

# Penetration Testing

## A brief introduction to Penetration Testing

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- ▶ Penetration Test Execution Standards
- ▶ Tools & utilities

# Penetration Test (pentest)



- ▶ Attacking a computer system to find its vulnerabilities
- ▶ Many times resumes to gaining access to the system

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- ▶ A pentester has to think like a real world (black hat) cracker, so a pentest could reflect the **real life behaviour of an assault**
- ▶ He has to discover means in which a cracker might compromise the security and deliver damage to the organization

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- ▶ Covert pentest (also called black box)
  - ▶ The pentester has basic or no information whatsoever, except the company name

# Terminology

- ▶ Exploit
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- ▶ Shellcode
  - ▶ A piece of code to be run after exploitation, typically written in machine code, usually spawns a shell (hence the name)

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  - ▶ e.g. Retina, Nessus, NeXpose, OpenVAS, Vega, etc

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  - ▶ w3af
- ▶ Tools
  - ▶ nmap, netcat, John the Ripper
  - ▶ tcpdump, Wireshark, upx, etc

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- ▶ Highly extensible & reusable
- ▶ Has several useful interfaces (cli, console, armitage)
- ▶ Free of charge, but commercial versions are also available

# References

- ▶ Kennedy D., OGorman J., Kearns D., Aharoni M. - Metasploit. The Penetration Testers Guide. (2011)
- ▶ Offensive Security - Metasploit Unleashed  
<http://www.offensive-security.com/metasploit-unleashed>
- ▶ Penetration Testing Execution Standard  
<http://www.pentest-standard.org/>
- ▶ Nmap <http://nmap.org/>
- ▶ Metasploit <http://www.metasploit.com/>

# Thanks for watching

“Try Harder” *Offensive Security*