DATA SECURITY

Current Trends and the Law Enforcement Perspective

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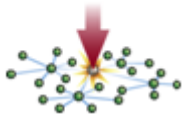
TRENDS IN CURRENT INCIDENTS

Types of Attacks

DDoS

False Tax Return Filings

Doxing



Network Destruction Attacks

Theft of IP

Ransomware and Extortion

Theft of PII, PHI

Business E-mail Compromise

Point of Sale Breaches

Website Defacements

Business Email Compromise

- **Account Compromise**
- **Bogus Invoice**
- **Executive "CEO" Fraud**
- **Data Theft**
- **Lawyer Impersonation**

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What is Ransomware?

Ransomware is a malware that encrypts a user's files and computers, making them inaccessible until a ransom is paid.

- Victim’s computer is infected with the malware.
- Encrypts victim’s data and/or systems, making them unreadable.
  - Networked backups are encrypted or deleted
- Announces Itself unlike other malware
  - Actor demands payment to decrypt files or network.
  - Cryptocurrency (BTC)
- Constantly evolving
  - People pay
  - Enterprise attacks on the rise

Ransomware Background

- Modern day ransomware began around 2013
  - Cryptolocker
  - Ransoms were $300 - $700
- Primary Actors Deploying Ransomware
  - Cyber-criminals
  - Financially motivated
- Difficult to investigate
  - All aspects are supported by anonymization
  - Initial intrusion
  - TOR (Darkweb)
  - Virtual Currency

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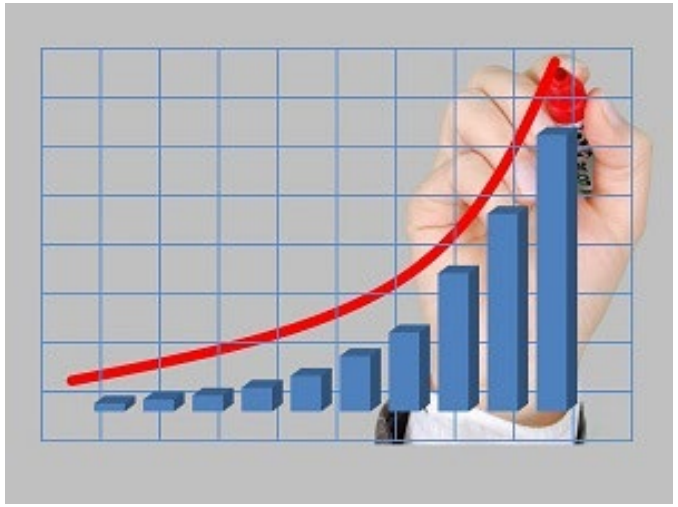
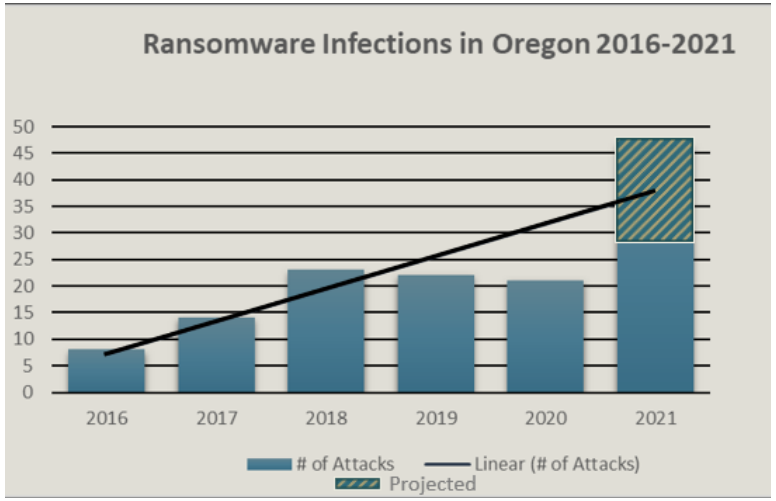
Global Impact

- Government, Health, Emergency Services, Hospitals, Police & Fire
- Loss of critical work
  - City records/planning documents, LE evidence, DNA
  - Patient Records, imaging, degradation of care
  - 911 dispatch and EMS response
- Remediation Costs
  - Can be in the millions
- Paying a ransom vs not
  - FBI recommendation



