

Stage 3 Summary Report:

- 1) Number of servers responded to ICMP ping requests:
 - a. 7/10 servers responded with ICMP replies
- 2) Percentage of responsive servers (from part 1) with different IP-ID in ICMP Packets:
 - a. Zero IP-ID counter = 0/7
 - b. Incremental IP-ID counter = 7/7
 - c. Random IP-ID counter = 0/7
- 3) Percentage of servers with port 80 open:
 - a. 9 total servers out of the 10 have port 80 open
- 4) Percentage of responsive servers with different IP-ID in TCP Packets:
 - a. Zero IP-ID counter = 6/9
 - b. Incremental IP-ID counter = 2/9
 - c. Random IP-ID counter = 1/9
 - d. Server that got no tcp response back = 1
- 5) Percentage of responsive servers from part 3 that deploys SYN cookies:
 - a. 5/9 servers deployed SYN cookies
 - i. Total is out of 9 because only 9/10 servers have their port 80 open
- 6) Percentage of servers with Linux/Windows OS:
 - a. Linux OS = 1/10 servers use Linux
 - b. Windows OS = 6/10 servers use Windows

Screenshots of All University Servers:

- 1) www.utoronto.ca

```
C:\Users\vedik\OneDrive\Desktop\EECS4482 - Netwrok Security and Forensics\Scapy Assignment>python ScapyAssignment-VedikaMaheshwari.py
www.utoronto.ca
A: Device with this IP address responds to ICMP-ping request pkts [yes/no]: Yes
B: IP-ID counter observed in ICMP-reply pkts [zero/incremental/random]: Incremental
C: TCP port 80 on this device is open [yes/no]: Yes
D: IP-ID counter observed in TCP replies [zero/incremental/random]: Zero
E: SYN cookies deployed by service running on TCP port 80 [yes/no]: Yes
F: max # of SYN-ACK pkts retransmitted by service on TCP port 80: 2
G: Likely OS system deployed on this device [Linux/Windows]: Windows
```

- 2) www.ubc.ca

```
C:\Users\vedik\OneDrive\Desktop\EECS4482 - Netwrok Security and Forensics\Scapy Assignment>python ScapyAssignment-VedikaMaheshwari.py
www.ubc.ca
A: Device with this IP address responds to ICMP-ping request pkts [yes/no]: Yes
B: IP-ID counter observed in ICMP-reply pkts [zero/incremental/random]: Incremental
C: TCP port 80 on this device is open [yes/no]: Yes
D: IP-ID counter observed in TCP replies [zero/incremental/random]: Zero
E: SYN cookies deployed by service running on TCP port 80 [yes/no]: No
G: Likely OS system deployed on this device [Linux/Windows]: Windows
```

- 3) www.yorku.ca

```
C:\Users\vedik\OneDrive\Desktop\EECS4482 - Netwrok Security and Forensics\Scapy Assignment>python ScapyAssignment-VedikaMaheshwari.py
www.yorku.ca
A: Device with this IP address responds to ICMP-ping request pkts [yes/no]: No
C: TCP port 80 on this device is open [yes/no]: Yes
D: IP-ID counter observed in TCP replies [zero/incremental/random]: Zero
E: SYN cookies deployed by service running on TCP port 80 [yes/no]: No
G: Likely OS system deployed on this device [Linux/Windows]: None
```

- 4) uwaterloo.ca

```
C:\Users\vedik\OneDrive\Desktop\EECS4482 - Netwrok Security and Forensics\Scapy Assignment>python ScapyAssignment-VedikaMaheshwari.py
uwaterloo.ca
A: Device with this IP address responds to ICMP-ping request pkts [yes/no]: Yes
B: IP-ID counter observed in ICMP-reply pkts [zero/incremental/random]: Incremental
C: TCP port 80 on this device is open [yes/no]: Yes
D: IP-ID counter observed in TCP replies [zero/incremental/random]: Zero
E: SYN cookies deployed by service running on TCP port 80 [yes/no]: Yes
F: max # of SYN-ACK pkts retransmitted by service on TCP port 80: 2
G: Likely OS system deployed on this device [Linux/Windows]: Windows
```

