Black Hat/White Hat:

An Aggressive Approach to the Graduate Computer Security Course

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BACKGROUND

- Saint Xavier University
- Computer Science Department:

  Computer Science & Computer Studies

  Master of Applied Computer Science
- Facility: The "Sandbox"

RATIONALE

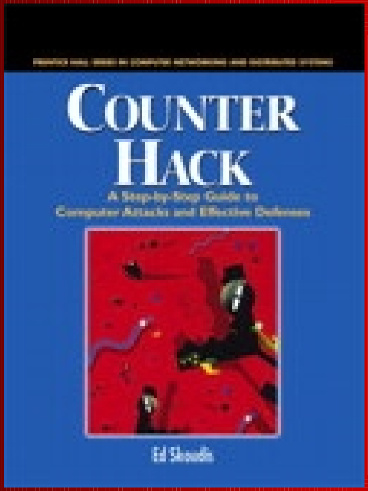
- John Aycock and Patricia Logan – SIGCSE '05
- Aggressive vs. Passive

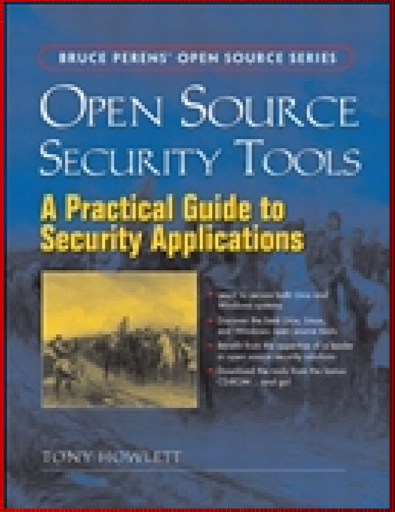
"If you know the enemy and know yourself, you need not fear the result of a hundred battles.

If you know yourself but not the enemy, for every victory gained you will also suffer a defeat.

If you know neither the enemy nor yourself, you will succumb in every battle."

THE COURSE: Books





THE COURSE: Facilities

- Older PCs
- Windows 2000 & Linux
- Hub
- Normally isolated (“sandbox”)

THE AUDIT EXERCISE

- Charge:

  1) Crack the firewalls guarding the target department
  2) Gain access to as many of the computers in the target as possible
  3) Continuous activity logging
  4) Presentation of final report

THE AUDIT EXERCISE

- Limitations:

1) No dumpster diving or personal social engineering
2) No tampering with files or computers
3) Must sign non-disclosure agreement first

THE AUDIT EXERCISE

- Report:

1) Routers were secure
2) School's default administrative password scheme must be changed
3) Target department extremely vulnerable
4) Recommended corrective actions for each vulnerability

THE AUDIT EXERCISE

- Aftermath:

  1) School's default administrative password scheme changed
  2) Target department adopted every recommendation (and more)
  3) The “rumor mill”

UPDATE

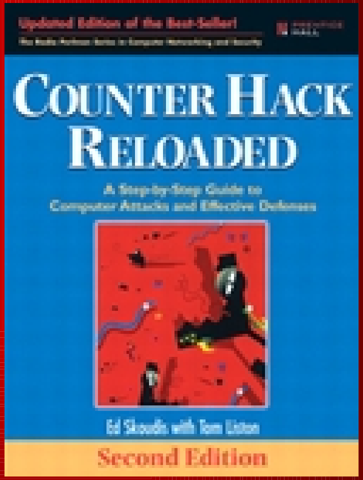
- Is there a middle ground?

- Next spring:

  Laptops

  VMware

  Win2K, WinXP, Linux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COUNTER HACK RELOADED
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CONVERSATION