EVOLVE

Security Academy

Presents:

Hacking 101

Disclaimer

Don’t try to hack into companies or people’s personal accounts.

It is illegal and you will be arrested.

Use your own lab.

EVOLVE
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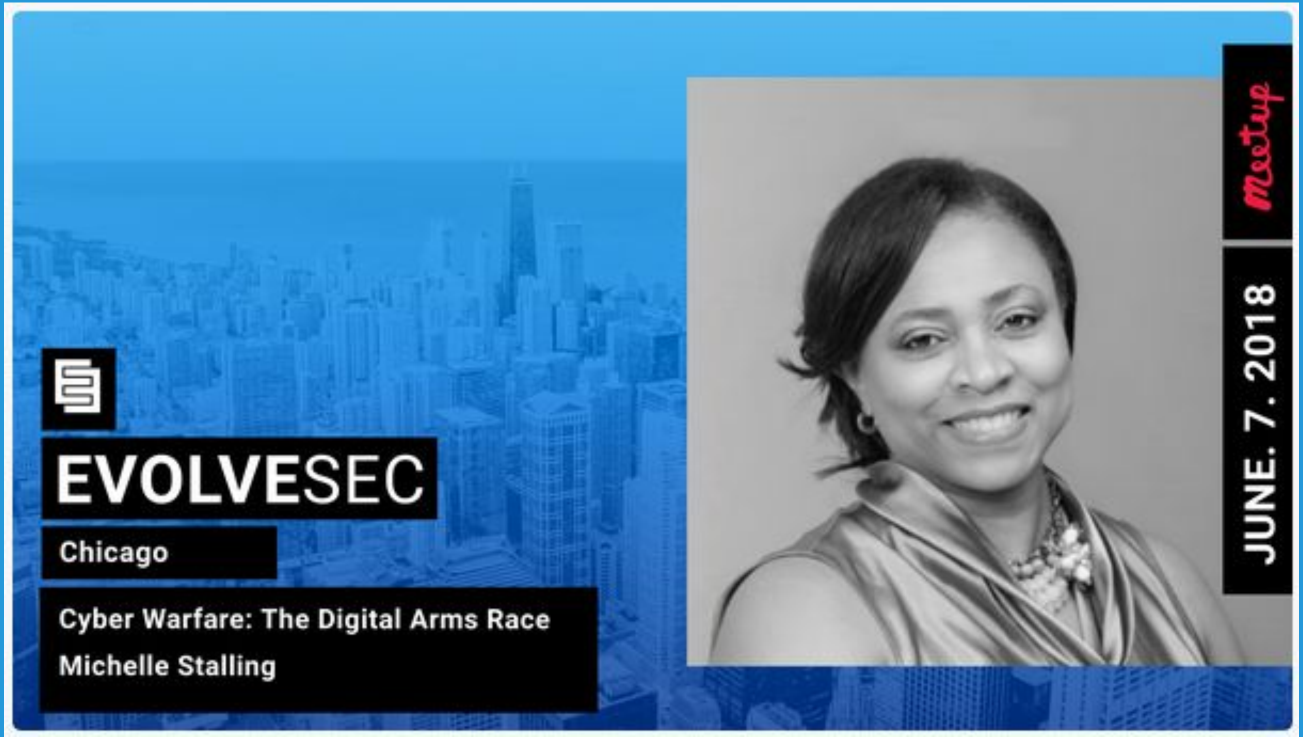
Upcoming Evolve Event



EVOLVESEC

Chicago

Cyber Warfare: The Digital Arms Race

Michelle Stalling

JUNE. 7. 2018

Meetup

Windows Users

Please download PuTTY

https://www.putty.org/

Burpsuite

Download:

https://portswigger.net/burp/communitydownload

Brain Teaser

Use each of the numbers 1, 3, 4 and 6 only once using the four basic math operations to total the number 24.

Hacking

- 1960’s (MIT Model Railroad Club)
- Today
    1. Malicious/illegal activities
    2. Writing programs to solve complex problems well

Elite hackers don’t rely on automated tools.

Terms

- CIA Triad
- Vulnerabilities, Threats, Exploits
- Malicious code

Hats & Hacking

- White Hat
- Grey Hat
- Black Hat

Threat Actors

1. Script Kiddies
2. Hacktivism
3. Organized crime
4. Nation States (APTs)

Network Vulnerabilities

- Weak / Default Passwords
- Man in the middle attacks
- Default / Weak configurations
- Outdated software / Patch Management

Application Vulnerabilities

OWASP Top 10 2017

- A1 Injection
- A2 Broken Authentication
- A3 Sensitive Data Exposure
- A4 XML External Entities (XXE)
- A5 Broken Access Control
- A6 Security Misconfiguration
- A7 Cross Site Scripting (XSS)
- A8 Insecure Deserialization
- A9 Using Components with Known Vulnerabilities
- A10 Insufficient logging and monitoring

Popularized Attacks

- DDOS
- Phishing
- Ransomware - Virus/Trojan

Typical Steps

- Identify target
  - Random OR Targeted
- Choose attack vector
  - External exploitable vulnerability
  - Social Engineering (Phishing email)
- Gain access & understand working system environment (root?)
- Establish foothold (install backdoor / persistence)
- Pivot throughout the network
- Exfiltration of data

The Common Tools

- Kali Linux – Penetration Testing Linux Distro
- Port Scanner – E.g. NMAP
- Vulnerability Scanner – E.g. Nessus
- Exploitation Tool – E.g. Metasploit
- Brute Force – Hydra
- Network Analysis – Wireshark
- Burp Suite Pro – Web Application Testing Tool

OK let’s hack

www.overthewire.org

Let’s keep hacking

www.hackthis.co.uk

Challenges

hack.evolvesecurity.io

www.hackthebox.eu

Thank you.

Q&A

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Brain Teaser Answer

$6 / (1 - (3/4))$