

CYBER ATTACKS

Cyber attacks are in the headlines everyday.

WE are under constant attack by hackers constantly trying to gain access to computer networks!

NEWS

DLA Piper rocked by ransomware attack ... weeks after publishing 'How to protect against cyber attacks' guide

(b) JUN 27 2017 8:18PM

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Anthem Hacking Points to Security Vulnerability of Health Care Industry

By REED ABELSON and MATTHEW GOLDSTEIN

CEO heads may roll for security breaches in wake of Sony boss' exit, experts say

Brokerage Firms Worry About Breaches by Hackers, Not Terrorists

By MATTHEW GOLDSTEIN FEBRUARY 3, 2015 11:54 AM ■ 4 Comments

F.B.I. Says Little Doubt North Korea Hit Sony

By MICHAEL S. SCHMIDT, NICOLE PERLROTH and MATTHEW GOLDSTEIN JAN. 7, 2015

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Partially Taken from Source: DynaSis

LIVE CYBER ATTACK THREAT MAPS https://cybermap.kaspersky.com/



Incident Trends & Organizational Threats They market on The Dark Web where Everything is For Sale

- DDOS attacks for as low as \$5 USD an hour
- Banking credentials from 1% to 5% of account balance
- 300,000 airline points for \$90 USD
- American Express Cards for \$30 USD
- ATM skimming devices as low as \$400 USD
- Crypters from \$80 USD

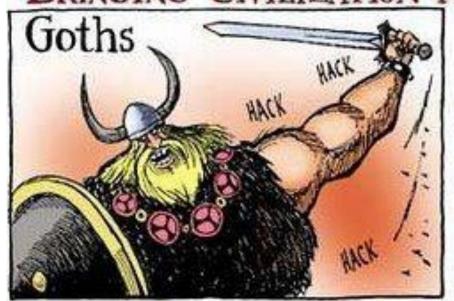
public static void moreParameters (Int. a. int. b.

f.println ("in method go, x: " + x + 1

- Angler Exploit Kits from \$100 USD
- Online tutorials from \$20 USD

System.out.println("in method falseSwap, x: " + x y: " + y);

BRINGING CIVILIZATION TO ITS KNEES ...

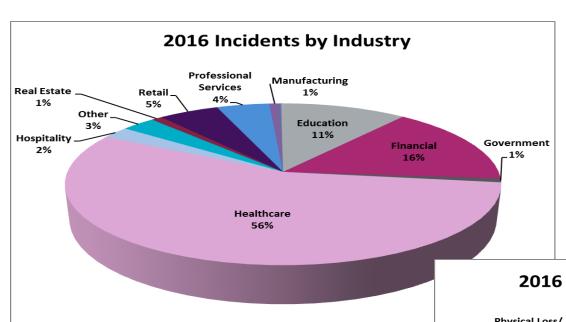








Incident Trends & Organizational Threats



2016 Incidents by Cause All Industries Other Physical Loss/ Non 3% **Electronic Record** 10% Unknown. 6% **Hack or Malware** 32% Unintended Disclosure Insider 32% 8% Portable Device 8% **Payment Card** Fraud 1%

OCR STATS FROM NIST/OCR 2017 CONFERENCE

September 2009 through July 31, 2017

- Approximately 2,017 reports involving a breach of PHI affecting 500 or more individuals
- Theft and Loss are 48% of large breaches
- Hacking/IT now account for 17% of incidents
- Laptops and other portable storage devices account for 26% of large breaches
- Paper records are 21% of large breaches
- Individuals affected are approximately 174,974,489
- Approximately 293,288 reports of breaches of PHI affecting fewer than 500 individuals

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OCR Stats . . .

- Complaints Received and Cases Resolved
 - o Over 158,293 complaints received to date
 - o Over 25,312 cases resolved with corrective action and/or technical assistance
 - Expect to receive 17,000 complaints this year

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Think

Before You Click!

PLEASE!!!!!

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Cyber Attacks Are Often Triggered By Scam Emails These Range From the More Obvious . . .

- In the past, attacks were much easier to spot.
- One example was the "Arabian Prince" type emails that were full of misspelled words. Fraud was not subtle . . .

