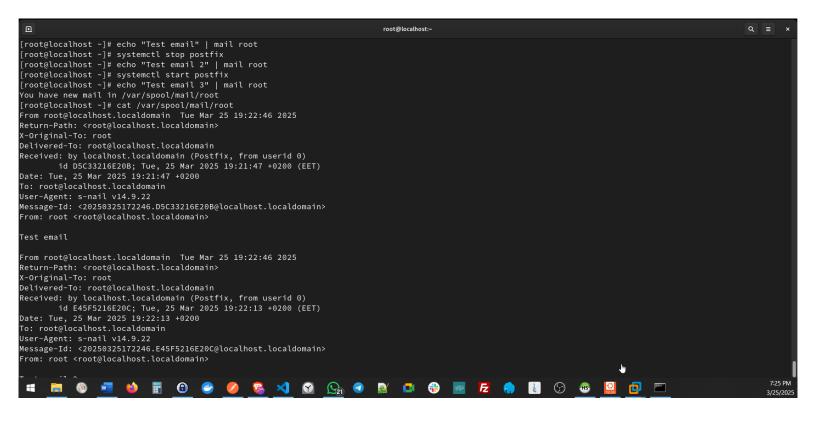
Cloud Platform Development

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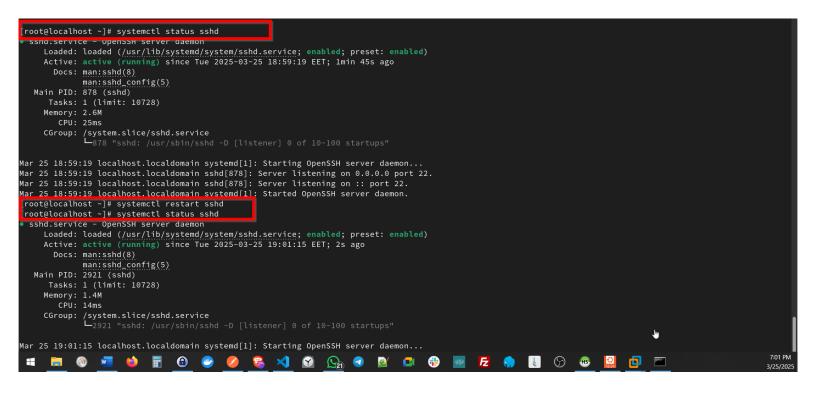


[root@localhost ~]# sudo systemctl l	ist-unitstype=service
UNIT	LOAD ACTIVE SUB DESCRIPTION
accounts-daemon.service	loaded active running Accounts Service
alsa-state.service	loaded active running Manage Sound Card State (restore and store)
atd.service	loaded active running Deferred execution scheduler
auditd.service	loaded active running Security Auditing Service
avahi-daemon.service	loaded active running Avahi mDNS/DNS-SD Stack
chronyd.service	loaded active running NTP client/server
colord.service	loaded active running Manage, Install and Generate Color Profiles
crond.service	loaded active running Command Scheduler
cups.service	loaded active running CUPS Scheduler
dbus-broker.service	loaded active running D-Bus System Message Bus
dracut-shutdown.service	loaded active exited Restore /run/initramfs on shutdown
firewalld.service	loaded active running firewalld - dynamic firewall daemon
fwupd.service	loaded active running Firmware update daemon
gdm.service	loaded active running GNOME Display Manager
kdump.service	loaded active exited Crash recovery kernel arming
kmod-static-nodes.service	loaded active exited Create List of Static Device Nodes
libstoragemgmt.service	loaded active running libstoragemgmt plug-in server daemon
lvm2-monitor.service	loaded active exited Monitoring of LVM2 mirrors, snapshots etc. using dmeventd or progress polling
mcelog.service	loaded active running Machine Check Exception Logging Daemon
ModemManager.service	loaded active running Modem Manager
NetworkManager-wait-online.service	loaded active exited Network Manager Wait Online
NetworkManager.service	loaded active running Network Manager
nis-domainname.service	loaded active exited Read and set NIS domainname from /etc/sysconfig/network
packagekit.service	loaded active running PackageKit Daemon
plymouth-quit-wait.service	loaded active exited Hold until boot process finishes up
plymouth-read-write.service	loaded active exited Tell Plymouth To Write Out Runtime Data
plymouth-start.service	loaded active exited Show Plymouth Boot Screen
polkit.service	loaded active running Authorization Manager
res .	



