CYBER SECURITY
In the Age of Cyber-Crime

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Cyber Security in the Age of Cyber-Crime

Cyber Security is Serious Business

- Websites
- Online Accounts
- Hosted Infrastructure
- Connected Networks

YOU ARE AT
RISK

Cyber Security in the Age of Cyber-Crime

Cybersecurity is Serious Business

News Focus on Bigger Entities
- Cyberattacks against Major Corporations
- Large Financial Institutions
- Government Websites
- Millions of $$$

Small Businesses are Prime Targets
- Lack of Resources
- Least Protected
- Easier to Compromise

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Data Breach: Soft Targets
- Small Business Breaches
- Not as Publicized – Local News
- 61% of Data Breaches are SMBs
- Security Not "Yet" a Priority
- Less IT Security Investments
- No Dedicated IT Staff

Basic Security
- Antivirus (Outdated?)
- Password Protection?
- Firewalls?
- Best Practices?
- Attack Protection?

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Types of ATTACKS
- **Malware** (Malicious Software)
- **Ransomware** (Fast Growing)
- **Password Attacks** (Guess Passwords)
- **Zero-Day Attacks** (Who Knew?)
- **Insider Attacks** (Disgruntled Employee)

Other ATTACKS
- **Man in the Middle** (MitM) – Public WiFi
- **DDoS, APT, CSS, SQL Injection**
- **Social Engineering** (You Don't Say!)

PHISHING ATTACK

- **Very Commonly Deployed Cybertheft**
- **Unsuspecting Individuals in Email**
- **Attempts to Collect Sensitive Information**
- **Login Credentials, CC#, Etc.**
- **Links to Fraudulent Websites**
- **Looks Legitimate on the Surface**
- **Uses Social Engineering**
- **Looks and Feels Familiar**
- **Spear Phishing: Advanced, Very Targeted**

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PHISHING

PROTECTION

"AVOID" THE TRICKS

1. Urgency or Threats
2. Pressure to Do Something
3. Request Sensitive Information
4. Spelling and Grammar Issues
5. Odd Email Addresses (To, From, Reply)
6. Too Good to Be True
7. Call the Sender to Confirm
8. Common Sense

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DEFENSES

Antivirus Software
Firewalls
Patch Management
Vulnerability Scan
Encryption
Password Protection

2FA or MFA
Email Security
Security Awareness
Data Backups
Social Due Diligence
3rd Party Assessment

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Antivirus Software
(Malware Protection)

- Most common protection deployed
- Defends against most Malware
- Ransomware Protection
- Drive-by Protection
- Desktop and Server Protection
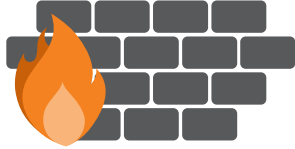- Gateway (Internet) Protection
- Keep it Updated!

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Firewalls

(Hardware or Software)

- Adds a Layer of Protection
- Prevents Unauthorized Access
- Protects at the Gateway
- Protects at the Computer
- Provide Intrusion Protection
- Blocks Network Attacks

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Patch Management

- Simple Method to Secure
- Hackers Scan for Vulnerabilities
- Exploit Vulnerabilities
- Unpatched = Open Doorway
- OS, Java, Adobe, Browsers
- Patch Often and Regularly

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Encryption

(Hardware or Software)

#$ff%$Gb@!`~#x

- Strong Data Protection
- Makes Data Unreadable to Hackers
- Protects Stored Data (file, volume, disk)
- Protects Data in Transit (https)
- Secure Email with Encryption
- Protects NPI, PII, PHI

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Password Protection

- Protect against Guessing Attacks
- Use Strong Passwords
- Passphrases are Better
- Use Unique Passwords
- Password Managers Help
- Change Device Defaults

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MFA or 2FA
(Multi-factor Authentication)

- Extra Layer of Password Protection
- Protects against Stolen Passwords
- Enables Additional Step
- Generates a Code
- Very Important Step to Take
- Easier than You Think
- Many Tools Available

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EMAIL Security

- **Protects Against Malicious Emails**
- **Built-in Malware Protection**
  - **Ransomware**
  - **Attachments, Payloads**
- **Spam Filtering**
  - **Phishing Attacks**
  - **Spear-Phishing**
- **Secure Email Transfer**

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Security Awareness

- Educate Employees
- Detect Malicious Cyberactivity
- Notice Phishing Attempts
- Protect Company Systems
- Stay Informed of New Techniques
- Consider a 3rd Party Solution

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Data Backups

- Critical to Have a Backup
- Something Will Go Wrong:
  - Accidental Deletion
  - Rogue Employee
  - Corrupted File
  - Hacker Activity (Ransomware)
- Backups are the Solution
- Easy to Setup and Maintain
- Keep You in Business

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Social Due Diligence
(Be Careful Online)

- **Social Engineering - loved by Hackers**
- **Used for Phishing and Spearphishing**
- **Hackers appear to be You to others**
- **Use your information against you**
- **Don't give out information too easily**
- **Share only what is necessary**

TECHNICAL AID

- Consider a 3rd Party Vendor
  - Security Assessments
  - Risk Assessments
  - Discovery and Remediation
- Sign-up for Notifications with Product Vendors
- Stay in the Know with Security Websites
- Attend Local Cyber Security Workshops
- Register for Cyber Security Webinars

RESOURCES

IT Security Awareness Training
- SANS: https://www.sans.org/security-awareness-training
- SANS Ouch!: https://www.sans.org/ouch

Phishing Tests/Tools
- KnowBe4: https://www.knowbe4.com/resources
- Phishme: https://phishme.com/free

Multi-Factor Authentication: https://twofactorauth.org

Security News: www.krebsonsecurity.com

Mail System Check: https://mxtoolbox.com

Breach Check: https://haveibeenpwned.com/

Best Practices: https://www.cisecurity.org

HAPPY SECURE COMPUTING