From: Armondo Travlio (atavaliow!@#7%@gmail.it)

To: Bob Servant

Subject: Delete This At Your Peril

FROM HIS ROYAL HIGHNEST, PRINCE TAVLIO

Dear Sir,

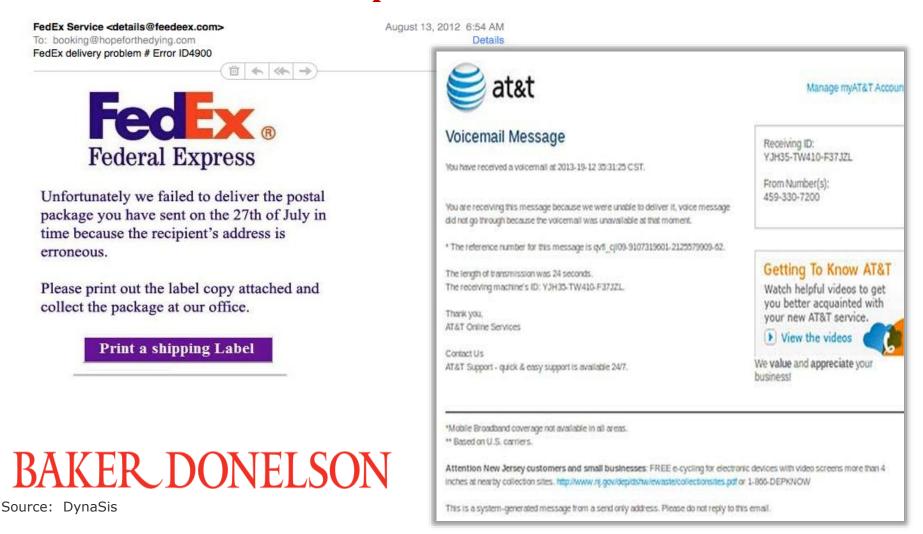
Permite me to inform you of my desire of going into business. I am Armondo, only son of late King Arawil of tribal land. My father was a very wealthy traditional ruler, poisoned by his rivals. Before his death here in Togol he told me of a trunke containing \$75m kept in a security company. I now seek a foreign partner were I will transfer the proceads for investment as you advize. I am willing to offer 20% of the sum as a compensation for your effort/input and 5% for any expenses. If you are willing to help, transfer \$1000 to Bank of Tribal Account Number: 3486022200 Routing Number: 12647774 as a show of good faith.

Thanks and God bless, PRINCE TAVLIO



Source: DynaSis

Today Scams Are Much More Sophisticated: Emails that appear to be from legitimate companies that you do business with and are designed to entice users to click on links or open attachments.



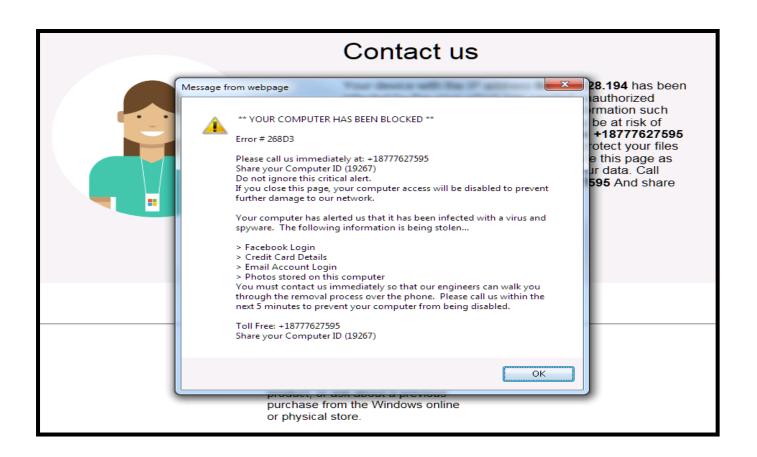
But Look Closely Before Clicking...

- Check the sender email address closely before you click. Don't assume an email is legitimate just because the logo looks correct.
- Use common sense. Using the example, if it would be odd for you to get an email about a FedEx delivery failure, that is a red flag.
- Sometimes, you can hover the cursor over the link to see the web address of the link. A FedEx "print shipping label" link should not be to random.net/hotdeal



Many Attacks Prey On Your Work Ethic And Fears like the "Alert" Pop-up

- Alerts claiming your computer is frozen or data is being stolen, commanding you to call a number or click on a link are scams.
- Shut down your computer or call your IT Department, if you are concerned. Do not click on anything. Do not call the number in the pop-up or share information.



Scam Requests for Payment

Some scams may look like an invoice. Use common sense. References to wire transfer or payment by the same day are red flags. Think before you click.

Dell Inc 5 Polaris Way, Aliso Viejo, CA 92656, Tel +1 949 754 8000 Fax +1 949 754 8999 WWW.Dell.com

Customer Name: Wilkins Academy

Account #: 1248447

Dear Customer,

Please be advised, the below overview of invoices is showing as unpaid on your customer account with Dell Software International Limited.

