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Securing the Enterprise from a Dangerous Cyberworld

September 19-20, 2011 • Marriott Brooklyn Bridge, New York City



Next-Gen Security Awareness: Educating the Spectrum -- from Digital Natives through Baby Boomers

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The Evolution of Threats and Their Defenses

1. Malware	a. Anti-Virus (signature/behavioral)
2. Perimeter Attacks	a. Firewalls (packet filter/stateful/app)
	b. Intrusion Detection/Prevention
3. Data Destruction/Alteration/Loss	a. Encryption
	b. DLP
4. Social Engineering	a. New hire and annual training
	b. Job-specific training
	c. Next Gen Awareness & Training







Cerebral Configuration

- Training & awareness is a human issue, dealing with how people learn and retain information.
 - Repetition (annual vs. frequent)
 - Generational & role aspects to how we learn
 - Relevancy
 - Common theme
 - Changing behavior



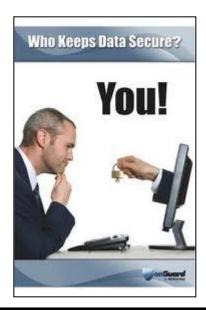




Historical Model of Awareness

- New-hire training
- Annual refresher training
- InfoSec awareness posters
- Security trinkets
 - "What is the awareness ROI of a stress ball?"
- Policy
 - We expect employees to not open unsolicited attachments or click on links.











"People respect what you inspect, and not what you expect."



- Lou Gerstner (former CEO, IBM)







INTERNAL PHISHING CAMPAIGNS







Phishing Your Own Employees

- People tend to view the micro (individual)
 view rather than the macro (community) view.
- Increases awareness in a very personal way
 - Touching the stove rather than being told the stove is hot
- Occurs all within the safety of your own security program
 - No data was harmed in the exercise







Building the Program

- Build or Buy?
- Start small
- Target high value roles
 - Administrative Assistants
 - Finance
 - Public/Corporate Relations
- Create (or buy) the technical underpinnings









Cutting Bait

- Craft a spoofed email with a link to an internal site
- Use a call to action to entice user interaction
- Start with campaigns that are fairly easy (not simple) for the employee to catch
- Progress with added complexity in each campaign







The Lesson

- On the internal site:
 - Explain to the user what just happened
 - Visualize for them how they could have picked up it was a phishing email – be specific
 - Thank them for helping to secure the network
- Overall, user feedback is positive







Catch & Release

- Capture actionable metrics that highlight:
 - # of users in the campaign
 - # of users who opened the email
 - # of users who clicked on the link
 - # of users who did not open the email
- Look for trends are some Business Units more vulnerable than others? How do you address?







SOCIAL MEDIA







Think Before You Tweet

- Create an internal buffer page, activated when a user goes to a social media site
 - One per browser session rather than for each social media site
- Identify:
 - Potential dangers of social media
 - Responsibilities of the user to protect data
 - Links to social media policies (you have them, right?)
 - Click through agreement









Leveraging Social Media

- Use social media as a security awareness tool:
 - Internal micro blogging tools to distribute security awareness messages
 - Corporate Facebook and LinkedIn instances to convey public messages (staffing needs, etc.)







EMAIL EXTERNAL TAGGING/STAMPING







Origination Intelligence

- Places a stamp in the subject line that reads "External" for all inbound email from outside the company
- Accomplished through content filtering and transport rules in email solutions through white listing







Email Tag/Stamp

- Another layer of awareness for the user
- If an email requests the user to change network credentials but comes from an external email address – raises a red flag
- Some push-back due to sorting and searching email







Final Thoughts

- Next Generation Awareness is not a substitute for traditional training
 - We still need annual training, role based training, and awareness articles
- These newer types of programs are supplements to the traditional forms of awareness







Thank You!

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