

RED TEAM ATTACK SIMULATION REPORT

(Heading 1)

- Project Title : A Red team-Blue team Security Simulation on Microsoft (Major project)
- Your Name : Avinash Das ManikPuri
- ERP: 6604666

1. Red Team Objective

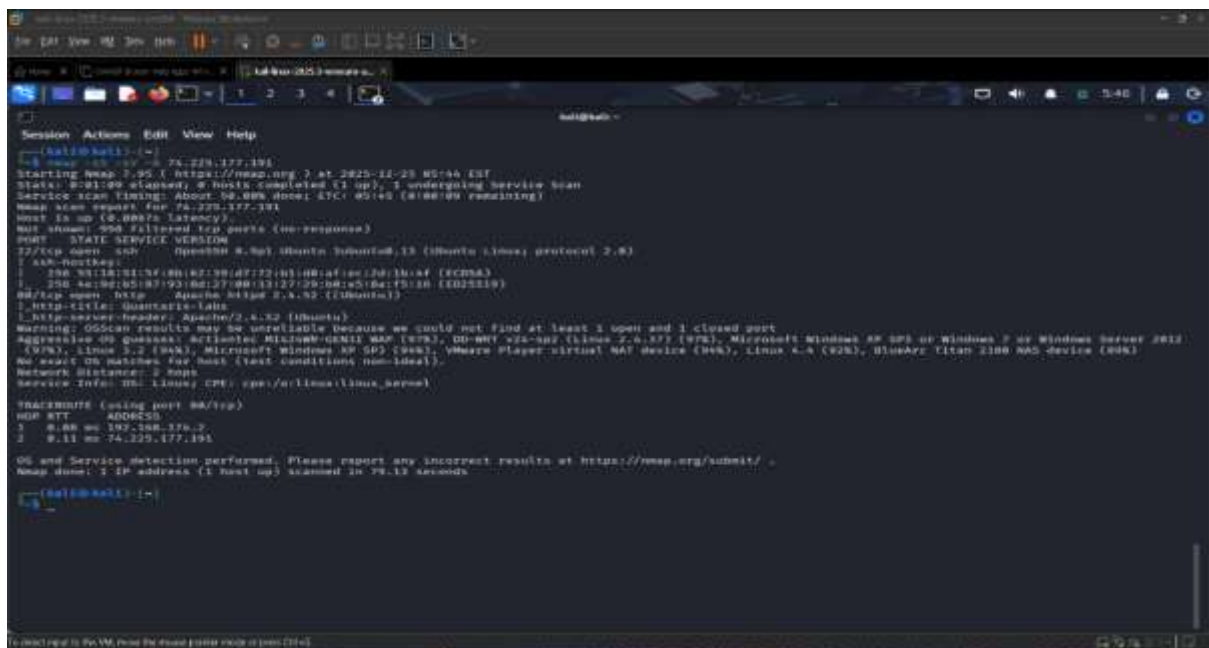
The objective of the Red Team phase is to simulate realistic cyber-attacks against the cloud infrastructure in order to identify vulnerabilities, misconfigurations, and weak security controls while generating security logs for analysis.

2. Attack Methodology

The attack methodology followed a structured penetration testing lifecycle:

1. Reconnaissance and enumeration
2. Authentication attacks
3. Privilege escalation attempts
4. Web application exploitation
5. Identity and service enumeration

