

```
top - 13:55:24 up 21 min, 1 user, load average: 0.00, 0.06, 0.11
Tasks: 160 total, 1 running, 159 sleeping, 0 stopped, 0 zombie
%Cpu(s): 50.0 us, 0.0 sy, 0.0 ni, 50.0 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 1966.8 total, 957.4 free, 717.3 used, 446.5 buff/cache
MiB Swap: 975.0 total, 975.0 free, 0.0 used. 1249.5 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1	root	20	0	0.0g	0.0g	0.0g	S	0.0	0.6	0:00.59	systemd
2	root	20	0	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.00	kthreadd
3	root	0	-20	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	rcu_gp
4	root	0	-20	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	rcu_par_gp
5	root	0	-20	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	slub_flushwq
6	root	0	-20	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	netns
9	root	20	0	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	kworker/u6:0-writeback
10	root	0	-20	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	mm_percpu_wq
11	root	20	0	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	rcu_tasks_kthread
12	root	20	0	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	rcu_tasks_rude_kthread
13	root	20	0	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	rcu_tasks_trace_kthread
14	root	20	0	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.02	ksoftirqd/0
15	root	20	0	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.21	rcu_preempt
16	root	rt	0	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.00	migration/0
17	root	-51	0	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.00	idle_inject/0
19	root	20	0	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.00	cpuhp/0
20	root	20	0	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.00	cpuhp/1
21	root	-51	0	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.00	idle_inject/1
22	root	rt	0	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.13	migration/1
23	root	20	0	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.03	ksoftirqd/1
25	root	0	-20	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	kworker/1:0H-events_highpri
26	root	20	0	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.00	cpuhp/2
27	root	-51	0	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.00	idle_inject/2
28	root	rt	0	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.13	migration/2
29	root	20	0	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.02	ksoftirqd/2
31	root	0	-20	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	kworker/2:0H-events_highpri
35	root	20	0	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.00	kdevtmpfs
36	root	0	-20	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	inet_frag_wq
37	root	20	0	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.00	kauditd
38	root	20	0	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.00	khungtaskd
39	root	20	0	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.00	oom_reaper
40	root	0	-20	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	writeback
41	root	20	0	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.02	kcompactd0
42	root	25	5	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.00	ksmd
44	root	39	19	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.04	khugepaged
45	root	0	-20	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	kintegrityd
46	root	0	-20	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	kblockd
47	root	0	-20	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	blkcg_punt_bio
48	root	0	-20	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	tpm_dev_wq
49	root	0	-20	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	edac-poller
50	root	0	-20	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	devfreq_wq
51	root	0	-20	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.01	kworker/2:1H-kblockd
52	root	20	0	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.00	kswapd0
58	root	0	-20	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	kthrotld
60	root	0	-20	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	acpi_thermal_pm
61	root	20	0	0.0g	0.0g	0.0g	S	0.0	0.0	0:00.00	xenbus_probe
62	root	0	-20	0.0g	0.0g	0.0g	I	0.0	0.0	0:00.00	mld

Terminal Emulator

File Action Use the command line

dan@Kali: ~

