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Roll No: 242466

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Assignment No: 1

Date Of Performance: 01/09/2025

Aim: Use the NESSUS/ISO Kali Linux tool to scan the network for vulnerabilities (use NMAP on Kali Linux)

### NESSUS:

#### **Nessus:**

- **Nessus** is a popular **vulnerability assessment tool** by Tenable.
- It scans systems, servers, and networks for **vulnerabilities, misconfigurations, and compliance issues**.

#### **Key Features:**

- Large **plugin database** (150k+ vulnerabilities).
- **Credentialed & non-credentialed scans**.
- Supports **compliance checks** (PCI, HIPAA, CIS).
- Generates detailed **reports with severity levels**.

#### **Scan Types:**

- Host discovery
- Port & service scanning
- Vulnerability detection (CVEs, misconfigs)
- Web app checks (SQLi, XSS, etc.)

#### **Severity Levels:**

- **Critical** – Full system compromise possible
- **High** – Major risks (privilege escalation)

- **Medium/Low** – Exploits with conditions or minor issues
- **Info** – Useful details

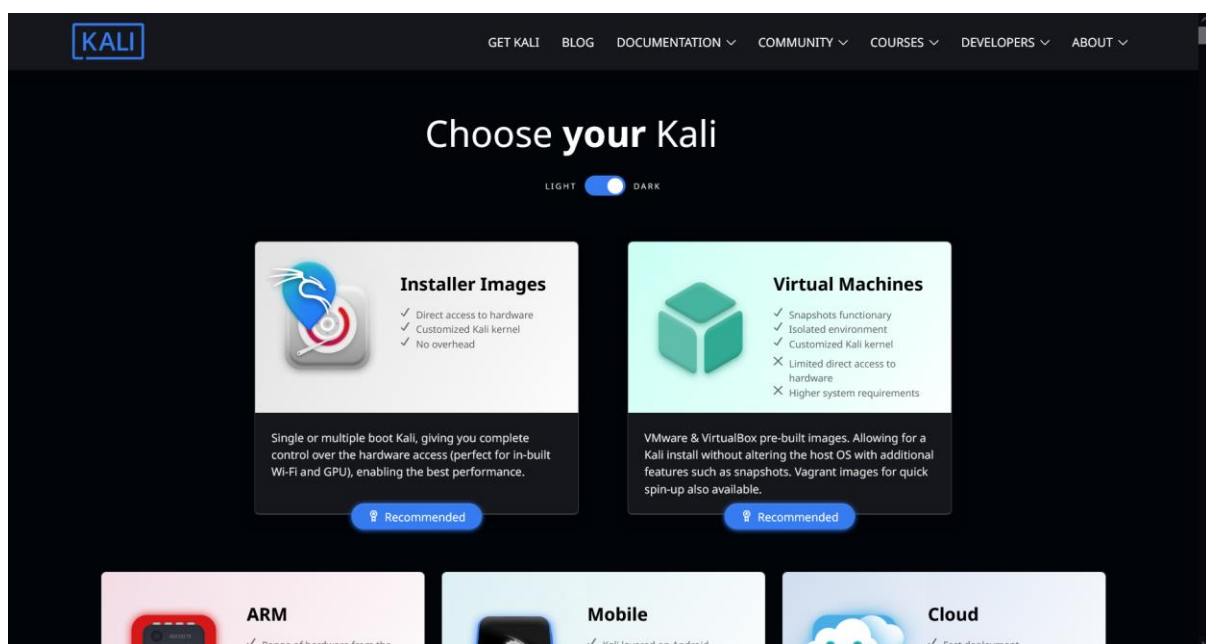
#### Pros:

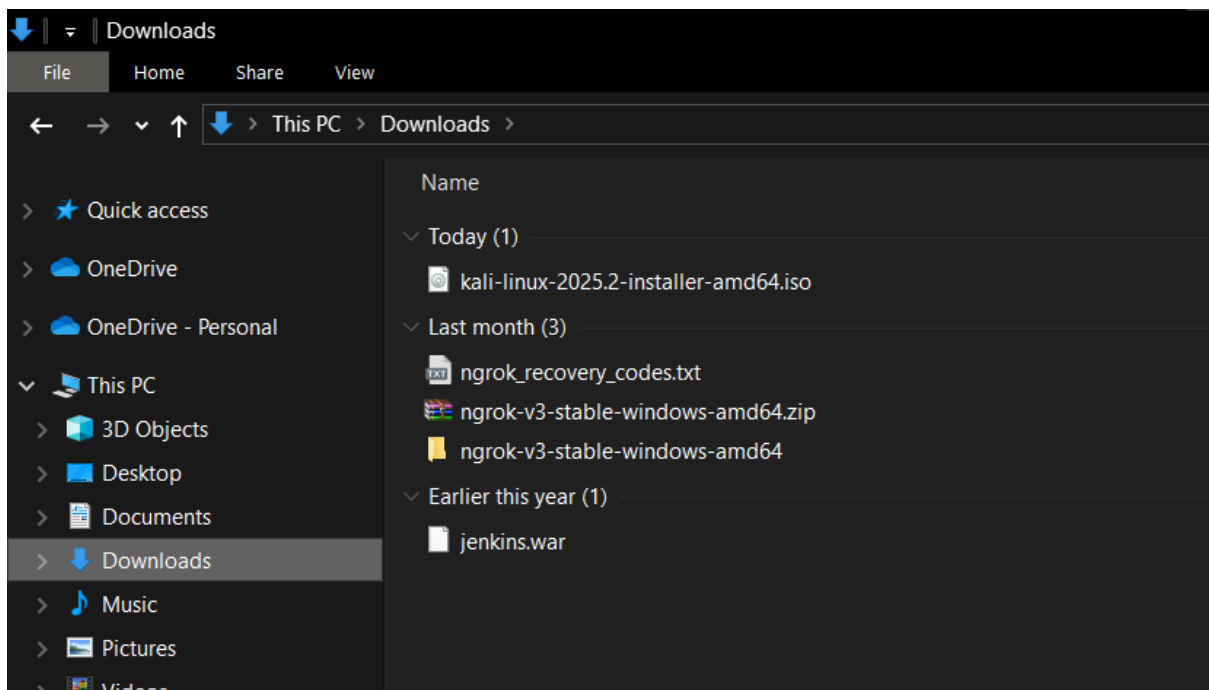
- Easy GUI, frequent updates
- Detects vulnerabilities & misconfigs
- Professional reports

#### Cons:

- Paid license for full version
- Possible false positives
- Heavy scans may slow systems

### Vulnerability Scan via Nessus:





New Virtual Machine Wizard

vmware  
**WORKSTATION**  
PRO™

# 17

## Welcome to the New Virtual Machine Wizard

What type of configuration do you want?

☒ **Typical (recommended)**  
Create a Workstation 17.5 or later virtual machine in a few easy steps.

☐ **Custom (advanced)**  
Create a virtual machine with advanced options, such as a SCSI controller type, virtual disk type and compatibility with older VMware products.

Help < Back **Next >** Cancel

New Virtual Machine Wizard

### Guest Operating System Installation

A virtual machine is like a physical computer; it needs an operating system. How will you install the guest operating system?

Install from:

☐ Installer disc:  
No drives available

☒ **Installer disc image file (iso):**  
C:\Users\Abdurrahman Qureshi\Downloads\kali-linux Browse...

⚠ Could not detect which operating system is in this disc image. You will need to specify which operating system will be installed.

☐ I will install the operating system later.  
The virtual machine will be created with a blank hard disk.

Help < Back **Next >** Cancel

New Virtual Machine Wizard

### Name the Virtual Machine

What name would you like to use for this virtual machine?

Virtual machine name:  
CNS Assignment 1

Location:  
C:\Users\Abdurrahman Qureshi\Documents\Virtual Machines\C Browse...

The default location can be changed at Edit > Preferences.

< Back **Next >** Cancel

New Virtual Machine Wizard

### Select a Guest Operating System

Which operating system will be installed on this virtual machine?

Guest operating system

☐ Microsoft Windows

☒ **Linux**

☐ VMware ESX

☐ Other

Version  
Debian 10.x 64-bit

Help < Back **Next >** Cancel

New Virtual Machine Wizard

### Specify Disk Capacity

How large do you want this disk to be?

The virtual machine's hard disk is stored as one or more files on the host computer's physical disk. These file(s) start small and become larger as you add applications, files, and data to your virtual machine.

Maximum disk size (GB): 75.0

Recommended size for Debian 10.x 64-bit: 20 GB

☐ Store virtual disk as a single file

☒ **Split virtual disk into multiple files**  
Splitting the disk makes it easier to move the virtual machine to another computer but may reduce performance with very large disks.

