ESCUELA COLOMBIANA DE INGENIERÍA JULIO GARAVITO

IT SECURITY AND PRIVACITY

INTRODUCTION TO LINUX (IMAGES)

FOCUS ON

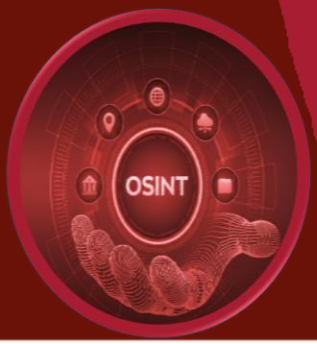
Kali Linux

ANDERSSON DAVID SÁNCHEZ MÉNDEZ
CRISTIAN SANTIAGO PEDRAZA RODRÍGUEZ

PROFESSOR:

DANIEL ESTEBAN VELA LOPEZ

Place: Bogota Date: February 03/2026

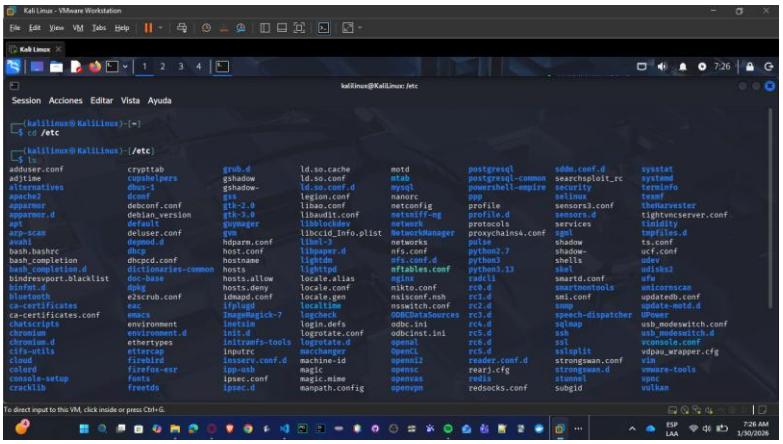


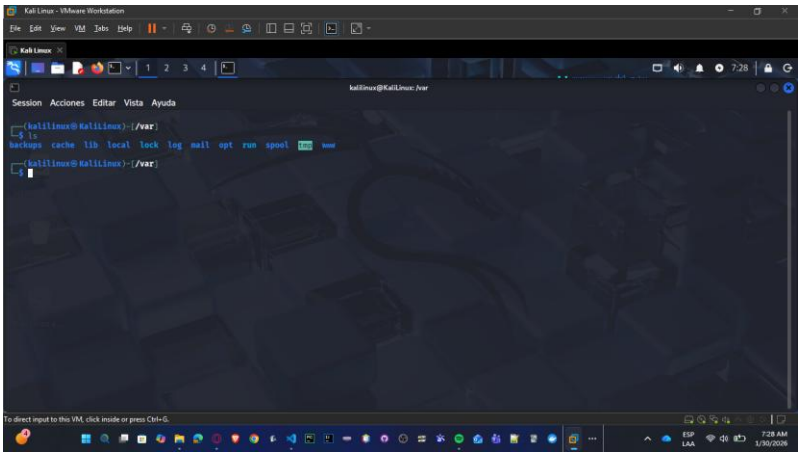
INTRODUCTION TO LINUX (IMAGES)

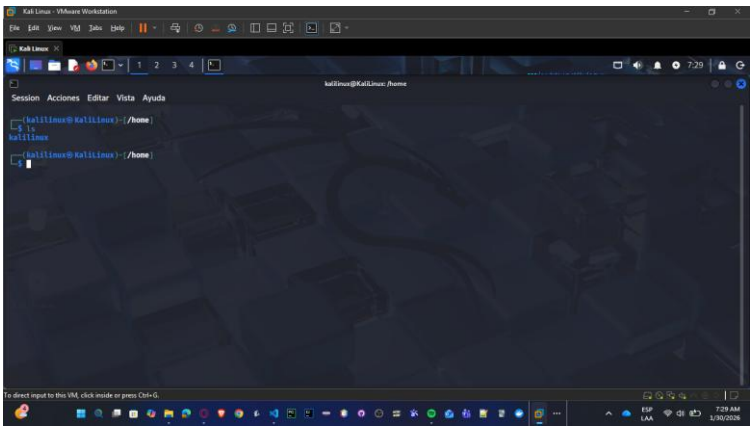
Student: Andersson David Sánchez Méndez
Student: Cristian Santiago Pedraza Rodríguez
Focus on: Kali Linux
Date: February 03, 2026

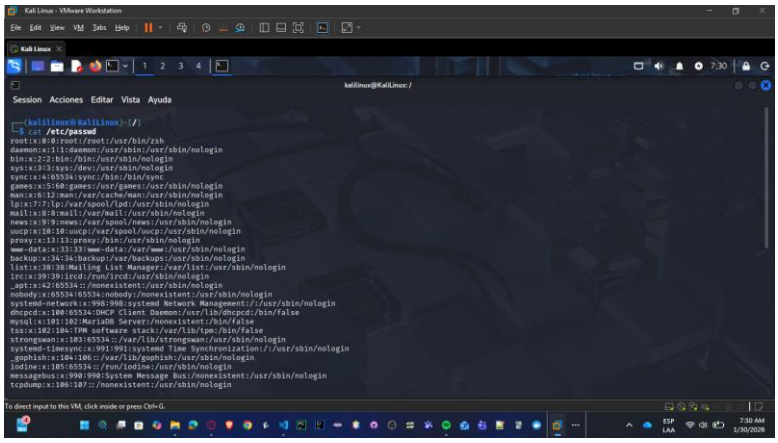
1. Exploring the System

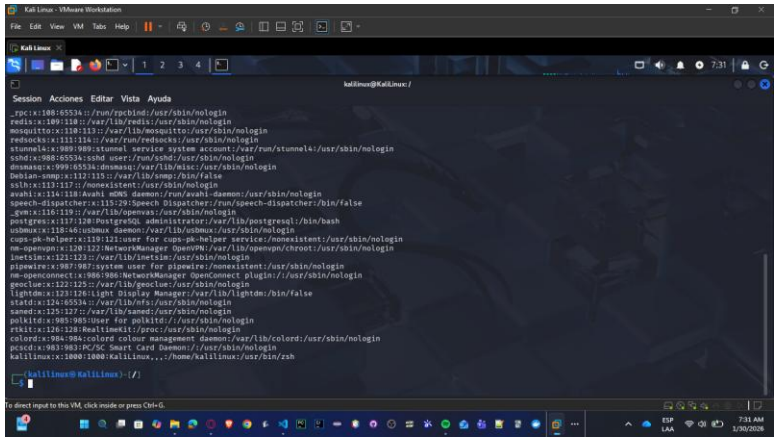
Andersson's images:








Kali Linux - VMware Workstation
File Edit View VM Tabs Help
Kali Linux
kalilinux@KaliLinux: /
Session Acciones Editar Vista Ayuda
┌──(kalilinux㉿KaliLinux)-[/]
└─$ cat /etc/passwd
root:x:0:0:root:/root:/usr/bin/zsh
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin
_apt:x:42:65534::/nonexistent:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:998:998:systemd Network Management:/:/usr/sbin/nologin
dhcpcd:x:100:65534:DHCP Client Daemon:/usr/lib/dhcpcd:/bin/false
mysql:x:101:102:MariaDB Server:/nonexistent:/bin/false
tss:x:102:104:TPM software stack:/var/lib/tpm:/bin/false
strongswan:x:103:65534::/var/lib/strongswan:/usr/sbin/nologin
systemd-timesync:x:991:991:systemd Time Synchronization:/:/usr/sbin/nologin
_gophish:x:104:106::/var/lib/gophish:/usr/sbin/nologin
iodine:x:105:65534::/run/iodine:/usr/sbin/nologin
messagebus:x:990:990:System Message Bus:/nonexistent:/usr/sbin/nologin
tcpdump:x:106:107::/nonexistent:/usr/sbin/nologin
To direct input to this VM, click inside or press Ctrl+G.


