DEVSECOPS BOOTCAMP

BUILDING RUGGED SOFTWARE

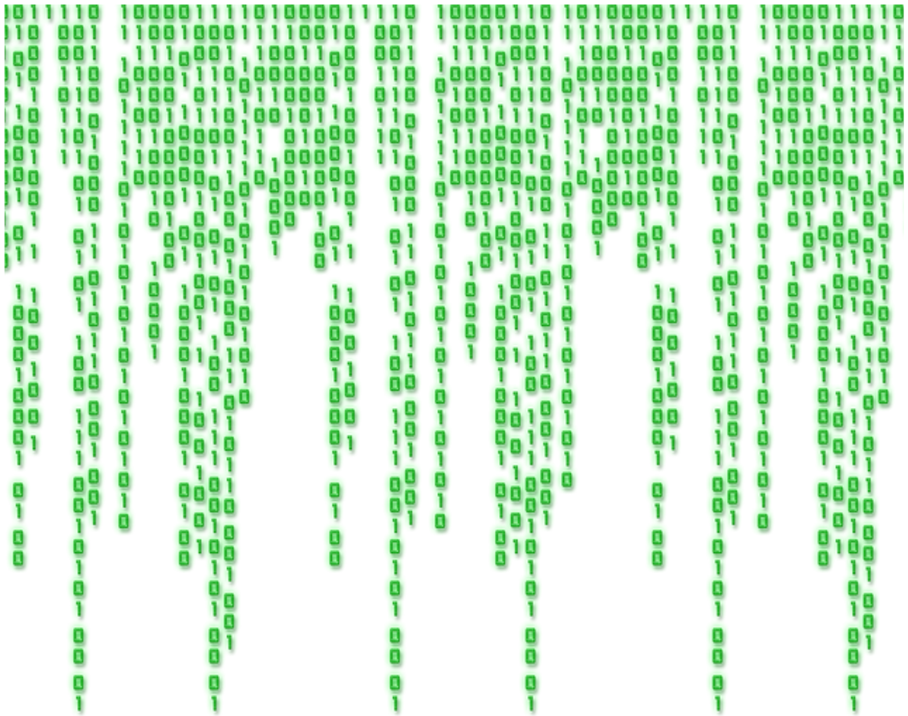
YEAR ONE / WEEK SIX / LESSON TWO

Agenda

- Network Attack
- Nmap
- Enumeration
- Metasploit
- Jenkins
- JBoss
- Lateral Movement
- Lab 2

Network Attack

- Enumerating systems
- Enumerating listening services
- Known vulnerabilities
- Unknown vulnerabilities (0 –Day)
- Misconfigurations
- Bad default installations (HUE, Jenkins, etc…)



Nmap

- Network Mapper
- Written by Fyodor
- Extensible through Nmap scripting engine (NSE) using Lua
- Many many command line args
- RTFM @ https://svn.nmap.org/nmap/docs/nmap.usage.txt
- Can test using scanme.nmap.org

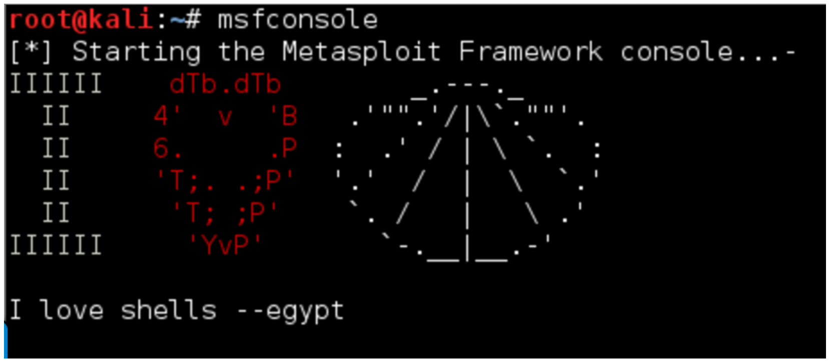
Vulnerability Enumeration

- https://nvd.nist.gov
- http://exploit-db.com
- https://cve.mitre.org
- Tools
  - Nessus
  - Qualys
  - Nexpose
  - Nmap

(http://exploit-db.com, 2016)

Metasploit

- Offensive Security Framework
  - Exploit Development
  - Exploit Delivery
- Modular
  - Exploit Modules
  - Auxiliary Modules
  - Scanner Modules
  - Multiple Payloads
    - Meterpreter
    - Shell
  - Post Exploitation Modules
    - Gather Data
    - Steal and Crack Password Hashes



```
root@kali:~# msfconsole
[*] Starting the Metasploit Framework console...-
IIIIII    dTb.dTb        _.---._
  II     4'  v  'B   .'"".'/|\`.""'.
  II     6.     .P  :  .' / | \ `.  :
  II     'T;. .;P'  '.'  /  |  \  `.'
  II      'T; ;P'    `. /   |   \ .'
IIIIII     'YvP'       `-.__|__.-'

I love shells --egypt
```

Jenkins

- Continuous Integration
- Continuous Deployment
- Master/Slave Architecture
- Distributed code execution platform
- Insecure by DEFAULT

JBoss

- Java Application Server
- Older versions are insecure by default
- JMX Console can be used to deploy arbitrary applications

Lateral Movement/Pivoting

- Establish Foothold
- Gather loot
  - .bash_history
  - .ssh
  - .aws
  - /etc/shadow
- Begin Network Enumeration
  - Scan (loud)
  - ARP (quiet)
- Persistence

Questions?

Lab 2 – Exploiting Jenkins

- https://github.com/devsecops/bootcamp/blob/master/Week-6/labs/LAB-2.md