CentOS Stream 9
Rernel 5.14.0-522.e19.x86_64 on an x86_64
Activate the web console with: systemctl enable --now cockpit.socket
localhost login: moaaz
Password:
Last login: Tue Mar 25 18:48:58 on tty2
Immoaz@localhost 13

CentOS Stream 9
Kernel 5.14.0-522.el9.x86_64 on an x86_64
Activate the web console with: systematl enable --now cockpit.socket
localhost login: root
Password:
Last login: Tue Mar 25 18:50:07 on pts/0
Iroot@localhost "1# systematl set-default graphical.target



☐ root@localhost:~

[root@localhost ~]# systemctl is-enabled chronyd
enabled

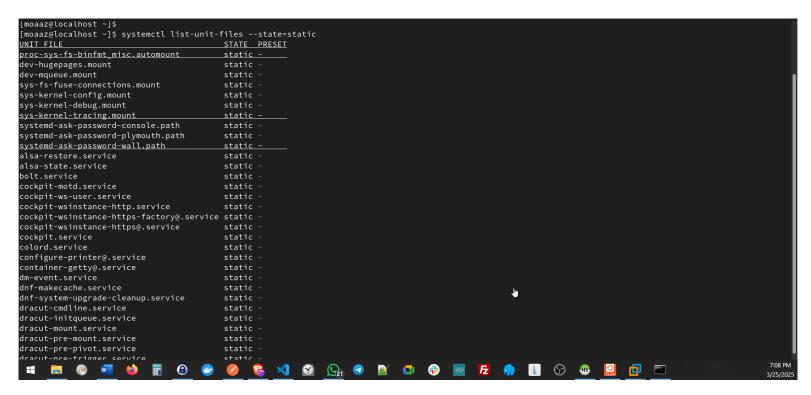
Then rebooted

```
root@localhost:~
[root@localhost ~]# systemctl disable chronyd
Removed "/etc/systemd/system/multi-user.target.wants/chronyd.service".
[root@localhost ~]# systemctl status chronyd
• chronyd.service - NTP client/server
       Loaded: loaded (/usr/lib/systemd/system/chronyd.service; disabled; preset: enabled)
       Active: active (running) since Tue 2025-03-25 19:04:02 EET; 2min 6s ago
         Docs: man:chronyd(8)
                 man:chrony.conf(5)
    Main PID: 756 (chronyd)
Tasks: 1 (limit: 10728)
       Memory: 4.2M
          CPÚ: 82ms
      CGroup: /system.slice/chronyd.service

_756 /usr/sbin/chronyd -F 2
Mar 25 19:04:01 localhost systemd[1]: Starting NTP client/server...
Mar 25 19:04:02 localhost chronyd[756]: chronyd version 4.6 starting (+CMDMON +NTP +REFCLOCK +RTC +PRIVDROP +SCFILTER +SIGND +ASYNCDNS +NTS +SECHASH +IPV6 +D>
Mar 25 19:04:02 localhost chronyd[756]: Loaded 0 symmetric keys
Mar 25 19:04:02 localhost chronyd[756]: Using right/UTC timezone to obtain leap second data
Mar 25 19:04:02 localhost chronyd[756]: Frequency -0.963 +/- 20.212 ppm read from /var/lib/chrony/drift
Mar 25 19:04:02 localhost chronyd[756]: Loaded seccomp filter (level 2)
Mar 25 19:04:02 localhost systemd[1]: Started NTP client/server.
     25 19:04:13 localhost.localdomain chronyd[756]: Selected source 41.175.51.165 (2.centos.pool.ntp.org)
Mar <u>25 19:04:13 loc</u>alhost.localdomain chronyd[756]: System clock TAI offset set to 37 seconds
lines 1-21/21 (END)
```

