Workshop Pentesting

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Engineering for digital security

Summary

- What is a pentest?
- Planning and preperation
- Information gathering
- Vulnerability detection
- Social Engineering
- Exploitation
- Analysis and reporting

What is a pentest?

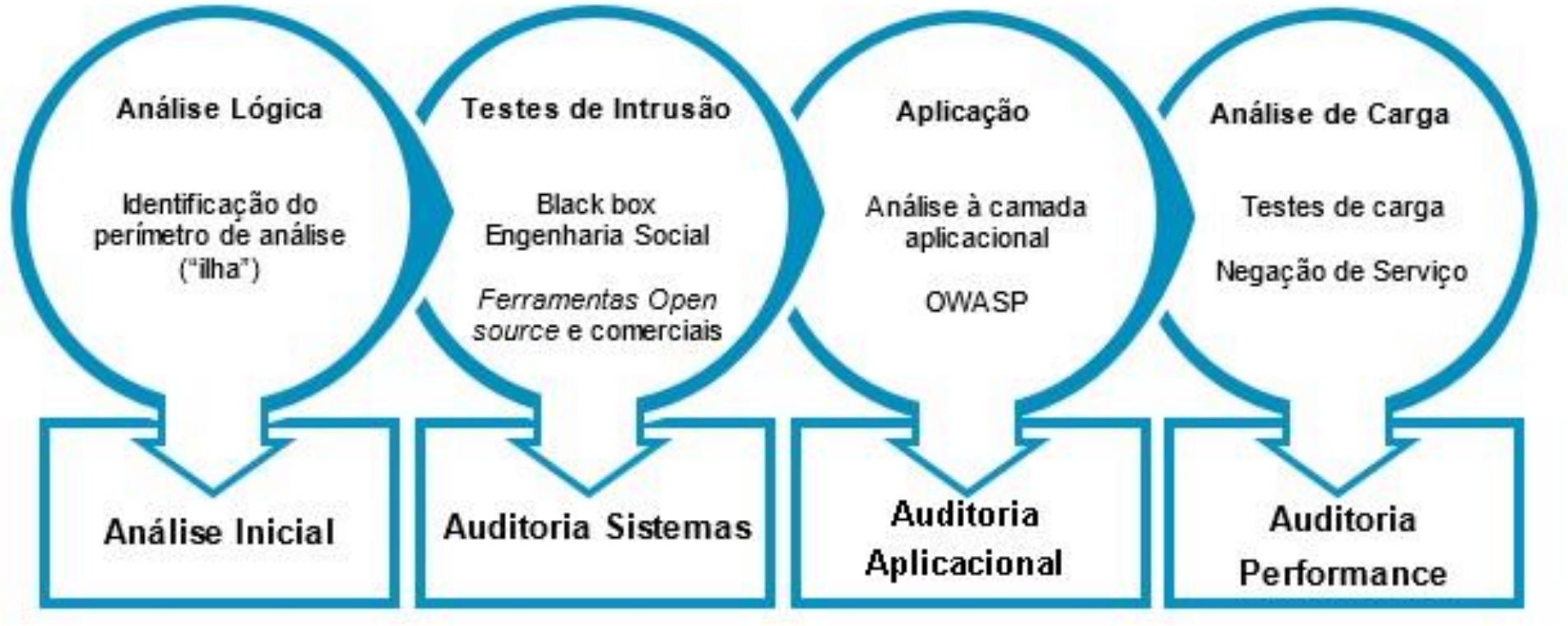
- Authorized simulated attack on a computer system.
- Primary goal focused on finding vulnerabilities that could be exploited.
- Inform the client about the vulnerabilities **along with recommended mitigation strategies.**

What is a pentest?

