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:
  - p8
  - 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
- Projects:
- Presentations?

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](http://code.google.com/edu/security/index.html)
  - injection slides
- Projects:
  - p12
- Presentations?

Week 11

- Topics:
- Projects:
  - p13
  - ctf
- Topics:
  - Application Security
  - Software Security
    - Buffer overflows
    - demo
  - Database injections
  - Jails, Containers
- Readings:
  - Buffer overflows
  - Overflows slides
- Presentations?

Week 12
Topics:
  - honeypots
  - honeynets
  - wireless and mobile security

Projects:
  - p14

Readings:
  - CEH Chapter 8
  - CEH Chapter 9

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### Week 13

- Topics:
  - Cryptography
  - CTF work
  - Forensics

- Projects:
  - p15

- Readings:
  - encryption
  - CEH Chapter 12

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### Week 14

- Topics:
  - CTF presentations

Thanksgiving

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### Week 15

- Topics:
  - More CTF
  - Fun random stuff?
  - [https://www.hackthis.co.uk/levels/main/4](https://www.hackthis.co.uk/levels/main/4)

- Test 3