Schedule and outline

Texts

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

Week 1

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

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

Week 3

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

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

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**Week 5**

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

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**Week 6**

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

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**Week 7**

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

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

Week 12
• Topics:
  • honeypots
  • honeynets
  • wireless and mobile security
  • [resources.infosecinstitute.com/cracking-damn-insecure-and-vulnerable-apps-diva-part-1/#gref](resources.infosecinstitute.com/cracking-damn-insecure-and-vulnerable-apps-diva-part-1/#gref)

• 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?
  • [jhalon.github.io/over-the-wire-leviathan/](jhalon.github.io/over-the-wire-leviathan/)
  • [https://www.hackthis.co.uk/levels/main/4](https://www.hackthis.co.uk/levels/main/4)

• Test 3