Managing IT Risk for Nonprofit Organizations with a Remote Workforce

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Aldrich Technology

- Information Security
- Software Solutions
- Merger + Acquisition Support
- Managed IT Services

Productivity or Security?

They are not mutually exclusive…

#1 must be Organizational Productivity

#1.1 must be Risk Management

#2 is everything else…

What is Risk?

Risk is anything that gets in the way of your success or limits your success.

Kinds of Risk:

- Insurable Risks
- Uninsurable Risks
- Knowingly assumed Risks
- Surprise Risks

Continuing Evolution of Cybersecurity

Evolving Threat Landscape

- Last year's cybersecurity thinking is inadequate against this year's threats
- Threats are growing in number, complexity, sophistication, and consequence
- Most IT departments are playing a never-ending game of catch-up – with your organization

ESTĒE LAUDER

What was stolen?

Over 25 Billion Records which include information such as:

- Names, addresses
- Gender, marital status, spouses, and sexual preferences
- Medical history, prescriptions, and formulations
- Account usernames and passwords
- Conversations, email, text, private sites, etc.
- Videoconference sessions
- Security tokens
- Device information
- Miscellaneous user details such as spoken language
- Transcripts of email correspondence
- Payment logs including credit card type, amount paid, and applicable currency
- IP addresses, Trade secrets, National Secrets

What's it Worth?

According to Keeper Security...

Social Security Number	$1.00
Drivers license	$20.00
Credit Card	$8.00 - $22.00
Email Address & Password	$0.70 - $2.30
Medical Record	$1.50 - $10.00
Complete Medical Record	$1,000.00

Ransomware

$50 - Ransomware kits on the Internet

$233,817 – Average ransom demand

25% - Victims pay hackers

30% - Average amount of data recovered after paying ransom

$20B – Ransomware cost to business in 2020 ($11B in 2019)

2020 Targeted Organizations

- 113 Government agencies
- 560 Healthcare facilities
- 1,681 Schools were impacted

Consequences

Would these consequences impact your ability to:

- Operate?
- Pay your Employees?
- Serve your Constituents?
- Fulfill your Mission?

How Do I Protect My Organization?

- Establish IT Governance
- Experience and Accomplishment
- Rely on competence rather than on personality/tenure/relations
- Develop an IT Strategy
- Pay attention to the Details
- Execution and Verification

Standards Bodies

National Institute on Standards in Technology (NIST)

Cybersecurity Maturity Model Certification (CMMC)

Payment Card Industry (PCI)

* Leverage standards – don't make it up on your own!

Components of Security

- People and their Practices
- Technologies
- IT Policies
- Incident Response

Helping People with Security Practices

- Education
- Recognize threats like spam, phishing, spear phishing
- Create people-centric controls
- Create people-centric IT Policy
- Passwords and Passphrases
- Two-Factor Authentication
- Establish Roles & Responsibilities
- Access Controls based on Roles (does everyone need access to everything?)