We would like to bring to your attention, we expect your payment to reflect on our account latest by due date, transferred to the respective bank details stated on invoice. In case of payment delays beyond contractual agreements, Dell Software Group is authorized to take further action to ensure timely payment.

Transaction #	Trans Date	Purchase Order	Due Date	Currency	Balance Due
=======	=======	========	=======	=======	=======================================
1000223085	28. 10. 2014	1-SQH9HT	31. 1. 2015	USD	\$1410.10

Please note that if you are paying by bacs, wire or chaps transfer to Dell software group please ensure that you have the below bank details correct in your system.

Bank name: JPMorgan Chase Bank, N.A. (NY), Account Number: 365839887, Swift Code: CHASUS33XXX, Currency: USD

Kindly include your Dell account number, company name and all invoice numbers when you make the payment so that we can apply the payment into the invoices immediately once we receive the payment. If you have paid any of these amounts, please exclude those from your payment order. Thank you once again for your continued business with Dell.

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Source: DynaSis

Sincerely,

Johnathan Griffin
Dell Collections
Email: igriffin@softwar

Email: jgriffin@software.dell.com



Scam Requests for Payment

The example below includes both a potentially dangerous link and a demand for payment.

Common sense and awareness:

- You should know if you've gotten a parking ticket. A legitimate email would include contact information for questions.
- The sender's email address does not look like an official email address.
- A legitimate email would not be signed "Police Department."

From: Traffic Police Department <gbpftif@ad.maxart.it>

Date: April 19, 2017 at 6:19:01 PM CDT **To**: Joe Stewart < <u>istewart@firm.com</u>> **Subject**: Parking Ticket #9856125332

You got a parking fine!

26-143 – Unattended car Required to appear in trial Parking ticket number PTD9856125332

Check Parking Ticket

To pay your parking fine, download your ticket and choose one of 2 convenient ways:

- 1. Online Pay online by Visa or Mastercard, \$2 processing fee.
- 2. By phone (automated system) Pay by Visa or Mastercard at 866-562-4828

Best Wishes,
Police Department.

Source: Baker Donelson PC

Scam Requests for Payment

- This email appears to be from a familiar company executive. The executive claims
 to be unable to talk with you in person but needs you to wire or send funds
 immediately.
- The sender's email address is a red flag.
- BUT NOTE: A hacker may have ghosted the executive's account such that the email address looks accurate. NEVER send or wire funds without face-to-face confirmation or without otherwise following our procedures.

From: Brenda Director < <u>brendaceo@gmail.com</u>>

Date: April 2, 2017 at 2:12:01 PM EDT

To: John Employee < <u>jemployee@firm.com</u>>

Subject: AT&T Payment - URGENT

Hi,

I'm out of the office in a meeting with John Smith. The payment to AT&T is overdue. This needs to go out now by wire transfer to avoid interruption of service.

Please immediately wire \$5,348.45 to South State Bank, Routing # 351578040, Account # 5831365839887. Let me know when complete. It can't wait.

Regards, Brenda CEO



Scam "Malvertising"

Links for "free" services, downloads, or streaming video are also suspicious. The cliché holds: If it sounds too good to be true, it probably is. It could be a link to malware or something that will harm our network.

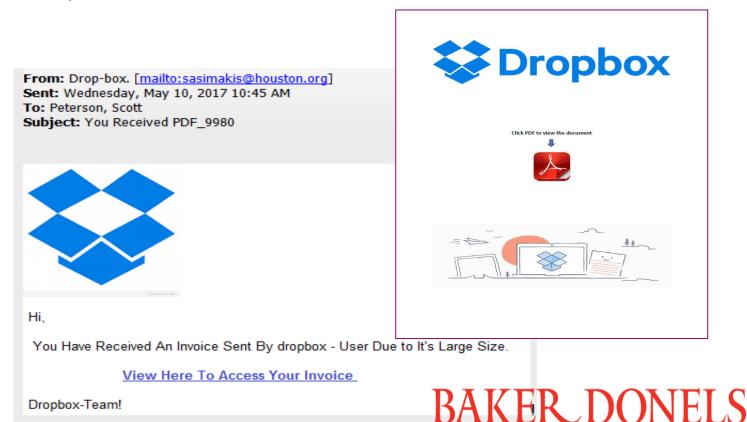


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Source: DynaSis

Scams That Make You Feel You are Missing Out If You Don't Click on the Link!

