CodePath

Week 9

Homework

Week 9 Lab report 11/4 @ 11:59 PM

- Submit on **Collab**

*Homework portion will be due the week after

Topics

Week 9

Readings on course website

- NetSec Crash Course

- Firewalls

- Intrusion Detection System

- Risk Assessment

- Penetration Testing

- Threat Monitoring

- Incident Response

Goals

- Learn about basic networking tools/utilities

- Practice with Wireshark

- Become familiar with TCP/IP

Lab Report

- Only **lab** is due for this week

- Next week you will be doing the assignment portion

- Look on Collab for details on what specific parts of the lab you will be doing

Core Tools

- Ifconfig/ipconfig/ip

  - Information about network interfaces

  - Starts/stops interfaces

  - Can even change MAC addresses

Core Tools

- ping

  - Determines if a target is reachable

  - Resolve IP from hostname

  - Find latency of connection

Core Tools

- nslookup
  - CLI for DNS server queries
  - Find IP from hostname or hosts from IP
  - Can be helpful for identifying an IP's origin

Core Tools

- traceroute/tracert
  - Finds the path to a specific destination
  - Each step is called a *hop*
  - Can find the latency at each hop

Core Tools

- telnet
  - Used to establish a remote connection
  - However is considered outdated and unsecure
  - Data is sent in plaintext!
  - No authentication of users
  - Uses port 23

Core Tools

- curl/wget
  - Used to download contents
  - Can both send HTTP POST requests
  - Both are scriptable

Core Tools

- ssh/scp
  - SSH is a secure way to establish a remote shell
  - SCP is to securely copy files to/from remote machines

Core Tools

- nmap
  - Utility for network discovery and security auditing
  - Can be used to find OS versions and open ports
  - You will need to install this if you are not using Kali

Important Notes

- If you plan on using the course's copy of Kali…
  - You need to run: `apt-key adv --keyserver hkp://keys.gnupg.net --recv-keys 7D8D0BF6`

Important Notes

- If you plan on using the course's copy of Kali…

  - `apt-get update && apt-get upgrade`

    - This will take some time

  - https://guides.codepath.com/websecurity/Running-Kali-Linux-in-VirtualBox

Office Hours

Monday / Thursday / Sunday : 5 - 7 PM @ Rice 226