

Service Management

To list all the available services on the system

```
[root@vivek ~]# systemctl --type=service
```

UNIT	LOAD	ACTIVE	SUB	DESCRIPTION
alsa-state.service	loaded	active	running	Manage Sound Card State (restore and store)
atd.service	loaded	active	running	Job spooling tools
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
crond.service	loaded	active	running	Command Scheduler
cups.service	loaded	active	running	CUPS Scheduler
dbus.service	loaded	active	running	D-Bus System Message Bus
dracut-shutdown.service	loaded	active	exited	Restore /run/initramfs on shutdown

To check the specific service status

```
[root@vivek ~]# systemctl status sshd.service
```

- sshd.service - OpenSSH server daemon

Loaded: loaded (/usr/lib/systemd/system/sshd.service; enabled; vendor preset: enabled)

Active: **active (running)** since Mon 2022-02-21 04:50:42 EST; 20min left

Docs: man:sshd(8)
man:sshd_config(5)

Main PID: 1088 (sshd)

Tasks: 1 (limit: 11160)

Memory: 7.0M

CGroup: /system.slice/sshd.service

└─1088 /usr/sbin/sshd -D -oCiphers=aes256-gcm@openssh.com,chacha20-pol

Feb 21 04:50:42 vivek.gandhi.com systemd[1]: Starting OpenSSH server daemon...

Feb 21 04:50:42 vivek.gandhi.com sshd[1088]: Server listening on 0.0.0.0 port 22.

Feb 21 04:50:42 vivek.gandhi.com sshd[1088]: Server listening on :: port 22.

Feb 21 04:50:42 vivek.gandhi.com systemd[1]: Started OpenSSH server daemon.

To list the active state of all loaded units

```
[root@vivek ~]# systemctl list-units --type=service
```

UNIT	LOAD	ACTIVE	SUB	DESCRIPTION
alsa-state.service	loaded	active	running	Manage Sound Card State (rest
atd.service	loaded	active	running	Job spooling tools
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
crond.service	loaded	active	running	Command Scheduler
cups.service	loaded	active	running	CUPS Scheduler
dbus.service	loaded	active	running	D-Bus System Message Bus

To list the active and inactive state of all loaded units

```
[root@vivek ~]# systemctl list-units --type=service -all
```

UNIT	LOAD	ACTIVE	SUB	DESCRIPTION
accounts-daemon.service	loaded	inactive	dead	Accounts Service
alsa-restore.service	loaded	inactive	dead	Save/Restore So
alsa-state.service	loaded	active	running	Manage Sound Ca
atd.service	loaded	active	running	Job spooling to
auditd.service	loaded	active	running	Security Audit

service will be started automatically or not

```
[root@vivek ~]# systemctl list-unit-files --type=service
```

UNIT	FILE	STATE
accounts-daemon.service		enabled
alsa-restore.service		static
alsa-state.service		static
anaconda-direct.service		static
anaconda-nm-config.service		static
anaconda-noshell.service		static
anaconda-pre.service		static
anaconda-shell@.service		static
anaconda-sshd.service		static
anaconda-tmux@.service		static
anaconda.service		static
arp-ethers.service		disabled

Service Management

filter the failed services using the systemctl command

```
[root@vivek ~]# systemctl --failed --type=service
```

UNIT	LOAD	ACTIVE	SUB	DESCRIPTION
● mcelog.service	loaded	failed	failed	Machine Check Exception Logging Daemon
● vmttoolsd.service	loaded	failed	failed	Service for virtual machines hosted on V

LOAD = Reflects whether the unit definition was properly loaded.
ACTIVE = The high-level unit activation state, i.e. generalization of SUB.
SUB = The low-level unit activation state, values depend on unit type.

2 loaded units listed. Pass --all to see loaded but inactive units, too.
To show all installed unit files use 'systemctl list-unit-files'.

To list the all-sockets units on the system

```
[root@vivek ~]# systemctl list-units --type=socket --all
```

UNIT	LOAD	ACTIVE	SUB	DESCRIPTION
avahi-daemon.socket	loaded	active	running	Avahi mDNS/DNS-SD Stack Activation Socket
cups.socket	loaded	active	running	CUPS Scheduler
dbus.socket	loaded	active	running	D-Bus System Message Bus Socket
dm-event.socket	loaded	active	listening	Device-mapper event daemon FIFOs
iscsid.socket	loaded	active	listening	Open-iSCSI iscsid Socket
iscsiuio.socket	loaded	active	listening	Open-iSCSI iscsiuiio Socket
lvm2-lvmpolld.socket	loaded	active	listening	LVM2 poll daemon socket
multipathd.socket	loaded	active	listening	multipathd control socket
rpcbind.socket	loaded	active	running	RPCbind Server Activation Socket
sssd-kcm.socket	loaded	active	listening	SSSD Kerberos Cache Manager responder sock
syslog.socket	loaded	inactive	dead	Syslog Socket
systemd-coredump.socket	loaded	active	listening	Process Core Dump Socket
systemd-initctl.socket	loaded	active	listening	initctl Compatibility Named Pipe
systemd-journald-audit.socket	loaded	inactive	dead	Journal Audit Socket
systemd-journald-dev-log.socket	loaded	active	running	Journal Socket (/dev/log)
systemd-journald.socket	loaded	active	running	Journal Socket
systemd-udev-control.socket	loaded	active	running	udev Control Socket
systemd-udev-kernel.socket	loaded	active	running	udev Kernel Socket
virtlockd-admin.socket	loaded	inactive	dead	Virtual machine lock manager admin socket
virtlockd.socket	loaded	active	listening	Virtual machine lock manager socket
virtlogd-admin.socket	loaded	inactive	dead	Virtual machine log manager socket
virtlogd.socket	loaded	active	listening	Virtual machine log manager socket

