COMP3355 Cyber Security

Assignment 3

(Due on Oct.28, 23:55)

All answers should come with screen captures.

Answers without screen captures may not earn points.

Tasks

Step 1. Install VMware on your machine and download the VM shared with Google Drive.

Step 2. Open the VM (Windows 10 x64.vmx).

Step 3. Take a look at XAMPP and get familiar with it. Will use it during the assignment.

Step 4. Use Nmap to find out the open ports and services on the Windows VM. Take note of the result.

VM link:
https://drive.google.com/file/d/1nHuIIgXEVa7XVFKmeybBhAkSjLLgoB2l/view?usp=sharing

Questions

Q1. (10%) Please describe the configuration information of your own computer which you finish the tasks (Hardware configuration, OS version, System information).

Q2. (10%) Determining a target computer:

The target computer you scanned has an IP of _____

Q3. (20%) Port Scanning:

Scan for open ports on your target host. Record the results from this scan in your report. In

addition, try "TCP CONNECT scan" "TCP SYN scan" "SCTP INIT Scan" and "UDP scan"

separately, observe their outputs and analyze why the outputs are same or different.

TCP CONNECT Scan nmap command: nmap -sT target

TCP SYN Scan nmap command: nmap -sS target

SCTP INIT Scan nmap command: nmap -sY target

UDP Scan nmap command: nmap -sU target

Q4. (10%)

Which ports and services are open on the machine that you scanned?

Q5. (10%) OS Detection:

It is usually important for an attacker to know what OS version is running on the target

computer. Nmap will scan for specific ports, and then extrapolate the most likely target OS

from the open port information. Determine the OS version of the targeted computer

that you have scanned. OS Detection command: nmap -O target.

Q6. (20%)

Use Nessus to scan vulnerabilities in the target computer and analyze the

result.

Q7. (20%)

Compare the port scanning results before and after you set up Web server,

mail server, FTP server and SSH server.

Submit a PDF file containing all your answers with screen captures.

(A possible error might occur saying something about the version. If that occurs, you need to open
the .vmx file in using a text editor, and changing 'virtualHW.version=16' the number to your VMWare's
version.)