systemd Services and logs

CONCEPTS

A unit is anything systemd manages: a service, timer, socket, target or mount. The .service suffix is optional on the command line.

Unit file /etc/systemd/system
↓ daemon-reload
Loaded known to systemd
↓ start
Active running
↓ enable
Boot target starts at boot

enable only controls start at boot; start only controls now. Use enable --now for both.

CONTROL SERVICES

systemctl start *<unit>*
Start a unit now

systemctl stop *<unit>*
Stop a unit

systemctl restart *<unit>*
Stop and start again

systemctl reload *<unit>*
Re-read config without restart

systemctl reset-failed *<unit>*
Clear the failed state

systemctl --user *<command>*
Manage your own user units

INSPECT

systemctl status *<unit>*
State, PID and last log lines

systemctl list-units --type=service
Loaded services

systemctl --failed
List failed units

systemctl cat *<unit>*
Show unit file plus drop-ins

BOOT AND UNIT FILES

systemctl enable *<unit>*
Start at boot

BOOT AND UNIT FILES (cont.)

systemctl disable *<unit>*
Do not start at boot

systemctl enable --now *<unit>*
Enable and start in one go

systemctl daemon-reload
Re-read changed unit files

systemctl edit *<unit>*
Override settings in a drop-in

LOGS (JOURNALCTL)

journalctl -u *<unit>*
Logs of one unit

journalctl -u *<unit>* **-f**
Follow new lines

journalctl -n 100
Last 100 entries

journalctl -b
Current boot only

journalctl -p err
Errors and worse

journalctl --since "*<date>***" --until "***<date>***"**
Time window

UNIT FILE BASICS

Minimal service

```
# /etc/systemd/system/myapp.service
[Unit]
Description=My app
After=network-online.target
Wants=network-online.target

[Service]
ExecStart=/usr/local/bin/myapp --serve
Restart=on-failure
User=myapp

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

systemd-analyze verify *<file>*
Lint a unit file

TIMERS AND ONE-OFFS

systemctl list-timers
Timers and next/last run

systemd-analyze calendar "*<expr>***"**
Check an OnCalendar expression