```
top - 13:56:09 up 22 min, 1 user, load average: 0.25, 0.12, 0.13
Tasks: 160 total, 1 running, 159 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.0 us, 0.0 sy, 0.0 ni,100.0 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 1966.8 total, 955.7 free, 719.0 used, 446.5 buff/cache
MiB Swap: 975.0 total, 975.0 free, 0.0 used. 1247.8 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
879	dan	20	0	0.0g	0.0g	0.0g	S	0.0	0.6	0:00.09	systemd
880	dan	20	0	0.0g	0.0g	0.0g	S	0.0	0.3	0:00.00	(sd-pam)
896	dan	9	-11	0.1g	0.0g	0.0g	S	0.0	0.8	0:00.02	pipewire
897	dan	20	0	0.1g	0.0g	0.0g	S	0.0	0.3	0:00.00	pipewire
899	dan	9	-11	0.5g	0.0g	0.0g	S	0.0	1.7	0:00.06	wireplumber
900	dan	9	-11	0.1g	0.0g	0.0g	S	0.0	0.4	0:00.01	pipewire-pulse
901	dan	20	0	0.0g	0.0g	0.0g	S	0.0	0.3	0:00.09	dbus-daemon
902	dan	20	0	0.3g	0.0g	0.0g	S	0.0	0.6	0:00.01	gnome-keyring-d
926	dan	20	0	0.3g	0.0g	0.0g	S	0.0	1.3	0:00.22	xfce4-session
977	dan	20	0	0.0g	0.0g	0.0g	S	0.0	0.1	0:00.00	VBoxClient
985	dan	20	0	0.0g	0.0g	0.0g	S	0.0	0.1	0:00.00	VBoxClient
989	dan	20	0	0.0g	0.0g	0.0g	S	0.0	0.1	0:00.00	VBoxClient
992	dan	20	0	0.2g	0.0g	0.0g	S	0.0	0.2	0:00.00	VBoxClient
999	dan	20	0	0.2g	0.0g	0.0g	S	0.0	0.2	0:00.54	VBoxClient
1001	dan	20	0	0.2g	0.0g	0.0g	S	0.0	0.1	0:00.75	VBoxClient
1013	dan	20	0	0.0g	0.0g	0.0g	S	0.0	0.1	0:00.00	ssh-agent
1023	dan	20	0	0.4g	0.0g	0.0g	S	0.0	0.5	0:00.00	at-spi-bus-laun
1033	dan	20	0	0.0g	0.0g	0.0g	S	0.0	0.2	0:00.03	dbus-daemon
1035	dan	20	0	0.0g	0.0g	0.0g	S	0.0	0.1	0:00.00	VBoxClient
1041	dan	20	0	0.2g	0.0g	0.0g	S	0.0	0.2	0:00.14	VBoxClient
1051	dan	20	0	0.2g	0.0g	0.0g	S	0.0	0.5	0:00.08	at-spi2-registr
1064	dan	20	0	0.1g	0.0g	0.0g	S	0.0	0.3	0:00.00	gpg-agent
1066	dan	20	0	1.1g	0.1g	0.1g	S	0.0	5.4	0:02.34	xfwm4
1070	dan	20	0	0.3g	0.0g	0.0g	S	0.0	0.6	0:00.00	gvfsd
1076	dan	20	0	0.4g	0.0g	0.0g	S	0.0	0.4	0:00.00	gvfsd-fuse
1097	dan	20	0	0.3g	0.0g	0.0g	S	0.0	1.5	0:00.20	xfsettingsd
1107	dan	20	0	0.5g	0.0g	0.0g	S	0.0	2.2	0:00.43	xfce4-panel
1112	dan	20	0	0.4g	0.0g	0.0g	S	0.0	1.3	0:00.05	Thunar
1118	dan	20	0	0.5g	0.1g	0.0g	S	0.0	3.0	0:00.89	xfdesktop
1122	dan	20	0	0.4g	0.0g	0.0g	S	0.0	2.4	0:00.18	panel-1-whisker
1126	dan	20	0	0.2g	0.0g	0.0g	S	0.0	1.0	0:00.05	xfce4-power-man
1132	dan	20	0	0.5g	0.0g	0.0g	S	0.0	2.5	0:00.10	nm-applet
1133	dan	20	0	0.3g	0.0g	0.0g	S	0.0	1.6	0:01.32	panel-13-cpugra
1134	dan	20	0	0.0g	0.0g	0.0g	S	0.0	0.1	0:00.01	xcape
1136	dan	20	0	0.4g	0.0g	0.0g	S	0.0	1.2	0:00.06	panel-14-systra
1137	dan	20	0	0.4g	0.0g	0.0g	S	0.0	1.4	0:01.78	panel-15-genmon
1138	dan	20	0	0.5g	0.0g	0.0g	S	0.0	2.1	0:00.08	panel-16-pulsea
1140	dan	20	0	0.5g	0.0g	0.0g	S	0.0	2.3	0:00.08	panel-17-notifi
1141	dan	20	0	0.4g	0.0g	0.0g	S	0.0	2.1	0:00.08	panel-18-power-
1148	dan	20	0	0.3g	0.0g	0.0g	S	0.0	0.4	0:00.02	xiccd
1158	dan	20	0	0.4g	0.0g	0.0g	S	0.0	2.1	0:00.08	panel-22-action
1159	dan	20	0	0.3g	0.0g	0.0g	S	0.0	0.5	0:00.00	agent
1193	dan	20	0	0.2g	0.0g	0.0g	S	0.0	0.9	0:00.01	polkit-gnome-au
1194	dan	20	0	0.4g	0.1g	0.0g	S	0.0	2.7	0:00.25	blueman-applet
1223	dan	20	0	0.3g	0.0g	0.0g	S	0.0	1.3	0:00.05	light-locker
1251	dan	20	0	0.2g	0.0g	0.0g	S	0.0	0.3	0:00.00	dconf-service
1283	dan	20	0	0.4g	0.0g	0.0g	S	0.0	1.0	0:00.08	xfce4-notifyd

Firefox ESR
Browse the World Wide Web

Trash



File System



Home



Epicode_Lab

Nelle slide sopra possiamo notare i processi attualmente attivi su Linux. Ho utilizzato il comando "top" per visualizzare i processi ed "u" per poter filtrare prima root e poi il profilo kali.