Oregon Impact

- As of mid September 2021, 2414 complaints, 32 in Oregon
- Average Ransom Demand = $36,000 (2019) -> $847,344 (2020)
- Non-Ransom Costs:
  - $900,000 Average Cost for Small Companies
    - Remediation
    - Legal Fees
    - Lost business
    - Downtime
  - Larger companies paying in multi-millions
  - Most costs must be paid even if you pay ransom!!
- Oregon attacks typically 4 per month
- Top targets: medical, government, academics, manufacturing, retail, technology



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USG Strategy - Ransomware

- NSC Task Force
- FBI Strategy
- Treasury / OFAC
  - Civil Penalty
- Ransom Disclosure Act (draft)

Other Attack Trends and Consequences

- Credential stuffing
- Unsecured databases
- Perils of unstructured data

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WHAT TO DO

General Best Practices

POLICIES

Security Program • Retention • Personal Information handling • Data classification • Least privilege • Incident Response

PRACTICES

Regular threat training • Data minimization • Secure coding • Updated hashing

TECHNICAL TOOLS

Rate limiting • IP whitelisting • Key management • Logging

Business Email Compromise Protection

Implement a two-step verification process for IT, financial and business procedures.

- ✓ Use out-of-band communications to confirm transactions.
- ✓ Be cautious with social media.
- ✓ Implement technical solutions to flag malicious behav
- ✓ Inspect payment details, amounts and justification.

Ransomware – Immediate Response

Backups are critical, and may be the best way to recover critical data.

- ✓ Isolate the infected computer(s).
- ✓ The No More Ransom Project (www.nomoreransom.org)
- ✓ The FBI does **not** advocate paying the ransom.
- ✓ Report to IC3 or your local FBI Field Office.

Ransomware Protection

- Offline Backups
  - Networked vs Offline
  - Backup regularly and often
  - Restore procedures

- Identify and fix the underlying problem
  - Employee Training/Awareness
  - Vulnerability Testing

LAW ENFORCEMENT REPORTS

Where to Report?

www.IC3.gov

CYWATCH@fbi.gov
(855) 292-3937

Why Work with the FBI?

- Establish trusted partnerships *prior* to a cyber event.
- Increase optics into nefarious cyber activity.
- Bilateral information exchange.
- Surge USG resources and capabilities.
- Investigative focus on actor attribution and disruption.
- Maintain consumer confidence.
- Incorporate the FBI's victim-centric approach into your response plan.
- We will determine the best approach together.

What the FBI does NOT Do…

- Take over your systems
- Repair your systems
- Share proprietary information with competitors
- Provide investigative-related information to the media or your shareholders

Working with US DOJ on Cyber Cases

DEBUNKING MYTHS

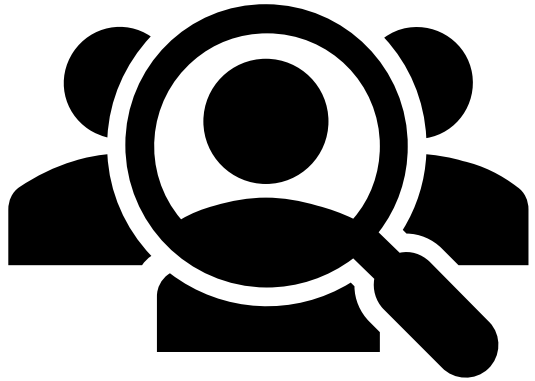
- Treatment of Victim Companies
- Interactions with Third-Party Mitigators
- Privilege Issues
- Restitution
- Crypto
- Trial

Treatment of Victim Companies

- Treated like victims of a crime
- Confidential treatment
  - Legal pleadings
  - Press releases
  - Trial
- Not reporting to regulatory authorities
- No victim blaming

Third-Party Mitigators & Privilege Issues

- Not interested in obtaining privileged information
- Not interested in victim blaming
- Basic forensics
- Communications with threat actors
- Crypto payments/wallets



Restitution & Crypto

- Restitution is a priority
- Tracing crypto
- Realities of recovery

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Trial

- Outline of a criminal trial
- Confidentiality concerns
- Managing expectations

QUESTIONS?