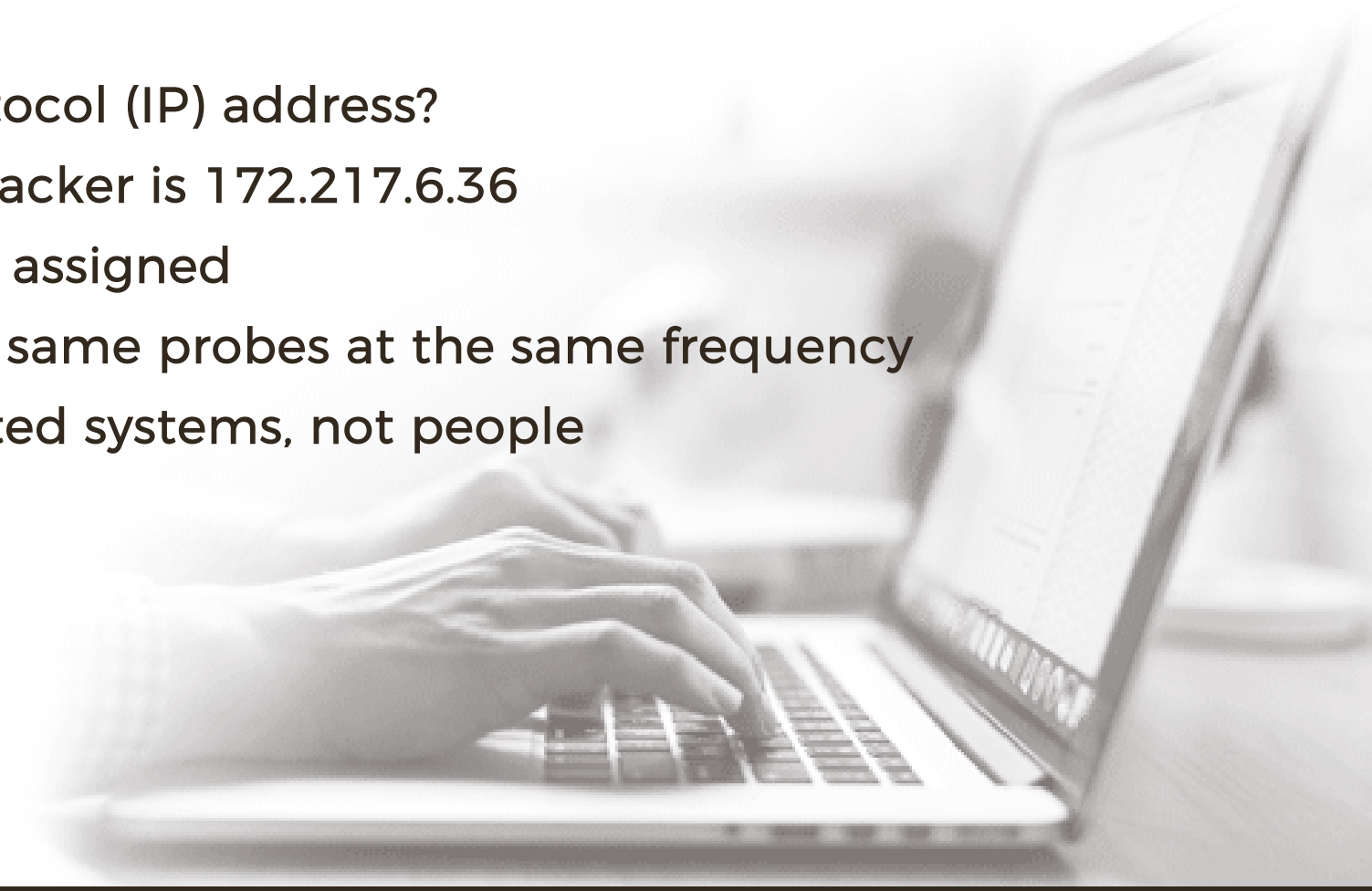
Who are you in the world?

Who Are You?

You are an address.

- What is an internet Protocol (IP) address?
- www.google.com to a hacker is 172.217.6.36
- IP addresses are usually assigned
- All IP addresses get the same probes at the same frequency
- This is done by automated systems, not people

It is not personal.



How long does it take to crack your password?

“bankers”	7 characters	.29 milliseconds
“b@n4er$”	7 characters	.29 milliseconds
“football”	8 characters	5 hours
“F@@tballz”	9 characters	5 days
“Metrology$”	10 characters	4 months
“FlowMatters”	11 characters	1 decade

Security Through Architecture

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What to do about cell phones???