- White box
  - **Testers are given full disclosure about the network prior to the penetration testing. This will include IP addresses, source code, network protocols, diagrams, etc…**

- Black box
  - **Testers are given very little or no information prior to the penetration test.**

Planning and preperation



https://www.owasp.org/index.php/Penetration_testing_methodologies

Information gathering

- The first phase in security assessment.
- Focused on collecting as much information as possible about a target application
- Information Gathering is the most critical step of an application security test

Information gathering

Information gathering

- Harvester

```
root@kali:~# theharvester -d hackingloops.com -b all -f vanshit
**************************************************************** *
* TheHarvester Ver. 2.2a *
* Coded by Christian Martorella *
* Edge-Security Research *
* cmartorella@edge-security.com *
****************************************************************
Full harvest..
[-] Searching in Google..
Searching 0 results...
Searching 100 results...
```

- Metagoofil

```
root@kali:~# metagoofil -d -t doc -l 200 -n 50 -o /root/
-f /root/file.html
[+] List of users found:
---------------------------
Lydia Jallow
M. Renee Brown
Renee Brown Doug
```

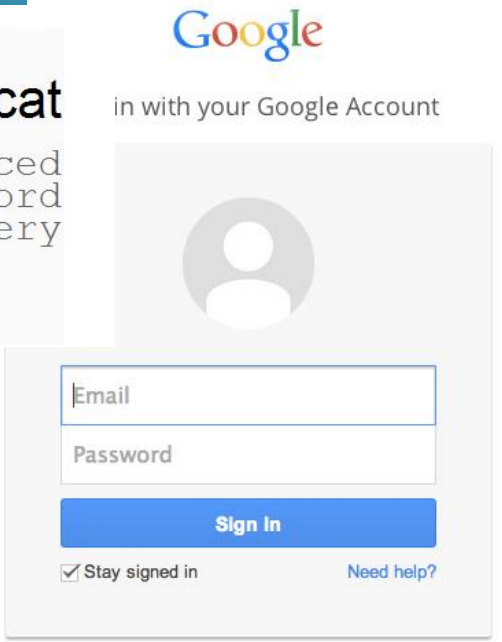
Information gathering

- Good old Google!!
  - **site:linkedin.com inurl:pub “at <organisation name>“**
  - **site:facebook.com “<search terms>”**
  - **site:twitter.com “<search terms>”**
- Dumpster diving

Information gathering

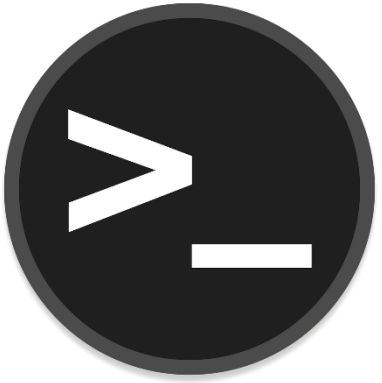
WHOis.net℠

';--have i been pwned?



Information gathering

Vulnerability detection



When everything else fails

OpenVAS
Open Vulnerability Assessment System

Nessus®
vulnerability scanner

Social engineering

"What I found personally to be true was that it's easier to manipulate people rather than technology" - *Kevin Mitnick*

"There is no technology today that cannot be defeated by social engineering." - *Frank Abagnale*

Social engineering types

- *Quid pro Quo*
- Phishing
- Baiting
- Pretext
- Diversion

Social engineering

All i need is a USB flash drive…

"… I forgot my CV, but i have it here in this USB drive!"