After reboot

```
moaaz@localhost ~]$ systemctl status chronyd
chronyd.service - NTP client/server
Loaded: loaded (/usr/lib/systemd/system/chronyd.service; disabled; preset: enabled)
Active: inactive (dead)
Doss: man:chronyd(8)
man:chrony.conf(5)
[moaaz@localhost ~]$
[moaaz@localhost ~]$
```



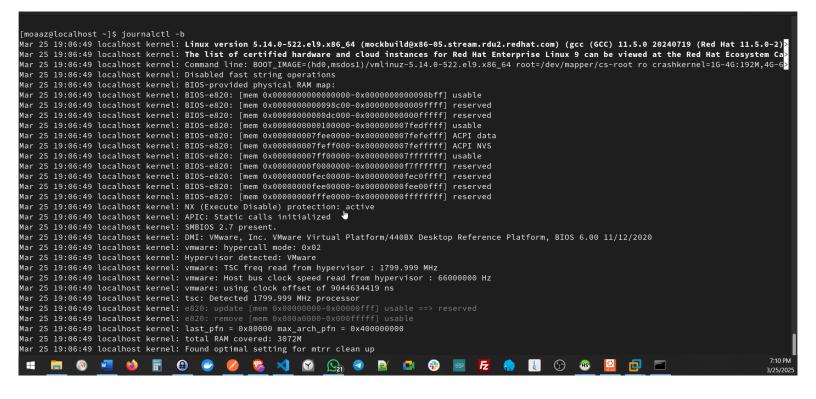
Differences Between Service States

Enable: Service starts automatically on boot

Disable: Service does not start automatically on boot

Static: Service cannot be enabled/disabled manually, starts only if another service depends on it

Mask: Completely prevents the service from being started, even manually



moaaz@localhost~]\$ journalctl -u sshd

Mar 25 19:07:04 localhost.localdomain systemd[]: Starting OpenSSH server daemon...

Mar 25 19:07:04 localhost.localdomain sshd[883]: Server listening on 0.0.0.0 port 22.

Mar 25 19:07:04 localhost.localdomain sshd[883]: Server listening on i. port 22.

Mar 25 19:07:04 localhost.localdomain sshd[883]: Server listening on :: port 22.

Mar 25 19:07:04 localhost.localdomain systemd[]: Started OpenSSH server daemon.

[moaaz@localhost~]\$

moaaz@localhost.~]\$ journalctl -f

Mar 25 19:08:14 localhost.localdomain systemd[1]: systemd-hostnamed.service: Deactivated successfully.

Mar 25 19:08:21 localhost.localdomain realmd[1740]: quitting realmd service after timeout

Mar 25 19:08:21 localhost.localdomain realmd[1740]: stopping service

Mar 25 19:08:21 localhost.localdomain realmd[1740]: stopping service:

Mar 25 19:08:21 localhost.localdomain systemd[1]: realmd.service: Deactivated successfully.

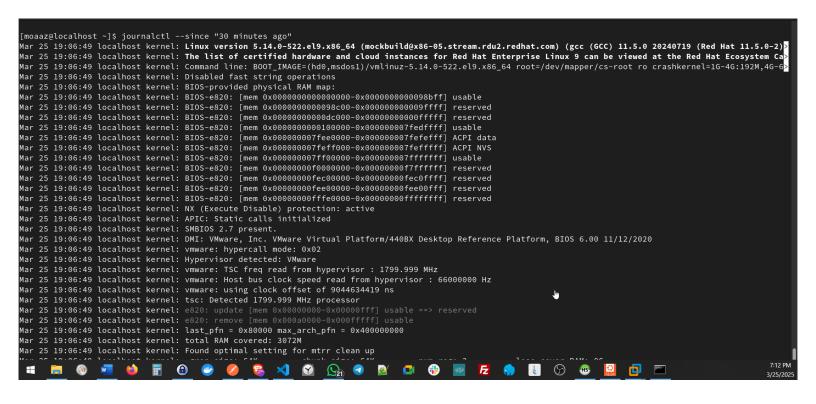
Mar 25 19:08:34 localhost.localdomain systemd[1832]: Starting Virtual filesystem metadata service...