Help < Back **Next >** Cancel

New Virtual Machine Wizard

### Ready to Create Virtual Machine

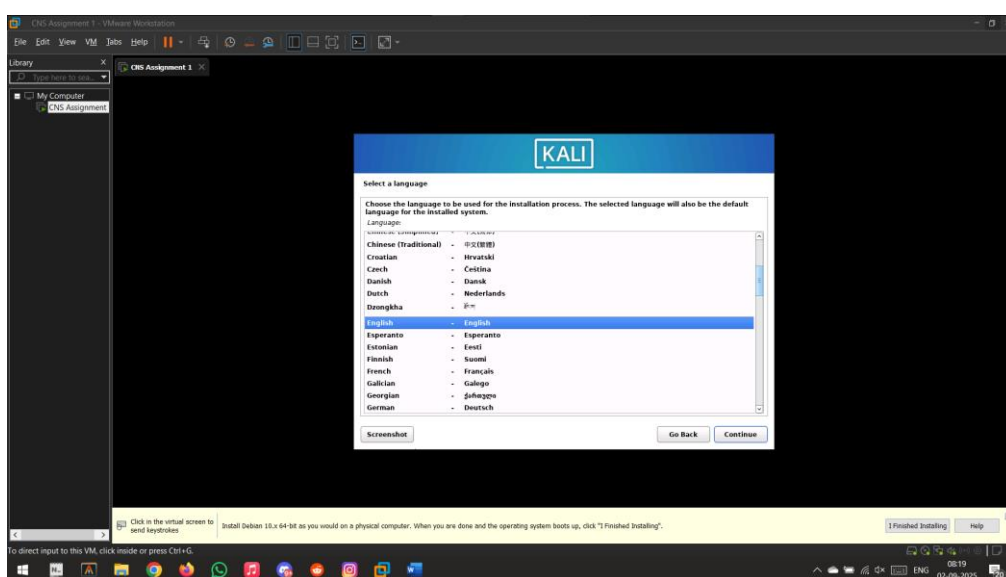
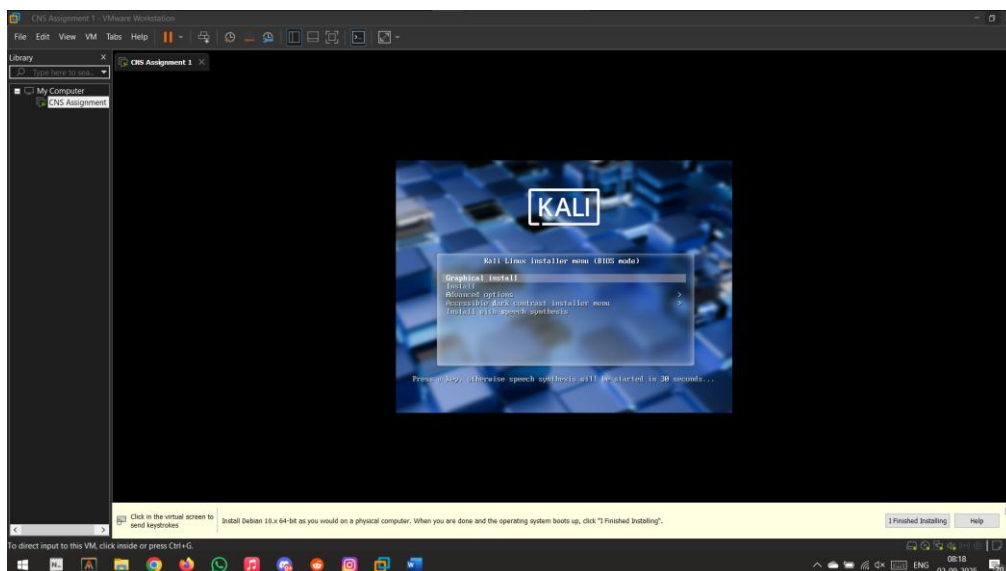
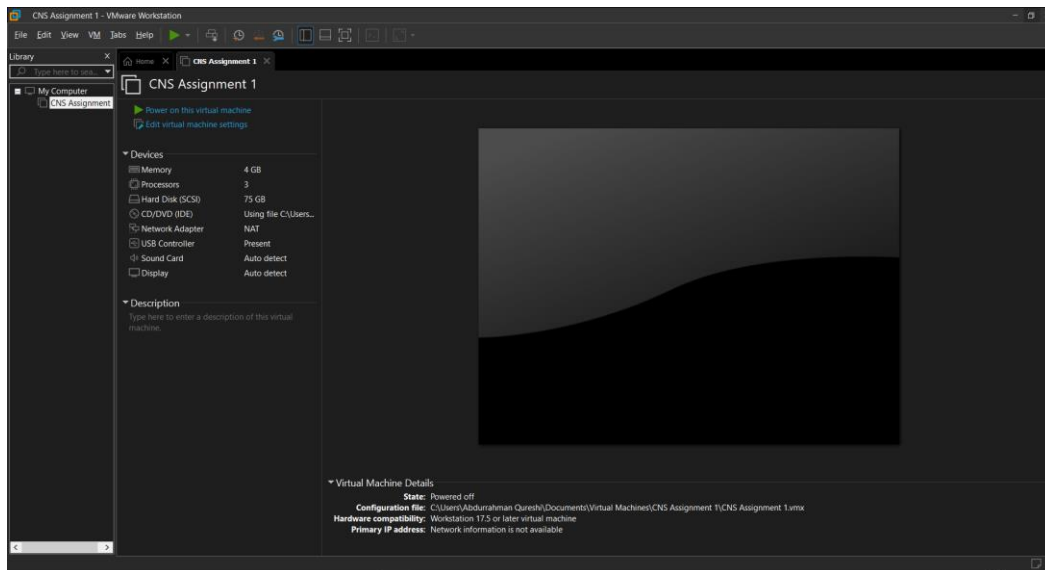
Click Finish to create the virtual machine. Then you can install Debian 10.x 64-bit.

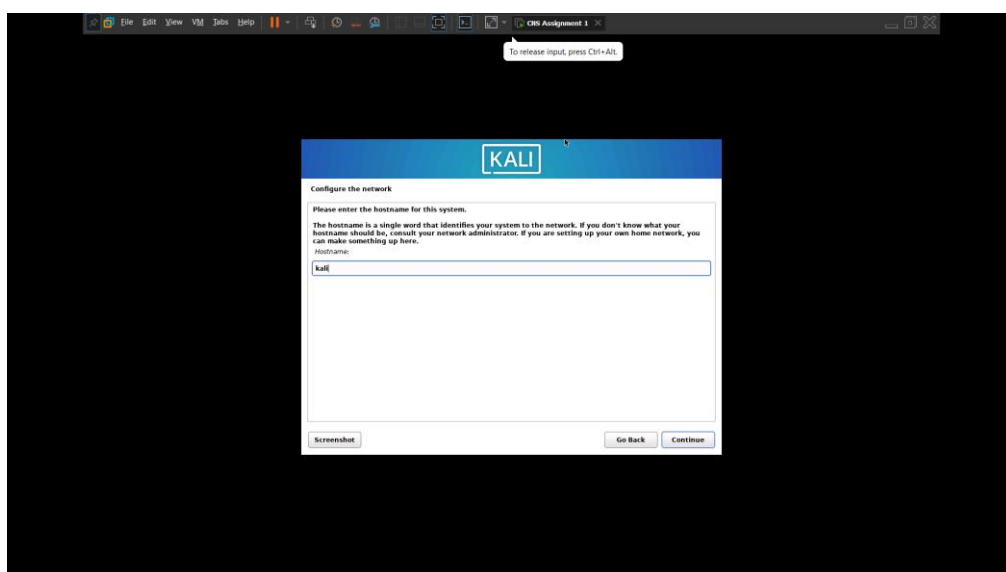
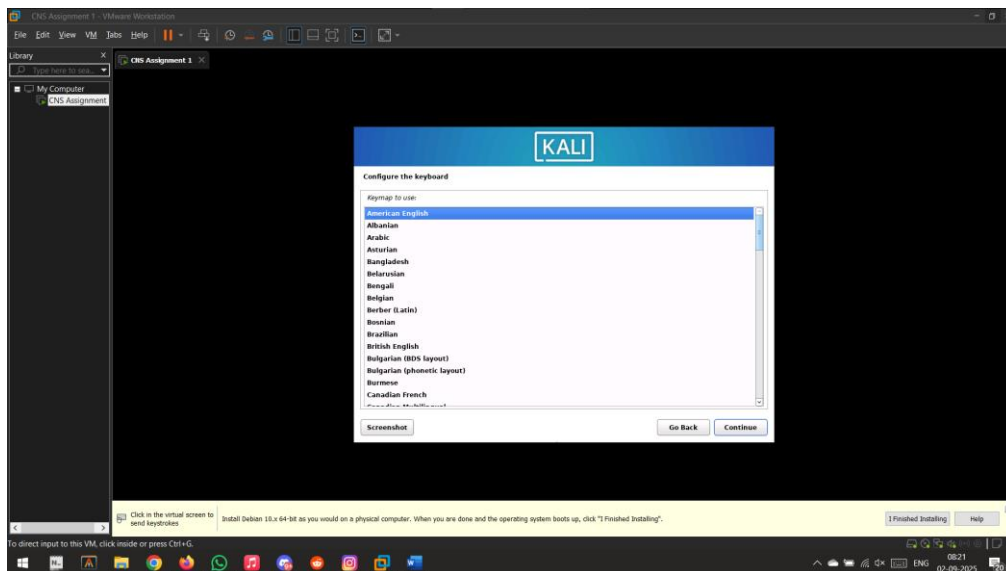
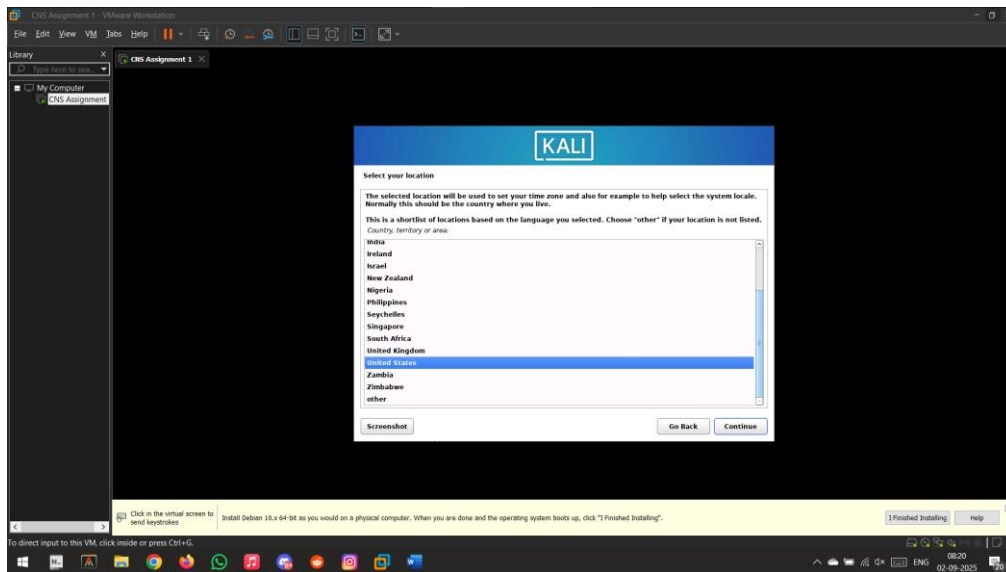
The virtual machine will be created with the following settings:

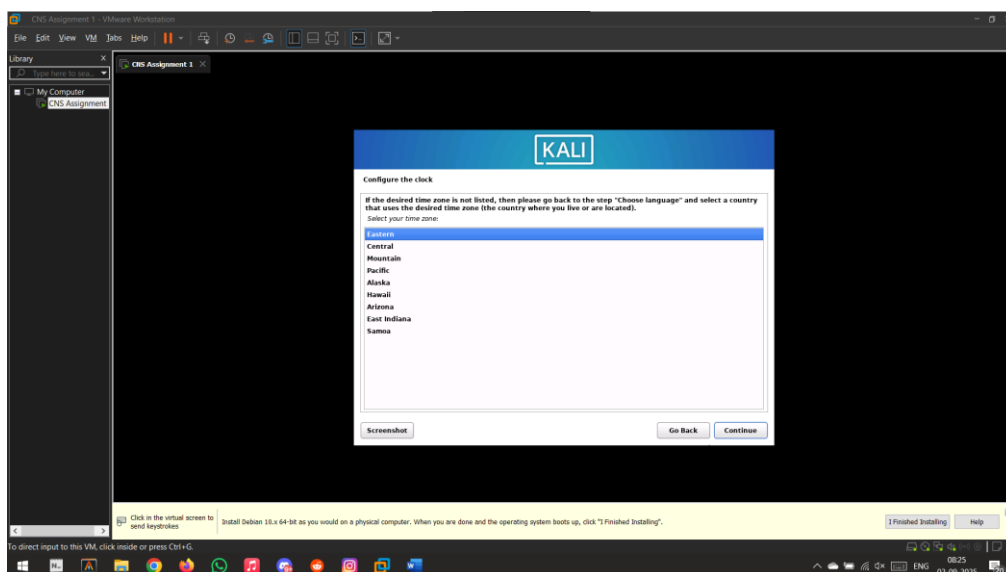
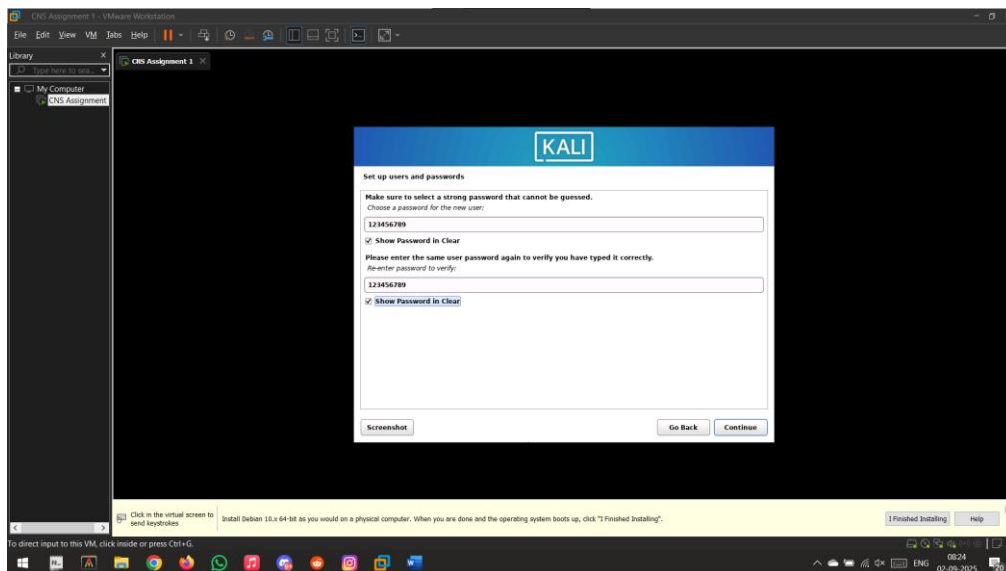
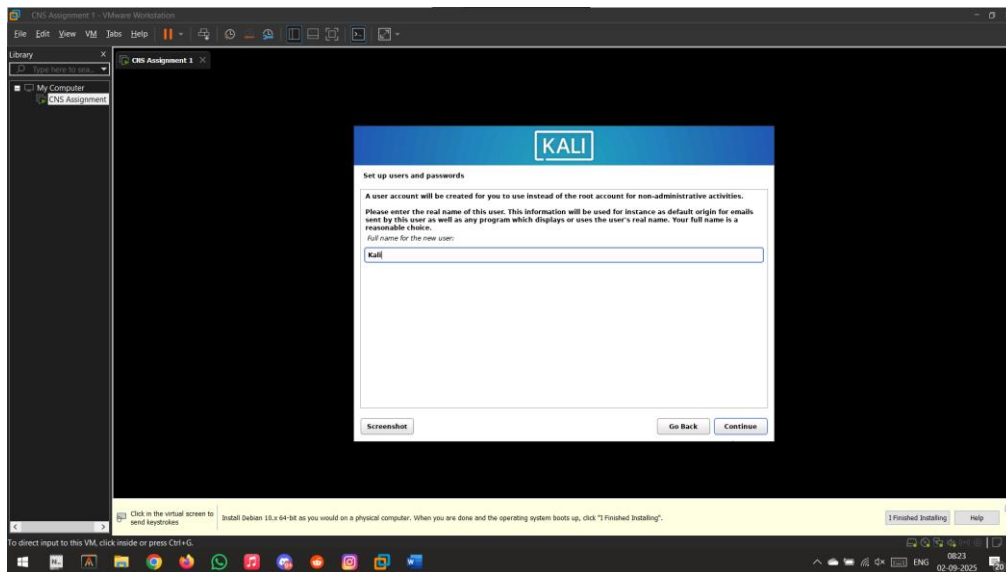
Name:	CNS Assignment 1
Location:	C:\Users\Abdurrahman Qureshi\Documents\Virtual Mac...
Version:	Workstation 17.5 or later
Operating System:	Debian 10.x 64-bit
Hard Disk:	75 GB, Split
Memory:	4096 MB
Network Adapter:	NAT
Other Devices:	3 CPU cores, CD/DVD, USB Controller, Sound Card

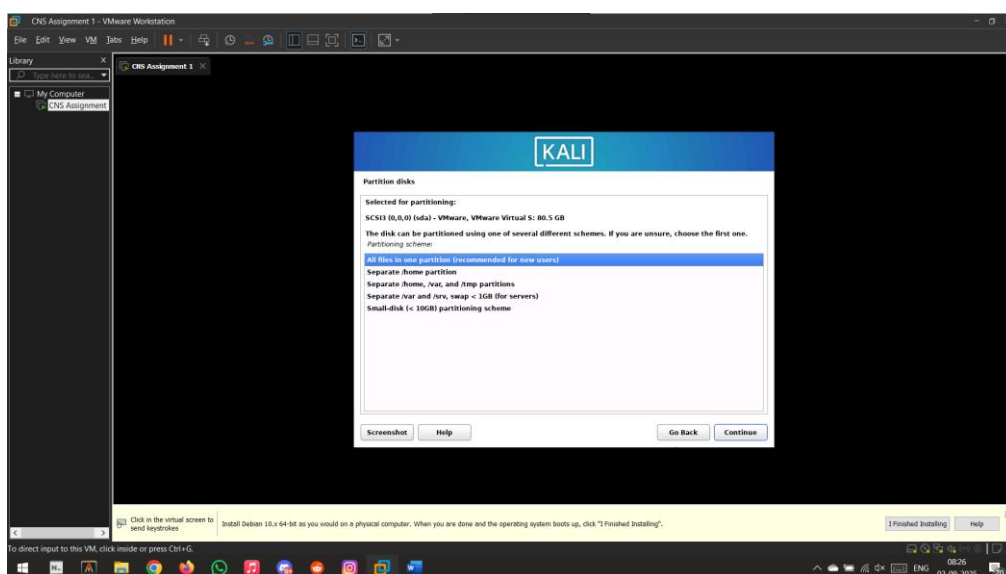
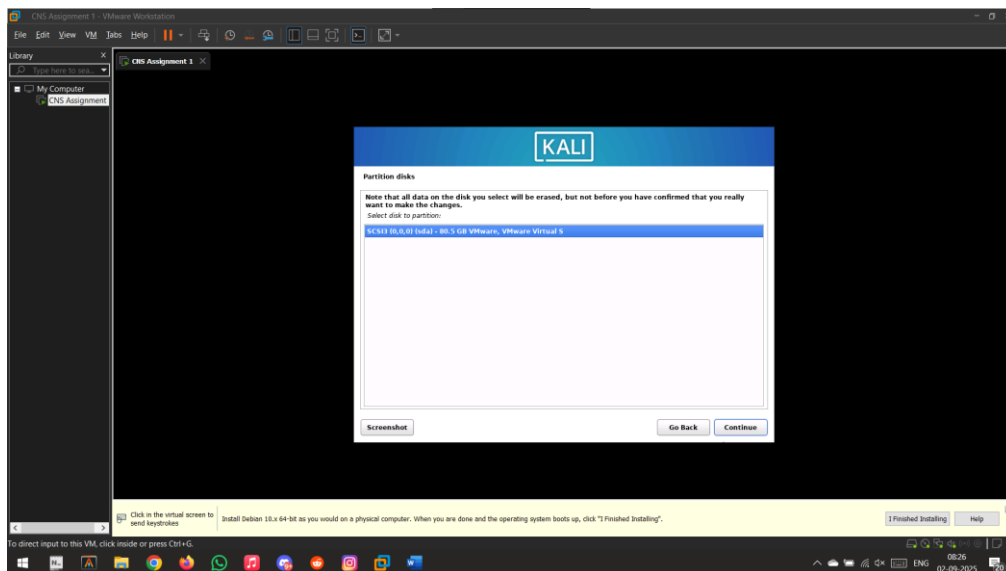
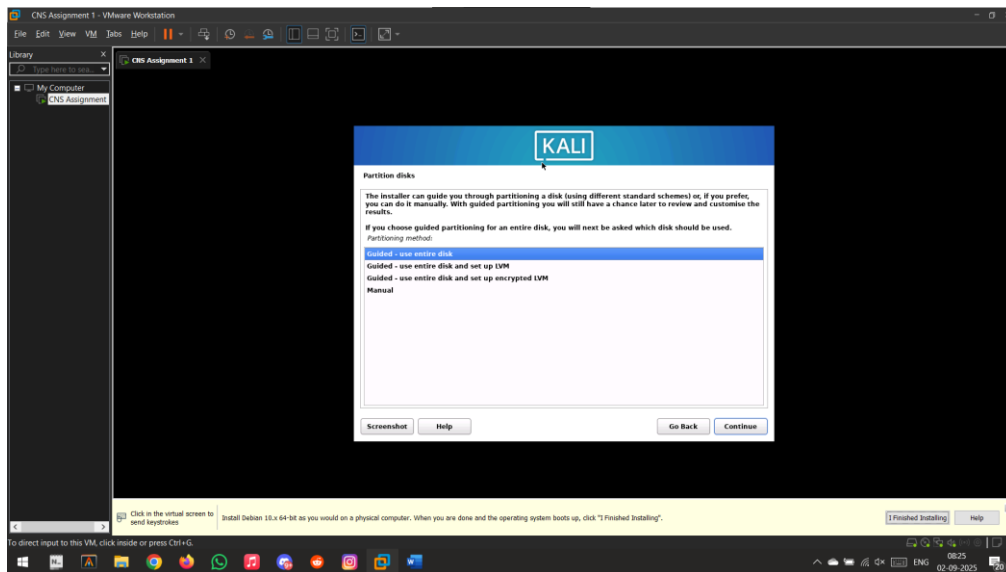
Customize Hardware...

