computer Fraud and Abuse Act of 1986 (CFAA) for unauthorized access

Supreme Court Ruling was 6-3:

NO CRIME

SCOTUS Says Insider Hacking isn't Hacking!

Strategies for Defense

The Case for Resiliency

57%

Percent of
businesses that
rank ransomware
as their #1 cyber
threat

57%

Percent of
businesses that
are successful in
recovering their
data using a
backup

Strategies for Defense

Cyber Resiliency

Prepare for when disaster strikes:

- Investment in resilience is needed
- Routine backup and recovery exercises
- Annual Disaster Recovery (DR) exercises
- CoG/COOP Planning for Mission Critical Systems

Cyber Landscape Today

Topics and Trends Affecting Information Security

Cyber Landscape Today

Legal / Cyber Insurance

- Indiana and North Carolina banned payout of ransomware by government agencies
- Merck (big pharma) wins \$1.5B payout



Cyber Landscape Today

Effects on Cybersecurity Insurance

- 2018: 34% of premiums were paid out in claims
- 2020: 73% of premiums were paid out in claims
- Premiums increased 35-50% in 2021
- Standard to qualify are increasing



Cyber Landscape Today

Legal / Cyber Insurance

- Georgia H.B. 134 – Signed into law 4/29/21
- Cybersecurity details are excluded from:
 - Open or public meeting requirements
 - Inspection of public records for certain documents relating to cybersecurity plans and systems

**Don't advertise on public record if you have
cyber insurance!**

Closing Thoughts

What did we learn?

Systems have been hacked since the beginning of time (or 1834)

Hacking might not be illegal

Ransomware is driving the industry

One factor never enough

Closing Thoughts

What did we learn?

Privileged users might need a vacay!

Least Privilege is a sign of Superiority!

Laws are changing for the better

Insurance is a silent decision

QUESTIONS?



Thank You!



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