- Emails that appear to be from a friend linking to pictures or a vendor linking to an invoice or deliverable.
- Be alert: Are you expecting pictures from that friend? Does the sender email make sense or look familiar?
- Hover your cursor over the link. Does the website information fit?
- Unless you are 100% certain, do not click on the link.



Ransomware: One Wrong Click Can Lead To An Attack

Ransomware launches an attack that lets the hacker hold our computers and network HOSTAGE until we pay a monetary ransom.

If you ever see a screen like the one below or on the following slide, shut down your computer and call the IT Department immediately.



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Ransomware Attacks Come In All Shapes And Sizes And Can Be Very Sophisticated.

Ransomware can launch from one click on a link or email attachment.



Incident Trends & Organizational Threats Increasingly Common: Dropper



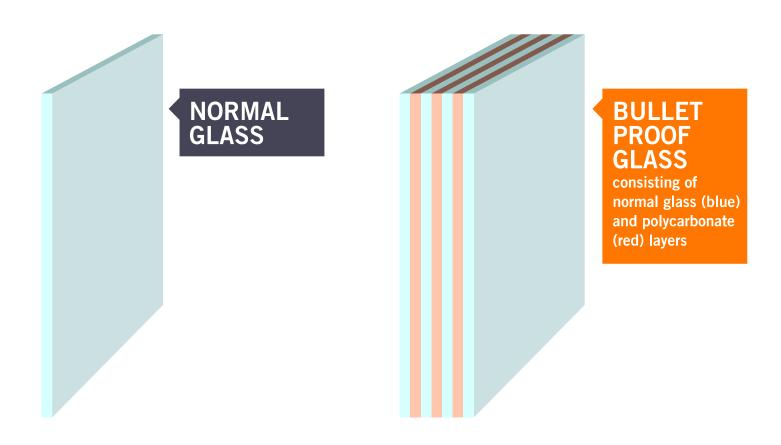
1 2 3 4

Bad actor gets a piece of malware on computer Malware sits quietly and just phones home; not the old fashion flashy/noisy malware of yesterday Bad actor sells or rents ability to infect computer

- Malware phones home
- Installs main payload: Ransomware, etc.

If contract ends or need more capacity, just install more Malware

Preventing An Attack Takes Layers of Protection and Prevention





Security And Risk Management Is About Managing Risk Through A Layered Approach

USER TRAINING: Establishing Safe Habits

INCIDENT RESPONSE EMERGENCY PREPAREDNESS PLAN

PRIVACY AND SECURITY POLICIES / PROCEDURES factoring in applicable law

TESTING SYSTEMS / TABLE TOPS

Cyber Liability Insurance

BACK-UP FILES / CONTAINMENT / BLOCKING

MANAGING ADMIN AND ACCESS RIGHTS –
Multifactor Authentication

FILTERING: Email Content Filtering

ANTI-MALWARE / ANTI-VIRUS SOFTWARE

WEEKLY PATCH UPDATES: Workstation & Server

FIREWALLS / ENCRYPTION

DATA MAPPING / DEVICE MANAGEMENT



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Security Risk Analysis & Management





Threats



Risks

"[a] flaw or weakness in system security procedures, design, implementation, or internal controls that could be exercised (accidentally triggered or intentionally exploited) and result in a security breach or a violation of the system's security policy."

Vulnerabilities can be technical or non-technical.

"[t]he potential for a person or thing to exercise (accidentally trigger or intentionally exploit) a specific vulnerability."

Threats can be natural, human, or environmental.

"the net mission impact considering (1) the probability that a particular [threat] will exercise (accidentally trigger or intentionally exploit) a particular [vulnerability] and (2) the resulting impact if this should occur."

A Vulnerability triggered or exploited by a Threat equals a Risk.

Source: NIST SP 800-30, Risk Management Guide for Information Technology Systems.

