COMP 7003
Introduction to Information and Network Security

Assignment-03

User Guide

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Contents

Purpose

The purpose of the program is to perform network reconnaissance using a SYN scan, a technique where it sends SYN packets to target ports and interprets responses to determine their state. It is useful for:

- Identifying active hosts on a network.
- Detecting open/closed/filtered ports on those hosts.
- Scanning a local subnet or a specified target range.
- Customizing scans using command-line arguments.

Installation

Navigate to https://learn.bcit.ca. Download COMP7003-assign03-v1.zip and Extract the contents.

Requirements

```
Need Scapy installed.
```

Building

```
No building required
```

Running

```
sudo python3 main.py -t <target> -p <ports> --show <filter>
```

Command Line Arguments

The following configuration values can be set:

Variable	Purpose
-t <target>	specifies the target(s) to scan
-p <ports>	specific ports or port ranges to scan
--show <filter>	Filters the final output based on port states (open, closed, filtered)

Examples

```
anmol@anmols-x1: ~/Documents/BCIT/comp7003-assign3-v1/source

anmol@anmols-x1:~/Documents/BCIT/comp7003-assign3-v1/source$ sudo python3 main.p
y -t 10.0.0.30 -p 80,443,1,22,631,7070,8000

[+] Starting scan...

[+] Scanning 10.0.0.30 on ports 1-8000...
[*] Scanning 10.0.0.30:80...
[+] 10.0.0.30:80 is open.
[*] Scanning 10.0.0.30:443...
[-] 10.0.0.30:443 is closed.
[*] Scanning 10.0.0.30:1...
[-] 10.0.0.30:1 is closed.
[*] Scanning 10.0.0.30:22...
[+] 10.0.0.30:22 is open.
[*] Scanning 10.0.0.30:631...
[-] 10.0.0.30:631 is closed.
[*] Scanning 10.0.0.30:7070...
[+] 10.0.0.30:7070 is open.
[*] Scanning 10.0.0.30:8000...
[-] 10.0.0.30:8000 is closed.

[+] Final Scan Summary:

  Open Ports:
  - 10.0.0.30:22
  - 10.0.0.30:80
  - 10.0.0.30:7070

  Closed Ports:
  - 10.0.0.30:1
  - 10.0.0.30:443
  - 10.0.0.30:631
  - 10.0.0.30:8000

  Filtered Ports:

anmol@anmols-x1:~/Documents/BCIT/comp7003-assign3-v1/source$
```