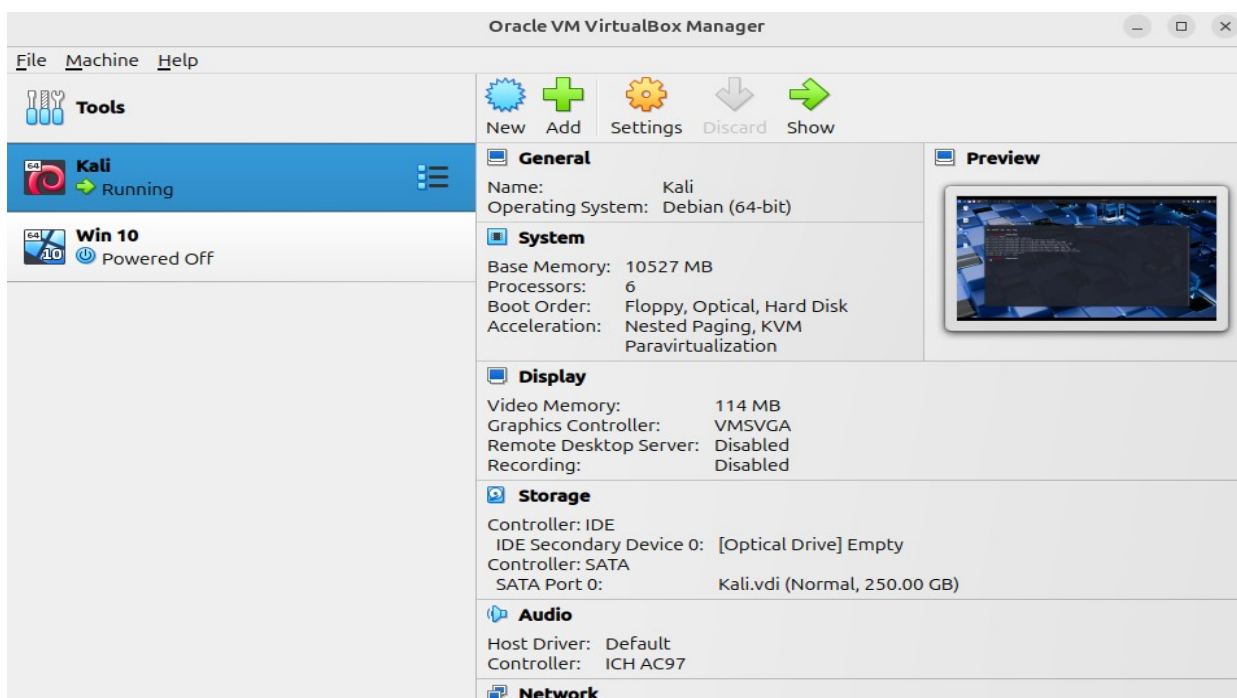


## MODULE 1-4

### Step 1: Install Virtual-Box...

```
zen@crypt:~$ sudo apt update
sudo apt install virtualbox -y
[sudo] password for zen:
Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:3 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Hit:4 https://deb.nodesource.com/node_18.x nodistro InRelease
Get:5 https://dl.google.com/linux/chrome/deb stable InRelease [1,825 B]
Get:6 https://dl.google.com/linux/chrome/deb stable/main amd64 Packages [1,211 B]
Get:7 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Hit:8 https://deb.i2p.net trixie InRelease
Get:9 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [151 kB]
Get:10 http://archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Components [212 B]
Get:11 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Components [364 kB]
Get:12 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [8,980 B]
Get:13 http://archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [940 B]
Get:14 http://archive.ubuntu.com/ubuntu noble-backports/main amd64 Components [208 B]
Get:15 http://archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [216 B]
Get:16 http://archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [20.0 kB]
Get:17 http://archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 Components [212 B]
Get:18 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]
Get:19 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [52.0 kB]
Get:20 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [208 B]
Fetched 979 kB in 4s (244 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
virtualbox is already the newest version (7.0.16-dfsg-2ubuntu1.1).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
zen@crypt:~$
```