5) www.uottawa.ca

```
C:\Users\vedik\OneDrive\Desktop\EECS4482 - Netwrok Security and Forensics\Scapy Assignment>python ScapyAssignment-VedikaMaheshwari.py
www.uottawa.ca
A: Device with this IP address responds to ICMP-ping request pkts [yes/no]: Yes
B: IP-ID counter observed in ICMP-reply pkts [zero/incremental/random]: Incremental
C: TCP port 80 on this device is open [yes/no]: Yes
D: IP-ID counter observed in TCP replies [zero/incremental/random]: Zero
E: SYN cookies deployed by service running on TCP port 80 [yes/no]: No
F: max # of SYN-ACK pkts retransmitted by service on TCP port 80: 2
G: Likely OS system deployed on this device [Linux/Windows]: Linux
```

6) www.uwo.ca

```
C:\Users\vedik\OneDrive\Desktop\EECS4482 - Netwrok Security and Forensics\Scapy Assignment>python ScapyAssignment-VedikaMaheshwari.py
www.uwo.ca
A: Device with this IP address responds to ICMP-ping request pkts [yes/no]: No
C: TCP port 80 on this device is open [yes/no]: Yes
D: IP-ID counter observed in TCP replies [zero/incremental/random]: Incremental
E: SYN cookies deployed by service running on TCP port 80 [yes/no]: Yes
F: max # of SYN-ACK pkts retransmitted by service on TCP port 80: 3
G: Likely OS system deployed on this device [Linux/Windows]: None
```

7) www.ualberta.ca

```
C:\Users\vedik\OneDrive\Desktop\EECS4482 - Netwrok Security and Forensics\Scapy Assignment>python ScapyAssignment-VedikaMaheshwari.py
www.ualberta.ca
A: Device with this IP address responds to ICMP-ping request pkts [yes/no]: Yes
B: IP-ID counter observed in ICMP-reply pkts [zero/incremental/random]: Incremental
C: TCP port 80 on this device is open [yes/no]: Yes
D: IP-ID counter observed in TCP replies [zero/incremental/random]: Zero
E: SYN cookies deployed by service running on TCP port 80 [yes/no]: No
G: Likely OS system deployed on this device [Linux/Windows]: Windows
```

8) www.torontomu.ca

```
C:\Users\vedik\OneDrive\Desktop\EECS4482 - Netwrok Security and Forensics\Scapy Assignment>python ScapyAssignment-VedikaMaheshwari.py
www.torontomu.ca
A: Device with this IP address responds to ICMP-ping request pkts [yes/no]: Yes
B: IP-ID counter observed in ICMP-reply pkts [zero/incremental/random]: Incremental
C: TCP port 80 on this device is open [yes/no]: Yes
D: IP-ID counter observed in TCP replies [zero/incremental/random]: Incremental
E: SYN cookies deployed by service running on TCP port 80 [yes/no]: Yes
F: max # of SYN-ACK pkts retransmitted by service on TCP port 80: 0
G: Likely OS system deployed on this device [Linux/Windows]: Windows
```

9) www.mcmaster.ca

```
C:\Users\vedik\OneDrive\Desktop\EECS4482 - Netwrok Security and Forensics\Scapy Assignment>python ScapyAssignment-VedikaMaheshwari.py
www.mcmaster.ca
WARNING: Mac address to reach destination not found. Using broadcast.
A: Device with this IP address responds to ICMP-ping request pkts [yes/no]: No
WARNING: Mac address to reach destination not found. Using broadcast.
C: TCP port 80 on this device is open [yes/no]: No
G: Likely OS system deployed on this device [Linux/Windows]: None
```

10) www.ucalgary.ca

```
C:\Users\vedik\OneDrive\Desktop\EECS4482 - Netwrok Security and Forensics\Scapy Assignment>python ScapyAssignment-VedikaMaheshwari.py
www.ucalgary.ca
A: Device with this IP address responds to ICMP-ping request pkts [yes/no]: Yes
B: IP-ID counter observed in ICMP-reply pkts [zero/incremental/random]: Incremental
C: TCP port 80 on this device is open [yes/no]: Yes
D: IP-ID counter observed in TCP replies [zero/incremental/random]: Random
E: SYN cookies deployed by service running on TCP port 80 [yes/no]: Yes
F: max # of SYN-ACK pkts retransmitted by service on TCP port 80: 0
G: Likely OS system deployed on this device [Linux/Windows]: Windows
```