Kali Linux - VMware Workstation
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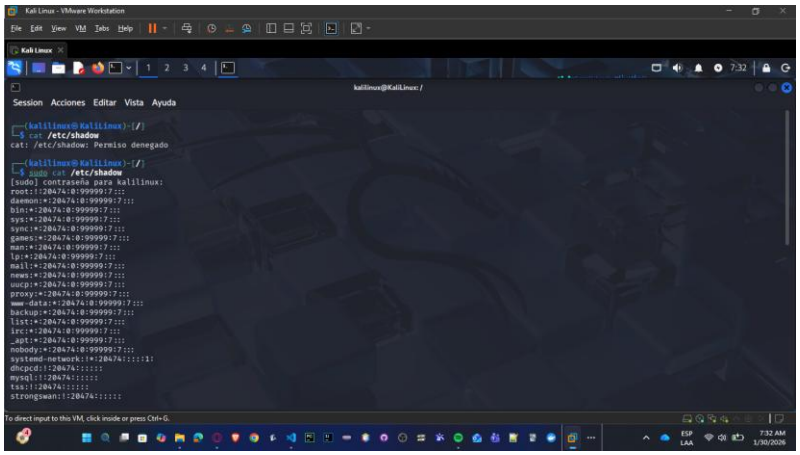
Kali Linux
kalilinux@KaliLinux: /
Session Acciones Editar Vista Ayuda
_rpc:x:108:65534::/run/rpcbind:/usr/sbin/nologin
redis:x:109:110::/var/lib/redis:/usr/sbin/nologin
mosquitto:x:110:113::/var/lib/mosquitto:/usr/sbin/nologin
redsocks:x:111:114::/var/run/redsocks:/usr/sbin/nologin
stunnel4:x:989:989:stunnel service system account:/var/run/stunnel4:/usr/sbin/nologin
sshd:x:988:65534:sshd user:/run/sshd:/usr/sbin/nologin
dnsmasq:x:999:65534:dnsmasq:/var/lib/misc:/usr/sbin/nologin
Debian-snmp:x:112:115::/var/lib/snmp:/bin/false
sslh:x:113:117::/nonexistent:/usr/sbin/nologin
avahi:x:114:118:Avahi mDNS daemon:/run/avahi-daemon:/usr/sbin/nologin
speech-dispatcher:x:115:29:Speech Dispatcher:/run/speech-dispatcher:/bin/false
_gvm:x:116:119::/var/lib/openvas:/usr/sbin/nologin
postgres:x:117:120:PostgreSQL administrator:/var/lib/postgresql:/bin/bash
usbmux:x:118:46:usbmux daemon:/var/lib/usbmux:/usr/sbin/nologin
cups-pk-helper:x:119:121:user for cups-pk-helper service:/nonexistent:/usr/sbin/nologin
nm-openvpn:x:120:122:NetworkManager OpenVPN:/var/lib/openvpn/chroot:/usr/sbin/nologin
inetsim:x:121:123::/var/lib/inetsim:/usr/sbin/nologin
pipewire:x:987:987:system user for pipewire:/nonexistent:/usr/sbin/nologin
nm-openconnect:x:986:986:NetworkManager OpenConnect plugin:/:/usr/sbin/nologin
geoclue:x:122:125::/var/lib/geoclue:/usr/sbin/nologin
lightdm:x:123:126:Light Display Manager:/var/lib/lightdm:/bin/false
statd:x:124:65534::/var/lib/nfs:/usr/sbin/nologin
saned:x:125:127::/var/lib/saned:/usr/sbin/nologin
polkitd:x:985:985:User for polkitd:/:/usr/sbin/nologin
rtkit:x:126:128:RealtimeKit:/proc:/usr/sbin/nologin
colord:x:984:984:colord colour management daemon:/var/lib/colord:/usr/sbin/nologin
pcscd:x:983:983:PC/SC Smart Card Daemon:/:/usr/sbin/nologin
kalilinux:x:1000:1000:KaliLinux,,,:/home/kalilinux:/usr/bin/zsh
┌──(kalilinux㉿KaliLinux)-[/]
└─$
To direct input to this VM, click inside or press Ctrl+G.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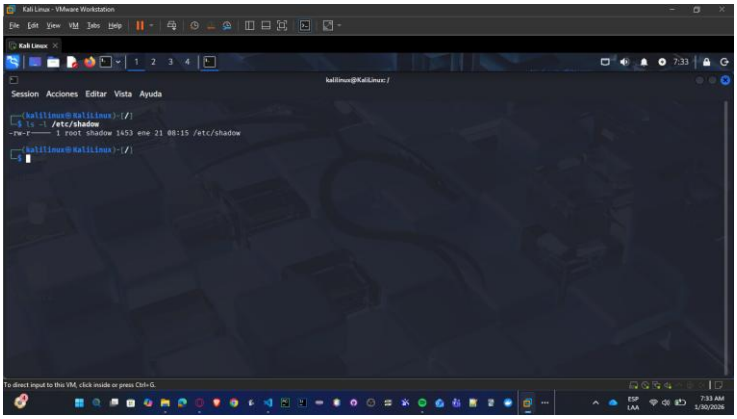
File Edit View VM Tabs Help
Kali Linux
kalilinux@KaliLinux: /
Session Acciones Editar Vista Ayuda
┌──(kalilinux㉿KaliLinux)-[/]
└─$ cat /etc/shadow
cat: /etc/shadow: Permiso denegado
┌──(kalilinux㉿KaliLinux)-[/]
└─$ sudo cat /etc/shadow
[sudo] contraseña para kalilinux:
root:!:20474:0:99999:7:::
daemon:*:20474:0:99999:7:::
bin:*:20474:0:99999:7:::
sys:*:20474:0:99999:7:::
sync:*:20474:0:99999:7:::
games:*:20474:0:99999:7:::
man:*:20474:0:99999:7:::
lp:*:20474:0:99999:7:::
mail:*:20474:0:99999:7:::
news:*:20474:0:99999:7:::
uucp:*:20474:0:99999:7:::
proxy:*:20474:0:99999:7:::
www-data:*:20474:0:99999:7:::
backup:*:20474:0:99999:7:::
list:*:20474:0:99999:7:::
irc:*:20474:0:99999:7:::
_apt:*:20474:0:99999:7:::
nobody:*:20474:0:99999:7:::
systemd-network:!*:20474::::::1
dhcpcd:!:20474:::::
mysql:!!:20474:::::
tss:!!20474:::::
strongswan:!!:20474:::::
To direct input to this VM, click inside or press Ctrl+G.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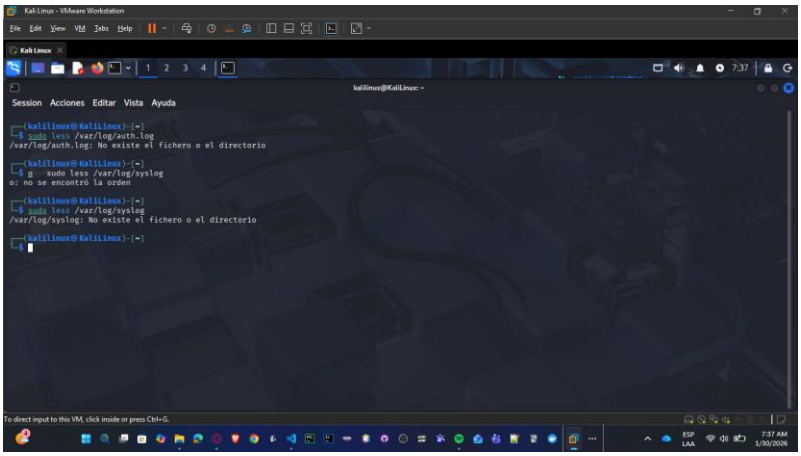
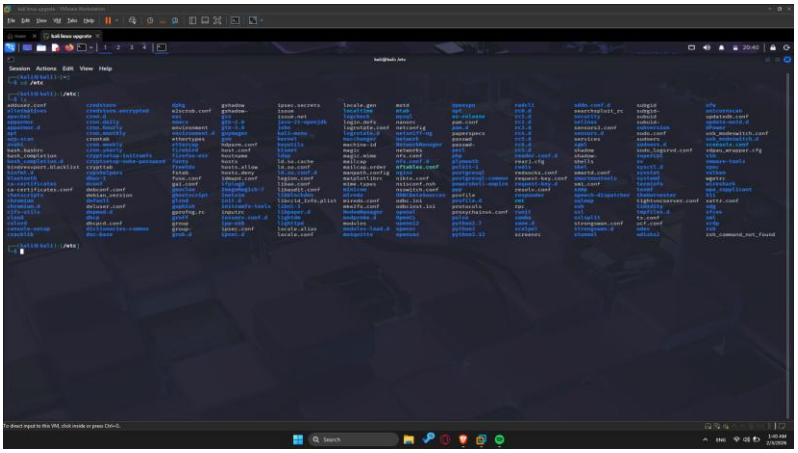
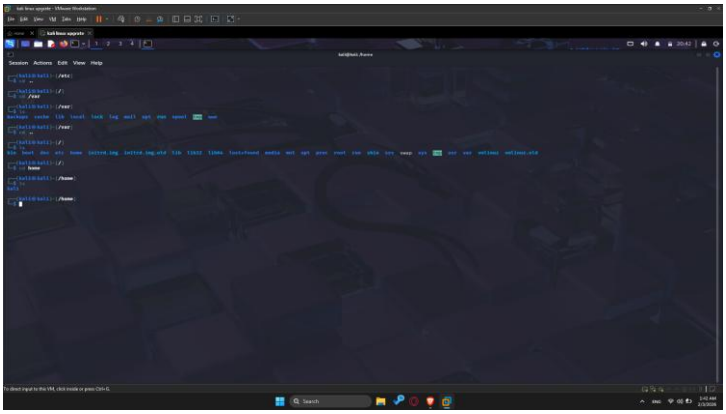
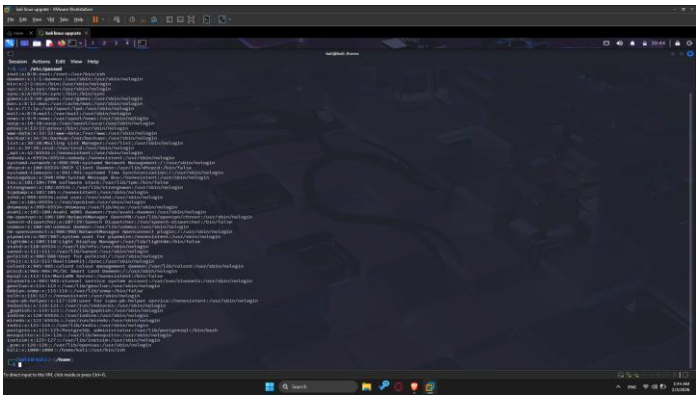
Kali Linux
kalilinux@KaliLinux: /
Session Acciones Editar Vista Ayuda
┌──(kalilinux㉿KaliLinux)-[/]
└─$ ls -l /etc/shadow
-rw-r----- 1 root shadow 1453 ene 21 08:15 /etc/shadow
┌──(kalilinux㉿KaliLinux)-[/]
└─$
To direct input to this VM, click inside or press Ctrl+G.