## Step 2: Install Kali linux in virtual box and update it...

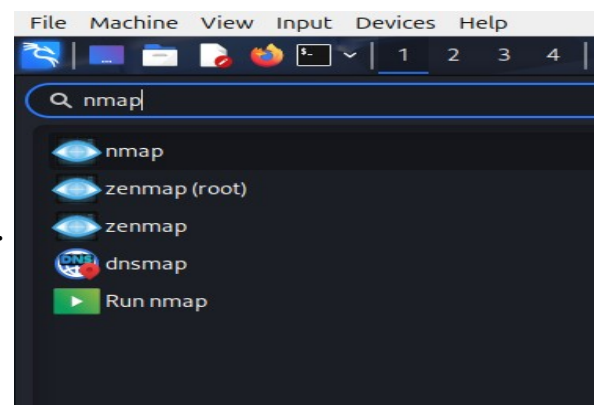
```
root@cyber: /home/cyber
File Actions Edit View Help
(root@cyber)-[/home/cyber]
# apt-get update
Hit:2 https://deb.i2p.net trixie InRelease
Get:1 http://kali.download/kali kali-rolling InRelease [41.5 kB]
Get:3 http://kali.download/kali kali-rolling/main amd64 Packages [20.6 MB]
Get:4 http://kali.download/kali kali-rolling/main amd64 Contents (deb) [49.1 MB]
Get:5 http://kali.download/kali kali-rolling/contrib amd64 Packages [115 kB]
Get:6 http://kali.download/kali kali-rolling/non-free amd64 Packages [202 kB]
Get:7 http://kali.download/kali kali-rolling/non-free amd64 Contents (deb) [884 kB]
Get:8 http://kali.download/kali kali-rolling/non-free-firmware amd64 Packages [10.8 kB]
Fetched 71.0 MB in 23s (3,049 kB/s)
Reading package lists ... Done

(root@cyber)-[/home/cyber]
# apt-get upgrade
Reading package lists ... Done
Building dependency tree ... Done
Reading state information ... Done
Calculating upgrade ... Done
The following packages will be upgraded:
  dictionaries-common intel-media-va-driver libblosc2-4 libbson-1.0-0t64 libmongoc-1.0-0t64 libnetpbm11t64 libnghttp3-9 libngtcp2-16 libngtcp2-c
  python3-zstandard tex-common wget
14 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
Need to get 9,764 kB of archives.
After this operation, 97.3 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://kali.download/kali kali-rolling/main amd64 wget amd64 1.25.0-1 [984 kB]
Get:2 http://kali.download/kali kali-rolling/main amd64 dictionaries-common all 1.30.10 [174 kB]
Get:3 http://http.kali.org/kali kali-rolling/main amd64 intel-media-va-driver amd64 25.1.2+dfsg1-1 [3,443 kB]
Get:4 http://http.kali.org/kali kali-rolling/main amd64 libblosc2-4 amd64 2.17.0+ds-1 [193 kB]
Get:5 http://kali.download/kali kali-rolling/main amd64 libbson-1.0-0t64 amd64 1.30.1-1 [87.1 kB]
Get:6 http://kali.download/kali kali-rolling/main amd64 libmongoc-1.0-0t64 amd64 1.30.1-1 [389 kB]
Get:10 http://mirror.ourhost.az/kali kali-rolling/main amd64 libngtcp2-16 amd64 1.11.0-1 [131 kB]
Get:8 http://kali.download/kali kali-rolling/main amd64 libnetpbm11t64 amd64 2:11.09.03-1 [184 kB]
Get:11 http://kali.download/kali kali-rolling/main amd64 libngtcp2-crypto-gnutls8 amd64 1.11.0-1 [29.3 kB]
Get:12 http://http.kali.org/kali kali-rolling/main amd64 python3-flasgger all 0.9.7.2-dev2+dfsg-4 [1,625 kB]
Get:13 http://kali.download/kali kali-rolling/main amd64 python3-zstandard amd64 0.23.0-3 [345 kB]
Get:14 http://kali.download/kali kali-rolling/main amd64 tex-common all 6.19 [29.4 kB]
Get:7 http://mirrors.neusoft.edu.cn/kali kali-rolling/main amd64 netpbm amd64 2:11.09.03-1 [2,081 kB]
Get:9 http://mirrors.neusoft.edu.cn/kali kali-rolling/main amd64 libnghttp3-9 amd64 1.8.0-1 [67.7 kB]
```