< Back **Finish** Cancel

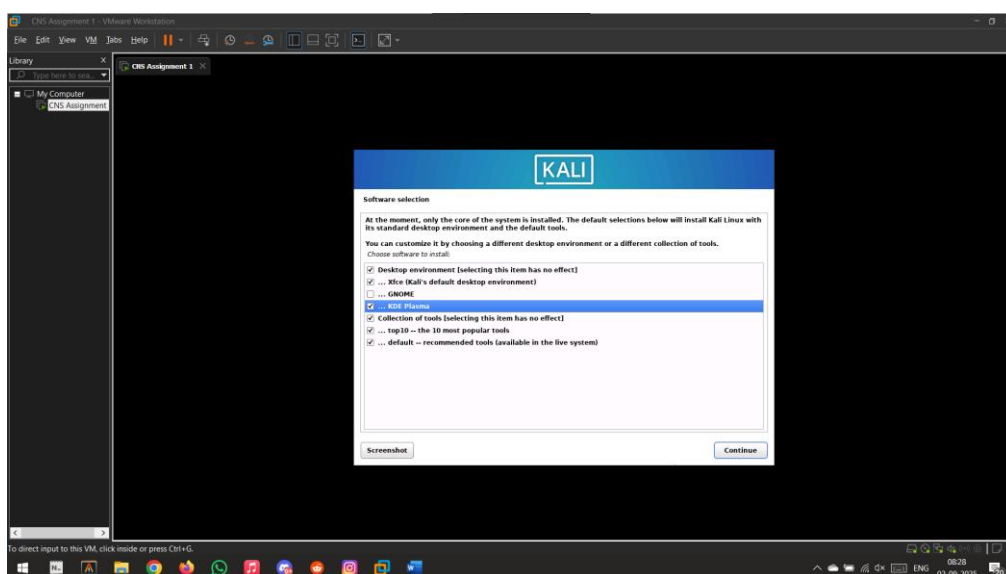
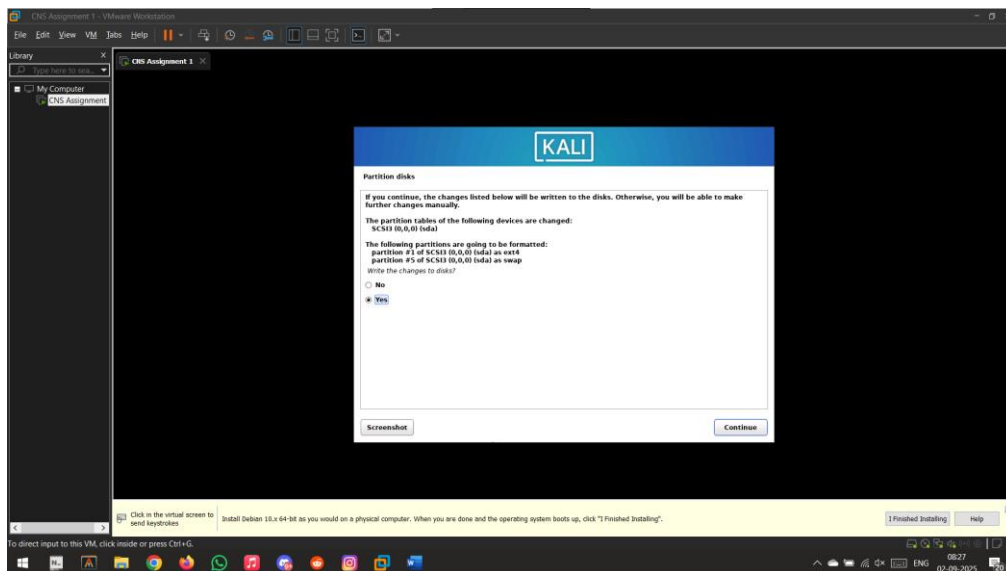
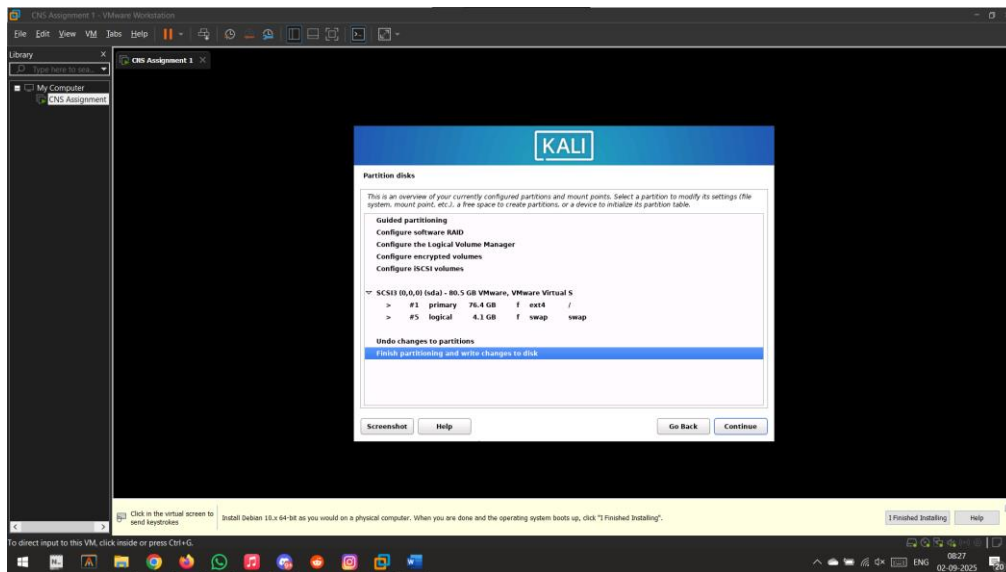


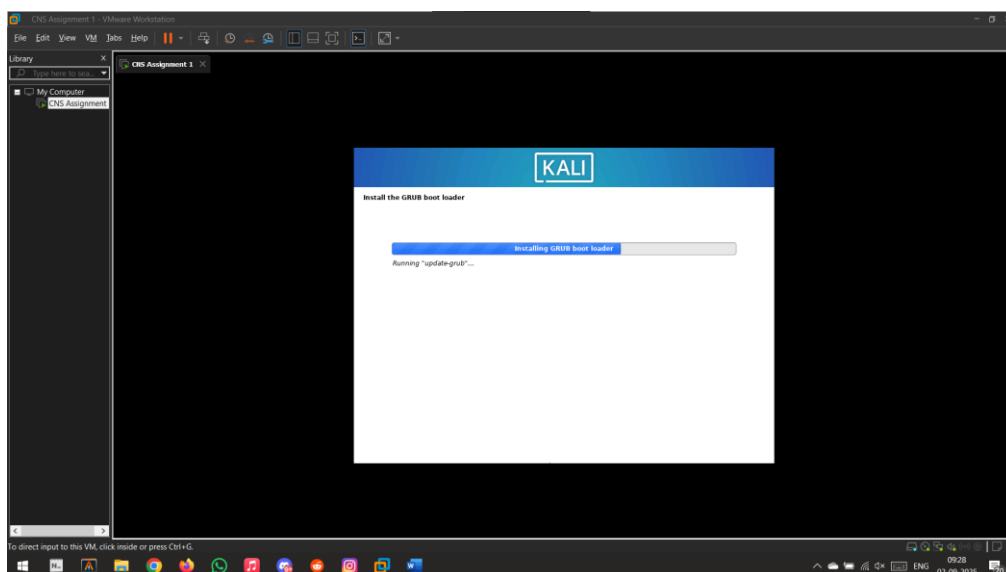
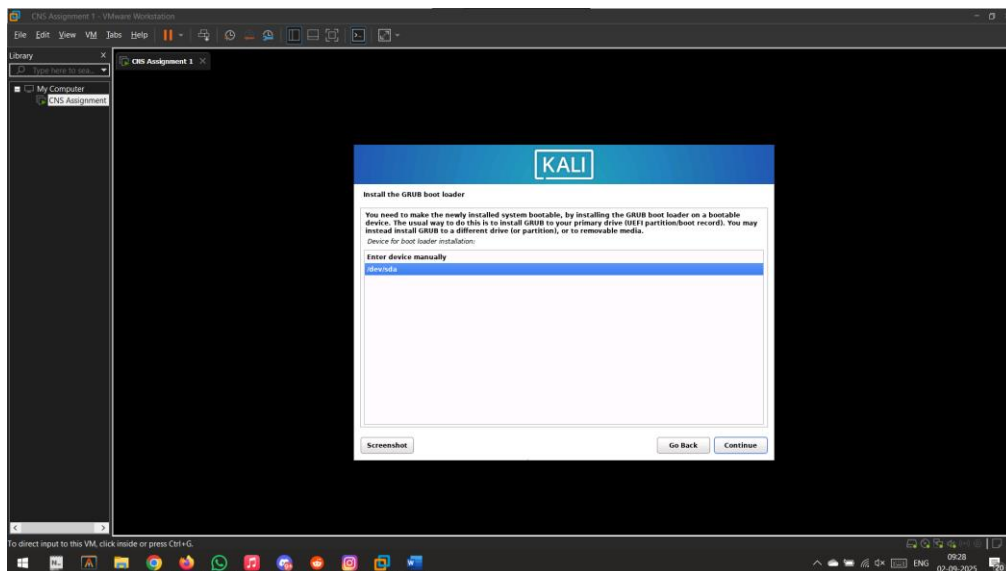
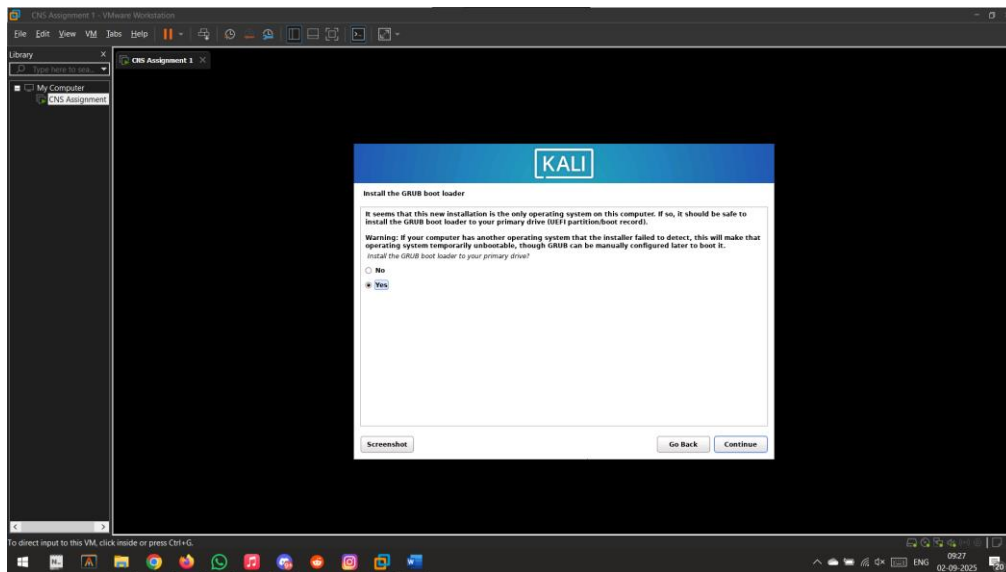


