Schedule and outline

Texts

Certified Ethical Hacker Version 9 Cert Guide - Denoted CHE for readings below

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Week 1

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

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Week 2

- Topics:
  - Vagrant & Virtualbox
  - 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

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Week 3

- Topics:
  - OS Security
  - Maintaining Access
    - Rootkit s5
    - Trojan and Backdoor
- Labs:
  - p4

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Week 4

- Topics:
- More OS Security
- Armitage
- zero day exploits
- security updates and patches
- Data Hiding: s6
- Review here
- Man in the middle project p5

- Test 1
- Presentation

Week 5

- Topics:
  - Network attacks with SCAPY
  - replay
  - DOS
- Readings:
  - Scapy slides 1
- Projects:
  - p6
  - p7

Week 6

- Topics:
  - More scapy
  - Malware
  - Ransomware
- Readings:
  - CEH Chapter 5
  - Ransomware
  - Linux ransomware
- Projects:
  - p6
  - p9

Week 7

- Topics:
  - firewalls/acls
  - iptables ppt more
- Readings:
- Projects:
  - p10
  - p11

Week 8

- Topics:
  - Malware conclusion
  - Social Engineering Toolkit
- Readings:
Week 9

- Review
- Test 2
- Topics:
  - Application security
- Readings:
  - Read the section “Finding and Exploiting XSS Vulnerabilities” to the “Summary” at the end of XSS. [this book](http://code.google.com/edu/security/index.html)
  - [Slides](http://code.google.com/edu/security/index.html)
- Projects:
- Presentations?

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Week 10

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

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Week 11

- Topics:
- Projects:
  - p13
  - ctf
- Topics:
  - Application Security
  - Software Security
    - Buffer overflows
    - [demo](http://code.google.com/edu/security/index.html)
  - Database injections
  - Jails, Containers
- Readings:
  - [Buffer overflows](http://code.google.com/edu/security/index.html)
  - Overflows [slides](http://code.google.com/edu/security/index.html)
- Presentations?

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Week 12
Week 13

- Topics:
  - Cryptography
  - CTF work
  - Forensics
- Projects:
  - p14
- Readings:
  - encryption
  - CEH Chapter 12

Week 14

- Topics:
  - CTF presentations

Thanksgiving

Week 15

- Topics:
  - More CTF
  - Fun random stuff?
  - https://www.hackthis.co.uk/levels/main/4
- Test 3