



# Using the Internet of Everything (IoE) to Give Awareness Training a Fresh Start

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# Objectives

- What are the leading training best practices across industry, academia, and government
- How methods such as interactive gamification of training can be effective in maintaining the user's interest and retention
- Why collaboration is key and how to get involved with other organizations/industries that are playing a role in educating users on the IoE
- What (ISC)2 and the community of security educators are doing to reinforce established security principles with users and IoE manufacturers
- What education and credentialing programs are available that support IoE training goals

# Who We Are

- Headquartered in Clearwater, FL with offices in Alexandria, VA, London, Hong Kong, Tokyo, Mumbai, and an authorized China agency in Beijing, (ISC)<sup>2</sup> is the global, not-for-profit leader in educating and certifying information security professionals throughout their careers.
- We are recognized for Gold Standard certifications and world class education programs.
- We provide vendor-neutral education products, career services, and Gold Standard credentials to professionals in more than 160 countries. We take pride in our reputation built on trust, integrity, and professionalism. And we're proud of our membership – an elite network of over 100,000 certified industry professionals worldwide.

# (ISC)<sup>2</sup> Credentials

(ISC)<sup>2</sup> INSPIRING A SAFE AND SECURE CYBER WORLD.

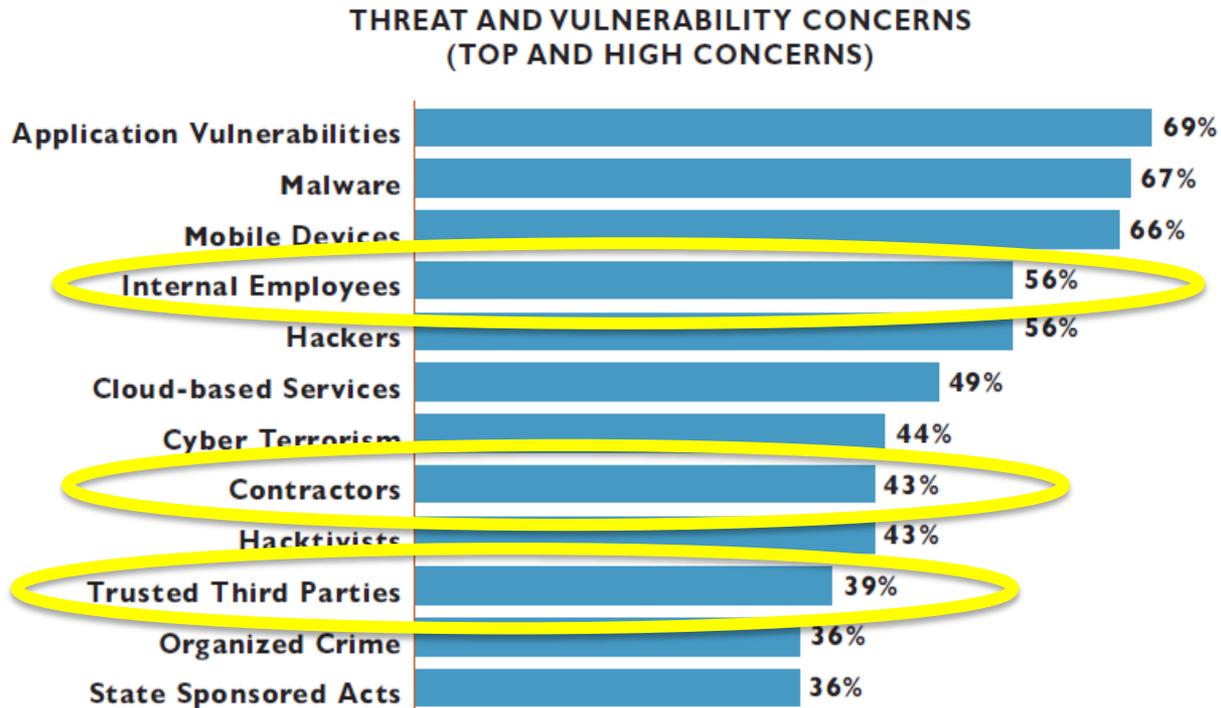


# Problem

*Welcome to your annual security refresher training.*

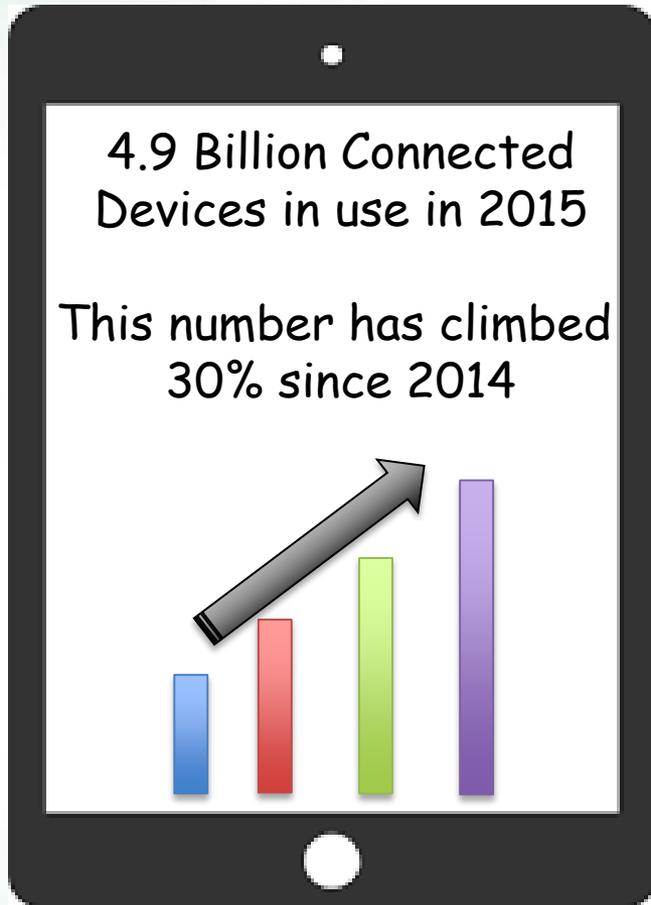
*The purpose of this briefing is to remind you of your personal responsibilities and liabilities under United States espionage and sabotage acts, and to reaffirm key security policies and procedures.*

# Problem – Trusted Staff A Big Concern



- *Source: 2013 (ISC)<sup>2</sup> Global Information Security Workforce Study (GISWS)*

# Problem - IoE



- Internet of Everything (IoE)
- Internet of Things (IoT), etc.
- All catchy phrases to capture the proliferation of internet-enabled devices
- 2015 is shaping up to be the year of IoE

# IoE



# IoE





# How Can We Help Solve the Problem?

- Current compliance-based security awareness training methods are not effective
- When compliance is the primary goal, teaching and learning will suffer
- Methods such as interactive gamification of training can be effective in maintaining the user's interest and retention