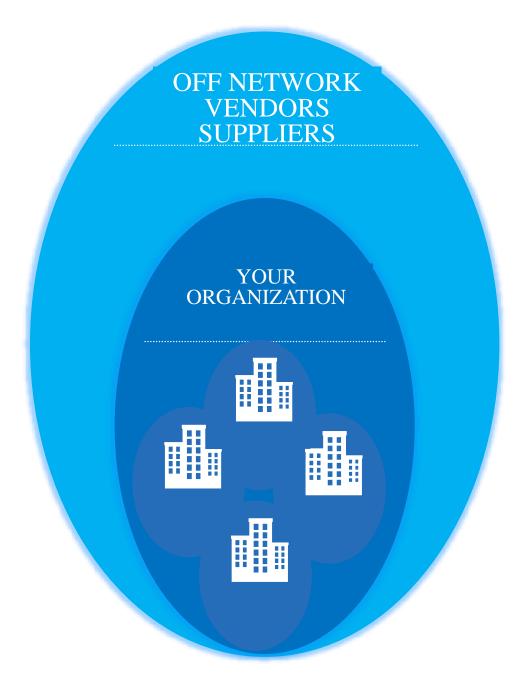




Biggest Areas of Risk

- No Risk Assessment
- No or Unfollowed Risk Management Plan
- No BA Agreement
- BAs allow overseas storage / access
- Unsecured Devices / Drives
 - Mobile Devices
 - Laptops
- No Plan for Attacks
- Disposal Issues
- Ransomware due to failure to train workforce / patch
 - Sign up for the FBI watch lists
- Internet of Things
 - Patient Devices





Incident Trends & Organizational Threats:

Attackers are targeting the weakest links in the supply chain

DUE DILIGENCE VENDORS!!!

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Source: DynaSis

User Error Remains the Biggest Risk... Don't cause that error!!



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Your Role Is Critical: Educate Yourself and Your Organization



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Cyber Security Guidance Material Webpage

https://www.hhs.gov/hipaa/for-professionals/security/guidance/cybersecurity/index.html

- o Includes a Cyber Security Checklist and Infographic, which explain the steps for a HIPAA covered entity or its business associate to take in response to a cyber-related security incident.
- Additional Cybersecurity Guidance: Ransomware and Cloud Computing
 - o Ransomware: http://www.hhs.gov/hipaa/for-professionals/security/guidance/index.html
 - o NIST Cybersecurity Crosswalk with HIPAA Mapping:
 - https://www.hhs.gov/sites/default/files/nist-csf-to-hipaa-security-rule-crosswalk-02-22-2016-final.pdf?language=es



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Monthly Guidance: Cybersecurity Newsletters

E-1- 2016	D		
Feb. 2016	Ransomware, "Tech Support" Scam, New BBB Scam Tracker		
March 2016	Keeping PHI safe, Malware and Medical Devices		
April 2016	New Cyber Threats and Attacks on the Healthcare Sector		
May 2016	Is Your Business Associate Prepared for a Security Incident		
June 2016	What's in Your Third-Party Application Software		
Sept. 2016	Cyber Threat Information Sharing		
Oct. 2016	Mining More than Gold (FTP)		
Nov. 2016	What Type of Authentication is Right for you?		
Dec. 2016	Understanding DoS and DDoS Attacks		
Jan. 2017	Audit Controls		
Feb. 2017	Reporting and Monitoring Cyber Threats		
March 2017	Reporting and Monitoring Cyber Threats		
April 2017	Man-in-the-Middle Attacks and "HTTPS Inspection Products"		
May 2017	Cybersecurity Incidents will happenRemember to Plan, Respond, and Report!		
June 2017	File Sharing and Cloud Computing: What to Consider?		
July 2017	Train Your Workforce, so They Don't Get Caught by a Phish!		
August 2017	Protecting yourself from potential scammers while being charitable		

 $\underline{http://www.hhs.gov/hipaa/for-professionals/security/guidance/index.html}$

https://www.hhs.gov/hipaa/for-professionals/security/guidance/cybersecurity/index.html



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Gina Greenwood is a healthcare attorney and IAPP Certified Information Privacy Professional (US) who assists clients across the country with data and other compliance needs, data breaches and internal and external compliance investigations.

- Gina concentrates her practice on a wide range of health care and privacy/security matters, including cyber liability, risk management, data breaches and response, HIPAA Privacy and Security Rule compliance and HIPAA / HITECH breaches; PCI, COPPA, CAN-SPAM, TCPA Act, FTC Act, GLBA, GINA, Part 2, etc. compliance, meaningful use audits, fraud and abuse compliance and EMTALA/COP investigations, corporate health care transactions and day to day compliance advice to hospitals and other licensed health care entities.
- Gina has authored numerous materials including privacy and security policy manuals, licensure policy manuals, and Internet-based employee training modules.
- Gina has been recognized as one of the Best Lawyers in US (Healthcare) and by Chambers USA as a leading health care lawyer in America. She has been voted *Georgia Trend Magazine* Legal Elite. She served as 2014 expert legal witness on EMTALA and mental health issues during the USCCR hearings in Washington, DC. which provided testimony to US Congress and President of the United States.