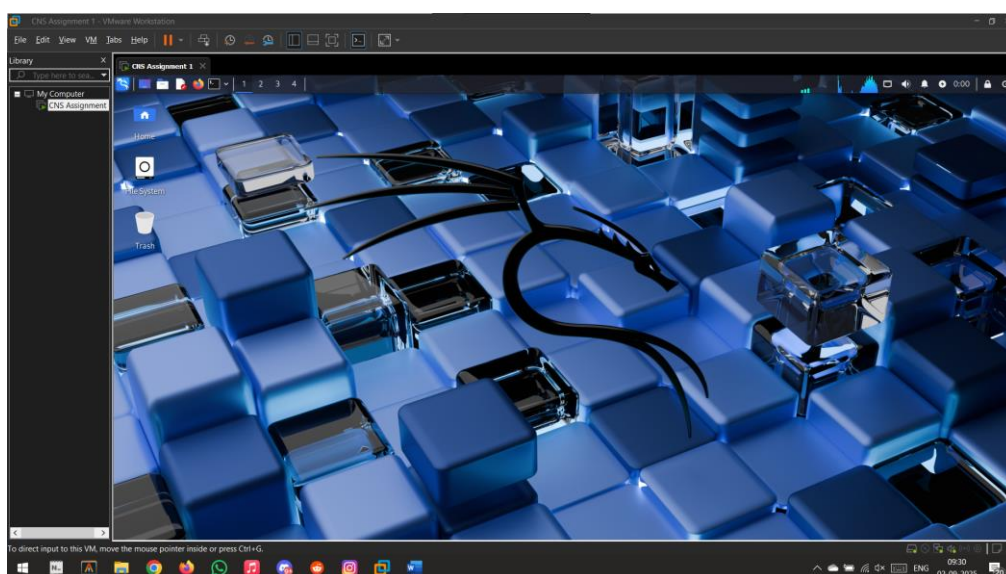
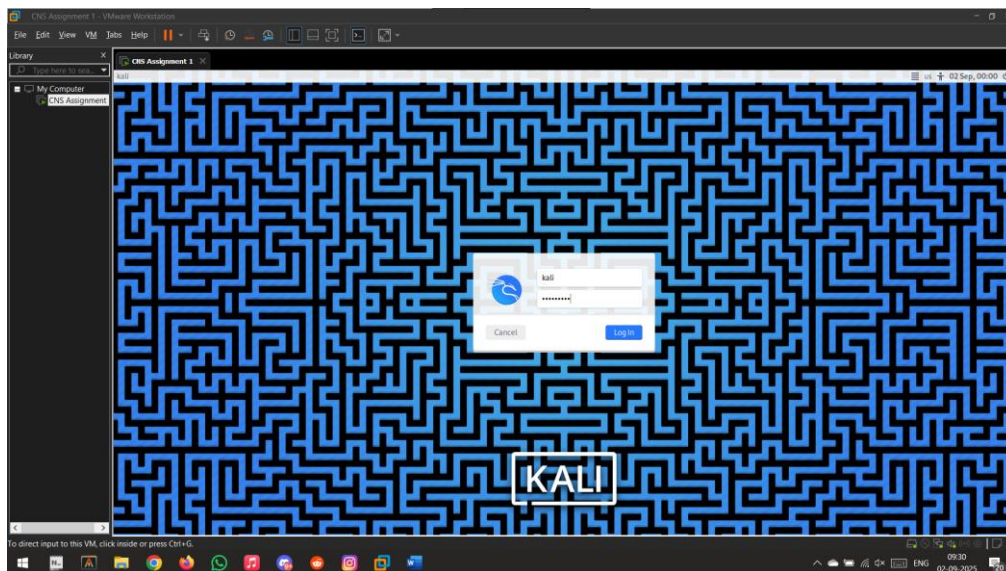
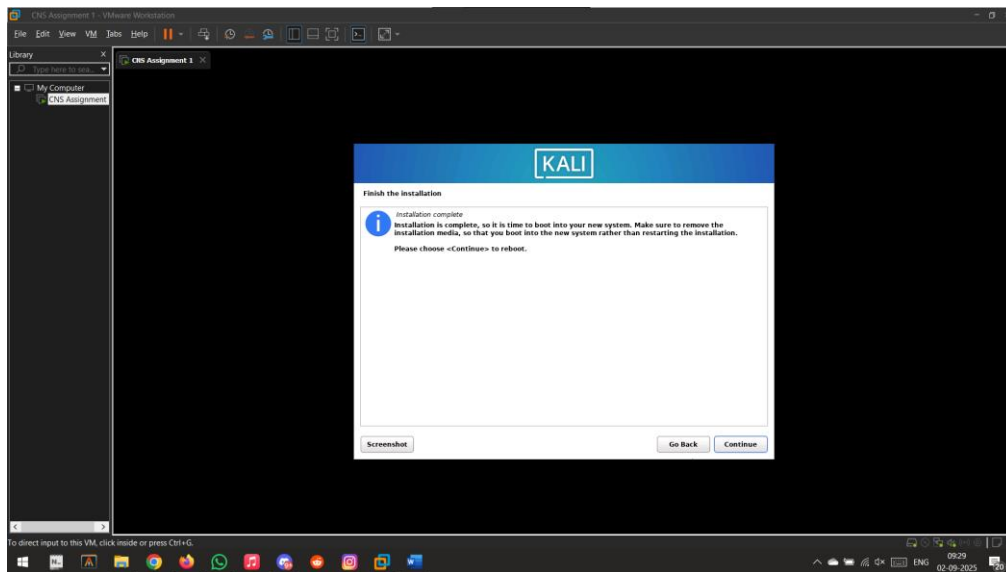








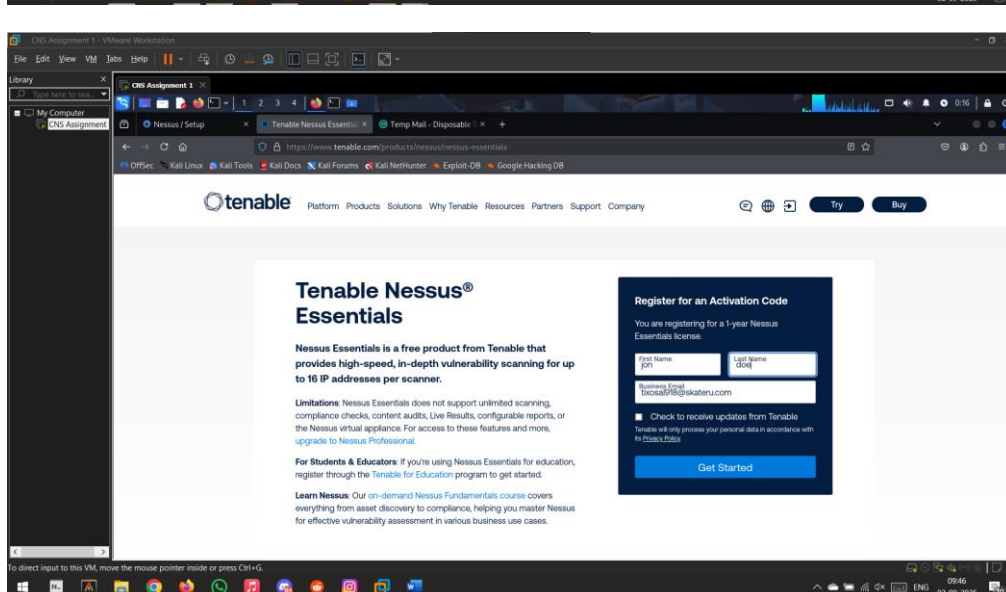
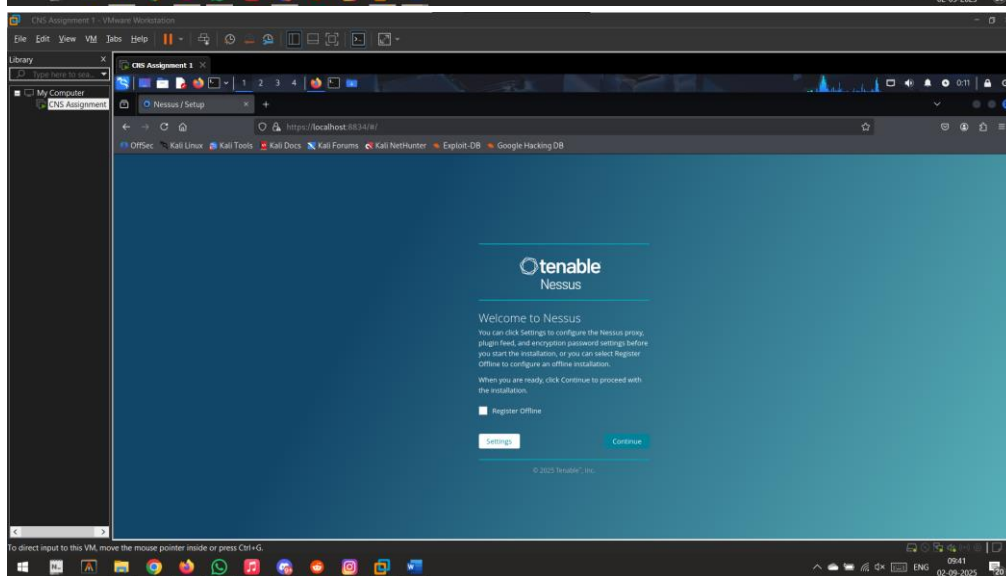




