Automated PenTest Toolkit

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Who Am I?

- Adam in 5 words:
  - Father *5 years*
  - Husband *16 years*
  - Hillbilly *39 years*
  - Pentester *15+ years*
  - Programmer *20+ years*

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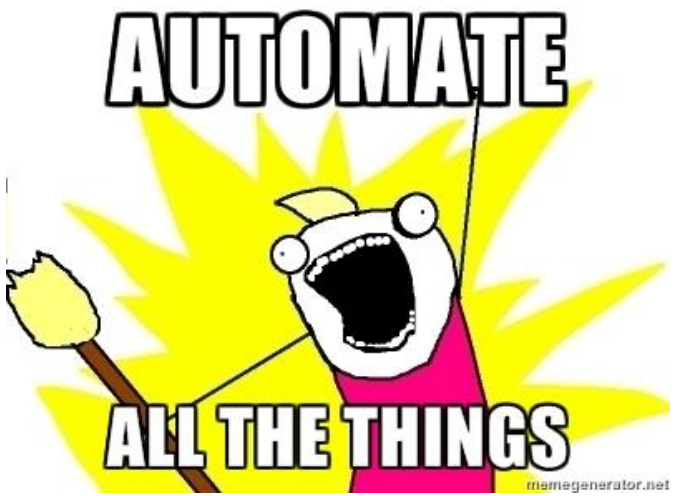

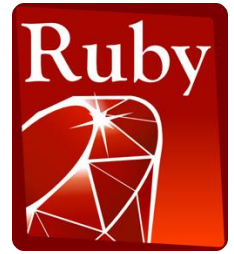

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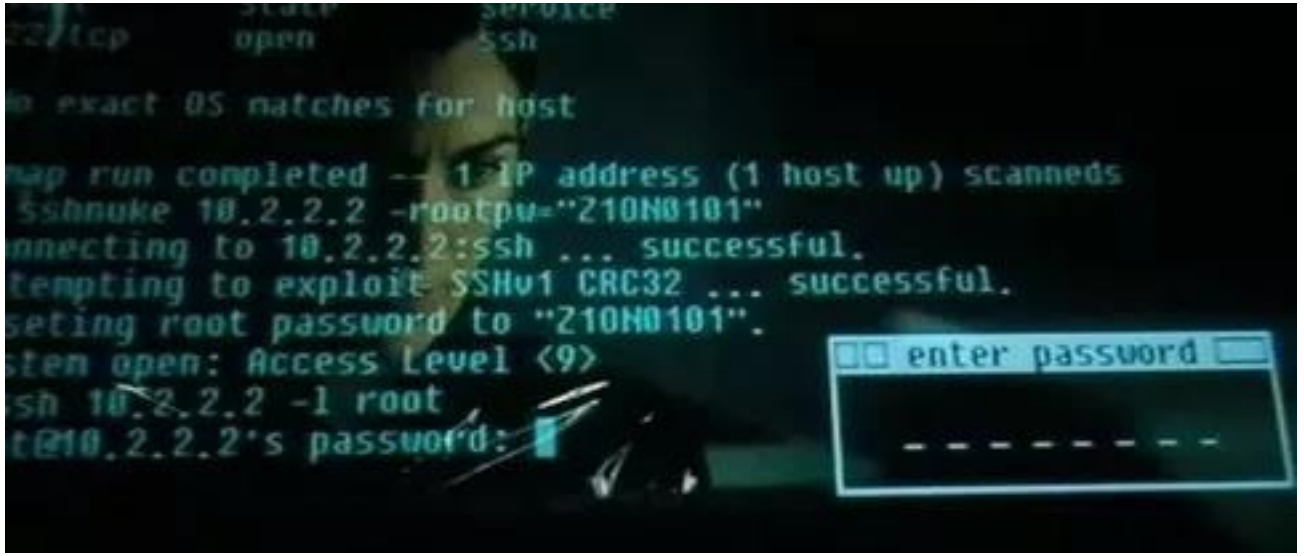
- This routine can be slow on large networks.
- Much of this routine can be automated.
- So we wrote a tool to help with the automation.

Typical Pentest Routine

- Run Nmap *(or port scanner of choice)*



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- Run Responder / Metasploit / CrackMapExec / …
- …
- Take over the DC/database/etc..

If it is not broken…

- Repeatability
- Consistency
- Can be tedious and slow
- Manually parsing through data can be prone to error

- Automation can help

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PROS

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CONS

- Can be fairly resource intensive
- Can be expensive
- How easy to add a new check/tool?

Automation via Scripting

- Kali already has LOTS of popular tools and scripts

- Automation methods:
  - Bash
  - Python (or scripting language of choice)
  - Metasploit RPC

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  - Modules
  - Event queue
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- Modules can create new events
- Runs until event queue is empty

How Does This Help?

- Multi-threaded event queue is **fast.**
- **Simple to create** new modules for nearly any tool/script.
- Ready to go:
  - Get Kali (or your favorite distro & tools)
  - Clone the repo
- Doesn't have a module for your favorite tool? **Then make it.**

So, What Can It Do?

- Identify services & operating systems
- Screenshot web applications, X11, VNC, …
- Analyze FTP and file shares
- Brute force accounts
- Run Metasploit modules
- Compile hashes -> John the Ripper/HashCat

- “ls /usr/share” – If it is listed here, a module can probably be made for it

Anatomy of a Module

- Inherit from base module (typically ActionModule)
- Has standard properties:
  - Name
  - Description
  - Requirements – Which tools need to be installed?
  - Trigger – Which event does this module listen for?
  - Safety Level – Scale of 1 – 5 (5 = safe, 1 = dangerous)
- ”process()” is the primary method

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- Nonstandard ports and service names may throw off modules

Demo Time

Development

- Open source – Available on the Rapid7 Github account at https://www.github.com/MooseDojo/apt2

- Future plans
  - Import from more than just NMAP
  - Responder -> John the Ripper -> Hydra
  - Multiple Passes
  - Pretty Reports
  - ?

411 & Questions

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  - adam.compton@gmail.com

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- QUESTIONS???