RSAConference2018
San Francisco | April 16–20 | Moscone Center

SESSION ID: HUM-W02

THE SAD TALE OF ETAOIN SHRDLU AND THE DANGER OF AUTOMATED PEN TESTS

Doug White

Chair, Cybersecurity and Networking
Roger Williams University
Bristol, RI
dwhite@rwu.edu

The Sad Tale of Etaoin Shrdlu*

- It’s pronounced Ethan Allen, my Mother was Welsh.
  - float dougsBankAccount;
  - dougsBankAccount = urPayck-(long)urPayck; //short change salami attack
- But how can the payload be delivered?
- *whitehat

The Dream…

- …Caused by the Flight of a Bee around a Pomegranate a Second before Awakening – Reality
- ☒ Pen Test – (the dream)

Since the Dawn of Time…

- Human beings like to check boxes
- I mean, they really do
- A sense of accomplishment
- A job…well…done
- A sense of….Compliance!

But not too many boxes!

- Compliance can be overwhelming
- How many subparts of COBIT are there?

Also, since the dawn of time…

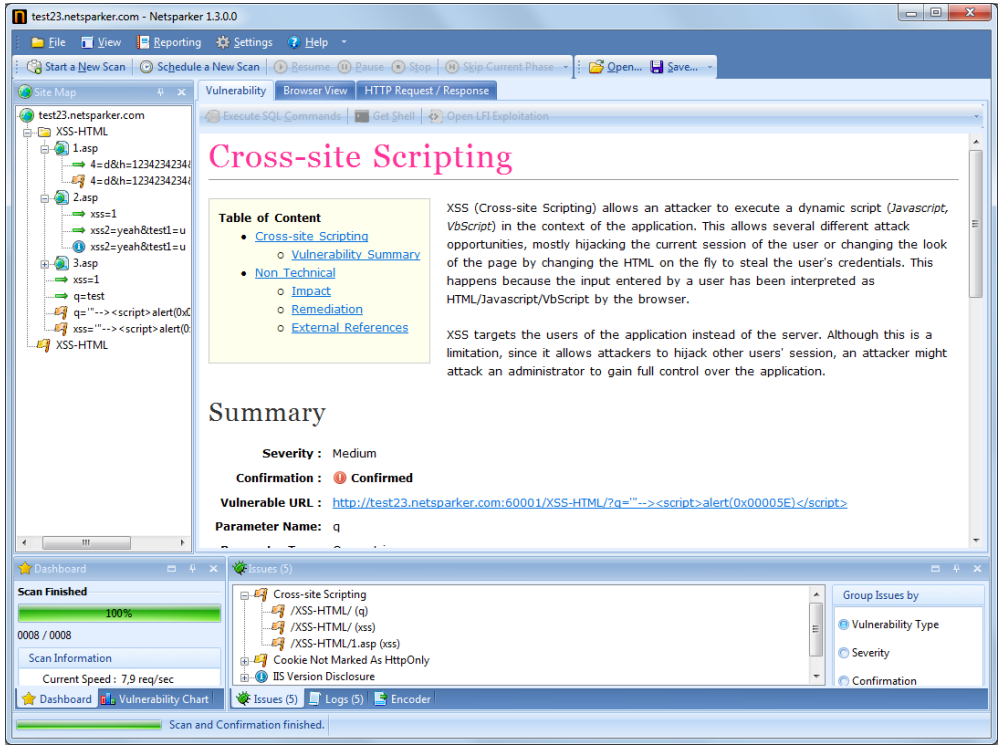
- Humans hate having their shortcomings and weaknesses pointed out by hackers and con men.

also, also, since the dawn of time…

- and, we really like having someone tell us: “Everything is going to be ok. You can trust me, I’m a doctor.”

Enter the Automated Pen Test

- These kids today…
- Can you click F4?
- Yay!
- ☒ Pen Test
- Here is your PDF, that
  - will be 5,000$



But, what if it's Console ports?

