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

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

Week 6 (Week of Feb 15)

Topics:
  • More scapy
  • Malware
  • Ransomware

Readings:
  • CEH Chapter 5
  • Malware s7
  • Ransomware
  • Linux ransomware

Projects:
  • p8
  • p9

Week 7 (Week of Feb 22)

Topics:
  • IDS

Readings:

Projects:
  • p10

Week 8 (Week of Mar 1)

Topics:
  • IDS, Firewalls, and Honeypots

Readings:
  • CEH Chapter 9 - IDS, Firewalls, and Honeypots
  • s8
• Projects:
  • p11
• Test 2 (???)

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:
  • p12
  • 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:
  - Cryptography
  - CTF work
  - Forensics
- Readings:
  - encryption
  - CEH Chapter 10
- Video Lectures:
  - Encryption 1
  - Encryption 2
- Projects:
  - p15

Week 14 (Week of Apr 19)

- Topics:
  - Fun random stuff?
    - https://www.hackthis.co.uk/levels/main/4
- Projects:
  - p16
  - Maybe one last project
- Test 3

Final?