Schedule and outline

Texts


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)

- Test 2 (Take in testing center)
- Topics:
  - Web hacking
  - Application security
- Readings:
  - Chapter 7
  - [Slides](#)
- Projects:
  - p11
- Presentations?

Week 10 (Week of Mar 22)

Malware workshop (????)

- Topics:
  - Application security
  - [https://sourceforge.net/projects/mutillidae/](https://sourceforge.net/projects/mutillidae/)
- Readings:
  - [Slides](#)
  - Not required but good overview of web security [here](#)
- Projects:
  - p12
- Presentations?

Week 11 (Week of Mar 29)

- Topics:
  - Application Security
  - Software Security
    - Buffer overflows
- Readings:
  - Buffer overflows
  - Overflows [slides](#)
- Video Lectures:
  - Sql Injections
  - More SQL Injections
  - Buffer overflow slides
- Presentations
  - See the presentation schedule [here](#)
- Projects:
  - p14
  - buffer overflow
Week 12 (Week of Apr 5)

- Topics:
  - wireless and mobile security
- Projects:
  - ctf
- Readings:
  - CEH Chapter 8

Week 13 (Week of Apr 12)

- 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?