3. Reconnaissance and Enumeration

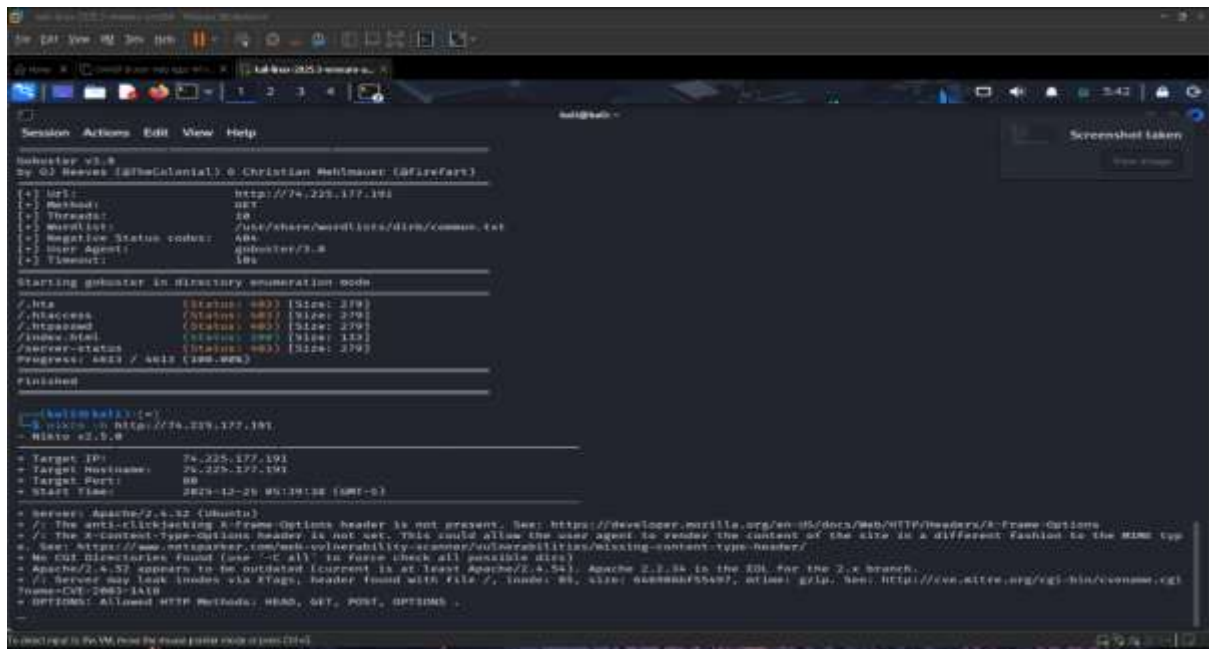


```
(kali@kali:~)$ nmap -v 74.229.177.191
Starting Nmap 7.90 ( https://nmap.org ) at 2025-11-25 05:44 EST
Stats: 0:01:09 elapsed, 0 hosts completed (1 up), 1 undergoing Service Scan
Service scan timing: About 50.00% done: 57C< 05<0 (0:00:00 remaining)
Nmap scan report for 74.229.177.191
Host is up (0.0000s latency).
Not shown: 998 filtered tcp ports (no-response)
PORT      STATE SERVICE VERSION
22/tcp    open  ssh      OpenSSH 8.9p1 Ubuntu 8ubuntu0.13 (Ubuntu Linux; protocol 2.0)
|_ AKN-fookey:
|   1 800 5013:01:34:00:07:00:07:22:01:00:0a:0e:20:1b:a4 (FC00A3)
|   2 800 5013:01:34:00:07:00:07:22:01:00:0a:0e:20:1b:a4 (1025319)
80/tcp    open  http     Apache/2.4.18 (Ubuntu)
|_ HTTP-Server-Header: Apache/2.4.18 (Ubuntu)
Warning: OSScan results may be unreliable because we could not find at least 1 open and 1 closed port
Aggressive OS guesses: AppleMac-GENII MAP (97%), DD-WRT v24-sp2 (97%), Microsoft Windows SP SP2 or Windows 2 or Windows Server 2012 (97%), Linux 3.2 (96%), Microsoft Windows SP SP2 (96%), VMware Player virtual NAT device (94%), Linux 4.4 (92%), BlueArc Titan 2180 NAS device (80%)
No exact OS matches for host (test condition non-ideal).
Network Distance: 2 hops
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel

TRACEROUTE (using port 80/tcp)
HOP RTT      ADDRESS
0  0.100 ms  192.168.178.3
1  0.111 ms  74.229.177.191

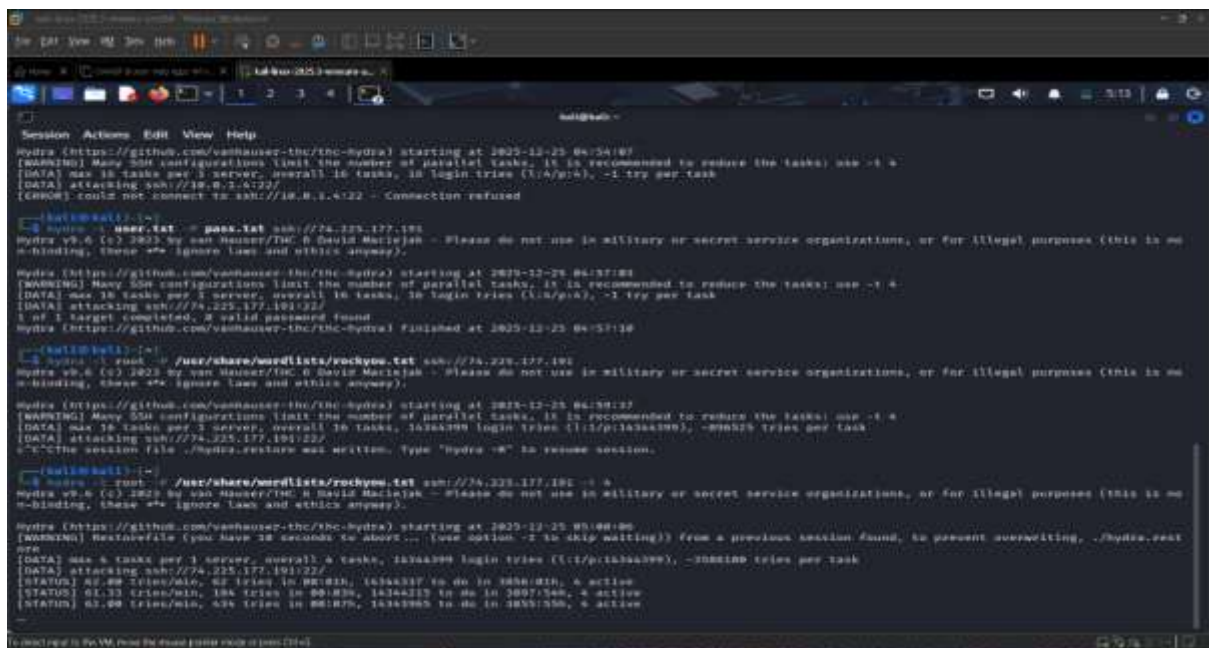
OS and Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 79.13 seconds

(kali@kali:~)$
```

Network scanning and service enumeration were performed to identify open ports, exposed services, and operating system details.

4. SSH Brute-Force Attacks



Password-based SSH brute-force attacks were conducted to simulate credential-stuffing and weak authentication exploitation.

6. Privilege Escalation Attempts

- File and directory enumeration
- Web vulnerability scanning

8. Outcome of Red Team Phase

The Red Team successfully identified multiple attack vectors and generated extensive security events across the infrastructure.

Screenshot Evidence Table – Red Team Attacks

Screenshot No.	Attack Type	Target VM	Evidence
1	Nmap Scan	VM-Internal	Open ports
2	SSH Brute Force	VM-Internal	auth.log
3	Web Enumeration	VM-Web	access.log