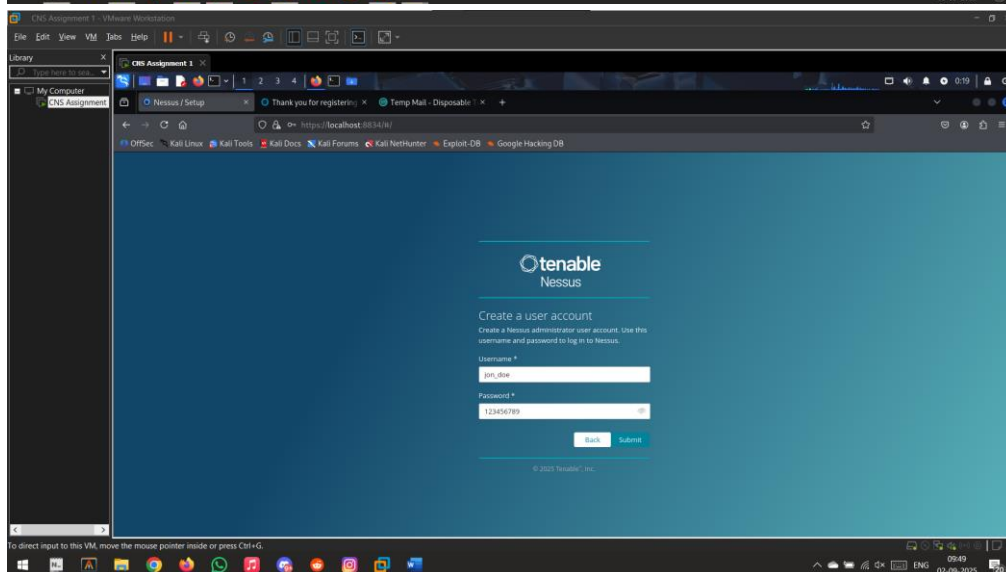
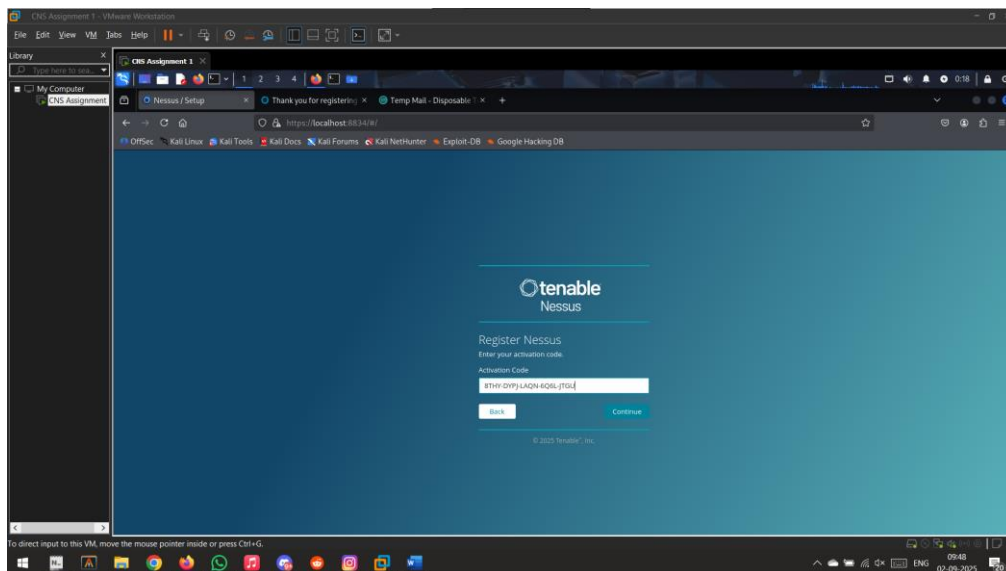
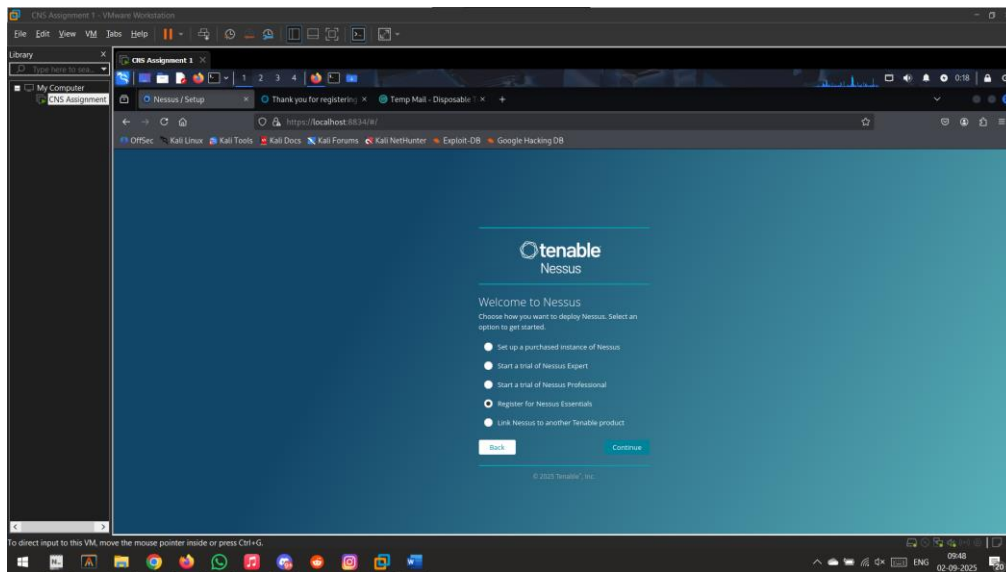


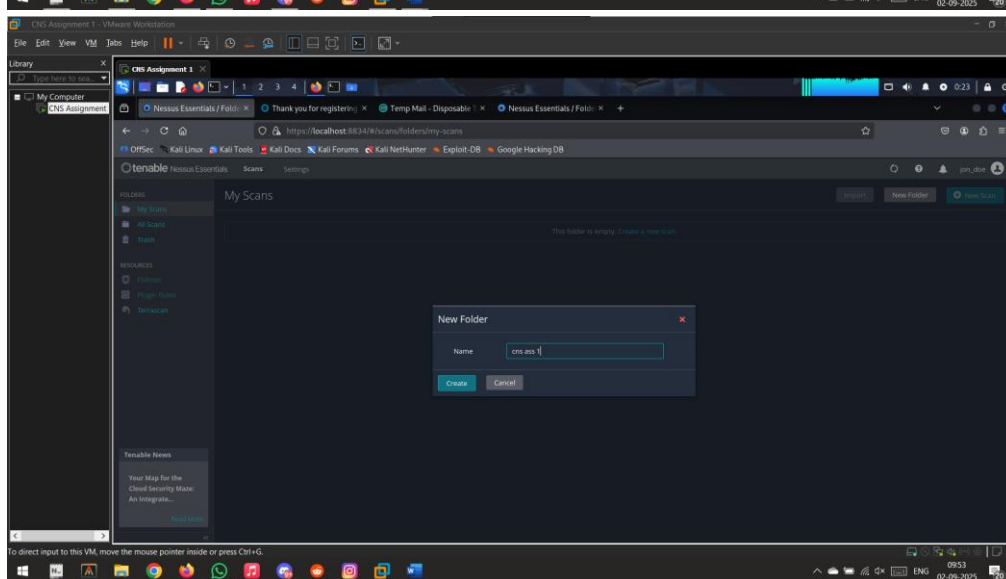
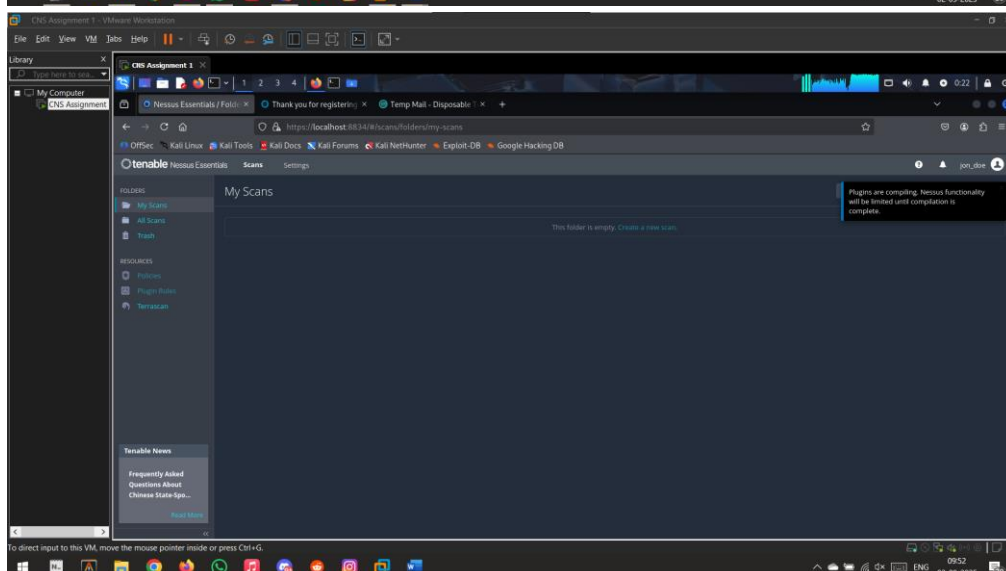
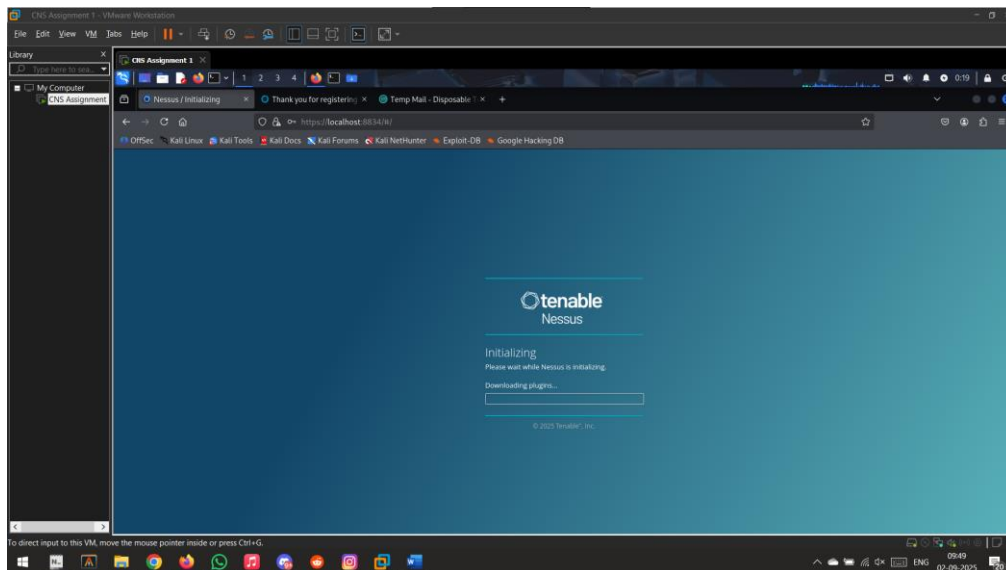
```
File Actions Edit View Help
kali@kali:~/Downloads
$ sudo apt --fix-broken install
Summary:
  Upgrading: 0, Installing: 0, Removing: 0, Not Upgrading: 1094
$ sudo systemctl start nessusd
$ sudo systemctl enable nessusd
Created symlink '/etc/systemd/system/multi-user.target.wants/nessusd.service'
→ '/usr/lib/systemd/system/nessusd.service'.
$
```