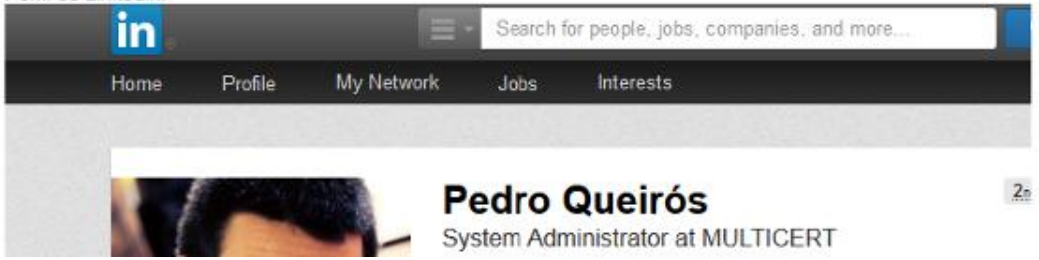
Social engineering

Humm... quem fez isto cometeu um erro n00b...
Seguem contactos de quem criou o domínio:

```
istrant Contact Information:
    Name                    Pedro Queiros
    Organization
    Address                 [redacted]
    City                    [redacted]
    State / Province        --
    Postal Code             [redacted]
    Country                 PT
    Phone                   [redacted]
    Email                   [redacted]
```

Foto da casa dele..

Perfil de Linkedin:



Exploitation

- Focuses solely on establishing access to the client system, bypassing security restrictions.

- Identify the main entry point into the organization and to identify high value target assets

Exploitation

- Physical Access
  - Attempting to circumvent physical security controls and gain unauthorized access.
- Proximity Access (WiFi)
  - Regardless of protocol, there are a number of attacks available for WEP, WPA, WPA2, EAP-FAST, EAP-LEAP, and other avenues
- Traffic Analysis
  - Identify what type of information is being sent and be able to understand and manipulate that traffic.

Exploitation

Metasploit Framework, a tool for developing and executing exploit code against a remote target machine