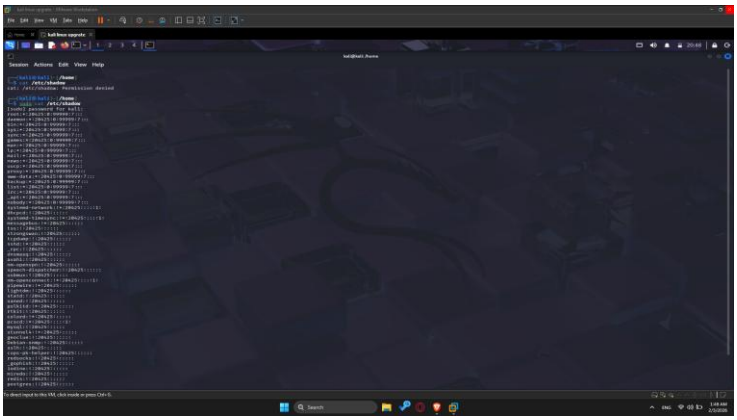


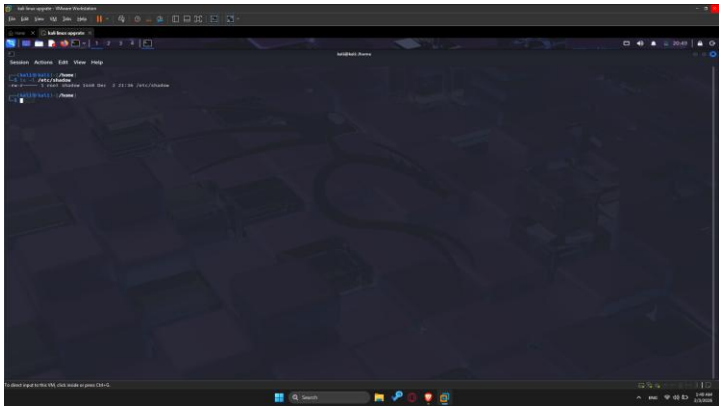
Cristian's images:

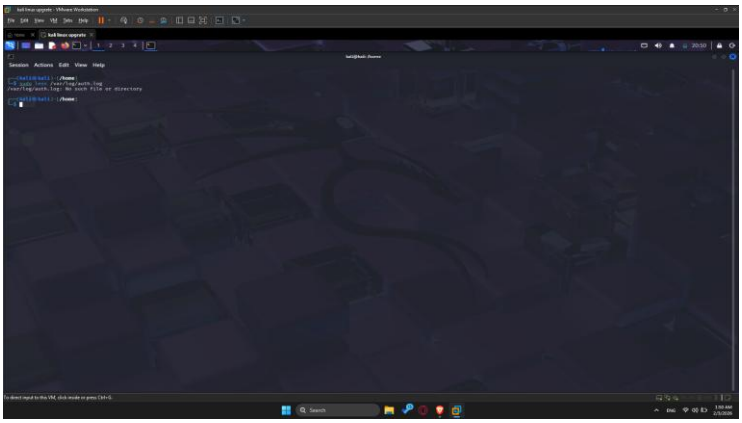






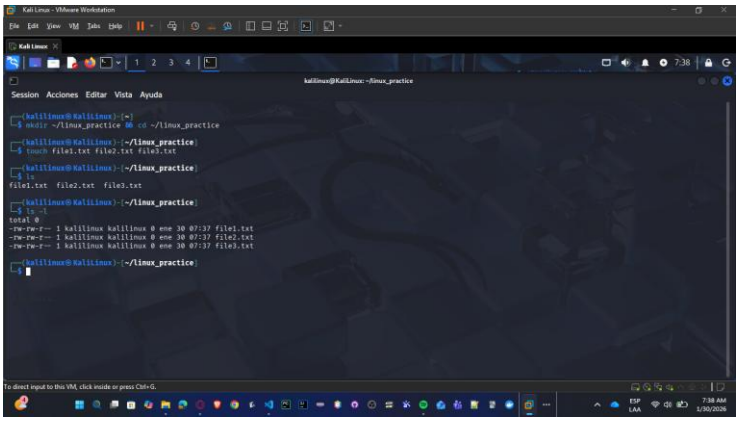


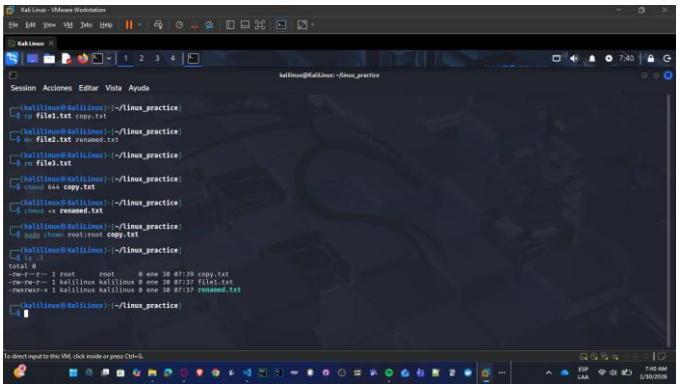




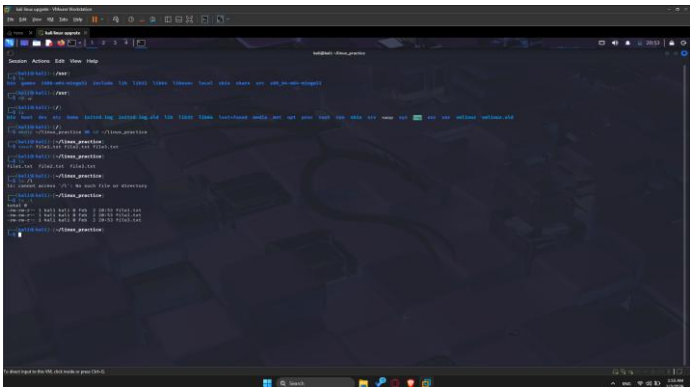
2. Files and Permissions

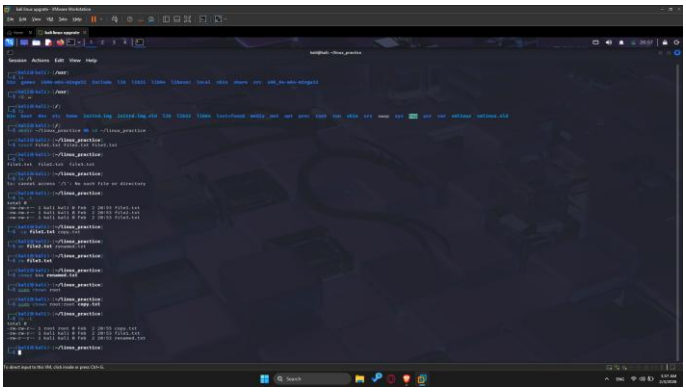
Andersson's images:





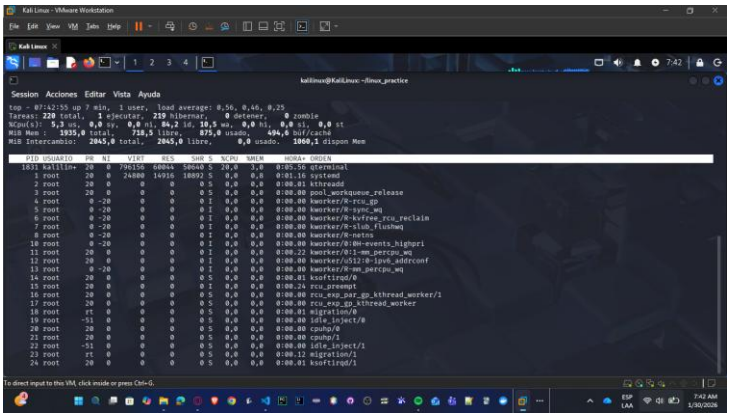
Cristian's images:

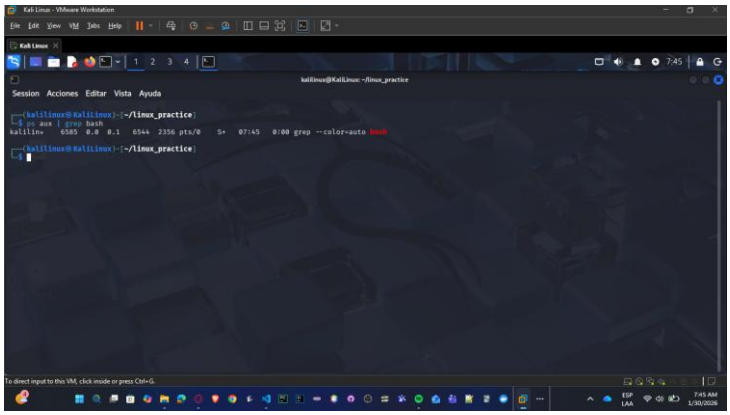


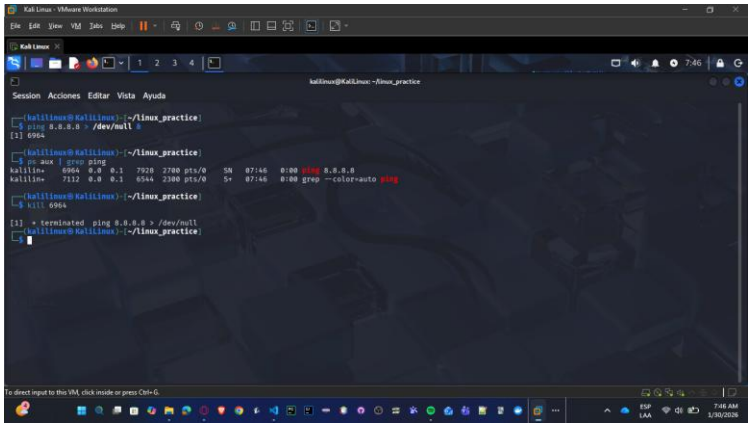


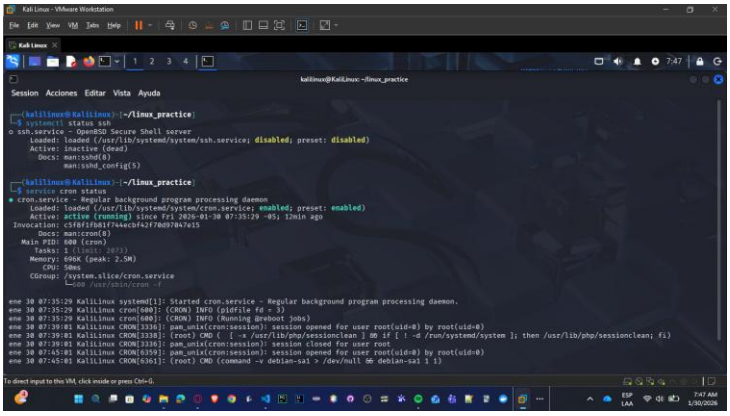
3. Processes and Services

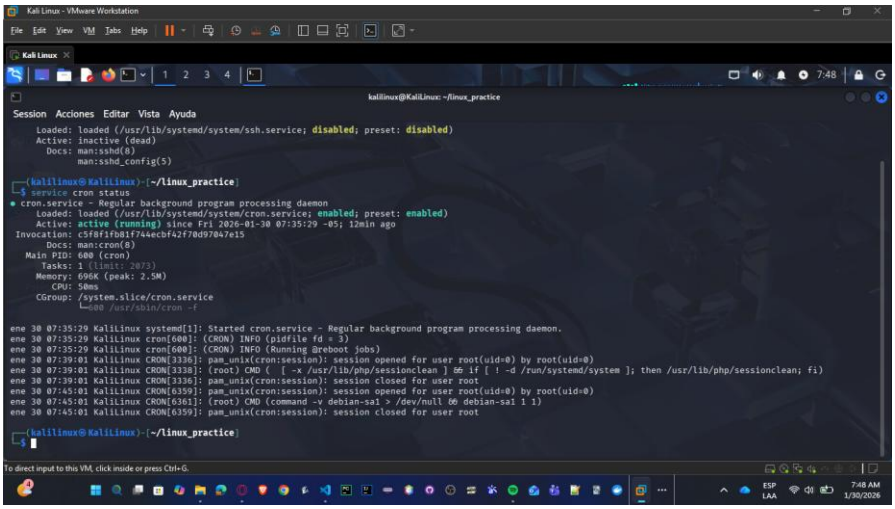
Andersson's images:




Kali Linux - VMware Workstation
kalilinux@KaliLinux: ~/linux_practice
Session Acciones Editar Vista Ayuda
┌──(kalilinux㉿KaliLinux)-[~/linux_practice]
└─$ ps aux | grep bash
kalilin+ 6585 0.0 0.1 6544 2356 pts/0 S+ 07:45 0:00 grep --color=auto bash
┌──(kalilinux㉿KaliLinux)-[~/linux_practice]
└─$


Kali Linux - VMware Workstation
kalilinux@KaliLinux: ~/linux_practice
Session Acciones Editar Vista Ayuda
┌──(kalilinux㉿KaliLinux)-[~/linux_practice]
└─$ ping 8.8.8.8 > /dev/null &
[1] 6964
┌──(kalilinux㉿KaliLinux)-[~/linux_practice]
└─$ ps aux | grep ping
kalilin+ 6964 0.0 0.1 7928 2700 pts/0 SN 07:46 0:00 ping 8.8.8.8
kalilin+ 7112 0.0 0.1 6544 2300 pts/0 S+ 07:46 0:00 grep --color=auto ping
┌──(kalilinux㉿KaliLinux)-[~/linux_practice]
└─$ kill 6964
[1] + terminated ping 8.8.8.8 > /dev/null
┌──(kalilinux㉿KaliLinux)-[~/linux_practice]
└─$