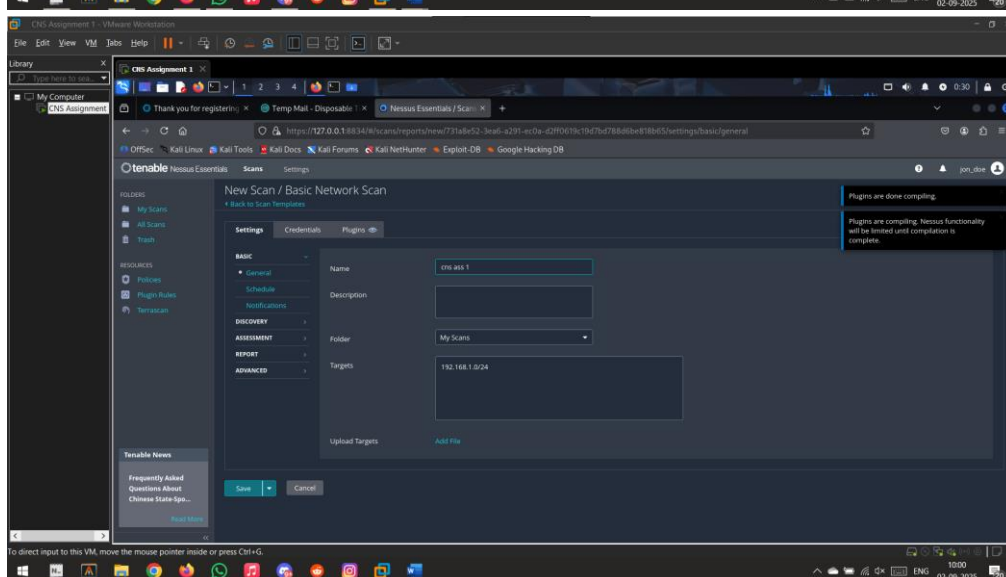
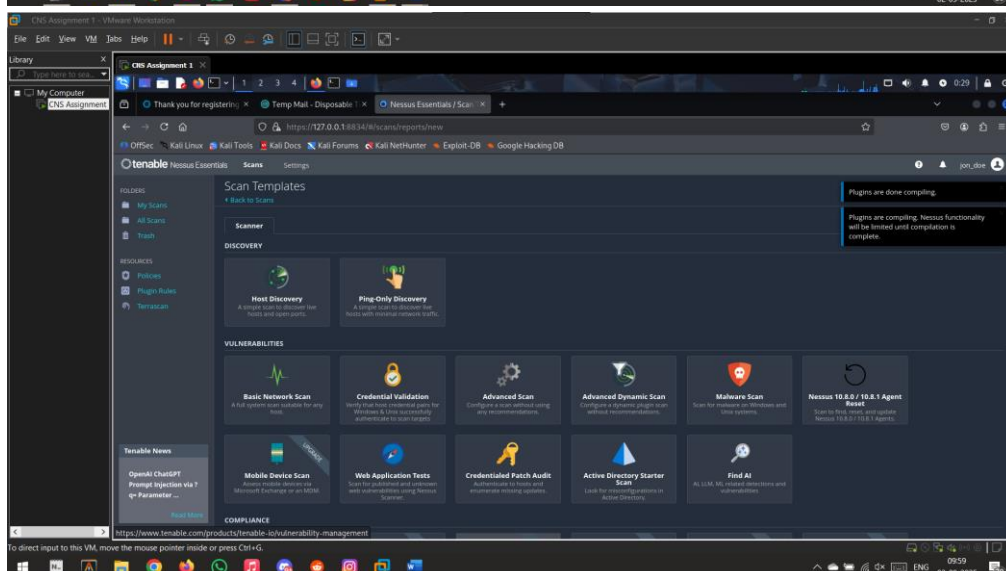
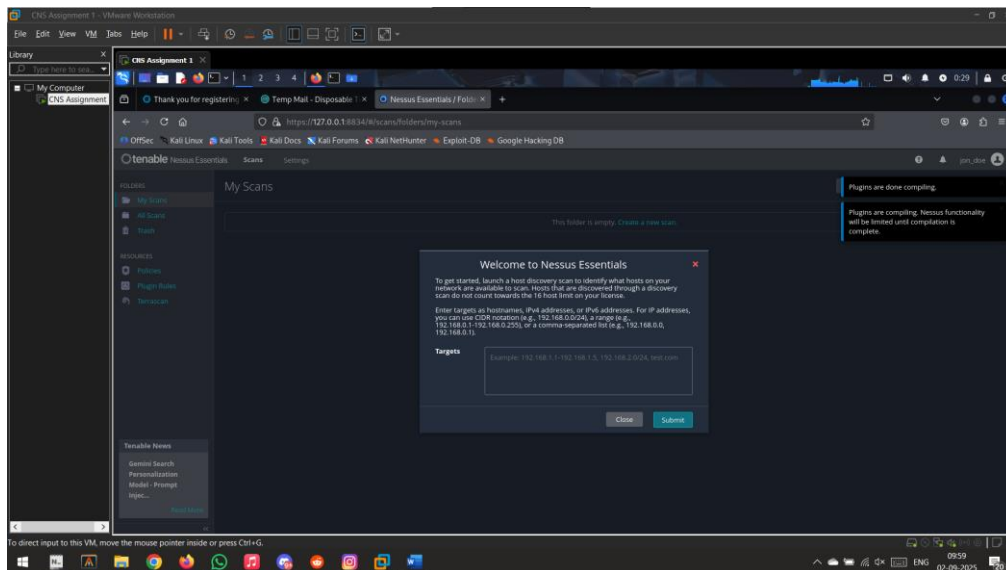
To direct input to this VM, move the mouse pointer inside or press Ctrl+G.



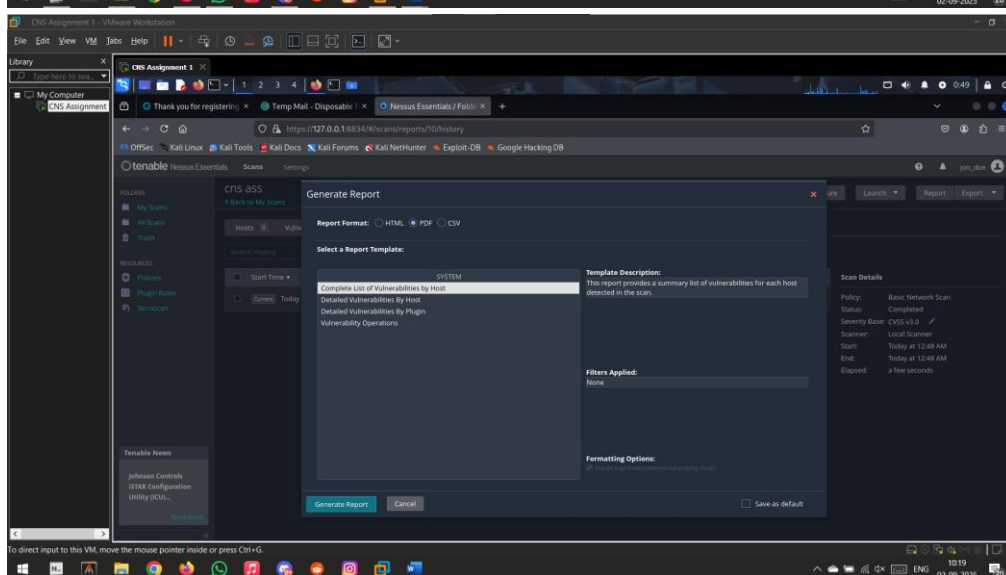
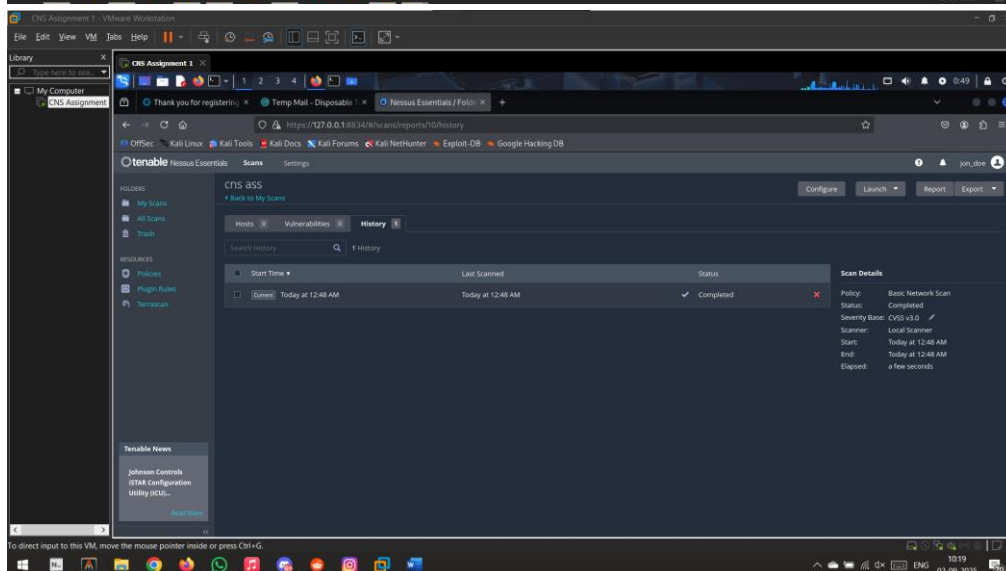
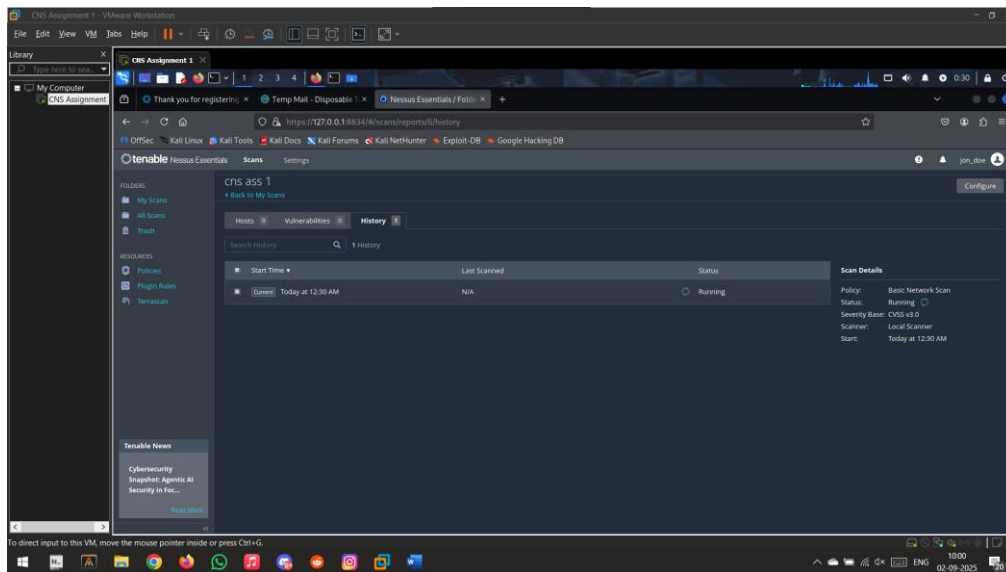


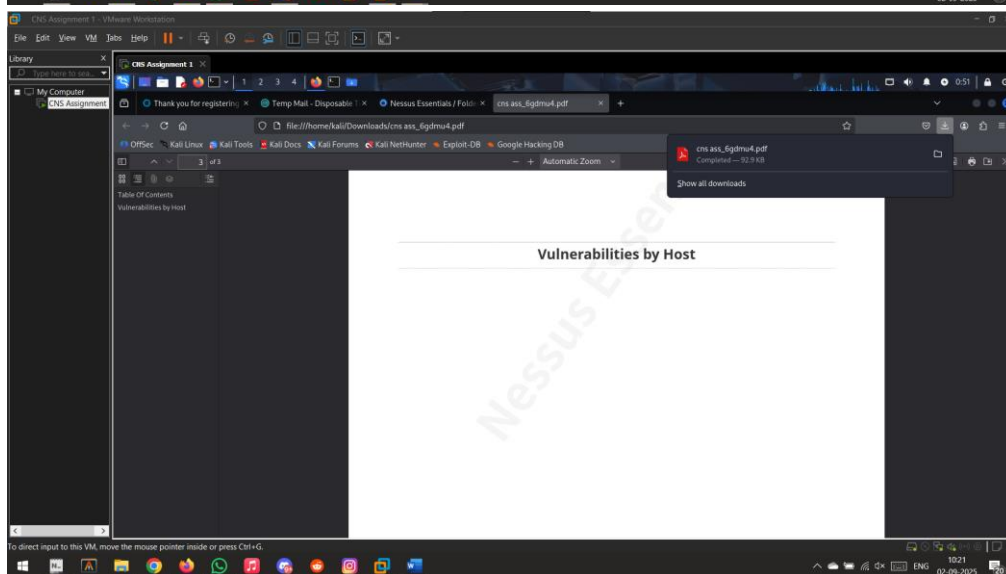
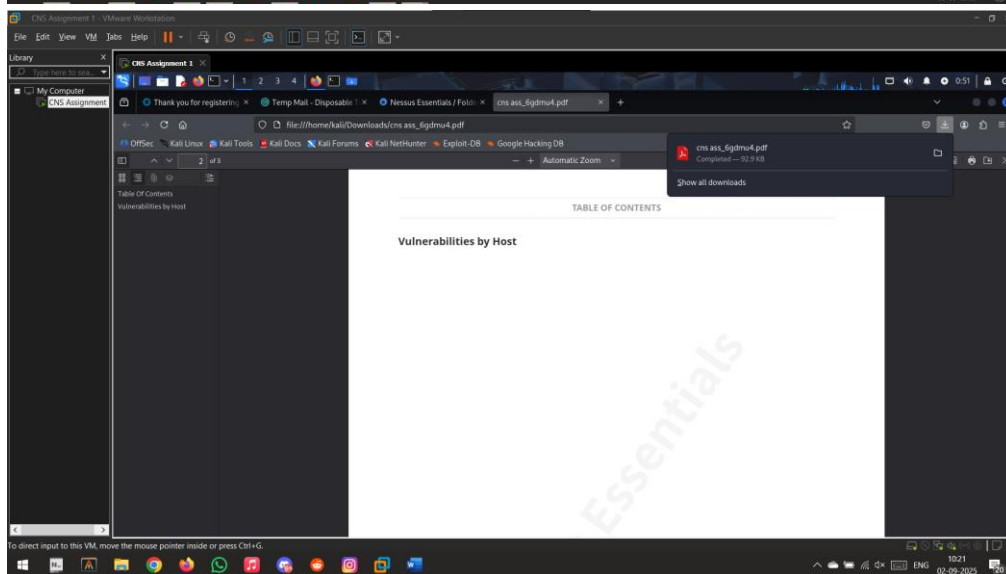
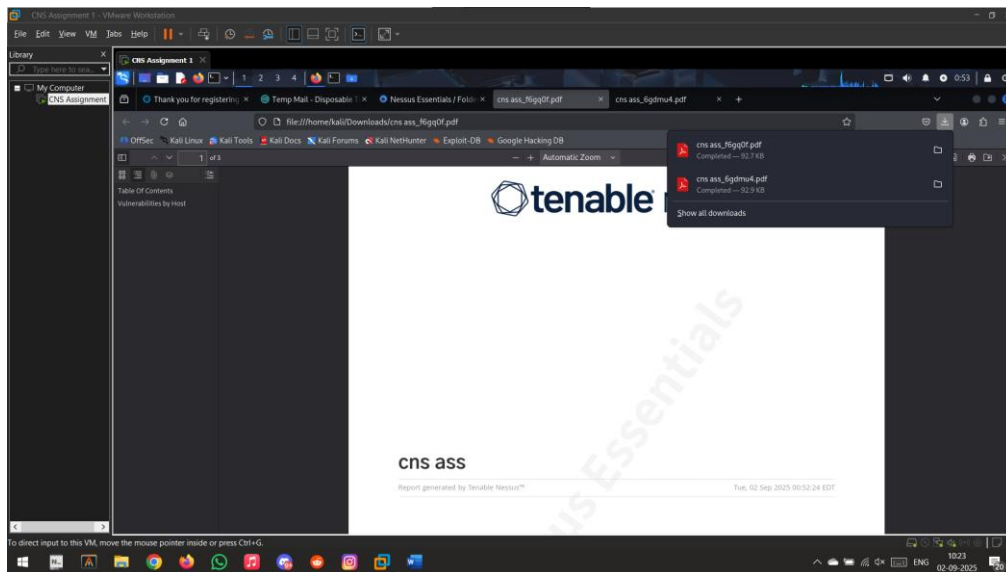












## Nmap:

Basic Ping Device Sweep: `nmap -sn 192.168.1.0/24`

```
(kali㉿kali)-[~]  
$ nmap -sn 192.168.165.255  
  
Starting Nmap 7.95 ( https://nmap.org ) at 2025-09-02 00:59 EDT  
Note: Host seems down. If it is really up, but blocking our ping probes, try -Pn  
Nmap done: 1 IP address (0 hosts up) scanned in 3.08 seconds
```

Service & Version Detection: `nmap -sv 192.168.1.105`

```
(kali㉿kali)-[~]  
$ nmap -sV 192.168.1.105  
  
Starting Nmap 7.95 ( https://nmap.org ) at 2025-09-02 01:01 EDT  
Nmap scan report for 192.168.1.105  
Host is up (0.00033s latency).  
All 1000 scanned ports on 192.168.1.105 are in ignored states.  
Not shown: 1000 filtered tcp ports (no-response)  
  
Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .  
Nmap done: 1 IP address (1 host up) scanned in 4.39 seconds
```

Aggressive Scan (OS + services + scripts): `nmap -A 192.168.1.105`

```
(kali㉿kali)-[~]  
$ nmap -A 192.168.1.105  
  
Starting Nmap 7.95 ( https://nmap.org ) at 2025-09-02 01:02 EDT  
Nmap scan report for 192.168.1.105  
Host is up (0.00055s latency).  
All 1000 scanned ports on 192.168.1.105 are in ignored states.  
Not shown: 1000 filtered tcp ports (no-response)  
Too many fingerprints match this host to give specific OS details  
  
TRACEROUTE (using port 80/tcp)  
HOP RTT ADDRESS  
1 ... 30  
  
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 21.20 seconds
```

## Vulnerability Script Scan: nmap --script vuln 192.168.1.105

```
(kali㉿kali)-[~]  
$ nmap --script vuln 192.168.1.105  
  
Starting Nmap 7.95 ( https://nmap.org ) at 2025-09-02 01:03 EDT  
Nmap scan report for 192.168.1.105  
Host is up (0.00047s latency).  
All 1000 scanned ports on 192.168.1.105 are in ignored states.  
Not shown: 1000 filtered tcp ports (no-response)  
  
Nmap done: 1 IP address (1 host up) scanned in 15.35 seconds
```

## Top 20 fastest ports (stealthy recon):

nmap --top-ports 20 192.168.1.105

```
(kali㉿kali)-[~]  
$ nmap --top-ports 20 192.168.1.105  
  
Starting Nmap 7.95 ( https://nmap.org ) at 2025-09-02 01:05 EDT  
Nmap scan report for 192.168.1.105  
Host is up (0.00052s latency).  
  
PORT      STATE      SERVICE  
21/tcp    filtered  ftp  
22/tcp    filtered  ssh  
23/tcp    filtered  telnet  
25/tcp    filtered  smtp  
53/tcp    filtered  domain  
80/tcp    filtered  http  
110/tcp   filtered  pop3  
111/tcp   filtered  rpcbind  
135/tcp   filtered  msrpc  
139/tcp   filtered  netbios-ssn  
143/tcp   filtered  imap  
443/tcp   filtered  https  
445/tcp   filtered  microsoft-ds  
993/tcp   filtered  imaps  
995/tcp   filtered  pop3s  
1723/tcp  filtered  pptp  
3306/tcp  filtered  mysql  
3389/tcp  filtered  ms-wbt-server  
5900/tcp  filtered  vnc  
8080/tcp  filtered  http-proxy  
  
Nmap done: 1 IP address (1 host up) scanned in 1.60 seconds
```