- "Our server rack has a lock."
- "That door is 'hardened' against entry."
- "Well, normally, that window is locked."
- "The guards don't have tasers."

What if it's "Taco Truck Tuesday"?

- What if I get you to deliver the payload?
- Spearphishing is the number one type of attack?
- Spearphishing circumvents everything because it relies on human behavior rather than open ports and vulnerabilities.
- Spearphishing is not going to be seen in automated pen tests

The Sad Tale of L. B. Jeffries*

- I know, I know, you won't get Spearphished!
- How about a little Van Eck Phreaking (well, not really)?
- Is the network key really written on that post it note? Really?
- Oh, and was the password for the admin on that post it note too?
- That automated test didn't detect…
- I also called this "Rear Window"
- *whitehat

So, what's the point Doug?

- All too often, we see mid size and even large organizations relying on
  - "The Cheapest"
  - "The Fastest"
  - "The Easiest"
  - "The Most Efficient"
- methods for checking that box

I know, I know, the point?

- As the Security environment continues to mature (well, that's relative), we increasingly see the involvement/request of "fully automated pen tests" and "discount pen testers" and pretty soon…
- Come on down to Crazy Eddie's Pen Test Discount Warehouse, where prices are INSAAAANE!
- All industries go through this type of movement from:
  - whacky inventors – "weird science"
  - startups – "should I be wearing a tie?"
  - Reputable and disreputable – "We are not like those other guys?" and "We're wearing ties."
  - Maturation – "Safe, reliable, efficient, cost effective"
  - Underwriting
  - Crazy Eddie

The reality is?

- All of us seek the Banker but we also secretly crave Crazy Eddie!

So, we shouldn't do automated Pen Tests?

- Absolutely, you should but it should be the first thing you, not the last.
- APT can be the trigger which causes audit but even then, it shouldn't be the only trigger.
- The Triangle Shirtwaist Factory Fire.
  - Are we locking doors that need to be unlocked?
  - Are we locking doors that need to be unlocked?
  - Are we locking doors that need to be unlocked?
  - Are we locking doors that need to be unlocked?

How do you find the balance?

- That is where you have to take a serious step
  - (serious) Evaluation of threats
  - Risk Acceptance
  - Risk Avoidance
  - Risk Limitation (reduction)
  - Risk Transference

- Die Rückkehr von Etoain
  - The bank did NOT want to document exposure
  - Instead, security through obscurity was assumed and this reinforced the idea of simple, checkbox pen tests. All is well, nothing to see here.
  - This is, of course, Risk Acceptance or Risk Denial

The failure facet fulcrum

- The Facet of Oversimplification
- The Facet of Budgetary Pressure
- The Facet of Ego
- The Facet of Complacency
- The Facet of Failure
- The Facet of Ignorance

Apply: What to do?

- You must have a full understanding of the Risk Structure YOU wish to adopt that suits your risk profile
  - This means budget must be applied accordingly, even when it hurts!
  - This means you can't just push that button and check that box
  - You can live in the wild west but remember there is always a new gun in town
- You must remember that humans will find a way and that humans are involved, not just automated attacks (although those are getting better too)
- You must avoid assumption of risk scenarios unless you truly understand them and the cost of this assumption
- Start with Automated Pen Tests, but don't end with them.

Apply: What to do?

- Always be asking yourself: “Am I just ticking a box or do I understand the risk?”
- Always be asking yourself: “What else can happen? Not just what I want to see?”
- Always be asking yourself: “What are the consequences if I assume this risk?”
- Always be telling yourself: “I am not invulnerable.”
- Always be telling yourself: “We are a target.”
- ABD: “Always be deposing.”

Questions?

- dwhite@rwu.edu
- @dougwhitephd
- securedigitallife.com
- securityweekly.com
- Doug White, PhD, CCE, CCNA, CISSP, PI(RI)