

## Lab 1

1. Use systemctl to view the status of all the system services.

```
nabila@nabila-HP-EliteBook-745-G3:~$ systemctl list-unit-files --type service
```

UNIT FILE	STATE	PRESET
accounts-daemon.service	enabled	enabled
alsa-restore.service	static	-
alsa-state.service	static	-
alsa-utils.service	masked	enabled
anacron.service	enabled	enabled
apparmor.service	enabled	enabled
apport-autoreport.service	static	-
apport-forward@.service	static	-
apport.service	generated	-
apt-daily-upgrade.service	static	-
apt-daily.service	static	-
autovt@.service	alias	-
avahi-daemon.service	enabled	enabled
bluetooth.service	enabled	enabled
bolt.service	static	-
brltty-udev.service	static	-
brltty.service	disabled	enabled
colord.service	static	-
configure-printer@.service	static	-
console-getty.service	disabled	disabled
console-setup.service	enabled	enabled
container-getty@.service	static	-
cron.service	enabled	enabled
cryptdisks-early.service	masked	enabled
cryptdisks.service	masked	enabled
cups-browsed.service	enabled	enabled
cups.service	enabled	enabled
dbus-fi.w1.wpa_supplicant1.service	alias	-
dbus-org.bluez.service	alias	-
dbus-org.freedesktop.Avahi.service	alias	-
dbus-org.freedesktop.hostname1.service	alias	-
dbus-org.freedesktop.locale1.service	alias	-
dbus-org.freedesktop.login1.service	alias	-
dbus-org.freedesktop.ModemManager1.service	alias	-
dbus-org.freedesktop.nm-dispatcher.service	alias	-
dbus-org.freedesktop.oom1.service	alias	-

2. Change the default run level back to multi-user.target and reboot.

```
Sun Feb 26 09:27:32 PM EET 2023
test>systemctl set-default multi-user.target

Removed "/etc/systemd/system/default.target".
Created symlink /etc/systemd/system/default.target → /usr/lib/systemd/system/multi-user.target.
test>
```

```
test>sudo reboot
```

3. Send mail to the root user.

```
nabila@nabila-HP-EliteBook-745-G3:~$ echo "test my first mail" | mail -s "test postfix" root
```

4. Verify that you have received this mail.

```
nabila@nabila-HP-EliteBook-745-G3:~$ sudo vi /var/spool/mail/root
```

```
From nabila@nabila-HP-EliteBook-745-G3 Sun Feb 26 22:00:23 2023
Return-Path: <nabila@nabila-HP-EliteBook-745-G3>
X-Original-To: root
Delivered-To: root@nabila-HP-EliteBook-745-G3
Received: by nabila-HP-EliteBook-745-G3 (Postfix, from userid 1000)
        id 567CE221621; Sun, 26 Feb 2023 22:00:23 +0200 (EET)
Subject: test postfix
To: root@nabila-HP-EliteBook-745-G3
User-Agent: mail (GNU Mailutils 3.15)
Date: Sun, 26 Feb 2023 22:00:23 +0200
Message-Id: <20230226200023.567CE221621@nabila-HP-EliteBook-745-G3>
From: Nabila <nabila@nabila-HP-EliteBook-745-G3>

test my first mail
```

5. Use systemctl utility to stop postfix service

```
nabila@nabila-HP-EliteBook-745-G3:~$ systemctl stop postfix
```

6. Send mail again to the root user.

```
nabila@nabila-HP-EliteBook-745-G3:~$ echo "test my second mail" | mail -s "test postfix after stop" root
```

7. Verify that you have received this mail.

Note :i didn't receive the second mail because I stop services in question number 5

```
From nabila@nabila-HP-EliteBook-745-G3 Sun Feb 26 22:00:23 2023
Return-Path: <nabila@nabila-HP-EliteBook-745-G3>
X-Original-To: root
Delivered-To: root@nabila-HP-EliteBook-745-G3
Received: by nabila-HP-EliteBook-745-G3 (Postfix, from userid 1000)
        id 567CE221621; Sun, 26 Feb 2023 22:00:23 +0200 (EET)
Subject: test postfix
To: root@nabila-HP-EliteBook-745-G3
User-Agent: mail (GNU Mailutils 3.15)
Date: Sun, 26 Feb 2023 22:00:23 +0200
Message-Id: <20230226200023.567CE221621@nabila-HP-EliteBook-745-G3>
From: Nabila <nabila@nabila-HP-EliteBook-745-G3>

test my first mail
```

8. Use systemctl utility to start postfix service

```
nabila@nabila-HP-EliteBook-745-G3:~$ systemctl start postfix
```

9. Verify that you have received this mail.

```
From nabila@nabila-HP-EliteBook-745-G3 Sun Feb 26 22:00:23 2023
Return-Path: <nabila@nabila-HP-EliteBook-745-G3>
X-Original-To: root
Delivered-To: root@nabila-HP-EliteBook-745-G3
Received: by nabila-HP-EliteBook-745-G3 (Postfix, from userid 1000)
        id 567CE221621; Sun, 26 Feb 2023 22:00:23 +0200 (EET)
Subject: test postfix
To: root@nabila-HP-EliteBook-745-G3
User-Agent: mail (GNU Mailutils 3.15)
Date: Sun, 26 Feb 2023 22:00:23 +0200
Message-Id: <20230226200023.567CE221621@nabila-HP-EliteBook-745-G3>
From: Nabila <nabila@nabila-HP-EliteBook-745-G3>
```

```
test my first mail
```

```
From nabila@nabila-HP-EliteBook-745-G3 Sun Feb 26 22:11:19 2023
Return-Path: <nabila@nabila-HP-EliteBook-745-G3>
X-Original-To: root
Delivered-To: root@nabila-HP-EliteBook-745-G3
Received: by nabila-HP-EliteBook-745-G3 (Postfix, from userid 1000)
        id 4AEE8221316; Sun, 26 Feb 2023 22:05:45 +0200 (EET)
Subject: test postfix after stop
To: root@nabila-HP-EliteBook-745-G3
User-Agent: mail (GNU Mailutils 3.15)
Date: Sun, 26 Feb 2023 22:05:45 +0200
Message-Id: <20230226201119.4AEE8221316@nabila-HP-EliteBook-745-G3>
From: Nabila <nabila@nabila-HP-EliteBook-745-G3>
```

```
test my second mail
```

10. Edit in the GRUB2 configuration file and change the timeout variable equal 20 seconds.

```
nabila@nabila-HP-EliteBook-745-G3:~$ sudo vi /etc/default/grub
```

```
GRUB_DEFAULT=0
GRUB_TIMEOUT_STYLE=hidden
GRUB_TIMEOUT=20
GRUB_DISTRIBUTOR=`lsb_release -i -s 2> /dev/null || echo Debian`
GRUB_CMDLINE_LINUX_DEFAULT="quiet splash"
GRUB_CMDLINE_LINUX=""
```

11. Edit in the GRUB2 configuration file and change your default operating system



```
GRUB_DEFAULT=0
GRUB_TIMEOUT_STYLE=hidden
```

12. Install a new printer called "tty12" using the system-config-printer utility. Have the printer queue be "/dev/tty12" and specify a "Text Only Printer" for its model type.

Showing 1 of 1 printer.

Queue Name	Description	Location	Make and Model	Status
tty12		lab1	Samsung C1810 Series PS	Idle

13. Print the file /etc/hosts to the printer and view the /dev/tty12 console to ensure that the print job went to the "printer".

```
nabila@nabila-HP-EliteBook-745-G3:~$ sudo vim /etc/default/grub
nabila@nabila-HP-EliteBook-745-G3:~$ lp -d tty12 /etc/hosts
request id is tty12-1 (1 file(s))
```

14. Prevent jobs from leaving the tty12 printer queue to the printer. Do not prevent users from sending jobs to the tty12 printer queue.

```
nabila@nabila-HP-EliteBook-745-G3:~$ /usr/bin/disable tty12
```

15. Print three files (/etc/hosts, /etc/xinetd.conf, and /etc/hosts.allow) to the tty12 printer

note:file number 2 throw an exception

```
lp: Error - unable to access /etc/xinetd.conf - No such file or directory
nabila@nabila-HP-EliteBook-745-G3:~$ lp -d tty12 /etc/hosts.allow
request id is tty12-4 (1 file(s))
```

```
nabila@nabila-HP-EliteBook-745-G3:~$ lp -d tty12 /etc/hosts
request id is tty12-3 (1 file(s))
nabila@nabila-HP-EliteBook-745-G3:~$ lp -d tty12 /etc/xinetd.conf
```

16. View the print queue.

```
lp: Specify the username to use for authentication
nabila@nabila-HP-EliteBook-745-G3:~$ lpq -a
Rank   Owner   Job     File(s)                Total Size
active nabila   1       hosts                  1024 bytes
1st     nabila   2       hosts                  1024 bytes
2nd     nabila   3       hosts                  1024 bytes
3rd     nabila   4       hosts.allow            1024 bytes
nabila@nabila-HP-EliteBook-745-G3:~$
```

17. Remove the second print job from the tty12 printer queue, and then allow the print jobs from the queue to be printed

```
nabila@nabila-HP-EliteBook-745-G3:~$ lprm -P tty12 2nd
```

```
nabila@nabila-HP-EliteBook-745-G3:~$ lpq -a
```

Rank	Owner	Job	File(s)	Total Size
active	nabila	1	hosts	1024 bytes
1st	nabila	3	hosts	1024 bytes
2nd	nabila	4	hosts.allow	1024 bytes

18. Prevent print jobs from going to the tty12 printer's print queue.

```
nabila@nabila-HP-EliteBook-745-G3:~$ cupsreject tty12
```

19. Verify this by trying to print the /etc/hosts file.

20. Delete the tty12 printer with the lpadmin command.

```
nabila@nabila-HP-EliteBook-745-G3:~$ lpadmin -x tty12
```

21. You want to know some information about the status of the system every ten minutes today between the hours of 8:00 AM and 5:00 PM. to help investigate some performance issues you have been having. You suspect it might be memory related and want to keep an eye on those resources.

Answer : \*/10 8-17 \* \* \*

```
nabila@nabila-HP-EliteBook-745-G3:~$ crontab -e
```

```
##
# m h dom mon dow   command
*/10 8-17 * * * systemctl status
```

```
nabila@nabila-HP-EliteBook-745-G3:~$ crontab -e
no crontab for nabila - using an empty one

Select an editor. To change later, run 'select-editor'.
 1. /bin/nano      <---- easiest
 2. /usr/bin/vim.basic
 3. /usr/bin/vim.tiny
 4. /bin/ed

Choose 1-4 [1]: 1
crontab: installing new crontab
nabila@nabila-HP-EliteBook-745-G3:~$
```

22. Use mail as the root user to check for e-mail from the cron jobs you have scheduled.

```
nabila@nabila-HP-EliteBook-745-G3:~$ mail
"/var/mail/nabila": 11 messages 11 new
>N 1 Cron Daemon      Mon Feb 27 09:00 18/719 Cron <nabila@nabila-HP-EliteBook-745-G3> systeminfo
N 2 Cron Daemon      Mon Feb 27 09:10 18/719 Cron <nabila@nabila-HP-EliteBook-745-G3> systeminfo
N 3 Cron Daemon      Mon Feb 27 09:20 18/719 Cron <nabila@nabila-HP-EliteBook-745-G3> systeminfo
N 4 Cron Daemon      Mon Feb 27 09:30 18/719 Cron <nabila@nabila-HP-EliteBook-745-G3> systeminfo
N 5 Cron Daemon      Mon Feb 27 09:40 18/719 Cron <nabila@nabila-HP-EliteBook-745-G3> systeminfo
N 6 Cron Daemon      Mon Feb 27 09:50 18/719 Cron <nabila@nabila-HP-EliteBook-745-G3> systeminfo
N 7 Cron Daemon      Mon Feb 27 10:00 18/719 Cron <nabila@nabila-HP-EliteBook-745-G3> systeminfo
N 8 Cron Daemon      Mon Feb 27 10:10 18/719 Cron <nabila@nabila-HP-EliteBook-745-G3> systeminfo
N 9 Cron Daemon      Mon Feb 27 10:20 18/719 Cron <nabila@nabila-HP-EliteBook-745-G3> systeminfo
N 10 Cron Daemon     Mon Feb 27 10:30 18/719 Cron <nabila@nabila-HP-EliteBook-745-G3> systeminfo
N 11 Cron Daemon     Mon Feb 27 10:40 18/719 Cron <nabila@nabila-HP-EliteBook-745-G3> systeminfo
```

23. How could you send the output from these cron jobs to another e-mail address (the manager user)?

```
GNU nano 0.4 /tmp/crontab.q2ymab/crontab
MAILTO=systemmanager
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
```

24. Use mail as the manager user to check for e-mail from the cron jobs you have scheduled.

```
crontab: installing new crontab
nabila@nabila-HP-EliteBook-745-G3:~$ su systemmanager
Password:
$ mail
"/var/mail/systemmanager": 1 message 1 new
>N 1 Cron Daemon      332/43516 :12 27 فبراير Cron <nabila@nabila-HP-EliteBook-745-G3> systemctl status
?
```