

# Boot Time Measurement User Manual

List of commands to validate the Boot Time data

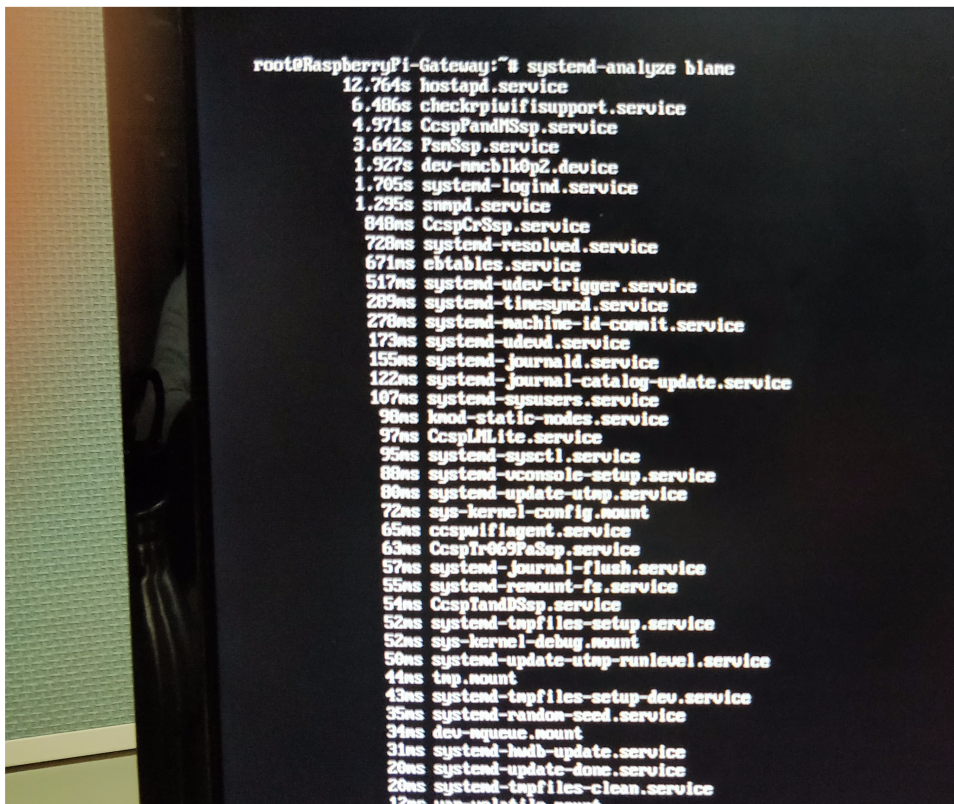
## ☐ systemd-analyze

```
# systemd-analyze

Startup finished in 1.190s (kernel) + 34.874s (userspace) = 36.065s
```

## ☐ systemd-analyze blame

- This command prints a list of all running units, ordered by the time they took to initialize.



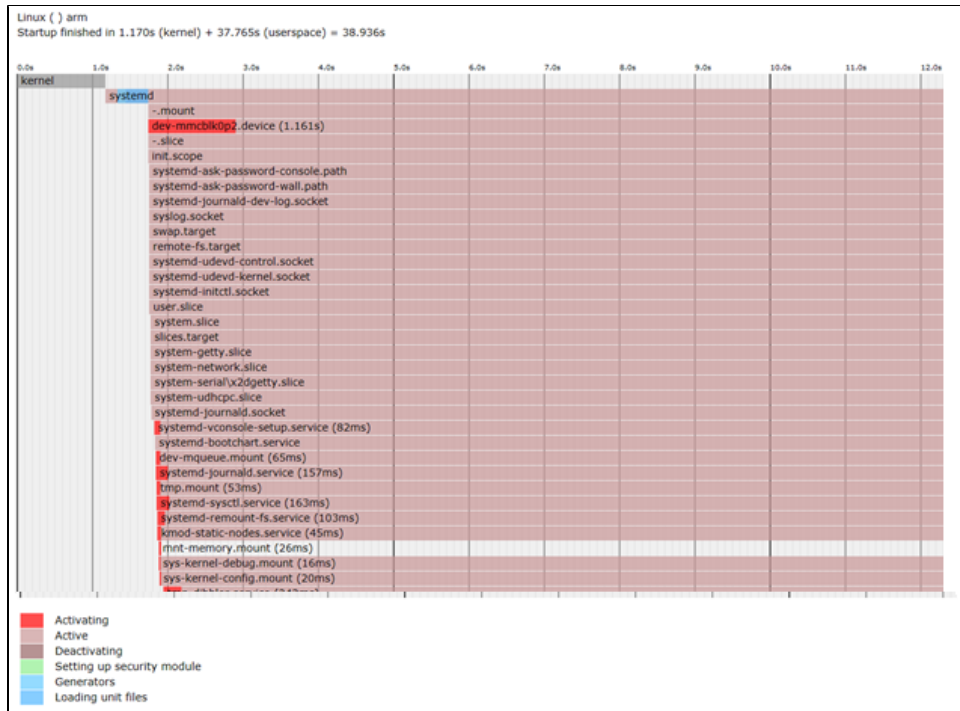
```
root@RaspberryPi-Gateway:~# systemd-analyze blame
12.764s hostapd.service
6.486s checkrpwifisupport.service
4.971s CcspFandISsp.service
3.642s FanSsp.service
1.927s dev-mmcblkp2.device
1.705s systemd-logind.service
1.295s snapd.service
848ms CcspCrSsp.service
728ms systemd-resolved.service
671ms ebtables.service
517ms systemd-udev-trigger.service
289ms systemd-timesyncd.service
278ms systemd-machine-id-commit.service
173ms systemd-udevd.service
155ms systemd-journald.service
122ms systemd-journal-catalog-update.service
107ms systemd-sysusers.service
98ms kmod-static-nodes.service
97ms CcspLILite.service
95ms systemd-sysctl.service
88ms systemd-uconsole-setup.service
86ms systemd-update-utmp.service
72ms sys-kernel-config.mount
65ms ccspwifiaagent.service
63ms CcspTr065TeSsp.service
57ms systemd-journal-flush.service
55ms systemd-remount-fs.service
54ms CcspFandISsp.service
52ms systemd-tmpfiles-setup.service
52ms sys-kernel-debug.mount
50ms systemd-update-utmp-runlevel.service
44ms tmp.mount
43ms systemd-tmpfiles-setup-dev.service
35ms systemd-random-seed.service
34ms dev-squeue.mount
31ms systemd-hwdb-update.service
28ms systemd-update-done.service
20ms systemd-tmpfiles-clean.service
12ms usr-unstable.mount
```

## ☐ systemd-analyze critical-chain

- This command prints a tree of the time-critical chain of units. The time after the unit is active or started is printed after the "@" character. The time the unit takes to start is printed after the "+" character.

## ☐ systemd-analyze plot > plot.svg

- This command prints an SVG graphic detailing which system services have been started at what time, highlighting the time they spent on initialization.



## systemd-bootchart

By default, systemd-bootchart.service is disabled. In order to start the process, execute the following command

- systemctl enable systemd-bootchart
- systemctl start systemd-bootchart

Systemd-bootchart command collects the CPU utilization, disk load, memory usage, as well as per-process information from a running system. Collected results are output as an SVG graph at /run/log. Systemd-bootchart is available only in morty version (yocto 2.2)