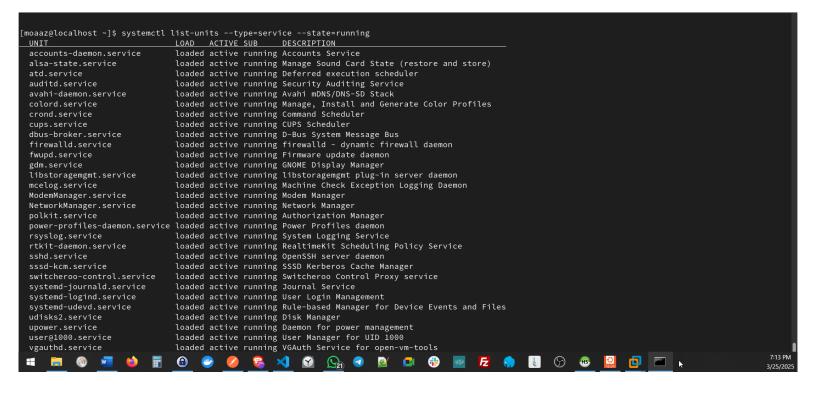
Mar 25 19:08:34 localhost.localdomain systemd[1832]: Started Virtual filesystem metadata service.

Mar 25 19:10:23 localhost.localdomain gnome-shell[1930]: Source ID 1753 was not found when attempting to remove it

Mar 25 19:10:23 localhost.localdomain systemd[1832]: Finished Mark boot as successful..

Mar 25 19:10:43 localhost.localdomain gnome-shell[1930]: Source ID 3018 was not found when attempting to remove it





```
root@localhost ~]# mkdir -p /opt/scripts
 root@localhost ~]# nano /opt/scripts/custom-script.sh
[root@localhost ~]# chmod +x /opt/scripts/custom-script.sh
[root@localhost ~]# nano /etc/systemd/system/custom-service.service
[root@localhost ~]# systemctl daemon-reload
[root@localhost ~]# systemctl enable custom-service
Created symlink /etc/systemd/system/multi-user.target.wants/custom-service.service → /etc/system<u>d/system/custom-service.service.</u>
[root@localhost ~]# systemctl start custom-service
root@localhost ~]# systemctl status custom-service
 custom-service.service - Custom Example Service
     Loaded: loaded (/etc/systemd/system/custom-service.service; enabled; preset: disabled)
     Active: active (running) since Tue 2025-03-25 19:17:53 EET; 12s ago
  Main PID: 2809 (custom-script.s)
     Tasks: 2 (limit: 10727)
Memory: 716.0K
        CPU: 8ms
     CGroup: /system.slice/custom-service.service
             2809 /bin/bash /opt/scripts/custom-script.sh
2811 sleep 60
Mar 25 19:17:53 localhost.localdomain systemd[1]: Started Custom Example Service.
[root@localhost ~]#
```

Custom-script.sh

```
GNU nano 5.6.1 /opt/scripts/custom-script.sh Modified #!/bin/bash
while true; do
    echo "Custom service running at $(date)" >> /var/log/custom-service.log
    sleep 60
done
```

Custom-service.service

```
GNU nano 5.6.1 /etc/systemd/system/custom-service.service Modified

[Unit]
Description=Custom Example Service
After=network.target

[Service]
ExecStart=/opt/scripts/custom-script.sh
Restart=always
User=root

[Install]
WantedBy=multi-user.target
```

Service logs

```
root@localhost ~]# journalctl -u custom-service
Mar 25 19:17:53 localhost.localdomain systemd[1]: Started Custom Example Service.

[root@localhost ~]# 

[root@localhost ~]# tail -f /var/log/custom-service.log
Custom service running at Tue Mar 25 07:17:53 PM EET 2025
Custom service running at Tue Mar 25 07:18:53 PM EET 2025
```

Managing custom service