LOAD = Reflects whether the unit definition was properly loaded.
ACTIVE = The high-level unit activation state, i.e. generalization of SUB.
SUB = The low-level unit activation state, values depend on unit type.

Controlling the services with systemctl

Check the crond service status

```
[root@vivek ~]# systemctl status crond.service
```

● crond.service - Command Scheduler

Loaded: loaded (/usr/lib/systemd/system/crond.service; enabled; vendor preset: enable)
Active: active (running) since Mon 2022-02-21 04:50:44 EST; 6min left
Main PID: 1276 (crond)
Tasks: 1 (limit: 11160)
Memory: 2.8M
CGroup: /system.slice/crond.service
└─1276 /usr/sbin/crond -n

Feb 21 00:32:01 vivek.gandhi.com anacron[2229]: Job `cron.daily' terminated
Feb 21 00:47:01 vivek.gandhi.com anacron[2229]: Job `cron.weekly' started
Feb 21 00:47:01 vivek.gandhi.com anacron[2229]: Job `cron.weekly' terminated
Feb 21 01:01:01 vivek.gandhi.com CROND[2836]: (root) CMD (run-parts /etc/cron.hourly)
Feb 21 01:07:01 vivek.gandhi.com anacron[2229]: Job `cron.monthly' started
Feb 21 01:07:01 vivek.gandhi.com anacron[2229]: Job `cron.monthly' terminated
Feb 21 01:07:01 vivek.gandhi.com anacron[2229]: Normal exit (3 jobs run)

Service Management

To stop the service, use systemctl stop command

```
[root@vivek ~]# systemctl stop crond.service
[root@vivek ~]#
[root@vivek ~]#
[root@vivek ~]# systemctl status crond.service
● crond.service - Command Scheduler
   Loaded: loaded (/usr/lib/systemd/system/crond.service; enabled; ven
   Active: inactive (dead) since Mon 2022-02-21 04:46:05 EST; 18s ago
   Process: 1276 ExecStart=/usr/sbin/crond -n $CRONDARGS (code=exited,
   Main PID: 1276 (code=exited, status=0/SUCCESS)
```

Service can be started back using systemctl start command

```
[root@vivek ~]# systemctl start crond.service
[root@vivek ~]# systemctl status crond.service
● crond.service - Command Scheduler
   Loaded: loaded (/usr/lib/systemd/system/crond.service; en
   Active: active (running) since Mon 2022-02-21 04:47:20 ES
   Main PID: 33346 (crond)
     Tasks: 1 (limit: 11160)
    Memory: 1.1M
    CGroup: /system.slice/crond.service
            └─33346 /usr/sbin/crond -n
```

Specific service can be restarted

```
[root@vivek ~]# systemctl restart crond.service
[root@vivek ~]# echo $?
0
[root@vivek ~]# systemctl status crond.service
● crond.service - Command Scheduler
   Loaded: loaded (/usr/lib/systemd/system/crond.service; enabled; vendor p
   Active: active (running) since Mon 2022-02-21 04:50:20 EST; 32s ago
   Main PID: 33376 (crond)
     Tasks: 1 (limit: 11160)
    Memory: 1.1M
    CGroup: /system.slice/crond.service
            └─33376 /usr/sbin/crond -n
```

Check last process successfully run or not

```
[root@vivek ~]# echo $?
0
[root@vivek ~]# systemctl status crond.servi
Unit crond.servi.service could not be found.
[root@vivek ~]# echo $?
4
[root@vivek ~]#
```

Output zero 0 means successfully execute query

Output any number means not run successfully execute query.

Service Management

To see the service dependency tree

```
[root@vivek ~]# systemctl list-dependencies crond.service
crond.service
├─system.slice
├─sysinit.target
│   ├──dev-hugepages.mount
│   ├──dev-mqueue.mount
│   ├──dracut-shutdown.service
│   ├──import-state.service
│   ├──iscsi-onboot.service
│   └─kmod-static-nodes.service
```

systemctl disable command

```
[root@vivek ~]# systemctl disable crond.service
```

systemctl enable command.

```
[root@vivek ~]# systemctl enable crond.service
Created symlink /etc/systemd/system/multi-user.target.wants/crond.service → /usr/lib/systemd/system/crond.service.
```

To completely disabled service

```
[root@vivek ~]# systemctl mask crond.service
Created symlink /etc/systemd/system/crond.service → /dev/null.
[root@vivek ~]# systemctl status crond.service
```

Enable the service from mask

```
[root@vivek ~]# systemctl unmask crond.service
Removed /etc/systemd/system/crond.service.
```