Schedule and outline

Texts

- Certified Ethical Hacker (CEH) Version 10 Cert Guide, 3rd Edition (available online through o’reilly books thru library.dixie.edu)

Week 1 (week of Jan 11)

- Topics:
  - Intro s1
  - Ethical Hacking s2
  - Information gathering s3
- Readings: CEH1-3
- Labs: p1

Week 2 (week of Jan 18)

- Topics:
  - Virtualbox review
  - Authentication s4
  - MFA
  - BIOMETRICS
  - Rainbow tables
  - Passwords
  - Gaining Access
    - Local password attacks
    - Privilege escalation
  - Physical Security
  - Hacking windows or linux without knowing password.
    - Rescue cd
    - Hirens
    - Reset SAM
  - Bios security
- Readings: CEH4
- Labs:
  - p2
  - p3

Week 3 (Week of Jan 25)

- Topics:
  - OS Security
  - Maintaining Access
    - Rootkit s5
    - Trojan and Backdoor
- Readings: Rootkits
- Reptile rootkit setup
- Reptile rootkit Demo
- Labs:
  - p4

Week 4 (Week of Feb 1)

- Topics:
• More OS Security
• C&C server
• PowerShell empire
• Data Hiding: s6
• Review here

• Labs:
  • p4a
• Test 1
• Presentation

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### Week 5 (Week of Feb 8)

• Topics:
  • MITM
  • `Ssh downgrade example`
  • `MITM with dns spoof`
  • Network attacks with SCAPY
  • replay
  • DOS
• Readings:
  • Scapy slides 1
• Projects:
  • p5 (man in the middle)
  • p6
  • p7

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### Week 6 (Week of Feb 15)

• Topics:
  • More scapy
  • Malware
  • Ransomware
• Readings:
  • CEH Chapter 5
  • Malware s7
  • Ransomware
  • Linux ransomware
• Projects:
  • p8
  • p9

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### Week 7 (Week of Feb 22)

• Topics:
  • IDS
• Readings:
• Projects:
  • p10

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### Week 8 (Week of Mar 1)

• Topics:
  • IDS, Firewalls, and Honeypots
• Readings:
  • CEH Chapter 9 - IDS, Firewalls, and Honeypots
  • s8
Spring Break (Week of Mar 8)

Week 9 (Week of Mar 15)

- Topics:
  - Web hacking
  - Application security
  - Proxy servers
- Readings:
  - Chapter 7
  - [Slides](#)
  - [Proxy Slides](#)
- Projects:
  - p11
  - p13
- Presentations?

Week 10 (Week of Mar 22)

- Topics:
  - Application security
    - [https://sourceforge.net/projects/mutillidae/](https://sourceforge.net/projects/mutillidae/)
  - Burpsuite
    - [Overview](#) of burpsuite.
  - SqlInjection
- Video Lectures:
  - [Sql Injections](#)
  - [More SQL Injections](#)
- Readings:
  - Not required but good overview of web security [here](#)
  - [Injection Slides](#)
- Projects:
  - p14
- Presentations?

Week 11 (Week of Mar 29)

- Topics:
  - Application Security
  - Software Security
    - Buffer overflows
- Readings:
  - [Buffer overflows](#)
  - Overflows [slides](#)
- Video Lectures:
  - [Buffer overflow slides](#)
- Presentations
  - See the presentation schedule [here](#)
- Projects:
  - [CTF1](#)
  - [buffer overflow](#)

Week 12 (Week of Apr 5)
Week 13 (Week of Apr 12)

Malware workshop April 13?

- Topics:
  o Cryptography
  o CTF work
  o Forensics
- Readings:
  o encryption
  o CEH Chapter 10
- Video Lectures:
  o Encryption 1
  o Encryption 2
- Projects:
  o p15

Week 14 (Week of Apr 19)

- Topics:
  o Fun random stuff?
  o https://jhalon.github.io/over-the-wire-leviathan/
  o https://www.hackthis.co.uk/levels/main/4
- Projects:
  o p16
  o Maybe one last project
- Test 3

Final?