Organization
Users

Internal Secure Network

Guests
Cell Phones
Tablets

Internet ONLY

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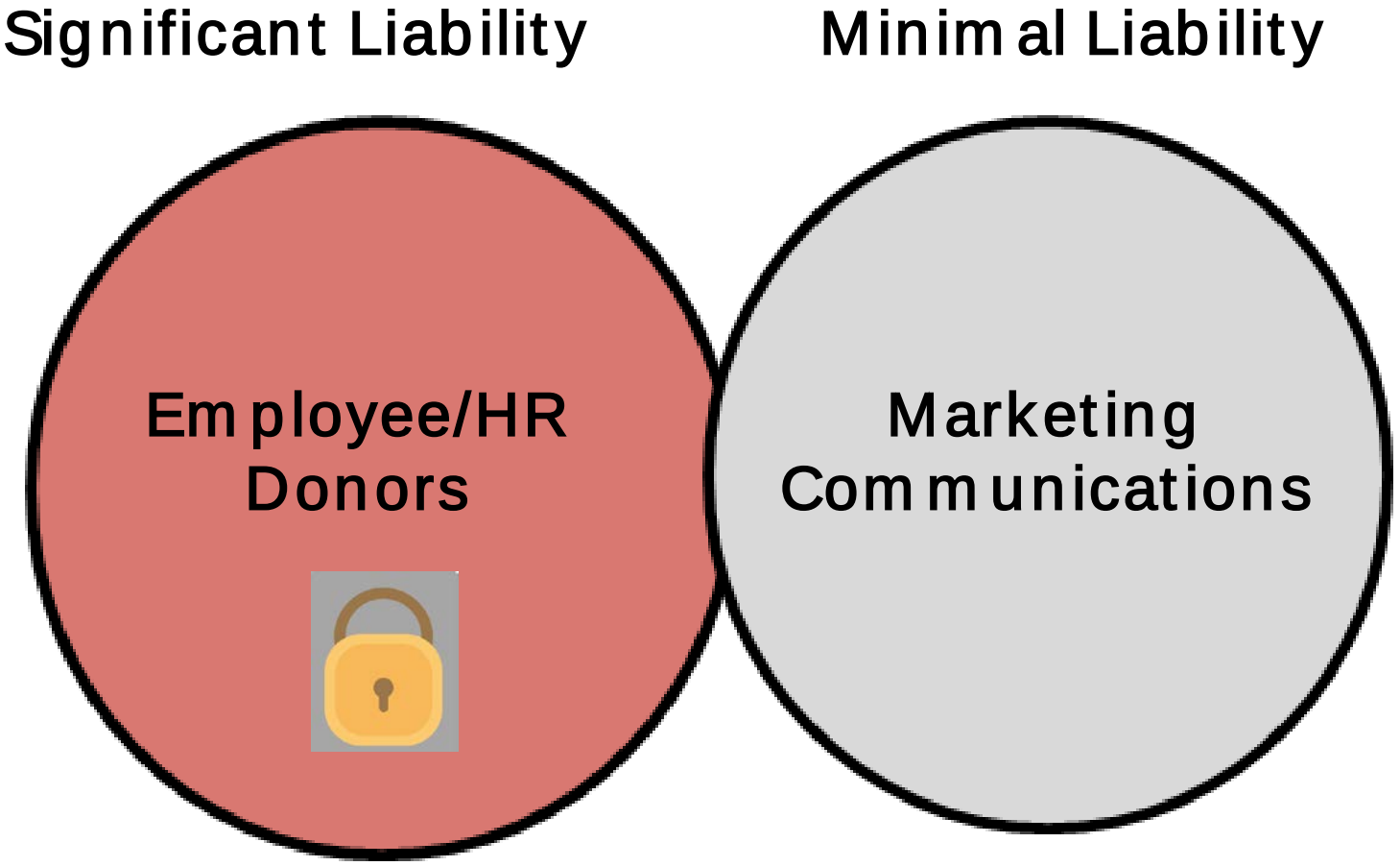
Is all data equal???



Good Technology Security Practices

- Maintenance, Administration & Patching
- Maintaining software at current/supported release levels
- Remove old accounts
- Anti-Spam and Anti-Virus
- Firewalls
- BotNet Filters
- Backups
- Encrypt laptop data
- Cell/smartphones
- Wireless Network Authentication (no Pre-Shared Keys!)

Good Security Policies

Leverage Policies to enforce what is and is not permitted

- Written Policies
  - Employee Handbook
  - Technology Usage
  - Code of Conduct
- IT Policies
  - Password Policy
  - VPN Policy
  - Application Policy
  - Cell/Smartphone Policy

Good Security Response

- Develop an Incident Response Plan – simple or complex
- Monitoring is not the answer alone, it is a piece of the answer
- People need to let IT know when they suspect something unusual or weird
- IT needs to take PROACTIVE action to:
  - Educate people
  - Maintain the network to always current
  - Be diligent about administration
  - Respond quickly and appropriately to the ever-changing threats
  - Educate people
  - And Educate people

Case Studies

Security vs Productivity

- Nonprofit with extreme security
- Employees not able to work effectively
- Current infrastructure inhibiting ability to accomplish their mission

Case Studies

IT Governance

- Nonprofit with no IT Governance
- Each department chose own software applications
- No consideration of the entire organization
- No master data shared across systems to evaluate programs, donors, etc.

Case Studies

Weak security policies

- Password policy not enforced
- No Multifactor Authentication
- Employee's email hacked

Important Take-Aways

- Boards have a fiduciary responsibility to ensure their organizations are taking appropriate documentable/verifiable actions to mitigate cyber risks.
- Cyber Insurance only covers insurable risk. Uninsurable risk is still significant
- Establish sound IT Governance
- Bring in competence where needed

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