- Users learn by “scenario based” examples
- Present a highly interactive environment where their actions tell a story and have direct consequences
- Understanding these impacts is key to appreciating why Security Awareness is imperative to any organization



# How Can We Help Solve the Problem?

- The best organizations perform security awareness training to actually train employees about security.
- Develop materials to teach users
  - what not to click and why
  - the difference between right and wrong
  - who to call when they think something is wrong
- Make it fun – introduce the concept of “gamification”

# Who Gets Involved?

- Traditionally, HR and Legal teams are responsible for creating
- Important to engage others with experience with other organizations or industries
  - Security!
  - IT
  - Communications
- Also helps with buy-in



# Best Practices

- Develop requirements, establish goals
- Improve content and delivery mechanism (push AND pull)
- Repeat your message – be consistent
- Repeat again – all about reinforcement
- Use the carrot more than the stick
- Make it fun

# Success Story

- Cyber Training 3.0: New Solutions Addressing Escalating Security Risks
  - Dan Lohrmann, Chief Security Officer, State of Michigan
- Featured a three-prong approach that aimed to address new threats and minimize risk
- Included an overhaul of the existing “Death by PowerPoint”
- RFP issued and a new vendor was brought in
- Twelve 10-minute self-paced training modules were then offered online as a service via the Internet from the vendor’s facility.
- Training was rolled out in six waves to over 50,000 employees and contract staff.
- Feedback from customer groups – with over 90% positive comments and words like: “fun,” “excellent,” “I will use this at home” and “best ever.”
- Training in all core categories that introduce risks, such as passwords, clicking on links, mobile security, web and application security, and others.
- Now an ongoing program that closed eleven audit findings and created comprehensive measurements on employee training.

# (ISC)<sup>2</sup> Blog

Introducing the Automotive Industry to Information Security:  
*I Am The Cavalry* Steers Call to Action

<http://blog.isc2.org>

<https://www.iamthecavalry.org>

These information security precautions are very similar to the measures (ISC)<sup>2</sup> advocates for application security through our CSSLP<sup>®</sup> certification.

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# QUESTIONS?

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