

Assignment 2.1

ITE 423 – Information Security

Due: April 29 (extension maybe later)

Programming Assignment

You will create a program that can scan web servers in Hanyang university network. Your program is looking for potential victims from any web server vulnerability. Your program will report the total number of web servers and IP address of each. For example,

```
>> scan_hanyang.py 166.104.177.xxx.
```

```
166.104.177.24      www.hanyang.ac.kr
```

Total number of web servers: 1

Scan duration: 10 sec

***Task-1 (60%):** Build your own program from scratch. Python is recommended. If you are willing to use other programming languages (C, Java, etc.), that's fine too. (60%)

- Hanyang University uses class B subnets, 166.104.xxx.xxx.
- Scan TCP/UDP port 80, 8080 to find the target web servers. If you try to scan the entire Hanyang university, it will take a while. So let's reduce the number. I will discuss in class.
- You must report IP address of web server.
- You must report the total number of web servers.
- You can also report the duration of your program in execution.
- socket, http, or request modules in python may be helpful. Multiprocessing module is also there to help you if you want to speed up the process (not mandatory).

***Bonus:** If you can provide the domain name along with IP, then it will be even better. (10%)

***Task-2 (40%):** Use existing tools like nmap (www.nmap.org) or any other similar tools that you can find. Simply provide proper input arguments to complete the task. To format the output, an extra script would be nice as well (not mandatory).

SUBMISSION:

***Make all this into a single document and convert it to pdf, then submit to Blackboard.**

1. Print out your source code for Task-1
2. Print out the output of your program for both Task-1 and Task-2
3. Write one paragraph explaining your program and any difficulties you had.
(several sentences are more than enough.)

IMPORTANT:

Do your best. Even if you can't do the whole assignment, submit as much as you can (with explanation why you can't do this). If I have a chance, I will randomly select a few students in class and ask them to explain their code.

TRIVIA:

Google is your friend and teacher. Search!

Discuss with your classmates! (DO NOT send me an email first)

I will go over the assignment in class, so don't worry too much.