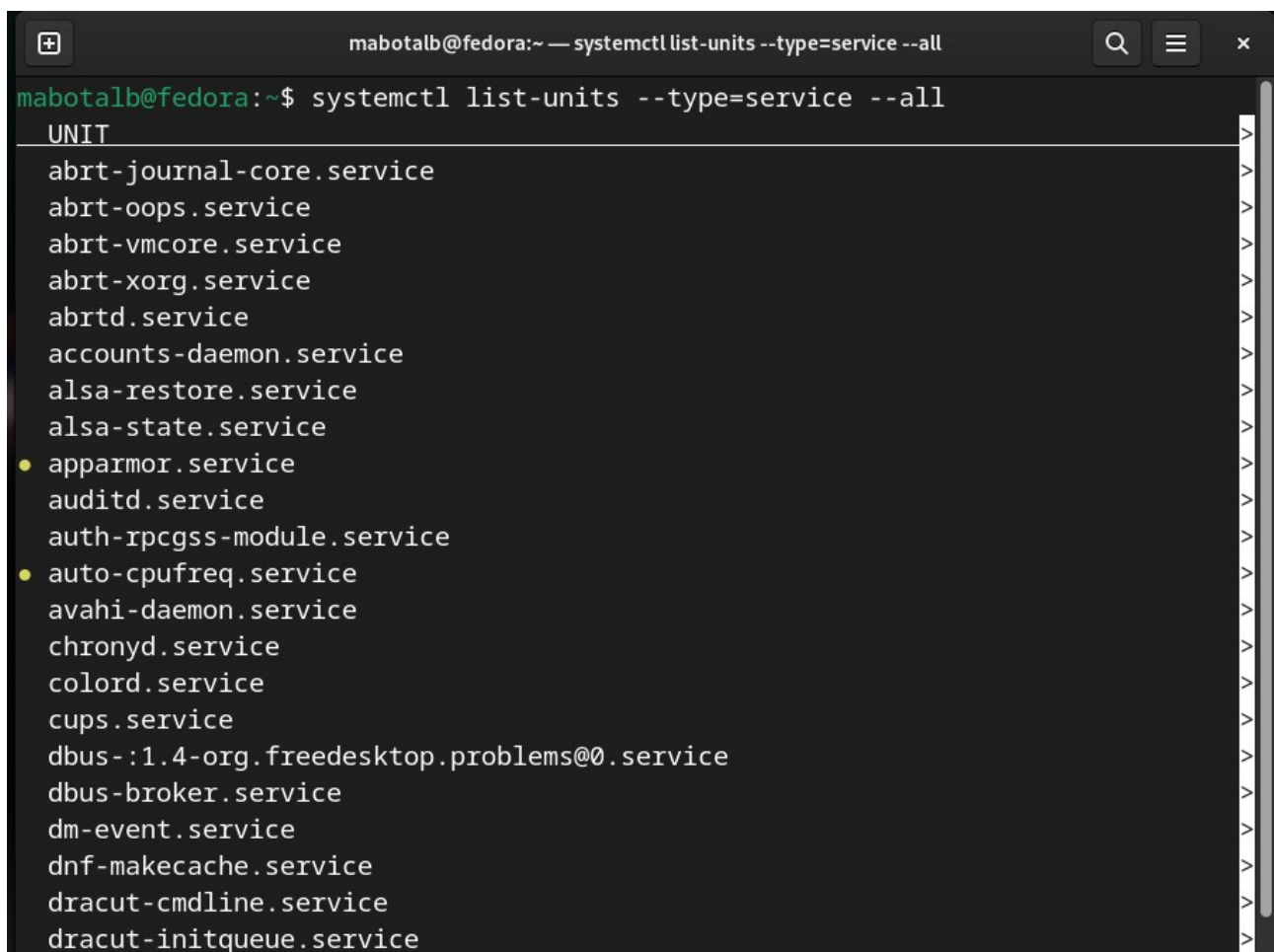


# Advanced Admin 1 – Lab 1

## Mohamed Abd Elaziz Abotalb

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

=> systemctl list-units --type=service --all



```
mabotalb@fedora:~$ systemctl list-units --type=service --all
UNIT
abrt-journal-core.service
abrt-oops.service
abrt-vmcore.service
abrt-xorg.service
abrttd.service
accounts-daemon.service
alsa-restore.service
alsa-state.service
● apparmor.service
auditd.service
auth-rpcgss-module.service
● auto-cpufreq.service
avahi-daemon.service
chronyd.service
colord.service
cups.service
dbus-:1.4-org.freedesktop.problems@0.service
dbus-broker.service
dm-event.service
dnf-makecache.service
dracut-cmdline.service
dracut-initqueue.service
```

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

=> systemctl set-default multi-user.target

=> sudo reboot

```
mabotalb@fedora:~$ systemctl get-default
graphical.target
mabotalb@fedora:~$ 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.
mabotalb@fedora:~$ sudo reboot
```

```
Fedora Linux 39 (Workstation Edition)
Kernel 6.5.6-300.fc39.x86_64 on an x86_64 (tty1)

fedora login: mabotalb
Password:
Last login: Thu Jan 25 21:28:03 on tty2
[mabotalb@fedora ~]$ _
```

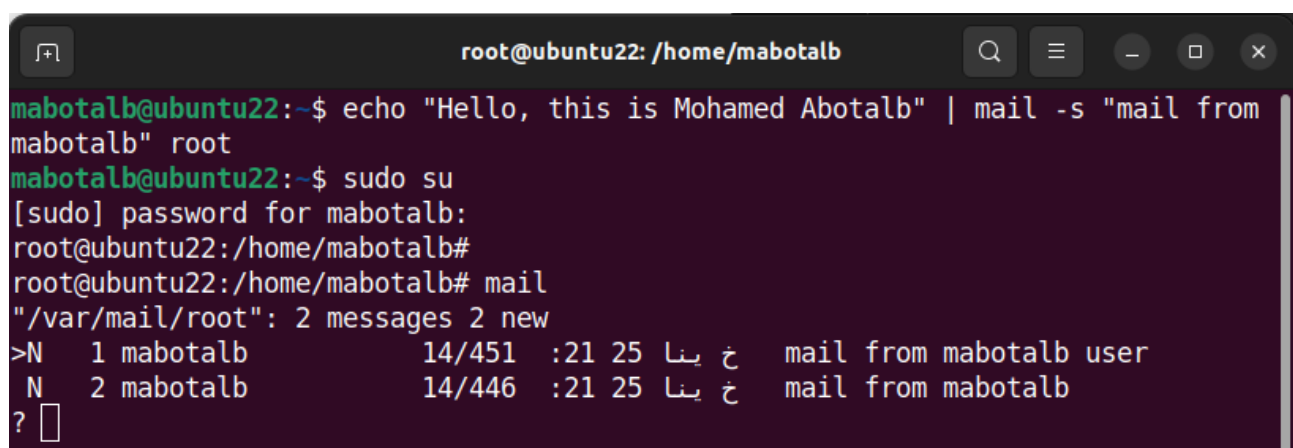
### 3. Send mail to the root user.

=> echo "Hello, This is Mohamed Abotalb" | mail -s "mabotalb user mail" root

### 4. Verify that you have received this mail.

=> sudo su

=> mail

A terminal window titled 'root@ubuntu22: /home/mabotalb' with standard window controls. The terminal shows the following commands and output:

```
mabotalb@ubuntu22:~$ echo "Hello, this is Mohamed Abotalb" | mail -s "mail from mabotalb" root
mabotalb@ubuntu22:~$ sudo su
[sudo] password for mabotalb:
root@ubuntu22:~# mail
"/var/mail/root": 2 messages 2 new
>N 1 mabotalb      14/451  :21 25 خ ينا  mail from mabotalb user
  N 2 mabotalb      14/446  :21 25 خ ينا  mail from mabotalb
? [ ]
```

## 5. Use systemctl utility to stop postfix service

=> sudo systemctl stop postfix

```
mabotalb@ubuntu22: ~  
mabotalb@ubuntu22:~$ sudo systemctl stop postfix  
mabotalb@ubuntu22:~$  
mabotalb@ubuntu22:~$  
mabotalb@ubuntu22:~$ systemctl status postfix  
○ postfix.service - Postfix Mail Transport Agent  
   Loaded: loaded (/lib/systemd/system/postfix.service; enabled; vendor prese  
   Active: inactive (dead) since Thu 2024-01-25 22:12:44 EET; 1min 18s ago  
   Docs: man:postfix(1)  
   Process: 2365 ExecStart=/bin/true (code=exited, status=0/SUCCESS)  
   Process: 57849 ExecReload=/bin/true (code=exited, status=0/SUCCESS)  
   Main PID: 2365 (code=exited, status=0/SUCCESS)  
   CPU: 2ms  
  
15:17:56 25 ينا ubuntu22 systemd[1]: Reloading Postfix Mail Transport Agent...  
15:17:56 25 ينا ubuntu22 systemd[1]: Reloaded Postfix Mail Transport Agent.  
15:17:56 25 ينا ubuntu22 systemd[1]: Reloading Postfix Mail Transport Agent...  
15:17:56 25 ينا ubuntu22 systemd[1]: Reloaded Postfix Mail Transport Agent.  
19:58:56 25 ينا ubuntu22 systemd[1]: Reloading Postfix Mail Transport Agent...  
19:58:56 25 ينا ubuntu22 systemd[1]: Reloaded Postfix Mail Transport Agent.  
19:58:56 25 ينا ubuntu22 systemd[1]: Reloading Postfix Mail Transport Agent...  
19:58:56 25 ينا ubuntu22 systemd[1]: Reloaded Postfix Mail Transport Agent.  
22:12:44 25 ينا ubuntu22 systemd[1]: postfix.service: Deactivated successfully.  
22:12:44 25 ينا ubuntu22 systemd[1]: Stopped Postfix Mail Transport Agent.  
lines 1-19/19 (END)
```

## 6. Send mail again to the root user.

=> echo "Hello, Postfix is Disabled" | mail -s "Postfix is Disabled" root

## 7. Verify that you have received this mail.

=> mail wasn't sent

```
root@ubuntu22: /home/mabotalb
mabotalb@ubuntu22:~$ echo "Hello, postfix service is disabled" | mail -s "Postfix is Disabled" root
mabotalb@ubuntu22:~$
mabotalb@ubuntu22:~$
mabotalb@ubuntu22:~$ sudo su
root@ubuntu22:/home/mabotalb# mail
"/var/mail/root": 2 messages 2 new
>N 1 mabotalb      16/504 :21 25 خينا  mail from mabotalb user
N 2 mabotalb      15/455 :21 25 خينا  mail from mabotalb
? 
```

## 8. Use systemctl utility to start postfix service

=> sudo systemctl start postfix

```
mabotalb@ubuntu22: ~
mabotalb@ubuntu22:~$ sudo systemctl start postfix
[sudo] password for mabotalb:
mabotalb@ubuntu22:~$ sudo systemctl status postfix
● postfix.service - Postfix Mail Transport Agent
   Loaded: loaded (/lib/systemd/system/postfix.service; enabled; vendor prese
   Active: active (exited) since Thu 2024-01-25 22:21:48 EET; 10s ago
     Docs: man:postfix(1)
   Process: 67646 ExecStart=/bin/true (code=exited, status=0/SUCCESS)
    Main PID: 67646 (code=exited, status=0/SUCCESS)
      CPU: 1ms

22:21:48 25 خينا ubuntu22 systemd[1]: Starting Postfix Mail Transport Agent...
22:21:48 25 خينا ubuntu22 systemd[1]: Finished Postfix Mail Transport Agent.
lines 1-10/10 (END)
```

9. Verify that you have received this mail.

```
root@ubuntu22: /home/mabotalb
mabotalb@ubuntu22:~$ sudo su
root@ubuntu22:/home/mabotalb# mail
"/var/mail/root": 3 messages 3 new
>N 1 mabotalb      16/504  :21 25 خ ينا mail from mabotalb user
  N 2 mabotalb      15/455  :21 25 خ ينا mail from mabotalb
  N 3 mabotalb      14/451  :22 25 خ ينا Postfix is Disabled
```

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

```
mabotalb@fedora:~$ sudo gedit /etc/default/grub
(gedit:3098): Gtk-WARNING **: 22:32:50.249: Calling org.freedesktop.portal.Inhibit.Inhibit failed: GDBus.Error:org.freedesktop.DBus.Error.UnknownMethod: No such interface "org.freedesktop.portal.Inhibit" on object at path /org/freedesktop/portal/desktop
mabotalb@fedora:~$ cat /etc/default/grub
GRUB_TIMEOUT=20
GRUB_DISTRIBUTOR="$(sed 's, release .*$,,g' /etc/system-release)"
GRUB_DEFAULT=saved
GRUB_DISABLE_SUBMENU=true
GRUB_TERMINAL_OUTPUT="console"
GRUB_CMDLINE_LINUX="rhgb quiet"
GRUB_DISABLE_RECOVERY="true"
GRUB_ENABLE_BLSCFG=true
mabotalb@fedora:~$
```

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

```
mabotalb@fedora:~$ sudo gedit /etc/default/grub

(gedit:3138): Gtk-WARNING **: 22:35:56.300: Calling org.freedesktop.portal.Inhibit.Inhibit failed: GDBus.Error:org.freedesktop.DBus.Error.UnknownMethod: No such interface "org.freedesktop.portal.Inhibit" on object at path /org/freedesktop/portal/desktop
mabotalb@fedora:~$ cat /etc/default/grub
GRUB_TIMEOUT=20
GRUB_DISTRIBUTOR="$(sed 's, release .*$,,g' /etc/system-release)"
GRUB_DEFAULT="fedora"
GRUB_DISABLE_SUBMENU=true
GRUB_TERMINAL_OUTPUT="console"
GRUB_CMDLINE_LINUX="rhgb quiet"
GRUB_DISABLE_RECOVERY="true"
GRUB_ENABLE_BLSCFG=true
mabotalb@fedora:~$
```

12. 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.

```
mabotalb@ubuntu22: ~$ crontab -e
crontab: installing new crontab
mabotalb@ubuntu22:~$ crontab -l
# m h dom mon dow   command
*/10 8-17 * * * systemctl status >> /home/mabotalb/system_status
mabotalb@ubuntu22:~$
```

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

```
mabotalb@ubuntu22: ~  
mabotalb@ubuntu22:~$ crontab -e  
crontab: installing new crontab  
mabotalb@ubuntu22:~$ crontab -l  
# m h dom mon dow   command  
*/10 8-17 * * * systemctl status >> /home/mabotalb/system_status  
* * * * * mail -s "System Status" root  
mabotalb@ubuntu22:~$
```

```
root@ubuntu22: /home/mabotalb  
mabotalb@ubuntu22:~$ sudo su  
[sudo] password for mabotalb:  
root@ubuntu22:/home/mabotalb# mail  
"/var/mail/root": 4 messages 4 new  
>N 1 mabotalb 16/504 :21 25 خ بـا خ mail from mabotalb user  
N 2 mabotalb 15/455 :21 25 خ بـا خ mail from mabotalb  
N 3 mabotalb 14/451 :22 25 خ بـا خ Postfix is Disabled  
N 4 mabotalb 13/410 :23 25 خ بـا خ System Status  
?
```

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

```
mabotalb@ubuntu22: /home/ahmed  
mabotalb@ubuntu22:/home/ahmed$ crontab -e  
crontab: installing new crontab  
mabotalb@ubuntu22:/home/ahmed$ crontab -l  
# m h dom mon dow   command  
*/10 8-17 * * * systemctl status >> /home/mabotalb/system_status  
* * * * * mail -s "System Status" root  
* * * * * echo "Message to manager Ahmed from mabotalb" | mail -s "Jobs Scheduled" ahmed  
mabotalb@ubuntu22:/home/ahmed$
```



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

```
ahmed@ubuntu22: ~  
mabotalb@ubuntu22:~$ su ahmed  
Password:  
ahmed@ubuntu22:/home/mabotalb$ cd ~  
ahmed@ubuntu22:~$ mail  
"/var/mail/ahmed": 1 message 1 new  
>N 1 mabotalb 14/453 :23 25 خ ينا Jobs Scheduled  
? 
```