Kali Linux - VMware Workstation
kalilinux@KaliLinux: ~/linux_practice
Session Acciones Editar Vista Ayuda
┌──(kalilinux㉿KaliLinux)-[~/linux_practice]
└─$ systemctl status ssh
○ ssh.service - OpenBSD Secure Shell server
Loaded: loaded (/usr/lib/systemd/system/ssh.service; disabled; preset: disabled)
Active: inactive (dead)
Docs: man:sshd(8)
man:sshd_config(5)
┌──(kalilinux㉿KaliLinux)-[~/linux_practice]
└─$ service cron status
● cron.service - Regular background program processing daemon
Loaded: loaded (/usr/lib/systemd/system/cron.service; enabled; preset: enabled)
Active: active (running) since Fri 2026-01-30 07:35:29 -05; 12min ago
Invocation: c5f8f1fb81f744ecbf42f70d97047e15
Docs: man:cron(8)
Main PID: 600 (cron)
Tasks: 1 (limit: 2073)
Memory: 696K (peak: 2.5M)
CPU: 50ms
CGroup: /system.slice/cron.service
└─600 /usr/sbin/cron -f
ene 30 07:35:29 KaliLinux systemd[1]: Started cron.service - Regular background program processing daemon.
ene 30 07:35:29 KaliLinux cron[600]: (CRON) INFO (pidfile fd = 3)
ene 30 07:35:29 KaliLinux cron[600]: (CRON) INFO (Running @reboot jobs)
ene 30 07:39:01 KaliLinux CRON[3336]: pam_unix(cron:session): session opened for user root(uid=0) by root(uid=0)
ene 30 07:39:01 KaliLinux CRON[3338]: (root) CMD ([-x /usr/lib/php/sessionclean] && if [! -d /run/systemd/system]; then /usr/lib/php/sessionclean; fi)
ene 30 07:39:01 KaliLinux CRON[3336]: pam_unix(cron:session): session closed for user root
ene 30 07:45:01 KaliLinux CRON[6359]: pam_unix(cron:session): session opened for user root(uid=0) by root(uid=0)
ene 30 07:45:01 KaliLinux CRON[6361]: (root) CMD (command -v debian-sa1 > /dev/null && debian-sa1 1 1)


Kali Linux - VMware Workstation
kalilinux@KaliLinux: ~/linux_practice
Session Acciones Editar Vista Ayuda
Loaded: loaded (/usr/lib/systemd/system/ssh.service; disabled; preset: disabled)
Active: inactive (dead)
Docs: man:sshd(8)
man:sshd_config(5)
┌──(kalilinux㉿KaliLinux)-[~/linux_practice]
└─$ service cron status
● cron.service - Regular background program processing daemon
Loaded: loaded (/usr/lib/systemd/system/cron.service; enabled; preset: enabled)
Active: active (running) since Fri 2026-01-30 07:35:29 -05; 12min ago
Invocation: c5f8f1fb81f744ecbf42f70d97047e15
Docs: man:cron(8)
Main PID: 600 (cron)
Tasks: 1 (limit: 2073)
Memory: 696K (peak: 2.5M)
CPU: 50ms
CGroup: /system.slice/cron.service
└─600 /usr/sbin/cron -f
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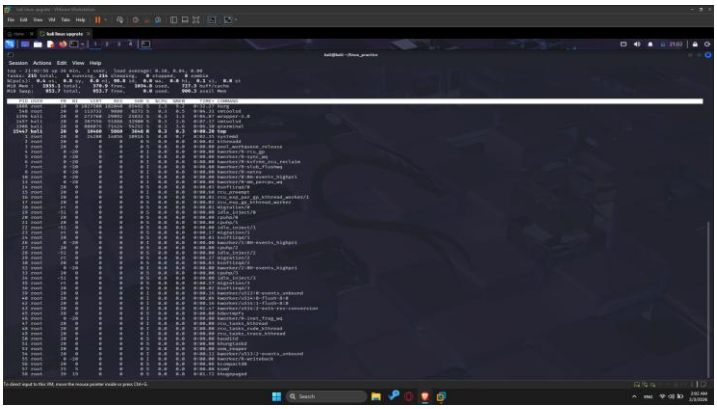
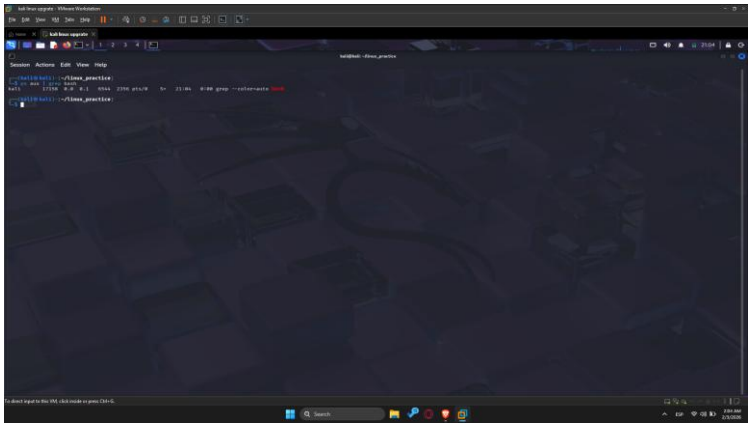
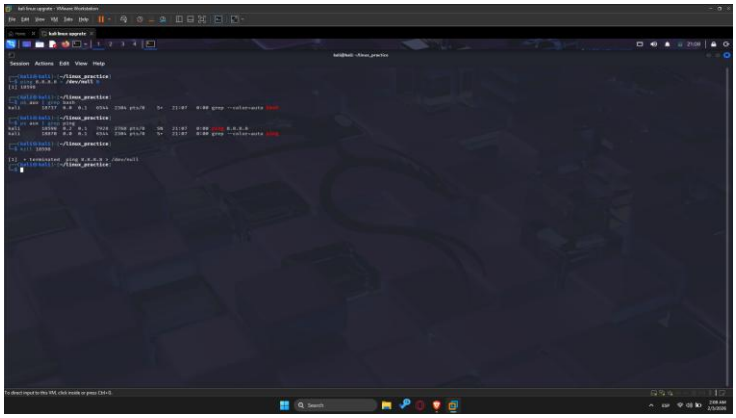
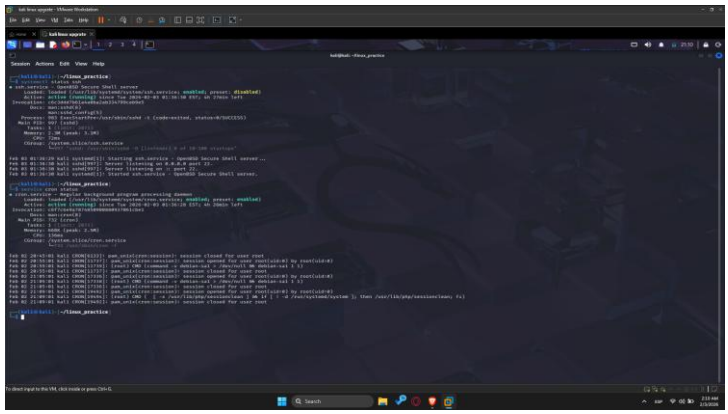
ene 30 07:45:01 KaliLinux CRON[6359]: pam_unix(cron:session): session closed for user root
┌──(kalilinux㉿KaliLinux)-[~/linux_practice]
└─$

Cristian's images:



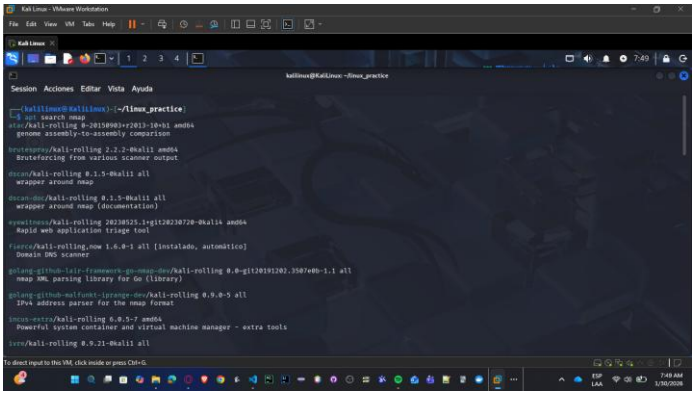


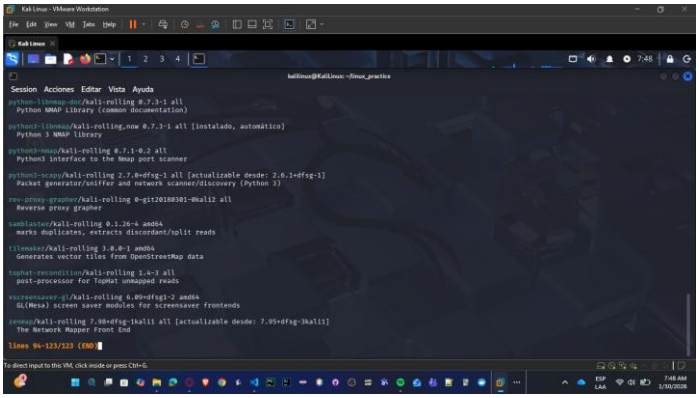


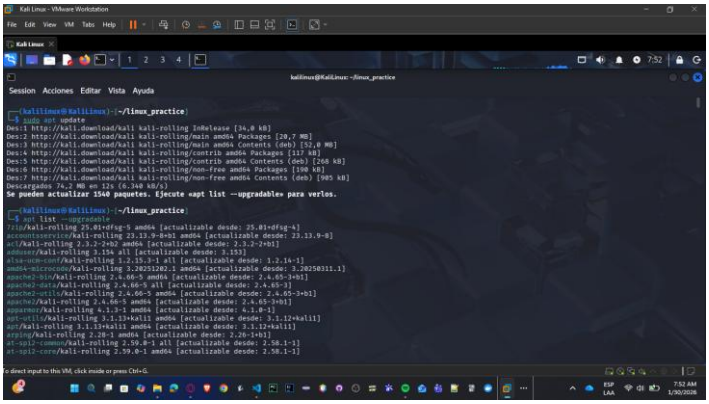


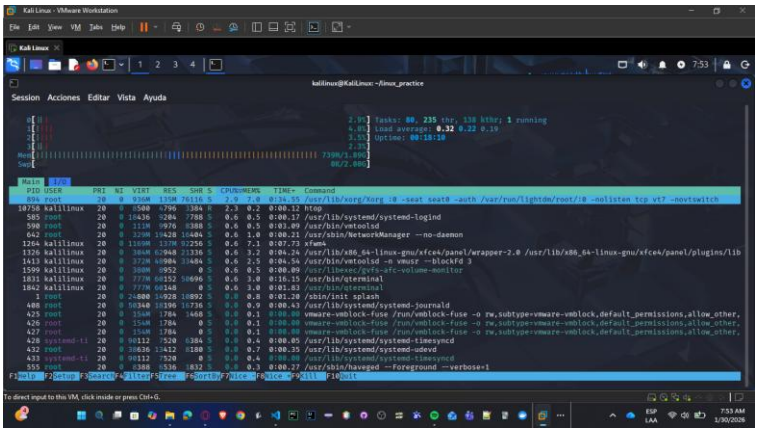
4. Package Management

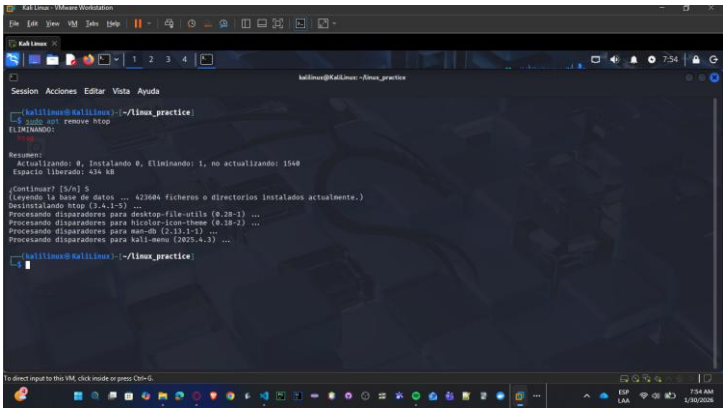
Andersson's images:



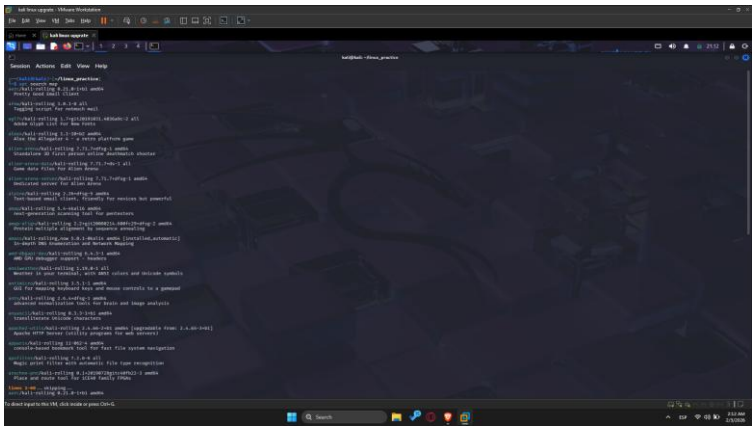






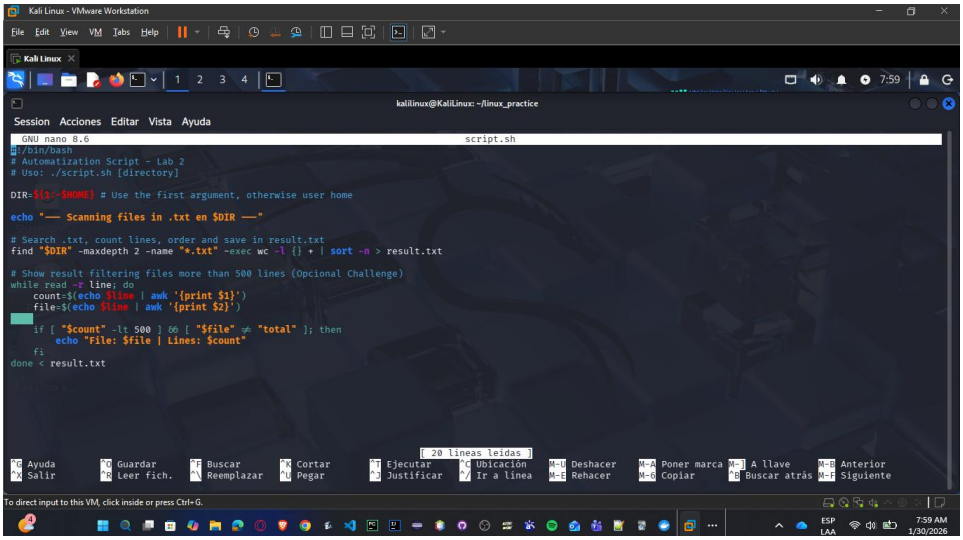


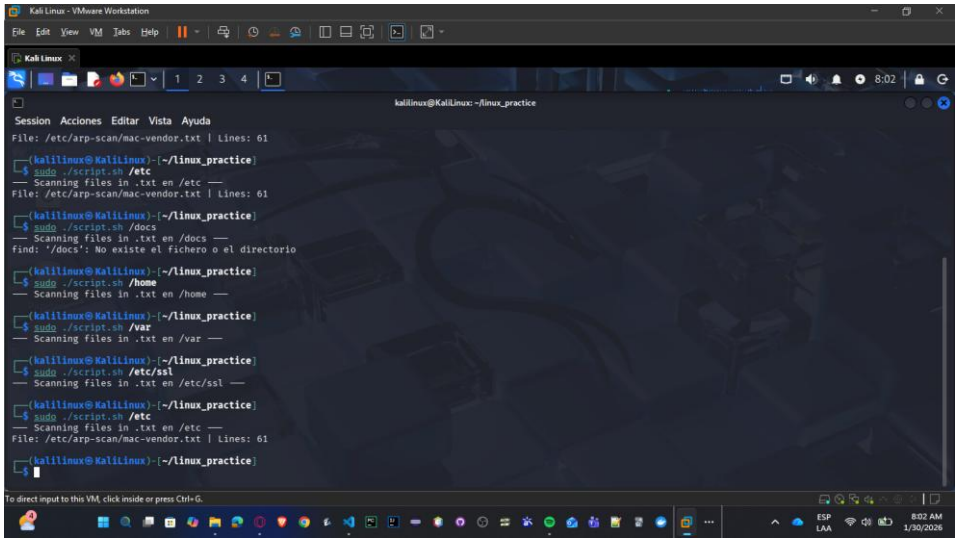
Cristian's images:

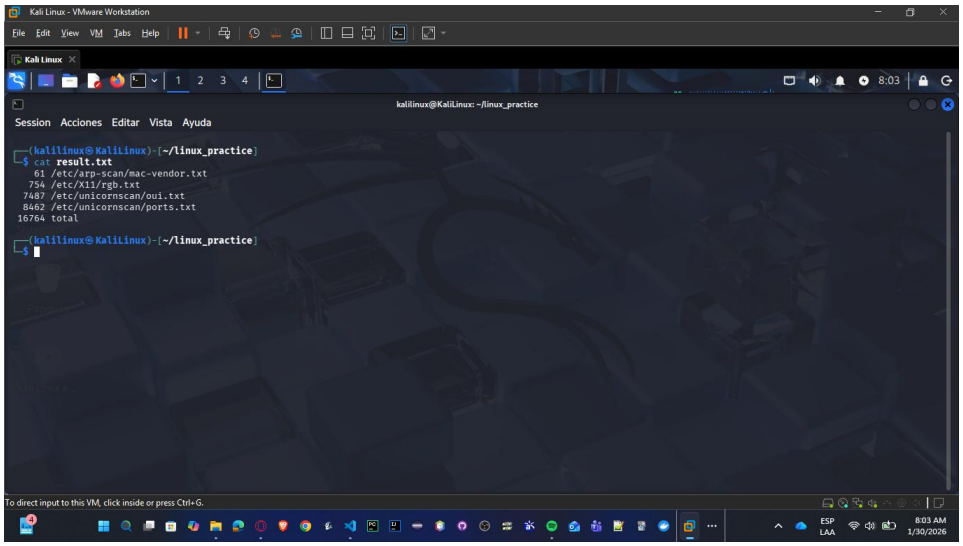
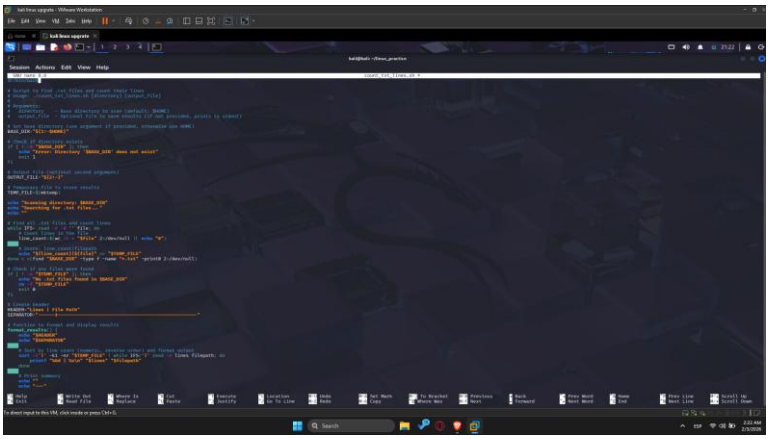
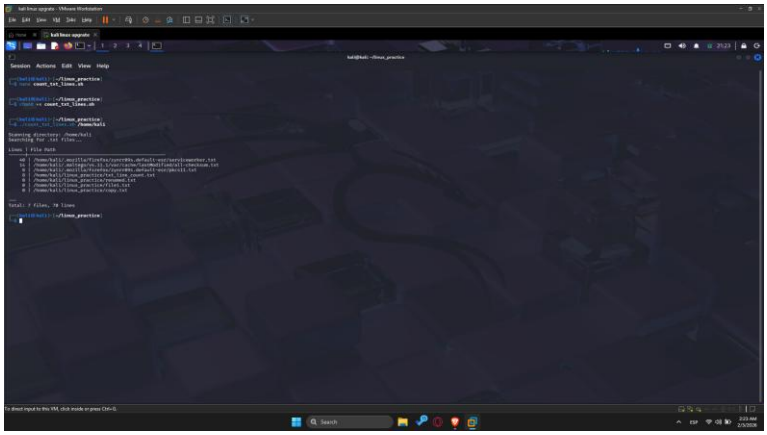


5. Automation with Bash

Andersson's images:







Cristian's images: