

fase 1, analisis de servicio de sistemas

Listar todos los servicios activos del sistema usando systemctl list-units --

type=service.

```
postfix.service
postfix@-.service
rsyslog.service
setvtrgb.service
snapd.apparmor.service
snapd.seeded.service
sysstat.service
systemd-binfmt.service
systemd-fsck@dev-disk-by\x2duuid-5f6d24d2\x2dc728\x2d
systemd-journal-flush.service
systemd-journald.service
systemd-logind.service
systemd-modules-load.service
systemd-networkd-wait-online.service
systemd-networkd.service
systemd-random-seed.service
systemd-remount-fs.service
systemd-resolved.service
systemd-sysctl.service
systemd-timesyncd.service
systemd-tmpfiles-setup-dev-early.service
systemd-tmpfiles-setup-dev.service
systemd-tmpfiles-setup.service
systemd-udev-trigger.service
systemd-udevvd.service
systemd-update-utmp.service
systemd-user-sessions.service
udisks2.service
```

Identificar y documentar 3 servicios activos fundamentales, ssh, cron, networking

```
[sudo] password for oscar:
sudo: /etc/ssh/sshd_config: command not found
oscar@srv-base-oscarhernandez:~$ sudo systemctl status ssh
* ssh.service - OpenBSD Secure Shell server
   Loaded: loaded (/usr/lib/systemd/system/ssh.service; disabled; preset: enabled)
   Active: inactive (dead)
   TriggeredBy: ● ssh.socket
   Docs: man:sshd(8)
          man:sshd_config(5)
```

cron

```

sudo] password for oscar:
sudo: /etc/ssh/sshd_config: command not found
oscar@srv-base-oscarhernandez:~$ sudo systemctl status ssh
ssh.service - OpenBSD Secure Shell server
   Loaded: loaded (/usr/lib/systemd/system/ssh.service; disabled; preset: enabled)
   Active: inactive (dead)
TriggeredBy: ● ssh.socket
   Docs: man:sshd(8)
        man:sshd_config(5)
oscar@srv-base-oscarhernandez:~$ sudo systemctl status cron
cron.service - Regular background program processing daemon
   Loaded: loaded (/usr/lib/systemd/system/cron.service; enabled; preset: enabled)
   Active: active (running) since Mon 2025-06-23 16:57:55 CEST; 12min ago
   Docs: man:cron(8)
  Main PID: 990 (cron)
    Tasks: 1 (limit: 2267)
   Memory: 460.0K (peak: 1.9M)
      CPU: 71ms
   CGroup: /system.slice/cron.service
           └─990 /usr/sbin/cron -f -P

un 23 16:57:55 srv-base-oscarhernandez systemd[1]: Started cron.service - Regular background program processing daemon
un 23 16:57:55 srv-base-oscarhernandez (cron)[990]: cron.service: Referenced but unset environment variable evaluates to
un 23 16:57:55 srv-base-oscarhernandez cron[990]: (CRON) INFO (pidfile fd = 3)
un 23 16:57:55 srv-base-oscarhernandez cron[990]: (CRON) INFO (Running @reboot jobs)
un 23 17:05:01 srv-base-oscarhernandez CRON[1634]: pam_unix(cron:session): session opened for user root(uid=0) by root
un 23 17:05:01 srv-base-oscarhernandez CRON[1635]: (root) CMD (command -v debian-sa1 > /dev/null && debian-sa1 1 1)
un 23 17:05:01 srv-base-oscarhernandez CRON[1634]: pam_unix(cron:session): session closed for user root

```

networking

```

srv-base-oscarhernandez
   State: running
  Units: 448 loaded (incl. loaded aliases)
   Jobs: 1 queued
Failed: 0 units
 Since: Mon 2025-06-23 16:57:48 CEST; 14min ago
systemd: 255.4-1ubuntu8.8
  CGroup: /
          └─init.scope
              └─1 /sbin/init
                  └─system.slice
                      ├─ModemManager.service
                      │   └─929 /usr/sbin/ModemManager
                      ├─apache2.service
                      │   ├──1027 /usr/sbin/apache2 -k start
                      │   ├──1032 /usr/sbin/apache2 -k start
                      │   └─1033 /usr/sbin/apache2 -k start
                      ├─auditd.service
                      │   └─560 /sbin/auditd
                      ├─cron.service
                      │   └─990 /usr/sbin/cron -f -P
                      ├─dbus.service
                      │   └─771 @dbus-daemon --system --address=systemd: --nofork --nopidfile --systemd-activation --syslog-only
                      ├─multipathd.service
                      │   └─364 /sbin/multipathd -d -s
                      ├─networkd-dispatcher.service
                      │   └─803 /usr/bin/python3 /usr/bin/networkd-dispatcher --run-startup-triggers
                      └─polkit.service
                          └─809 /usr/lib/polkit-1/polkitd --no-debug

```

Fase 2: Gestión avanzada de servicios con Systemd

Detener, reiniciar y habilitar al arranque el servicio web apache2

para detener se utiliza **sudo systemctl stop apache2**

para habilitar el servicio **sudo systemctl enabled apache2**

para reiniciar **sudo systemctl restart apache2**

para reiniciar automaticamente apache 2 si falla hay que añadir una linea en su directorio

```

[service]
restart=alway

```

Crear un alias para reiniciar rápidamente el servicio desde .bashrc o .zshrc.

```
# enable programmable completion features (you don't need to enable
# this, if it's already enabled in /etc/bash.bashrc and /etc/profile
# sources /etc/bash.bashrc).
if ! shopt -oq posix; then
  if [ -f /usr/share/bash-completion/bash_completion ]; then
    . /usr/share/bash-completion/bash_completion
  elif [ -f /etc/bash_completion ]; then
    . /etc/bash_completion
  fi
fi
alias restart-apache='sudo systemctl restart apache2'
```

fase 3, creación de un servicio personalizado.

Crear un script Bash llamado saludo.sh que escriba "¡Servidor iniciado correctamente!" en un archivo /var/log/saludo.log.

primero creamos el archivo /var/log/saludo.log

```
oscar@srv-base-oscarhernandez:~$ ls
oscar@srv-base-oscarhernandez:~$ cd /var
oscar@srv-base-oscarhernandez:/var$ ls
backups  cache  crash  lib  local  lock  log  mail  opt  run  snap  spool  tmp  www
oscar@srv-base-oscarhernandez:/var$ cd log
oscar@srv-base-oscarhernandez:/var/log$ ls
alternatives.log  audit  cloud-init.log  dmesg.0  dmesg.4.gz  journal  mail.log  syslog
apache2          auth.log  cloud-init-output.log  dmesg.1.gz  dpkg.log  kern.log  private  sysstat
appport.log      bootstrap.log  dist-upgrade  dmesg.2.gz  faillog  landscape  README  ubuntu-advantage
apt             bttmp  dmesg          dmesg.3.gz  installer  lastlog  saludo.log  ufw.log
oscar@srv-base-oscarhernandez:/var/log$ cd saludo.log
-bash: cd: saludo.log: Not a directory
oscar@srv-base-oscarhernandez:/var/log$ _
```

despues se crea el archivo [saludo.sh](#) y se modifica.

```
GNU nano 7.2
#!/bin/bash
echo "servidor iniciado correctamente" >> /var/log/saludo.log
```

comprobación

```
oscar@srv-base-oscarhernandez:/var/log$ sudo cat /var/log/saludo.log
servidor iniciado crrectamente
oscar@srv-base-oscarhernandez:/var/log$ _
```

Crear un nuevo **servicio de systemd** llamado saludo.service que ejecute ese script automáticamente al iniciar el sistema.

```
oscar@srv-base-oscarhernandez:~$ cat /etc/systemd/system/saludo.service
[Unit]
Description=Saludo
After=network.target

[Service]
Type=oneshot
ExecStart=/bin/bash -c 'echo "servidor iniciado correctamente" >> /var/log/saludo.log'

[Install]
WantedBy=multi-user.target

oscar@srv-base-oscarhernandez:~$ systemctl daemon-reload
oscar@srv-base-oscarhernandez:~$ systemctl start saludo.service
oscar@srv-base-oscarhernandez:~$ cat /var/log/saludo.log
servicio iniciado
servidor iniciado correctamente
servicio finalizado
oscar@srv-base-oscarhernandez:~$
```

crear el logs

```
[sudo] password for oscar:
oscar@srv-base-oscarhernandez:~$ sudo cat /var/log/saludo.log
Servicio iniciado
servidor iniciado correctamente
servicio finalizado
oscar@srv-base-oscarhernandez:~$
```

fase 4, monitorización de logs

visualizar los logs

```

jun 23 19:12:02 srv-base-oscarhernandez systemd[1]: Started saludo.service - Servicio de saludo.
jun 23 19:12:02 srv-base-oscarhernandez systemd[1]: saludo.service: Deactivated successfully.
jun 23 19:12:02 srv-base-oscarhernandez systemd[1]: saludo.service: Scheduled restart job, restart counter is at 1.
jun 23 19:12:02 srv-base-oscarhernandez systemd[1]: Started saludo.service - Servicio de saludo.
jun 23 19:12:02 srv-base-oscarhernandez systemd[1]: saludo.service: Deactivated successfully.
jun 23 19:12:02 srv-base-oscarhernandez systemd[1]: saludo.service: Scheduled restart job, restart counter is at 2.
jun 23 19:12:02 srv-base-oscarhernandez systemd[1]: Started saludo.service - Servicio de saludo.
jun 23 19:12:02 srv-base-oscarhernandez systemd[1]: saludo.service: Deactivated successfully.
jun 23 19:12:02 srv-base-oscarhernandez systemd[1]: saludo.service: Scheduled restart job, restart counter is at 3.
jun 23 19:12:02 srv-base-oscarhernandez systemd[1]: Started saludo.service - Servicio de saludo.
jun 23 19:12:03 srv-base-oscarhernandez systemd[1]: saludo.service: Deactivated successfully.
jun 23 19:12:03 srv-base-oscarhernandez systemd[1]: saludo.service: Scheduled restart job, restart counter is at 4.
jun 23 19:12:03 srv-base-oscarhernandez systemd[1]: Started saludo.service - Servicio de saludo.
jun 23 19:12:03 srv-base-oscarhernandez systemd[1]: saludo.service: Deactivated successfully.
jun 23 19:12:03 srv-base-oscarhernandez systemd[1]: saludo.service: Scheduled restart job, restart counter is at 5.

```

estado

```

oscar@srv-base-oscarhernandez:~$ sudo system status saludo.service
sudo: system: command not found
oscar@srv-base-oscarhernandez:~$ sudo systemctl status saludo.service
* saludo.service - Servicio de saludo
   Loaded: loaded (/etc/systemd/system/saludo.service; disabled; preset: enabled)
   Active: inactive (dead)

jun 23 21:45:50 srv-base-oscarhernandez systemd[1]: /etc/systemd/system/saludo.service
jun 23 21:45:50 srv-base-oscarhernandez systemd[1]: /etc/systemd/system/saludo.service

```

filtrar los errores journalctl -p 3 -xb

```

oscar@srv-base-oscarhernandez:~$ sudo journalctl -p 3 -xb
jun 23 21:43:02 srv-base-oscarhernandez kernel: RETbleed: WARNING: Spectre v2 mitigat
jun 23 21:43:02 srv-base-oscarhernandez systemd[1]: Invalid DMI field header.
jun 23 21:43:03 srv-base-oscarhernandez kernel: vmwgfx 0000:00:02.0: [drm] *ERROR* vm
jun 23 21:43:03 srv-base-oscarhernandez kernel: vmwgfx 0000:00:02.0: [drm] *ERROR* Th
jun 23 21:43:03 srv-base-oscarhernandez kernel: vmwgfx 0000:00:02.0: [drm] *ERROR* Pl
jun 23 21:43:11 srv-base-oscarhernandez login[1038]: PAM unable to dlopen(pam_lastlog
jun 23 21:43:11 srv-base-oscarhernandez login[1038]: PAM adding faulty module: pam_la
lines 1-7/7 (END)

```