In questa slide invece ho creato una nuova cartella sul desktop con "mkdir", mi sono spostato nella cartella con "cd" e successivamente ho creato ed aperto il file "Esercizio.txt"

```
dan@Kali: ~/Desktop/Epicode_Lab
File Actions Edit View Help
(dan@Kali)~[~/Desktop]
$ mkdir Epicode_Lab
(dan@Kali)~[~/Desktop]
$ cd /home/dan/desktop/Epicode_Lab
cd: no such file or directory: /home/dan/desktop/Epicode_Lab
(dan@Kali)~[~/Desktop]
$ cd /home/dan/Desktop/Epicode_Lab
(dan@Kali)~[~/Desktop/Epicode_Lab]
$ nano Esercizio.txt
(dan@Kali)~[~/Desktop/Epicode_Lab]
$ nano Esercizio.txt
(dan@Kali)~[~/Desktop/Epicode_Lab]
$ cat
^Z
zsh: suspended cat
(dan@Kali)~[~/Desktop/Epicode_Lab]
$ cat Esercizio.txt
Ciao Epicode! :)
(dan@Kali)~[~/Desktop/Epicode_Lab]
$
```

In questa slide invece ho visualizzato e modificato i permessi dei vari utenti, utilizzando i comandi "ls -l" per visualizzare i permessi e "chmod" per modificarli.

Ho impostato "RWX" (Read Write Execute) per l'utente attuale, RW per il gruppo ed R per gli altri utenti.

Il file può quindi essere letto, modificato ed eseguito (nel caso di un file .exe) dal mio utente principale. Letto e modificato dal gruppo e solamente letto dagli altri utenti.

```
dan@Kali: ~/Desktop/Epicode_Lab
File Actions Edit View Help
(dan@Kali)~[~/Desktop/Epicode_Lab]
$ cat Esercizio.txt
Ciao Epicode! :)

(dan@Kali)~[~/Desktop/Epicode_Lab]
$ ls -la
total 12
drwxr-xr-x 2 dan dan 4096 Oct  3 14:06 .
drwxr-xr-x 3 dan dan 4096 Oct  3 14:01 ..
-rw-r--r-- 1 dan dan  17 Oct  3 14:06 Esercizio.txt

(dan@Kali)~[~/Desktop/Epicode_Lab]
$ ls -l
total 4
-rw-r--r-- 1 dan dan 17 Oct  3 14:06 Esercizio.txt

(dan@Kali)~[~/Desktop/Epicode_Lab]
$ chmod u+x Esercizio.txt

(dan@Kali)~[~/Desktop/Epicode_Lab]
$ ls -l
total 4
-rwxr--r-- 1 dan dan 17 Oct  3 14:06 Esercizio.txt

(dan@Kali)~[~/Desktop/Epicode_Lab]
$ chmod g+w Esercizio.txt

(dan@Kali)~[~/Desktop/Epicode_Lab]
$ chmod o+r Esercizio.txt

(dan@Kali)~[~/Desktop/Epicode_Lab]
$ ls -l
total 4
-rwxrw-r-- 1 dan dan 17 Oct  3 14:06 Esercizio.txt

(dan@Kali)~[~/Desktop/Epicode_Lab]
$
```



In questa slide ho creato un nuovo utente (non si vede dal terminale :) con il comando "useradd" e l'ho chiamato "dan2" per comodità. Ho switchato a quell utente per il proposito di testare i permessi utente.

Provando a leggere il file "Esercizio.txt" (con il comando "cat") il tutto funziona correttamente.

Ho successivamente eliminato file, directory e utente come richiesto dall'esercizio usando i seguenti comandi:

- "rm" per rimuovere il file
- "rmdir" per rimuovere la directory
- "userdel" per rimuovere l'utente

```
dan@Kali: ~/Desktop
File Actions Edit View Help
drwxr-xr-x 16 root root 4096 Sep 25 13:56 usr
drwxr-xr-x 12 root root 4096 Sep 25 13:55 var
lrwxrwxrwx 1 root root 30 Sep 25 13:52 vmlinuz → boot/vmlinuz-6.3.0-kali1-amd64
lrwxrwxrwx 1 root root 30 Sep 25 13:52 vmlinuz.old → boot/vmlinuz-6.3.0-kali1-amd64

(dan@Kali)-[/]
$ su dan2
Password:
su: Authentication failure

(dan@Kali)-[/]
$ su dan2
Password:
$ cat Esercizio.txt
Ciao Epicode! :)
$ su dan
Password:
(dan@Kali)-[/]
$ rm Esercizio.txt
rm: cannot remove 'Esercizio.txt': Permission denied

(dan@Kali)-[/]
$ sudo rm Esercizio.txt

(dan@Kali)-[/]
$ cd /home/dan/Desktop/Epicode_Lab

(dan@Kali)-[~/Desktop/Epicode_Lab]
$ rmdir /Epicode_Lab
rmdir: failed to remove '/Epicode_Lab': No such file or directory

(dan@Kali)-[~/Desktop/Epicode_Lab]
$ rmdir /home/dan/Desktop/Epicode_Lab

(dan@Kali)-[~/Desktop/Epicode_Lab]
$ cd /home/dan/Desktop
```