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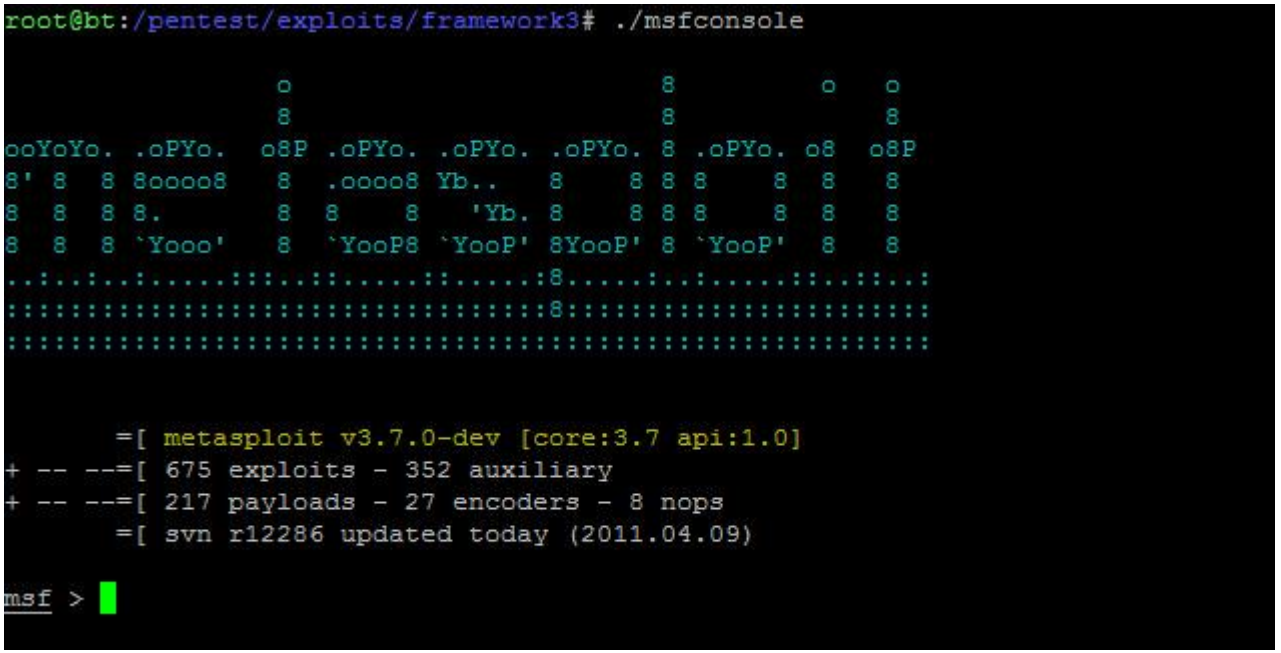
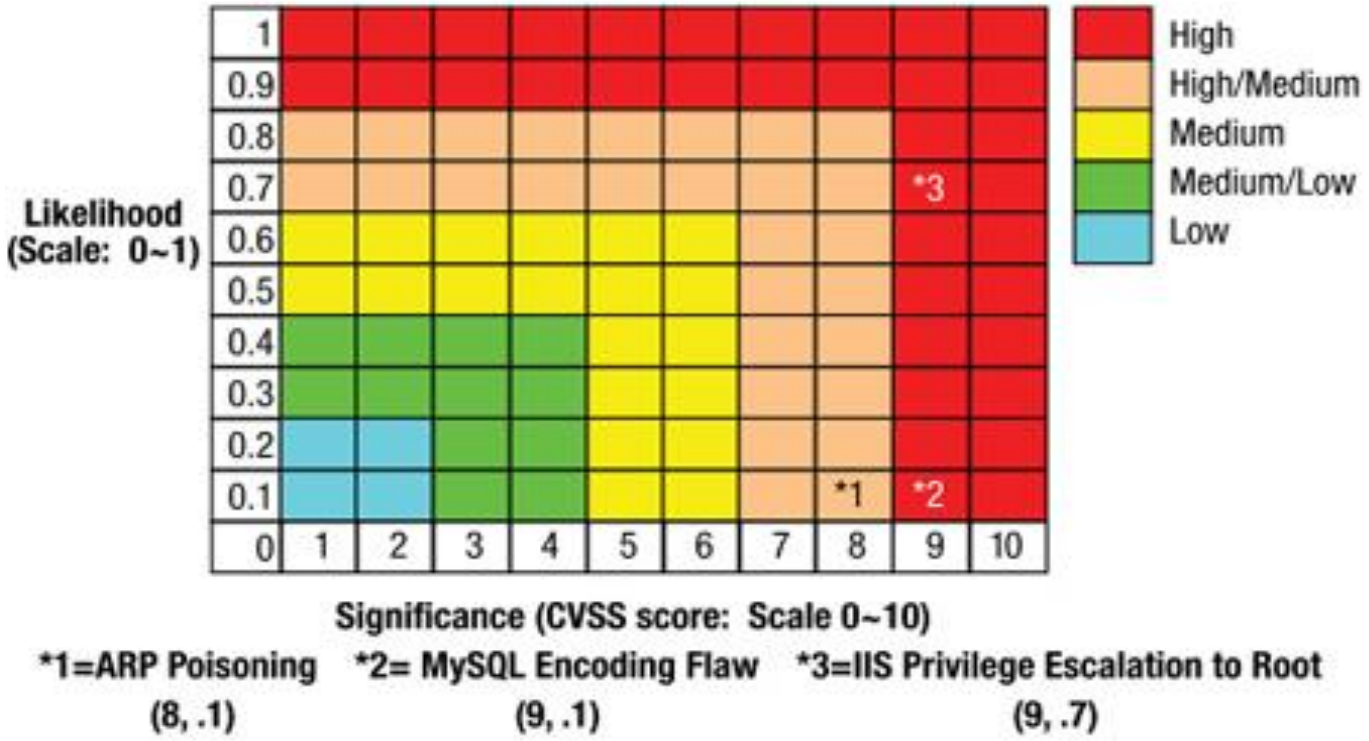


Analysis and Reporting

Analysis and Reporting

- Should provide a high level of understanding.
- Structure should make it easy for a non technical user to understand what was done.
- Risk profile.



Thank you!

Questions?

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