## Step 3: Explore application menu in Kali Linux . List 5 tools and there purpose ...

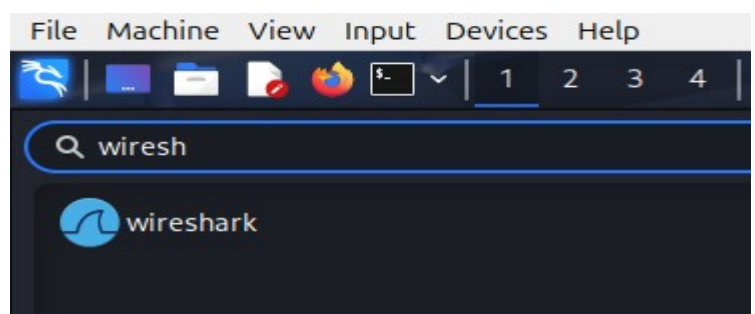
### Tool 1: Nmap

**Purpose:** Network scanning and reconnaissance. It detects live hosts, services, and open ports on a network.



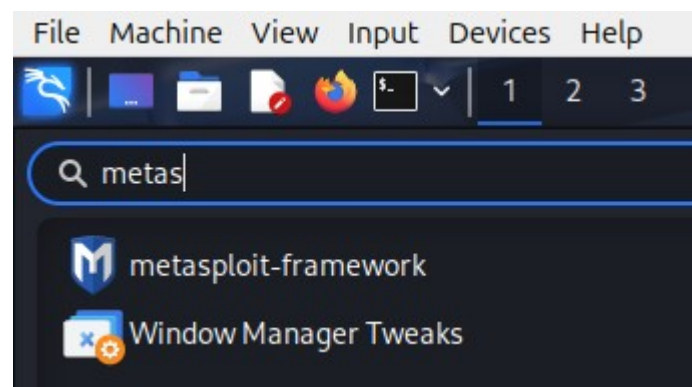
### Tool 2: Wireshark

**Purpose:** A powerful network packet analyzer used for inspecting and troubleshooting network traffic.



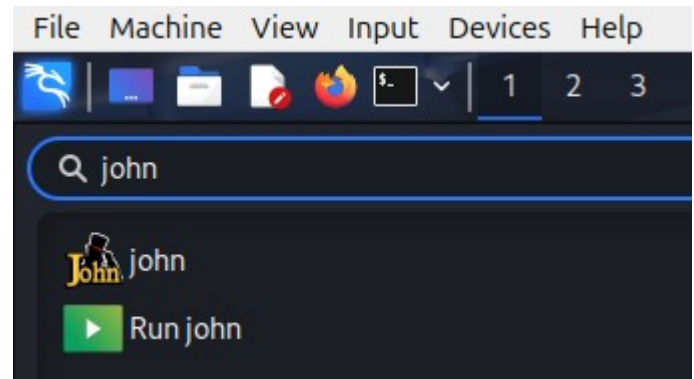
### Tool 3: Metasploit

**Purpose:** A penetration testing framework used for exploiting vulnerabilities in networks and applications.



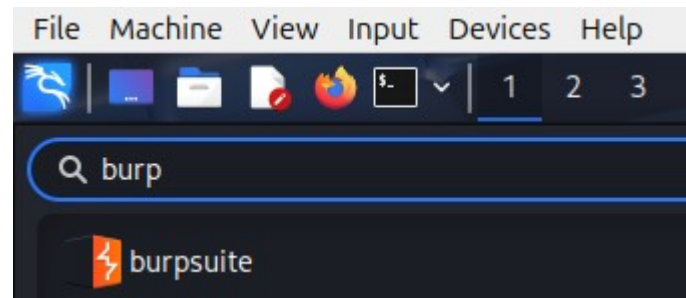
### Tool 4: John the Ripper

**Purpose:** A password-cracking tool that uses brute-force and dictionary attacks to recover passwords.



### Tool 5: Burpsuit

**Purpose:** A web security testing tool used for testing and analyzing vulnerabilities in websites and applications.



**Step 4:** . Execute the following Linux commands:

- Find command
- Ping command
- Traceroute command
- Whoami command
- Ps command

```
(root@cyber)-[/home/cyber]
# ping google.com
PING google.com (142.250.193.46) 56(84) bytes of
64 bytes from del11s15-in-f14.1e100.net (142.250
64 bytes from del11s15-in-f14.1e100.net (142.250
64 bytes from del11s15-in-f14.1e100.net (142.250
64 bytes from del11s15-in-f14.1e100.net (142.250
64 bytes from del11s15-in-f14.1e100.net (142.250
64 bytes from del11s15-in-f14.1e100.net (142.250
```

```
(root@cyber)-[/home/cyber]
#
(root@cyber)-[/home/cyber]
# find /home/cyber/Desktop
/home/cyber/Desktop
/home/cyber/Desktop/rockyou.txt
(root@cyber)-[/home/cyber]
#
```



```
(cyber@cyber)-[~]
$ ps
  PID TTY          TIME CMD
 2448 pts/0    00:00:00 zsh
 23258 pts/0    00:00:00 ps

(cyber@cyber)-[~]
$
```

```
(root@cyber)-[~]
# whoami
root

(cyber@cyber)-[~]
# exit

(cyber@cyber)-[~]
$ whoami
cyber

(cyber@cyber)-[~]
$
```

```
File  Actions  Edit  View  Help

(root@cyber)-[/home/cyber]
# traceroute google.com
traceroute to google.com (142.250.193.46), 30 hops max, 60 byte packets
 1  10.0.2.2 (10.0.2.2)  0.677 ms  0.623 ms  0.584 ms
 2  _gateway (192.168.202.31)  2.223 ms  5.681 ms  6.468 ms
 3  * * *
 4  192.168.2.99 (192.168.2.99)  64.286 ms  64.251 ms  58.077 ms
 5  192.168.204.1 (192.168.204.1)  58.121 ms  192.168.203.1 (192.168.203.1)  63.643 ms  192.168.204.1 (192.168.204.1)  63.740 ms
 6  192.168.204.2 (192.168.204.2)  63.896 ms  61.460 ms  192.168.203.2 (192.168.203.2)  61.392 ms
 7  223.196.20.154 (223.196.20.154)  60.924 ms
```

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