# MODULE 3 SCRIPTING WITH LINUX

In our Module 3, we developed a Python script on a Raspbian Linux platform, aiming to extract and display critical information about the Linux Kernel. The script features a suite of functions, each designed to provide specific system insights:

* List All Running Processes (get\_all\_running\_processes): This function executes the ps aux command to list all processes currently running on the system. It's crucial for monitoring active system processes.
* Get Kernel Name (get\_kernal\_name): By executing uname --kernel-name, this function retrieves the name of the installed kernel, aiding in system identification.
* Get Kernel Version (get\_kernal\_version): This function uses uname --kernel-version to fetch the kernel version, providing an insight into the system's core versioning.
* Get Kernel Dump (get\_kernal\_dump): This function displays the kernel dump using the dmesg command, which is essential for diagnosing system crashes or errors.
* Real-Time Linux Monitoring (real\_time\_monitoring): Utilizing the atop command, this function monitors various aspects of system performance in real-time.
* Real-Time Disk Utilization (show\_disk\_usage): It executes atop -d to monitor disk usage, offering a snapshot of the system's storage performance.
* Real-Time Memory Consumption (check\_memory): This function employs atop -m to track memory usage, crucial for understanding the system's memory allocation and consumption.
* Show All Active Processes (show\_all\_active\_process): It runs atop -a to display all active processes, complementing the first function for a comprehensive process overview.
* Show All Background Processes (show\_all\_background\_process): By executing atop -c, this function lists background processes, which is vital for full system process management.
* Number of Processes per User (processes\_per\_user): This function uses atop -au to show processes organized by user, aiding in user-specific process monitoring.
* Get Device IP (get\_device\_ip): It retrieves the system's IP address using ifconfig, a fundamental aspect of network configuration and troubleshooting.
* Get Physical Memory Stats (stats\_physical\_memory): Utilizing free -m, this function displays detailed statistics of the physical memory usage.
* Get Swap Memory Stats (stats\_swap\_memory): Similar to the previous, it provides swap memory statistics, essential for understanding paging and memory management.
* Show RAM Stats (stats\_RAM): This function executes lscpu to display detailed RAM statistics, offering insights into the system's memory architecture.

**Bonus Section :**

Our script is not only automated to execute these functions sequentially but also configured to run at system start-up using crontab. sudo crontab -e this command opens the editor. After pasting command @reboot sudo python "/home/pi/Desktop/MESA/Project 2/Module 3/main.py" & it executes python executable during boot up.

This ensures immediate system information retrieval post-boot, making the script a comprehensive tool for system administrators.

A computer screen shot of a program

Description automatically generated

Figure 1 : Command Line

A screenshot of a computer

Description automatically generated

Figure 2 : Text for each command

In conclusion, our project successfully integrates a diverse range of system information functionalities. It demonstrates our proficiency in scripting complex tasks in a Linux environment, significantly enhancing our skills in system administration and Python programming.

# Code :

"""

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* @file get\_kernel\_details.py

\* System Information Retrieval Script for Linux - Project 3 Module 3

\*

\* This script automatically retrieves various system information

\* details and saves them to individual files for later analysis.

\*

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\* @see <a href="https://www.gnu.org/software/bash/manual/">Bash Reference Manual</a>

\* @see <a href="https://docs.python.org/3/library/os.html">Python OS Library Documentation</a>

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"""

import os

import platform

import time

# Directory where output files will be saved

output\_directory = "/home/pi/Desktop/OS\_Info"

def execute\_command(command, output\_file):

"""

Executes a system command and redirects the output to a specified file.

Args:

command (str): The system command to be executed.

output\_file (str): The name of the file where the command output will be saved.

"""

full\_command = f'{command} > {output\_directory}/{output\_file}'

os.system(full\_command)

def show\_menu():

"""

Displays the menu options for system information retrieval.

The menu is displayed for informational purposes.

"""

menu\_options = {

"1": "List all Running Process",

"2": "Get Kernel Name",

"3": "Get Kernel Version",

"4": "Get Kernel Dump",

"5": "Real time Linux Monitoring",

"6": "Real time Disk Utilization",

"7": "Real time Memory Consumption",

"8": "Show all active processes",

"9": "Show all background processes",

"10": "Number of processes per user",

"11": "Get device IP",

"12": "Get Physical Memory Stats",

"13": "Get Swap Memory Stats",

"14": "Show RAM Stats"

}

print("-----------------------------------------------------------")

for key, value in menu\_options.items():

print(f"{key}. {value}")

print("-----------------------------------------------------------")

def main():

"""

Main function to execute system information commands and save their outputs.

Each command's output is saved to a distinct text file.

"""

show\_menu()

# Execute commands and save outputs to files

execute\_command('ps aux', '1\_running\_processes.txt')

execute\_command('uname --kernel-name', '2\_kernel\_name.txt')

execute\_command('uname --kernel-version', '3\_kernel\_version.txt')

execute\_command('dmesg', '4\_kernel\_dump.txt')

execute\_command('timeout 2 atop', '5\_real\_time\_linux\_monitoring.txt')

execute\_command('timeout 2 atop -d', '6\_disk\_utilization.txt')

execute\_command('timeout 2 atop -m', '7\_memory\_consumption.txt')

execute\_command('timeout 2 atop -a', '8\_active\_processes.txt')

execute\_command('timeout 2 atop -c', '9\_background\_processes.txt')

execute\_command('timeout 2 atop -au', '10\_processes\_per\_user.txt')

execute\_command("ifconfig | grep 'broadcast' | awk '{print $2}'", '11\_device\_ip.txt')

execute\_command("free -m | grep 'Mem' | awk '{print \"Physical Memory Stats in MB: \", \"Total:\", $2, \"Used:\", $3,\"Free:\", $4, \"Shared:\", $5,\"Buff/Cache:\", $6, \"Available:\", $7}'", '12\_physical\_memory\_stats.txt')

execute\_command("free -m | grep 'Swap' | awk '{print \"Swap Memory Stats in MB: \", \"Total:\", $2, \"Used:\", $3,\"Free:\", $4, \"Shared:\", $5,\"Buff/Cache:\", $6, \"Available:\", $7}'", '13\_swap\_memory\_stats.txt')

execute\_command('lscpu', '14\_ram\_stats.txt')

if \_\_name\_\_ == "\_\_main\_\_":

main()

# Text output :

USER PID %CPU %MEM VSZ RSS TTY STAT START TIME COMMAND

root 1 23.6 1.0 17760 10156 ? Ss 19:54 0:03 /sbin/init splash

root 2 0.1 0.0 0 0 ? S 19:54 0:00 [kthreadd]

root 3 0.0 0.0 0 0 ? I< 19:54 0:00 [rcu\_gp]

root 4 0.0 0.0 0 0 ? I< 19:54 0:00 [rcu\_par\_gp]

root 5 0.0 0.0 0 0 ? I< 19:54 0:00 [slub\_flushwq]

root 6 0.0 0.0 0 0 ? I< 19:54 0:00 [netns]

root 7 0.2 0.0 0 0 ? I 19:54 0:00 [kworker/0:0-events]

root 8 0.0 0.0 0 0 ? I< 19:54 0:00 [kworker/0:0H-mmc\_complete]

root 9 11.3 0.0 0 0 ? I 19:54 0:01 [kworker/u8:0-events\_unbound]

root 10 0.0 0.0 0 0 ? I< 19:54 0:00 [mm\_percpu\_wq]

root 11 0.0 0.0 0 0 ? I 19:54 0:00 [rcu\_tasks\_kthread]

root 12 0.0 0.0 0 0 ? I 19:54 0:00 [rcu\_tasks\_rude\_kthread]

root 13 0.0 0.0 0 0 ? I 19:54 0:00 [rcu\_tasks\_trace\_kthread]

root 14 0.0 0.0 0 0 ? S 19:54 0:00 [ksoftirqd/0]

root 15 0.8 0.0 0 0 ? I 19:54 0:00 [rcu\_preempt]

root 16 0.0 0.0 0 0 ? S 19:54 0:00 [migration/0]

root 17 0.0 0.0 0 0 ? S 19:54 0:00 [cpuhp/0]

root 18 0.0 0.0 0 0 ? S 19:54 0:00 [cpuhp/1]

root 19 0.0 0.0 0 0 ? S 19:54 0:00 [migration/1]

root 20 0.1 0.0 0 0 ? S 19:54 0:00 [ksoftirqd/1]

root 21 0.0 0.0 0 0 ? I 19:54 0:00 [kworker/1:0-events]

root 22 0.0 0.0 0 0 ? I< 19:54 0:00 [kworker/1:0H-mmc\_complete]

root 23 0.0 0.0 0 0 ? S 19:54 0:00 [cpuhp/2]

root 24 0.0 0.0 0 0 ? S 19:54 0:00 [migration/2]

root 25 0.0 0.0 0 0 ? S 19:54 0:00 [ksoftirqd/2]

root 26 0.0 0.0 0 0 ? I 19:54 0:00 [kworker/2:0-events]

root 27 0.0 0.0 0 0 ? I< 19:54 0:00 [kworker/2:0H-kblockd]

root 28 0.0 0.0 0 0 ? S 19:54 0:00 [cpuhp/3]

root 29 0.0 0.0 0 0 ? S 19:54 0:00 [migration/3]

root 30 0.0 0.0 0 0 ? S 19:54 0:00 [ksoftirqd/3]

root 31 0.0 0.0 0 0 ? I 19:54 0:00 [kworker/3:0-events]

root 32 0.0 0.0 0 0 ? I< 19:54 0:00 [kworker/3:0H-events\_highpri]

root 33 0.0 0.0 0 0 ? S 19:54 0:00 [kdevtmpfs]

root 34 0.0 0.0 0 0 ? I< 19:54 0:00 [inet\_frag\_wq]

root 35 0.0 0.0 0 0 ? I 19:54 0:00 [kworker/0:1-events]

root 36 0.0 0.0 0 0 ? S 19:54 0:00 [kauditd]

root 37 0.0 0.0 0 0 ? I 19:54 0:00 [kworker/0:2-cgroup\_destroy]

root 38 0.0 0.0 0 0 ? S 19:54 0:00 [khungtaskd]

root 39 1.4 0.0 0 0 ? I 19:54 0:00 [kworker/u8:1-events\_unbound]

root 40 0.0 0.0 0 0 ? S 19:54 0:00 [oom\_reaper]

root 41 0.0 0.0 0 0 ? I< 19:54 0:00 [writeback]

root 42 0.0 0.0 0 0 ? S 19:54 0:00 [kcompactd0]

root 43 0.0 0.0 0 0 ? I< 19:54 0:00 [kintegrityd]

root 44 0.0 0.0 0 0 ? I< 19:54 0:00 [kblockd]

root 45 0.0 0.0 0 0 ? I< 19:54 0:00 [blkcg\_punt\_bio]

root 46 0.0 0.0 0 0 ? S 19:54 0:00 [watchdogd]

root 47 0.0 0.0 0 0 ? I 19:54 0:00 [kworker/u8:2-events\_unbound]

root 48 0.4 0.0 0 0 ? I 19:54 0:00 [kworker/3:1-events]

root 49 1.6 0.0 0 0 ? I< 19:54 0:00 [kworker/3:1H-kblockd]

root 50 0.0 0.0 0 0 ? I< 19:54 0:00 [rpciod]

root 51 0.0 0.0 0 0 ? I< 19:54 0:00 [xprtiod]

root 52 0.0 0.0 0 0 ? I 19:54 0:00 [kworker/u8:3]

root 53 0.2 0.0 0 0 ? I 19:54 0:00 [kworker/1:1-events]

root 54 0.4 0.0 0 0 ? I 19:54 0:00 [kworker/2:1-events]

root 55 0.0 0.0 0 0 ? S 19:55 0:00 [kswapd0]

root 56 0.0 0.0 0 0 ? I< 19:55 0:00 [nfsiod]

root 57 0.0 0.0 0 0 ? I< 19:55 0:00 [kthrotld]

root 59 1.2 0.0 0 0 ? I 19:55 0:00 [kworker/3:2-events]

root 62 0.0 0.0 0 0 ? S 19:55 0:00 [hwrng]

root 63 0.0 0.0 0 0 ? I< 19:55 0:00 [iscsi\_conn\_clea]

root 64 0.0 0.0 0 0 ? I< 19:55 0:00 [nvme-wq]

root 65 0.0 0.0 0 0 ? I< 19:55 0:00 [nvme-reset-wq]

root 66 0.0 0.0 0 0 ? I< 19:55 0:00 [nvme-delete-wq]

root 67 0.0 0.0 0 0 ? I< 19:55 0:00 [dwc\_otg]

root 68 0.0 0.0 0 0 ? I< 19:55 0:00 [DWC Notificatio]

root 69 0.0 0.0 0 0 ? I< 19:55 0:00 [uas]

root 70 0.0 0.0 0 0 ? S< 19:55 0:00 [vchiq-slot/0]

root 71 0.0 0.0 0 0 ? S< 19:55 0:00 [vchiq-recy/0]

root 72 0.0 0.0 0 0 ? S< 19:55 0:00 [vchiq-sync/0]

root 73 0.0 0.0 0 0 ? I< 19:55 0:00 [zswap-shrink]

root 74 0.5 0.0 0 0 ? I< 19:55 0:00 [kworker/u9:0-brcmf\_wq/mmc1:0001:1]

root 95 0.0 0.0 0 0 ? I 19:55 0:00 [kworker/2:2-events]

root 96 0.0 0.0 0 0 ? I< 19:55 0:00 [mmc\_complete]

root 97 1.2 0.0 0 0 ? I< 19:55 0:00 [kworker/2:1H-kblockd]

root 98 1.3 0.0 0 0 ? I< 19:55 0:00 [kworker/0:1H-kblockd]

root 99 0.3 0.0 0 0 ? I 19:55 0:00 [kworker/1:2-events]

root 100 2.1 0.0 0 0 ? I< 19:55 0:00 [kworker/1:1H-mmc\_complete]

root 101 0.0 0.0 0 0 ? S 19:55 0:00 [jbd2/mmcblk0p2-8]

root 102 0.0 0.0 0 0 ? I< 19:55 0:00 [ext4-rsv-conver]

root 103 0.0 0.0 0 0 ? I< 19:55 0:00 [kworker/1:2H]

root 104 0.2 0.0 0 0 ? D< 19:55 0:00 [kworker/2:2H+kblockd]

root 106 0.0 0.0 0 0 ? I< 19:55 0:00 [kworker/0:2H]

root 107 0.0 0.0 0 0 ? S 19:55 0:00 [irq/184-usb-001:003:01]

root 108 0.0 0.0 0 0 ? I< 19:55 0:00 [mld]

root 109 0.0 0.0 0 0 ? I< 19:55 0:00 [ipv6\_addrconf]

root 124 0.0 0.0 0 0 ? I< 19:55 0:00 [kworker/3:2H]

root 140 9.5 1.1 32724 10536 ? Ss 19:55 0:00 /lib/systemd/systemd-journald

root 150 1.3 0.0 0 0 ? I 19:55 0:00 [kworker/1:3-events]

root 157 0.5 0.3 16848 3188 ? Ss 19:55 0:00 /lib/systemd/systemd-fsckd

root 173 19.3 0.6 22124 6248 ? Ss 19:55 0:01 /lib/systemd/systemd-udevd

root 174 0.0 0.0 0 0 ? I 19:55 0:00 [kworker/0:3-events]

root 175 9.1 0.7 21980 6808 ? S 19:55 0:00 /lib/systemd/systemd-udevd

root 177 8.3 0.7 23908 6604 ? S 19:55 0:00 /lib/systemd/systemd-udevd

root 178 11.0 0.8 22872 7756 ? S 19:55 0:00 /lib/systemd/systemd-udevd

root 179 8.2 0.6 21808 5684 ? S 19:55 0:00 /lib/systemd/systemd-udevd

root 180 7.0 0.6 23936 5996 ? S 19:55 0:00 /lib/systemd/systemd-udevd

root 181 8.7 0.8 25508 7536 ? S 19:55 0:00 /lib/systemd/systemd-udevd

root 182 10.8 0.7 21812 6812 ? S 19:55 0:00 /lib/systemd/systemd-udevd

root 183 6.5 0.5 23916 5384 ? S 19:55 0:00 /lib/systemd/systemd-udevd

root 184 6.5 0.6 23916 6400 ? S 19:55 0:00 /lib/systemd/systemd-udevd

root 185 9.0 0.8 24540 7544 ? S 19:55 0:00 /lib/systemd/systemd-udevd

root 196 0.0 0.0 0 0 ? S 19:55 0:00 [vchiq-keep/0]

root 197 0.0 0.0 0 0 ? S< 19:55 0:00 [SMIO]

root 223 0.0 0.0 0 0 ? S 19:55 0:00 [spi0]

root 228 0.0 0.0 0 0 ? I< 19:55 0:00 [mmal-vchiq]

root 230 0.0 0.0 0 0 ? I< 19:55 0:00 [mmal-vchiq]

root 244 0.0 0.0 0 0 ? I< 19:55 0:00 [mmal-vchiq]

root 245 0.0 0.0 0 0 ? I< 19:55 0:00 [mmal-vchiq]

root 246 0.0 0.0 0 0 ? I< 19:55 0:00 [mmal-vchiq]

root 248 0.0 0.0 0 0 ? I< 19:55 0:00 [mmal-vchiq]

root 249 0.0 0.0 0 0 ? I< 19:55 0:00 [mmal-vchiq]

root 278 0.3 0.0 0 0 ? I 19:55 0:00 [kworker/2:3-events]

root 299 0.0 0.0 0 0 ? I< 19:55 0:00 [cfg80211]

root 309 0.0 0.0 0 0 ? S 19:55 0:00 [cec-vc4-hdmi]

root 310 0.0 0.0 0 0 ? S 19:55 0:00 [irq/82-vc4 hdmi cec]

root 319 0.0 0.0 0 0 ? S 19:55 0:00 [card0-crtc0]

root 320 0.0 0.0 0 0 ? S 19:55 0:00 [card0-crtc1]

root 321 0.0 0.0 0 0 ? S 19:55 0:00 [card0-crtc2]

root 322 0.0 0.0 0 0 ? S 19:55 0:00 [card0-crtc3]

root 323 0.0 0.0 0 0 ? I< 19:55 0:00 [brcmf\_wq/mmc1:0]

root 324 0.0 0.0 0 0 ? S 19:55 0:00 [brcmf\_wdog/mmc1:0001:1]

systemd+ 343 12.2 0.3 88100 3428 ? Ssl 19:55 0:00 /lib/systemd/systemd-timesyncd

root 346 0.0 0.0 0 0 ? I 19:55 0:00 [kworker/3:3-events]

root 350 0.0 0.0 0 0 ? I< 19:55 0:00 [kworker/u9:1]

root 393 1.2 0.3 13876 3172 ? Ss 19:55 0:00 /lib/systemd/systemd-rfkill

root 427 5.0 0.9 502480 9248 ? S<sl 19:55 0:00 /bin/brltty --no-daemon

avahi 438 2.6 0.3 7068 2836 ? Ss 19:55 0:00 avahi-daemon: running [raspberrypi.local]

root 441 0.6 0.0 1948 72 ? S< 19:55 0:00 /usr/sbin/atopacctd

root 442 1.0 0.2 6692 2404 ? Ss 19:55 0:00 /usr/sbin/cron -f

message+ 443 9.6 0.4 8128 4052 ? Ss 19:55 0:00 /usr/bin/dbus-daemon --system --address=systemd: --nofork --nopidfile --systemd-activation --syslog-only

root 446 2.6 0.6 17764 6212 ? Ds 19:55 0:00 (crub\_all)

avahi 452 0.0 0.0 6888 312 ? S 19:55 0:00 avahi-daemon: chroot helper

root 458 0.6 0.1 2060 1260 ? Ss 19:55 0:00 /bin/sh /usr/bin/btuart

root 460 5.6 0.8 237420 7824 ? Ssl 19:55 0:00 /usr/libexec/polkitd --no-debug

root 481 4.0 0.3 220880 3304 ? Ssl 19:55 0:00 /usr/sbin/rsyslogd -n -iNONE

root 500 2.3 0.4 12168 4340 ? S 19:55 0:00 sudo python /home/pi/Desktop/MESA/Project 2/Module 3/main.py

root 516 14.6 0.6 14104 5944 ? Ss 19:55 0:00 /lib/systemd/systemd-logind

nobody 517 0.6 0.2 5480 2388 ? Ss 19:55 0:00 /usr/sbin/thd --triggers /etc/triggerhappy/triggers.d/ --socket /run/thd.socket --user nobody --deviceglob /dev/input/event\*

root 521 15.0 1.3 395756 12816 ? Ssl 19:55 0:00 /usr/libexec/udisks2/udisksd

root 523 2.0 0.5 13576 4780 ? Ss 19:55 0:00 /sbin/wpa\_supplicant -u -s -O /run/wpa\_supplicant

root 535 5.0 0.1 2120 1472 ? S 19:55 0:00 /usr/bin/hciattach /dev/serial1 bcm43xx 921600 noflow - b8:27:eb:9c:95:c6

root 538 0.0 0.1 3112 1752 ? Ss 19:55 0:00 /usr/sbin/dhcpcd -b -q

root 550 17.5 1.0 15856 9364 ? S 19:55 0:00 python /home/pi/Desktop/MESA/Project 2/Module 3/main.py

root 579 18.5 0.7 7572 6628 ? S<Ls 19:55 0:00 /usr/bin/atop -R -w /var/log/atop/atop\_20231115 600

root 584 0.5 0.0 92288 92 ? SLsl 19:55 0:00 /usr/sbin/rngd -r /dev/hwrng

root 588 7.0 0.8 29564 7908 ? Ss 19:55 0:00 /usr/sbin/cupsd -l

epmd 589 1.0 0.1 6016 1276 ? Ss 19:55 0:00 /usr/bin/epmd -systemd

root 597 1.5 0.2 6956 2304 ? Ss 19:55 0:00 /usr/bin/vncserver-x11-serviced -fg

root 599 8.5 0.8 236204 8072 ? Ssl 19:55 0:00 /usr/sbin/lightdm

root 601 14.0 1.3 27580 12336 ? S 19:55 0:00 /usr/bin/vncserver-x11-core -service

root 607 11.0 0.6 13636 6428 ? Ss 19:55 0:00 sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups

root 608 0.0 0.4 13992 3748 ? Ss 19:55 0:00 wpa\_supplicant -B -c/etc/wpa\_supplicant/wpa\_supplicant.conf -iwlan0

root 614 12.0 0.9 241188 8448 ? Dsl 19:55 0:00 /usr/sbin/ModemManager

root 621 6.0 0.7 16360 6808 ? R 19:55 0:00 /usr/lib/xorg/Xorg :0 -seat seat0 -auth /var/run/lightdm/root/:0 -nolisten tcp vt7 -novtswitch

root 622 0.0 0.3 17764 2840 ? S 19:55 0:00 (agetty)

root 624 0.0 0.3 17764 2840 ? S 19:55 0:00 (agetty)

lp 626 3.0 0.6 16644 5800 ? S 19:55 0:00 /usr/lib/cups/notifier/dbus dbus://

root 627 7.0 0.8 26336 8188 ? Rs 19:55 0:00 /usr/sbin/cups-browsed

root 635 0.0 0.0 2060 480 ? S 19:55 0:00 sh -c ps aux > /home/pi/Desktop/OS\_Info/1\_running\_processes.txt

root 636 0.0 0.3 9452 2908 ? R 19:55 0:00 ps aux

Linux

#1642 SMP PREEMPT Mon Apr 3 17:24:16 BST 2023

[ 0.000000] Booting Linux on physical CPU 0x0000000000 [0x410fd034]

[ 0.000000] Linux version 6.1.21-v8+ (dom@buildbot) (aarch64-linux-gnu-gcc-8 (Ubuntu/Linaro 8.4.0-3ubuntu1) 8.4.0, GNU ld (GNU Binutils for Ubuntu) 2.34) #1642 SMP PREEMPT Mon Apr 3 17:24:16 BST 2023

[ 0.000000] random: crng init done

[ 0.000000] Machine model: Raspberry Pi 3 Model B Rev 1.2

[ 0.000000] efi: UEFI not found.

[ 0.000000] Reserved memory: created CMA memory pool at 0x000000001ec00000, size 256 MiB

[ 0.000000] OF: reserved mem: initialized node linux,cma, compatible id shared-dma-pool

[ 0.000000] Zone ranges:

[ 0.000000] DMA [mem 0x0000000000000000-0x000000003b3fffff]

[ 0.000000] DMA32 empty

[ 0.000000] Normal empty

[ 0.000000] Movable zone start for each node

[ 0.000000] Early memory node ranges

[ 0.000000] node 0: [mem 0x0000000000000000-0x000000003b3fffff]

[ 0.000000] Initmem setup node 0 [mem 0x0000000000000000-0x000000003b3fffff]

[ 0.000000] On node 0, zone DMA: 19456 pages in unavailable ranges

[ 0.000000] percpu: Embedded 29 pages/cpu s78504 r8192 d32088 u118784

[ 0.000000] pcpu-alloc: s78504 r8192 d32088 u118784 alloc=29\*4096

[ 0.000000] pcpu-alloc: [0] 0 [0] 1 [0] 2 [0] 3

[ 0.000000] Detected VIPT I-cache on CPU0

[ 0.000000] CPU features: kernel page table isolation forced ON by KASLR

[ 0.000000] CPU features: detected: Kernel page table isolation (KPTI)

[ 0.000000] CPU features: detected: ARM erratum 843419

[ 0.000000] CPU features: detected: ARM erratum 845719

[ 0.000000] alternatives: applying boot alternatives

[ 0.000000] Built 1 zonelists, mobility grouping on. Total pages: 238896

[ 0.000000] Kernel command line: coherent\_pool=1M 8250.nr\_uarts=1 snd\_bcm2835.enable\_headphones=0 snd\_bcm2835.enable\_headphones=1 snd\_bcm2835.enable\_hdmi=1 snd\_bcm2835.enable\_hdmi=0 video=Composite-1:720x480@60i vc\_mem.mem\_base=0x3ec00000 vc\_mem.mem\_size=0x40000000 console=ttyS0,115200 console=tty1 root=PARTUUID=ecbbd781-02 rootfstype=ext4 fsck.repair=yes rootwait quiet splash plymouth.ignore-serial-consoles cfg80211.ieee80211\_regdom=GB

[ 0.000000] Unknown kernel command line parameters "splash", will be passed to user space.

[ 0.000000] Dentry cache hash table entries: 131072 (order: 8, 1048576 bytes, linear)

[ 0.000000] Inode-cache hash table entries: 65536 (order: 7, 524288 bytes, linear)

[ 0.000000] mem auto-init: stack:off, heap alloc:off, heap free:off

[ 0.000000] Memory: 665128K/970752K available (11776K kernel code, 2106K rwdata, 3688K rodata, 4160K init, 1077K bss, 43480K reserved, 262144K cma-reserved)

[ 0.000000] SLUB: HWalign=64, Order=0-3, MinObjects=0, CPUs=4, Nodes=1

[ 0.000000] ftrace: allocating 39744 entries in 156 pages

[ 0.000000] ftrace: allocated 156 pages with 4 groups

[ 0.000000] trace event string verifier disabled

[ 0.000000] rcu: Preemptible hierarchical RCU implementation.

[ 0.000000] rcu: RCU event tracing is enabled.

[ 0.000000] rcu: RCU restricting CPUs from NR\_CPUS=256 to nr\_cpu\_ids=4.

[ 0.000000] Trampoline variant of Tasks RCU enabled.

[ 0.000000] Rude variant of Tasks RCU enabled.

[ 0.000000] Tracing variant of Tasks RCU enabled.

[ 0.000000] rcu: RCU calculated value of scheduler-enlistment delay is 25 jiffies.

[ 0.000000] rcu: Adjusting geometry for rcu\_fanout\_leaf=16, nr\_cpu\_ids=4

[ 0.000000] NR\_IRQS: 64, nr\_irqs: 64, preallocated irqs: 0

[ 0.000000] Root IRQ handler: bcm2836\_arm\_irqchip\_handle\_irq

[ 0.000000] rcu: srcu\_init: Setting srcu\_struct sizes based on contention.

[ 0.000000] arch\_timer: cp15 timer(s) running at 19.20MHz (phys).

[ 0.000000] clocksource: arch\_sys\_counter: mask: 0xffffffffffffff max\_cycles: 0x46d987e47, max\_idle\_ns: 440795202767 ns

[ 0.000001] sched\_clock: 56 bits at 19MHz, resolution 52ns, wraps every 4398046511078ns

[ 0.000383] Console: colour dummy device 80x25

[ 0.000470] printk: console [tty1] enabled

[ 0.000544] Calibrating delay loop (skipped), value calculated using timer frequency.. 38.40 BogoMIPS (lpj=76800)

[ 0.000585] pid\_max: default: 32768 minimum: 301

[ 0.000765] LSM: Security Framework initializing

[ 0.001019] Mount-cache hash table entries: 2048 (order: 2, 16384 bytes, linear)

[ 0.001061] Mountpoint-cache hash table entries: 2048 (order: 2, 16384 bytes, linear)

[ 0.002881] cgroup: Disabling memory control group subsystem

[ 0.006132] cblist\_init\_generic: Setting adjustable number of callback queues.

[ 0.006155] cblist\_init\_generic: Setting shift to 2 and lim to 1.

[ 0.006428] cblist\_init\_generic: Setting shift to 2 and lim to 1.

[ 0.006692] cblist\_init\_generic: Setting shift to 2 and lim to 1.

[ 0.007333] rcu: Hierarchical SRCU implementation.

[ 0.007351] rcu: Max phase no-delay instances is 1000.

[ 0.009235] EFI services will not be available.

[ 0.009986] smp: Bringing up secondary CPUs ...

[ 0.011558] Detected VIPT I-cache on CPU1

[ 0.011739] CPU1: Booted secondary processor 0x0000000001 [0x410fd034]

[ 0.013530] Detected VIPT I-cache on CPU2

[ 0.013677] CPU2: Booted secondary processor 0x0000000002 [0x410fd034]

[ 0.015374] Detected VIPT I-cache on CPU3

[ 0.015517] CPU3: Booted secondary processor 0x0000000003 [0x410fd034]

[ 0.015730] smp: Brought up 1 node, 4 CPUs

[ 0.015762] SMP: Total of 4 processors activated.

[ 0.015781] CPU features: detected: 32-bit EL0 Support

[ 0.015796] CPU features: detected: 32-bit EL1 Support

[ 0.015815] CPU features: detected: CRC32 instructions

[ 0.016018] CPU: All CPU(s) started at EL2

[ 0.016050] alternatives: applying system-wide alternatives

[ 0.018598] devtmpfs: initialized

[ 0.043796] Enabled cp15\_barrier support

[ 0.043850] Enabled setend support

[ 0.044223] clocksource: jiffies: mask: 0xffffffff max\_cycles: 0xffffffff, max\_idle\_ns: 7645041785100000 ns

[ 0.044271] futex hash table entries: 1024 (order: 4, 65536 bytes, linear)

[ 0.055810] pinctrl core: initialized pinctrl subsystem

[ 0.057195] DMI not present or invalid.

[ 0.058218] NET: Registered PF\_NETLINK/PF\_ROUTE protocol family

[ 0.070439] DMA: preallocated 1024 KiB GFP\_KERNEL pool for atomic allocations

[ 0.070874] DMA: preallocated 1024 KiB GFP\_KERNEL|GFP\_DMA pool for atomic allocations

[ 0.072429] DMA: preallocated 1024 KiB GFP\_KERNEL|GFP\_DMA32 pool for atomic allocations

[ 0.072593] audit: initializing netlink subsys (disabled)

[ 0.073035] audit: type=2000 audit(0.072:1): state=initialized audit\_enabled=0 res=1

[ 0.074082] thermal\_sys: Registered thermal governor 'step\_wise'

[ 0.074217] cpuidle: using governor menu

[ 0.075065] hw-breakpoint: found 6 breakpoint and 4 watchpoint registers.

[ 0.075369] ASID allocator initialised with 32768 entries

[ 0.075630] Serial: AMBA PL011 UART driver

[ 0.093278] bcm2835-mbox 3f00b880.mailbox: mailbox enabled

[ 0.116623] raspberrypi-firmware soc:firmware: Attached to firmware from 2023-03-17T10:52:42, variant start

[ 0.120640] raspberrypi-firmware soc:firmware: Firmware hash is 82f3750a65fadae9a38077e3c2e217ad158c8d54

[ 0.133991] KASLR enabled

[ 0.195902] bcm2835-dma 3f007000.dma: DMA legacy API manager, dmachans=0x1

[ 0.203030] SCSI subsystem initialized

[ 0.203401] usbcore: registered new interface driver usbfs

[ 0.203495] usbcore: registered new interface driver hub

[ 0.203603] usbcore: registered new device driver usb

[ 0.204279] usb\_phy\_generic phy: supply vcc not found, using dummy regulator

[ 0.204628] usb\_phy\_generic phy: dummy supplies not allowed for exclusive requests

[ 0.205070] pps\_core: LinuxPPS API ver. 1 registered

[ 0.205089] pps\_core: Software ver. 5.3.6 - Copyright 2005-2007 Rodolfo Giometti <giometti@linux.it>

[ 0.205132] PTP clock support registered

[ 0.206950] vgaarb: loaded

[ 0.208304] clocksource: Switched to clocksource arch\_sys\_counter

[ 0.209314] VFS: Disk quotas dquot\_6.6.0

[ 0.209433] VFS: Dquot-cache hash table entries: 512 (order 0, 4096 bytes)

[ 0.209734] FS-Cache: Loaded

[ 0.210020] CacheFiles: Loaded

[ 0.226589] NET: Registered PF\_INET protocol family

[ 0.227350] IP idents hash table entries: 16384 (order: 5, 131072 bytes, linear)

[ 0.230004] tcp\_listen\_portaddr\_hash hash table entries: 512 (order: 1, 8192 bytes, linear)

[ 0.230058] Table-perturb hash table entries: 65536 (order: 6, 262144 bytes, linear)

[ 0.230098] TCP established hash table entries: 8192 (order: 4, 65536 bytes, linear)

[ 0.230229] TCP bind hash table entries: 8192 (order: 6, 262144 bytes, linear)

[ 0.230606] TCP: Hash tables configured (established 8192 bind 8192)

[ 0.230857] UDP hash table entries: 512 (order: 2, 16384 bytes, linear)

[ 0.230927] UDP-Lite hash table entries: 512 (order: 2, 16384 bytes, linear)

[ 0.231279] NET: Registered PF\_UNIX/PF\_LOCAL protocol family

[ 0.232389] RPC: Registered named UNIX socket transport module.

[ 0.232411] RPC: Registered udp transport module.

[ 0.232429] RPC: Registered tcp transport module.

[ 0.232445] RPC: Registered tcp NFSv4.1 backchannel transport module.

[ 0.232484] PCI: CLS 0 bytes, default 64

[ 0.235569] hw perfevents: enabled with armv8\_cortex\_a53 PMU driver, 7 counters available

[ 0.235978] kvm [1]: IPA Size Limit: 40 bits

[ 0.237926] kvm [1]: Hyp mode initialized successfully

[ 2.011505] Initialise system trusted keyrings

[ 2.012119] workingset: timestamp\_bits=46 max\_order=18 bucket\_order=0

[ 2.025496] zbud: loaded

[ 2.030184] NFS: Registering the id\_resolver key type

[ 2.030235] Key type id\_resolver registered

[ 2.030253] Key type id\_legacy registered

[ 2.030480] nfs4filelayout\_init: NFSv4 File Layout Driver Registering...

[ 2.030506] nfs4flexfilelayout\_init: NFSv4 Flexfile Layout Driver Registering...

[ 2.032686] Key type asymmetric registered

[ 2.032714] Asymmetric key parser 'x509' registered

[ 2.032842] Block layer SCSI generic (bsg) driver version 0.4 loaded (major 247)

[ 2.033263] io scheduler mq-deadline registered

[ 2.033290] io scheduler kyber registered

[ 2.045362] simple-framebuffer 3eaa9000.framebuffer: framebuffer at 0x3eaa9000, 0x151800 bytes

[ 2.045402] simple-framebuffer 3eaa9000.framebuffer: format=a8r8g8b8, mode=720x480x32, linelength=2880

[ 2.046093] Console: switching to colour frame buffer device 90x30

[ 2.049232] simple-framebuffer 3eaa9000.framebuffer: fb0: simplefb registered!

[ 2.057299] Serial: 8250/16550 driver, 1 ports, IRQ sharing enabled

[ 2.061495] bcm2835-rng 3f104000.rng: hwrng registered

[ 2.062753] vc-mem: phys\_addr:0x00000000 mem\_base=0x3ec00000 mem\_size:0x40000000(1024 MiB)

[ 2.065120] gpiomem-bcm2835 3f200000.gpiomem: Initialised: Registers at 0x3f200000

[ 2.085954] brd: module loaded

[ 2.100411] loop: module loaded

[ 2.101571] Loading iSCSI transport class v2.0-870.

[ 2.109164] usbcore: registered new interface driver r8152

[ 2.109294] usbcore: registered new interface driver lan78xx

[ 2.109409] usbcore: registered new interface driver smsc95xx

[ 2.110214] dwc\_otg: version 3.00a 10-AUG-2012 (platform bus)

[ 2.839731] Core Release: 2.80a

[ 2.839757] Setting default values for core params

[ 2.839790] Finished setting default values for core params

[ 3.040337] Using Buffer DMA mode

[ 3.040354] Periodic Transfer Interrupt Enhancement - disabled

[ 3.040372] Multiprocessor Interrupt Enhancement - disabled

[ 3.040388] OTG VER PARAM: 0, OTG VER FLAG: 0

[ 3.040411] Dedicated Tx FIFOs mode

[ 3.045493] WARN::dwc\_otg\_hcd\_init:1074: FIQ DMA bounce buffers: virt = ffffffc008459000 dma = 0x00000000df000000 len=9024

[ 3.045538] FIQ FSM acceleration enabled for :

Non-periodic Split Transactions

Periodic Split Transactions

High-Speed Isochronous Endpoints

Interrupt/Control Split Transaction hack enabled

[ 3.045561] dwc\_otg: Microframe scheduler enabled

[ 3.045634] WARN::hcd\_init\_fiq:497: MPHI regs\_base at ffffffc00806d000

[ 3.045735] dwc\_otg 3f980000.usb: DWC OTG Controller

[ 3.045780] dwc\_otg 3f980000.usb: new USB bus registered, assigned bus number 1

[ 3.045845] dwc\_otg 3f980000.usb: irq 74, io mem 0x00000000

[ 3.045907] Init: Port Power? op\_state=1

[ 3.045924] Init: Power Port (0)

[ 3.046469] usb usb1: New USB device found, idVendor=1d6b, idProduct=0002, bcdDevice= 6.01

[ 3.046498] usb usb1: New USB device strings: Mfr=3, Product=2, SerialNumber=1

[ 3.046522] usb usb1: Product: DWC OTG Controller

[ 3.046543] usb usb1: Manufacturer: Linux 6.1.21-v8+ dwc\_otg\_hcd

[ 3.046564] usb usb1: SerialNumber: 3f980000.usb

[ 3.047773] hub 1-0:1.0: USB hub found

[ 3.047871] hub 1-0:1.0: 1 port detected

[ 3.049248] dwc\_otg: FIQ enabled

[ 3.049268] dwc\_otg: NAK holdoff enabled

[ 3.049284] dwc\_otg: FIQ split-transaction FSM enabled

[ 3.049320] Module dwc\_common\_port init

[ 3.050096] usbcore: registered new interface driver uas

[ 3.050265] usbcore: registered new interface driver usb-storage

[ 3.050630] mousedev: PS/2 mouse device common for all mice

[ 3.058101] sdhci: Secure Digital Host Controller Interface driver

[ 3.058125] sdhci: Copyright(c) Pierre Ossman

[ 3.059084] sdhci-pltfm: SDHCI platform and OF driver helper

[ 3.063148] ledtrig-cpu: registered to indicate activity on CPUs

[ 3.063723] hid: raw HID events driver (C) Jiri Kosina

[ 3.063992] usbcore: registered new interface driver usbhid

[ 3.064067] usbhid: USB HID core driver

[ 3.072743] NET: Registered PF\_PACKET protocol family

[ 3.072947] Key type dns\_resolver registered

[ 3.075309] registered taskstats version 1

[ 3.075426] Loading compiled-in X.509 certificates

[ 3.076850] Key type .fscrypt registered

[ 3.076873] Key type fscrypt-provisioning registered

[ 3.103779] uart-pl011 3f201000.serial: cts\_event\_workaround enabled

[ 3.104015] 3f201000.serial: ttyAMA0 at MMIO 0x3f201000 (irq = 99, base\_baud = 0) is a PL011 rev2

[ 3.109206] bcm2835-aux-uart 3f215040.serial: there is not valid maps for state default

[ 3.110274] printk: console [ttyS0] disabled

[ 3.110457] 3f215040.serial: ttyS0 at MMIO 0x3f215040 (irq = 71, base\_baud = 50000000) is a 16550

[ 3.110885] printk: console [ttyS0] enabled

[ 3.113289] bcm2835-wdt bcm2835-wdt: Broadcom BCM2835 watchdog timer

[ 3.113980] bcm2835-power bcm2835-power: Broadcom BCM2835 power domains driver

[ 3.117332] mmc-bcm2835 3f300000.mmcnr: mmc\_debug:0 mmc\_debug2:0

[ 3.117362] mmc-bcm2835 3f300000.mmcnr: DMA channel allocated

[ 3.144786] sdhost: log\_buf @ 000000007780c121 (c2922000)

[ 3.160571] Indeed it is in host mode hprt0 = 00021501

[ 3.195806] mmc0: sdhost-bcm2835 loaded - DMA enabled (>1)

[ 3.200849] of\_cfs\_init

[ 3.201036] of\_cfs\_init: OK

[ 3.202646] Waiting for root device PARTUUID=ecbbd781-02...

[ 3.230208] mmc0: host does not support reading read-only switch, assuming write-enable

[ 3.233574] mmc0: new high speed SDHC card at address 5048

[ 3.235273] mmcblk0: mmc0:5048 SD32G 29.7 GiB

[ 3.240945] mmcblk0: p1 p2

[ 3.241943] mmcblk0: mmc0:5048 SD32G 29.7 GiB (quirks 0x00004000)

[ 3.266897] EXT4-fs (mmcblk0p2): mounted filesystem with ordered data mode. Quota mode: none.

[ 3.267068] VFS: Mounted root (ext4 filesystem) readonly on device 179:2.

[ 3.275834] mmc1: new high speed SDIO card at address 0001

[ 3.277500] devtmpfs: mounted

[ 3.290210] Freeing unused kernel memory: 4160K

[ 3.290449] Run /sbin/init as init process

[ 3.290498] with arguments:

[ 3.290514] /sbin/init

[ 3.290531] splash

[ 3.290547] with environment:

[ 3.290563] HOME=/

[ 3.290579] TERM=linux

[ 3.352389] usb 1-1: new high-speed USB device number 2 using dwc\_otg

[ 3.352667] Indeed it is in host mode hprt0 = 00001101

[ 3.564965] usb 1-1: New USB device found, idVendor=0424, idProduct=9514, bcdDevice= 2.00

[ 3.565013] usb 1-1: New USB device strings: Mfr=0, Product=0, SerialNumber=0

[ 3.566235] hub 1-1:1.0: USB hub found

[ 3.566438] hub 1-1:1.0: 5 ports detected

[ 3.856374] usb 1-1.1: new high-speed USB device number 3 using dwc\_otg

[ 3.956942] usb 1-1.1: New USB device found, idVendor=0424, idProduct=ec00, bcdDevice= 2.00

[ 3.957011] usb 1-1.1: New USB device strings: Mfr=0, Product=0, SerialNumber=0

[ 3.960428] smsc95xx v2.0.0

[ 3.968480] systemd[1]: System time before build time, advancing clock.

[ 4.128186] SMSC LAN8700 usb-001:003:01: attached PHY driver (mii\_bus:phy\_addr=usb-001:003:01, irq=184)

[ 4.129582] smsc95xx 1-1.1:1.0 eth0: register 'smsc95xx' at usb-3f980000.usb-1.1, smsc95xx USB 2.0 Ethernet, b8:27:eb:36:3f:6c

[ 4.258791] NET: Registered PF\_INET6 protocol family

[ 4.261915] Segment Routing with IPv6

[ 4.261995] In-situ OAM (IOAM) with IPv6

[ 4.340796] systemd[1]: systemd 247.3-7+deb11u4 running in system mode. (+PAM +AUDIT +SELINUX +IMA +APPARMOR +SMACK +SYSVINIT +UTMP +LIBCRYPTSETUP +GCRYPT +GNUTLS +ACL +XZ +LZ4 +ZSTD +SECCOMP +BLKID +ELFUTILS +KMOD +IDN2 -IDN +PCRE2 default-hierarchy=unified)

[ 4.342357] systemd[1]: Detected architecture arm64.

[ 4.353156] systemd[1]: Set hostname to <raspberrypi>.

[ 5.393148] systemd[1]: /lib/systemd/system/plymouth-start.service:16: Unit configured to use KillMode=none. This is unsafe, as it disables systemd's process lifecycle management for the service. Please update your service to use a safer KillMode=, such as 'mixed' or 'control-group'. Support for KillMode=none is deprecated and will eventually be removed.

[ 5.655582] systemd[1]: Queued start job for default target Graphical Interface.

[ 5.674859] systemd[1]: Created slice system-getty.slice.

[ 5.677102] systemd[1]: Created slice system-modprobe.slice.

[ 5.678764] systemd[1]: Created slice system-serial\x2dgetty.slice.

[ 5.680458] systemd[1]: Created slice system-systemd\x2dfsck.slice.

[ 5.681808] systemd[1]: Created slice User and Session Slice.

[ 5.682626] systemd[1]: Started Forward Password Requests to Wall Directory Watch.

[ 5.684382] systemd[1]: Set up automount Arbitrary Executable File Formats File System Automount Point.

[ 5.685172] systemd[1]: Reached target Slices.

[ 5.685367] systemd[1]: Reached target Swap.

[ 5.686794] systemd[1]: Listening on Syslog Socket.

[ 5.687868] systemd[1]: Listening on fsck to fsckd communication Socket.

[ 5.688558] systemd[1]: Listening on initctl Compatibility Named Pipe.

[ 5.690527] systemd[1]: Listening on Journal Audit Socket.

[ 5.691714] systemd[1]: Listening on Journal Socket (/dev/log).

[ 5.693361] systemd[1]: Listening on Journal Socket.

[ 5.696780] systemd[1]: Listening on udev Control Socket.

[ 5.698134] systemd[1]: Listening on udev Kernel Socket.

[ 5.699645] systemd[1]: Condition check resulted in Huge Pages File System being skipped.

[ 5.721088] systemd[1]: Mounting POSIX Message Queue File System...

[ 5.728109] systemd[1]: Mounting RPC Pipe File System...

[ 5.737014] systemd[1]: Mounting Kernel Debug File System...

[ 5.745904] systemd[1]: Mounting Kernel Trace File System...

[ 5.747034] systemd[1]: Condition check resulted in Kernel Module supporting RPCSEC\_GSS being skipped.

[ 5.757286] systemd[1]: Starting Restore / save the current clock...

[ 5.765179] systemd[1]: Starting Set the console keyboard layout...

[ 5.773906] systemd[1]: Starting Create list of static device nodes for the current kernel...

[ 5.782269] systemd[1]: Starting Load Kernel Module configfs...

[ 5.794585] systemd[1]: Starting Load Kernel Module drm...

[ 5.809492] systemd[1]: Starting Load Kernel Module fuse...

[ 5.814282] systemd[1]: Condition check resulted in Set Up Additional Binary Formats being skipped.

[ 5.822503] systemd[1]: Starting File System Check on Root Device...

[ 5.838601] systemd[1]: Starting Journal Service...

[ 5.854961] systemd[1]: Starting Load Kernel Modules...

[ 5.864093] systemd[1]: Starting Coldplug All udev Devices...

[ 5.898139] systemd[1]: Mounted POSIX Message Queue File System.

[ 5.899378] systemd[1]: Mounted RPC Pipe File System.

[ 5.900718] systemd[1]: Mounted Kernel Debug File System.

[ 5.901974] systemd[1]: Mounted Kernel Trace File System.

[ 5.905915] systemd[1]: Finished Restore / save the current clock.

[ 5.910263] systemd[1]: Finished Create list of static device nodes for the current kernel.

[ 5.913736] systemd[1]: modprobe@configfs.service: Succeeded.

[ 5.916052] systemd[1]: Finished Load Kernel Module configfs.

[ 5.951366] fuse: init (API version 7.37)

[ 5.965058] systemd[1]: Mounting Kernel Configuration File System...

[ 5.969804] systemd[1]: modprobe@fuse.service: Succeeded.

[ 5.978933] systemd[1]: Finished Load Kernel Module fuse.

[ 5.989448] systemd[1]: Mounted Kernel Configuration File System.

[ 6.003662] systemd[1]: Mounting FUSE Control File System...

[ 6.020775] i2c\_dev: i2c /dev entries driver

[ 6.024060] systemd[1]: Started File System Check Daemon to report status.

[ 6.041135] systemd[1]: Finished Load Kernel Modules.

[ 6.077849] systemd[1]: Starting Apply Kernel Variables...

[ 6.088193] systemd[1]: Mounted FUSE Control File System.

[ 6.139063] systemd[1]: modprobe@drm.service: Succeeded.

[ 6.141808] systemd[1]: Finished Load Kernel Module drm.

[ 6.207837] systemd[1]: Finished Apply Kernel Variables.

[ 6.262691] systemd[1]: Finished File System Check on Root Device.

[ 6.296202] systemd[1]: Starting Remount Root and Kernel File Systems...

[ 6.344584] systemd[1]: Started Journal Service.

[ 6.532855] EXT4-fs (mmcblk0p2): re-mounted. Quota mode: none.

[ 6.642127] systemd-journald[140]: Received client request to flush runtime journal.

[ 6.674924] systemd-journald[140]: File /var/log/journal/54561d4fcc8a4f9d8e97e4a7d7762e2f/system.journal corrupted or uncleanly shut down, renaming and replacing.

[ 8.349799] vc\_sm\_cma: module is from the staging directory, the quality is unknown, you have been warned.

[ 8.353455] bcm2835\_vc\_sm\_cma\_probe: Videocore shared memory driver

[ 8.353511] [vc\_sm\_connected\_init]: start

[ 8.372004] [vc\_sm\_connected\_init]: installed successfully

[ 8.375821] mc: Linux media interface: v0.10

[ 8.517380] videodev: Linux video capture interface: v2.00

[ 8.650739] bcm2835\_mmal\_vchiq: module is from the staging directory, the quality is unknown, you have been warned.

[ 8.672655] bcm2835\_isp: module is from the staging directory, the quality is unknown, you have been warned.

[ 8.683945] bcm2835\_v4l2: module is from the staging directory, the quality is unknown, you have been warned.

[ 8.702198] bcm2835-isp bcm2835-isp: Device node output[0] registered as /dev/video13

[ 8.703281] bcm2835-isp bcm2835-isp: Device node capture[0] registered as /dev/video14

[ 8.704378] bcm2835-isp bcm2835-isp: Device node capture[1] registered as /dev/video15

[ 8.707341] bcm2835-isp bcm2835-isp: Device node stats[2] registered as /dev/video16

[ 8.707405] bcm2835-isp bcm2835-isp: Register output node 0 with media controller

[ 8.707443] bcm2835-isp bcm2835-isp: Register capture node 1 with media controller

[ 8.707474] bcm2835-isp bcm2835-isp: Register capture node 2 with media controller

[ 8.707525] bcm2835-isp bcm2835-isp: Register capture node 3 with media controller

[ 8.715792] bcm2835-isp bcm2835-isp: Device node output[0] registered as /dev/video20

[ 8.718858] bcm2835-isp bcm2835-isp: Device node capture[0] registered as /dev/video21

[ 8.737264] bcm2835-isp bcm2835-isp: Device node capture[1] registered as /dev/video22

[ 8.738364] bcm2835-isp bcm2835-isp: Device node stats[2] registered as /dev/video23

[ 8.738449] bcm2835-isp bcm2835-isp: Register output node 0 with media controller

[ 8.738486] bcm2835-isp bcm2835-isp: Register capture node 1 with media controller

[ 8.738518] bcm2835-isp bcm2835-isp: Register capture node 2 with media controller

[ 8.738549] bcm2835-isp bcm2835-isp: Register capture node 3 with media controller

[ 8.740986] bcm2835-isp bcm2835-isp: Loaded V4L2 bcm2835-isp

[ 8.752423] snd\_bcm2835: module is from the staging directory, the quality is unknown, you have been warned.

[ 8.803320] bcm2835\_audio bcm2835\_audio: card created with 8 channels

[ 8.820901] bcm2835\_codec: module is from the staging directory, the quality is unknown, you have been warned.

[ 8.854150] bcm2835-codec bcm2835-codec: Device registered as /dev/video10

[ 8.854235] bcm2835-codec bcm2835-codec: Loaded V4L2 decode

[ 8.861256] bcm2835-codec bcm2835-codec: Device registered as /dev/video11

[ 8.861335] bcm2835-codec bcm2835-codec: Loaded V4L2 encode

[ 8.889308] bcm2835-codec bcm2835-codec: Device registered as /dev/video12

[ 8.889393] bcm2835-codec bcm2835-codec: Loaded V4L2 isp

[ 8.904630] bcm2835-codec bcm2835-codec: Device registered as /dev/video18

[ 8.904717] bcm2835-codec bcm2835-codec: Loaded V4L2 image\_fx

[ 8.939363] bcm2835-codec bcm2835-codec: Device registered as /dev/video31

[ 8.939483] bcm2835-codec bcm2835-codec: Loaded V4L2 encode\_image

[ 9.605090] cfg80211: Loading compiled-in X.509 certificates for regulatory database

[ 9.654603] cfg80211: Loaded X.509 cert 'sforshee: 00b28ddf47aef9cea7'

[ 9.675959] cfg80211: loaded regulatory.db is malformed or signature is missing/invalid

[ 9.781358] Console: switching to colour dummy device 80x25

[ 9.795145] vc4-drm soc:gpu: bound 3f400000.hvs (ops vc4\_hvs\_ops [vc4])

[ 9.805878] Registered IR keymap rc-cec

[ 9.806189] rc rc0: vc4-hdmi as /devices/platform/soc/3f902000.hdmi/rc/rc0

[ 9.806599] input: vc4-hdmi as /devices/platform/soc/3f902000.hdmi/rc/rc0/input0

[ 9.873333] vc4-drm soc:gpu: bound 3f902000.hdmi (ops vc4\_hdmi\_ops [vc4])

[ 9.874058] vc4-drm soc:gpu: bound 3f004000.txp (ops vc4\_txp\_ops [vc4])

[ 9.874581] vc4-drm soc:gpu: bound 3f206000.pixelvalve (ops vc4\_crtc\_ops [vc4])

[ 9.875053] vc4-drm soc:gpu: bound 3f207000.pixelvalve (ops vc4\_crtc\_ops [vc4])

[ 9.875549] vc4-drm soc:gpu: bound 3f807000.pixelvalve (ops vc4\_crtc\_ops [vc4])

[ 9.875937] vc4-drm soc:gpu: bound 3fc00000.v3d (ops vc4\_v3d\_ops [vc4])

[ 9.891482] [drm] Initialized vc4 0.0.0 20140616 for soc:gpu on minor 0

[ 9.893847] vc4-drm soc:gpu: [drm] Cannot find any crtc or sizes

[ 9.902356] brcmfmac: F1 signature read @0x18000000=0x1541a9a6

[ 9.952948] brcmfmac: brcmf\_fw\_alloc\_request: using brcm/brcmfmac43430-sdio for chip BCM43430/1

[ 9.953935] usbcore: registered new interface driver brcmfmac

[ 10.310461] brcmfmac: brcmf\_c\_preinit\_dcmds: Firmware: BCM43430/1 wl0: Jul 19 2021 03:24:18 version 7.45.98 (TOB) (56df937 CY) FWID 01-8e14b897

[ 12.372262] input: BRLTTY 6.3 Linux Screen Driver Keyboard as /devices/virtual/input/input1

[ 12.529843] Process accounting resumed

[ 13.019153] 8021q: 802.1Q VLAN Support v1.8

[ 13.097900] uart-pl011 3f201000.serial: no DMA platform data

[ 13.159904] Adding 102396k swap on /var/swap. Priority:-2 extents:1 across:102396k SSFS

[ 13.878206] brcmfmac: brcmf\_cfg80211\_set\_power\_mgmt: power save enabled

[ 14.353359] smsc95xx 1-1.1:1.0 eth0: hardware isn't capable of remote wakeup

[ 14.358629] smsc95xx 1-1.1:1.0 eth0: Link is Down

ATOP - raspberrypi 2023/11/15 19:55:14 ---------------- 15s elapsed

PRC | sys 12.03s | user 9.32s | #proc 161 | #zombie 0 | #exit 3 |

CPU | sys 115% | user 93% | irq 3% | idle 151% | wait 38% |

cpu | sys 34% | user 23% | irq 1% | idle 34% | cpu000 w 8% |

cpu | sys 28% | user 28% | irq 1% | idle 32% | cpu001 w 12% |

cpu | sys 28% | user 21% | irq 0% | idle 42% | cpu003 w 9% |

cpu | sys 25% | user 21% | irq 1% | idle 44% | cpu002 w 9% |

CPL | avg1 1.77 | avg5 0.38 | avg15 0.12 | csw 53435 | intr 137259 |

MEM | tot 909.6M | free 659.5M | cache 104.9M | buff 19.5M | slab 40.3M |

SWP | tot 100.0M | free 100.0M | swcac 0.0M | vmcom 355.3M | vmlim 554.8M |

DSK | mmcblk0 | busy 62% | read 3582 | write 43 | avio 2.61 ms |

NET | transport | tcpi 4 | tcpo 4 | udpi 7 | udpo 7 |

NET | network | ipi 15 | ipo 15 | ipfrw 0 | deliv 13 |

NET | lo ---- | pcki 15 | pcko 15 | si 0 Kbps | so 0 Kbps |

\*\*\* system and process activity since boot \*\*\*

PID SYSCPU USRCPU RDELAY VGROW RGROW RDDSK WRDSK CPU CMD

1 2.11s 1.44s 0.84s 17760K 10156K 52799K 28K 23% systemd

9 1.70s 0.00s 0.04s 0K 0K 0K 0K 11% kworker/u8:0-e

173 0.38s 1.17s 2.29s 22124K 6248K 952K 0K 10% systemd-udevd

140 0.55s 0.41s 0.33s 32724K 10536K 1072K 7040K 6% systemd-journa

178 0.34s 0.54s 1.39s 22872K 7756K 2244K 0K 6% systemd-udevd

182 0.36s 0.51s 1.52s 21812K 6812K 1748K 0K 6% systemd-udevd

175 0.29s 0.44s 1.42s 21980K 6808K 1616K 0K 5% systemd-udevd

185 0.31s 0.41s 1.61s 24540K 7544K 1212K 0K 5% systemd-udevd

181 0.36s 0.34s 0.93s 25508K 7536K 6476K 0K 5% systemd-udevd

177 0.26s 0.41s 1.16s 23908K 6604K 40K 0K 4% systemd-udevd

179 0.24s 0.42s 1.18s 21808K 5684K 1232K 0K 4% systemd-udevd

343 0.28s 0.33s 0.26s 88100K 3428K 108K 0K 4% systemd-timesy

180 0.26s 0.30s 1.03s 23936K 5996K 312K 0K 4% systemd-udevd

184 0.22s 0.30s 1.11s 23916K 6400K 1200K 0K 3% systemd-udevd

183 0.23s 0.29s 1.10s 23916K 5384K 1636K 0K 3% systemd-udevd

521 0.22s 0.23s 0.21s 386.5M 12816K 4656K 0K 3% udisksd

516 0.20s 0.24s 0.30s 14104K 5944K 260K 0K 3% systemd-logind

579 0.25s 0.12s 0.08s 7572K 6628K 796K 16K 2% atop

550 0.12s 0.23s 0.11s 15856K 9364K 5364K 52K 2% python

443 0.12s 0.19s 0.28s 8128K 4052K 796K 0K 2% dbus-daemon

100 0.27s 0.00s 0.01s 0K 0K 0K 0K 2% kworker/1:1H+k

49 0.26s 0.00s 0.02s 0K 0K 0K 0K 2% kworker/3:1H-k

39 0.22s 0.00s 0.09s 0K 0K 552K 0K 1% kworker/u8:1-e

427 0.10s 0.10s 0.05s 490.7M 9248K 5744K 4K 1% brltty

601 0.09s 0.09s 0.05s 27580K 13084K 5840K 4K 1% vncserver-x11-

599 0.07s 0.10s 0.09s 230.7M 8072K 1248K 4K 1% lightdm

460 0.07s 0.10s 0.11s 231.9M 7824K 3356K 0K 1% polkitd

98 0.17s 0.00s 0.01s 0K 0K 0K 0K 1% kworker/0:1H-m

614 0.07s 0.09s 0.09s 237.7M 9196K 4164K 0K 1% ModemManager

59 0.16s 0.00s 0.08s 0K 0K 0K 0K 1% kworker/3:2-ev

97 0.15s 0.00s 0.01s 0K 0K 0K 0K 1% kworker/2:1H-k

588 0.06s 0.08s 0.07s 29564K 7908K 3992K 8K 1% cupsd

481 0.09s 0.04s 0.28s 215.7M 3304K 948K 176K 1% rsyslogd

150 0.13s 0.00s 0.27s 0K 0K 552K 0K 1% kworker/1:3-ev

15 0.12s 0.00s 0.23s 0K 0K 0K 0K 1% rcu\_preempt

607 0.03s 0.08s 0.01s 13636K 6428K 0K 0K 1% sshd

535 0.10s 0.01s 0.07s 2120K 1472K 988K 0K 1% hciattach

621 0.07s 0.02s 0.04s 112.8M 9260K 4996K 16K 1% Xorg

650 0.08s 0.01s 0.01s 6960K 6560K 0K 0K 1% atop

627 0.04s 0.04s 0.01s 169.9M 9564K 1936K 0K 1% cups-browsed

446 0.05s 0.03s 0.20s 17764K 6212K 8K 0K 1% (crub\_all)

438 0.05s 0.03s 0.05s 7068K 2836K 480K 0K 1% avahi-daemon

74 0.08s 0.00s 0.00s 0K 0K 0K 0K 1% kworker/u9:0-b

500 0.05s 0.02s 0.11s 12168K 4340K 868K 0K 0% sudo

523 0.04s 0.02s 0.11s 13576K 4780K 2848K 0K 0% wpa\_supplicant

393 0.03s 0.03s 0.01s 13876K 3172K 28K 0K 0% systemd-rfkill

48 0.06s 0.00s 0.28s 0K 0K 0K 0K 0% kworker/3:1-ev

54 0.06s 0.00s 0.16s 0K 0K 4K 0K 0% kworker/2:1-ev

157 0.02s 0.03s 0.02s 16848K 3188K 24K 0K 0% systemd-fsckd

7 0.04s 0.00s 0.17s 0K 0K 0K 0K 0% kworker/0:0-ev

53 0.04s 0.00s 0.06s 0K 0K 0K 0K 0% kworker/1:1-ev

99 0.04s 0.00s 0.08s 0K 0K 32K 0K 0% kworker/1:2-ev

104 0.02s 0.02s 0.00s 0K 0K 0K 0K 0% kworker/2:2H-k

626 0.02s 0.01s 0.00s 16644K 5800K 32K 0K 0% dbus

442 0.02s 0.01s 0.02s 6692K 2404K 764K 0K 0% cron

597 0.03s 0.00s 0.01s 6956K 2304K 748K 0K 0% vncserver-x11-

441 0.03s 0.00s 0.04s 1948K 72K 0K 0K 0% atopacctd

278 0.03s 0.00s 0.15s 0K 0K 0K 0K 0% kworker/2:3-ev

517 0.02s 0.00s 0.00s 5480K 2388K 72K 0K 0% thd

589 0.02s 0.00s 0.00s 6016K 1276K 52K 0K 0% epmd

458 0.02s 0.00s 0.04s 2060K 1260K 172K 0K 0% btuart

2 0.02s 0.00s 0.00s 0K 0K 0K 0K 0% kthreadd

20 0.02s 0.00s 0.01s 0K 0K 0K 0K 0% ksoftirqd/1

608 0.00s 0.01s 0.00s 13992K 3748K 0K 0K 0% wpa\_supplicant

538 0.01s 0.00s 0.01s 3048K 1828K 1564K 0K 0% dhcpcd

584 0.01s 0.00s 0.03s 92288K 92K 0K 0K 0% rngd

14 0.01s 0.00s 0.06s 0K 0K 0K 0K 0% ksoftirqd/0

25 0.00s 0.01s 0.04s 0K 0K 0K 0K 0% ksoftirqd/2

30 0.00s 0.01s 0.04s 0K 0K 0K 0K 0% ksoftirqd/3

33 0.01s 0.00s 0.00s 0K 0K 0K 0K 0% kdevtmpfs

37 0.01s 0.00s 0.04s 0K 0K 0K 0K 0% kworker/0:2-cg

106 0.01s 0.00s 0.01s 0K 0K 0K 0K 0% kworker/0:2H

124 0.01s 0.00s 0.01s 0K 0K 0K 0K 0% kworker/3:2H

652 0.00s 0.01s - 0K 0K - - 0% <crda>

622 0.00s 0.00s 0.00s 17764K 2840K 0K 0K 0% (agetty)

624 0.00s 0.00s 0.00s 17764K 2840K 0K 0K 0% (agetty)

649 0.00s 0.00s 0.00s 5236K 608K 0K 0K 0% timeout

648 0.00s 0.00s 0.00s 2060K 524K 0K 0K 0% sh

452 0.00s 0.00s 0.00s 6888K 312K 0K 0K 0% avahi-daemon

3 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% rcu\_gp

4 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% rcu\_par\_gp

5 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% slub\_flushwq

6 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% netns

8 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/0:0H-m

10 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% mm\_percpu\_wq

11 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% rcu\_tasks\_kthr

12 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% rcu\_tasks\_rude

13 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% rcu\_tasks\_trac

16 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% migration/0

17 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% cpuhp/0

18 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% cpuhp/1

19 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% migration/1

21 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/1:0-ev

22 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/1:0H-m

23 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% cpuhp/2

24 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% migration/2

26 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/2:0-ev

27 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/2:0H-k

28 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% cpuhp/3

29 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% migration/3

31 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/3:0-ev

32 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/3:0H-e

34 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% inet\_frag\_wq

35 0.00s 0.00s 0.05s 0K 0K 0K 0K 0% kworker/0:1-ev

36 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kauditd

38 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% khungtaskd

40 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% oom\_reaper

41 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% writeback

42 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kcompactd0

43 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kintegrityd

44 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kblockd

45 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% blkcg\_punt\_bio

46 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% watchdogd

47 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/u8:2-e

50 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% rpciod

51 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% xprtiod

52 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/u8:3

55 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kswapd0

56 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% nfsiod

57 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kthrotld

62 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% hwrng

63 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% iscsi\_conn\_cle

64 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% nvme-wq

65 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% nvme-reset-wq

66 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% nvme-delete-wq

67 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% dwc\_otg

68 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% DWC Notificati

69 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% uas

70 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% vchiq-slot/0

71 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% vchiq-recy/0

72 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% vchiq-sync/0

73 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% zswap-shrink

95 0.00s 0.00s 0.01s 0K 0K 0K 0K 0% kworker/2:2-ev

96 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% mmc\_complete

101 0.00s 0.00s 0.00s 0K 0K 0K 172K 0% jbd2/mmcblk0p2

102 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% ext4-rsv-conve

103 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/1:2H

107 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% irq/184-usb-00

108 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% mld

109 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% ipv6\_addrconf

174 0.00s 0.00s 0.06s 0K 0K 0K 0K 0% kworker/0:3-ev

196 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% vchiq-keep/0

197 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% SMIO

223 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% spi0

228 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% mmal-vchiq

230 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% mmal-vchiq

244 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% mmal-vchiq

245 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% mmal-vchiq

246 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% mmal-vchiq

248 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% mmal-vchiq

249 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% mmal-vchiq

299 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% cfg80211

309 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% cec-vc4-hdmi

310 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% irq/82-vc4 hdm

319 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% card0-crtc0

320 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% card0-crtc1

321 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% card0-crtc2

322 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% card0-crtc3

323 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% brcmf\_wq/mmc1:

324 0.00s 0.00s 0.02s 0K 0K 0K 0K 0% brcmf\_wdog/mmc

346 0.00s 0.00s 0.01s 0K 0K 0K 0K 0% kworker/3:3-ev

350 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/u9:1

653 0.00s 0.00s - 0K 0K - - 0% <dhcpcd-run-h>

654 0.00s 0.00s - 0K 0K - - 0% <cached\_setup>

ATOP - raspberrypi 2023/11/15 19:55:16 ---------------- 17s elapsed

PRC | sys 12.37s | user 9.62s | #proc 160 | #zombie 0 | #exit 1 |

CPU | sys 105% | user 85% | irq 3% | idle 159% | wait 48% |

cpu | sys 31% | user 21% | irq 1% | idle 36% | cpu000 w 11% |

cpu | sys 25% | user 26% | irq 1% | idle 33% | cpu001 w 15% |

cpu | sys 26% | user 19% | irq 0% | idle 46% | cpu003 w 9% |

cpu | sys 23% | user 19% | irq 1% | idle 44% | cpu002 w 14% |

CPL | avg1 1.77 | avg5 0.38 | avg15 0.12 | csw 59091 | intr 159611 |

MEM | tot 909.6M | free 615.6M | cache 142.1M | buff 19.5M | slab 40.8M |

SWP | tot 100.0M | free 100.0M | swcac 0.0M | vmcom 376.8M | vmlim 554.8M |

DSK | mmcblk0 | busy 66% | read 3983 | write 43 | avio 2.83 ms |

NET | transport | tcpi 6 | tcpo 6 | udpi 9 | udpo 9 |

NET | network | ipi 24 | ipo 29 | ipfrw 0 | deliv 21 |

NET | wlan0 0% | pcki 6 | pcko 13 | si 0 Kbps | so 0 Kbps |

NET | lo ---- | pcki 19 | pcko 19 | si 0 Kbps | so 0 Kbps |

\*\*\* system and process activity since boot \*\*\*

PID TID RDDSK WRDSK WCANCL DSK CMD

1 - 52883K 32K 0K 31% systemd

621 - 40176K 16K 0K 23% Xorg

140 - 1072K 7128K 0K 5% systemd-journa

181 - 6476K 0K 0K 4% systemd-udevd

601 - 5840K 4K 0K 3% vncserver-x11-

427 - 5744K 4K 0K 3% brltty

550 - 5364K 68K 0K 3% python

521 - 4656K 0K 0K 3% udisksd

614 - 4508K 0K 0K 3% ModemManager

588 - 3992K 8K 0K 2% cupsd

460 - 3356K 0K 0K 2% polkitd

523 - 2848K 0K 0K 2% wpa\_supplicant

178 - 2244K 0K 0K 1% systemd-udevd

627 - 1936K 0K 0K 1% cups-browsed

182 - 1748K 0K 0K 1% systemd-udevd

183 - 1636K 0K 0K 1% systemd-udevd

175 - 1616K 0K 0K 1% systemd-udevd

538 - 1572K 0K 0K 1% dhcpcd

655 - 1364K 0K 0K 1% vncagent

599 - 1248K 4K 0K 1% lightdm

179 - 1232K 0K 0K 1% systemd-udevd

185 - 1212K 0K 0K 1% systemd-udevd

184 - 1200K 0K 0K 1% systemd-udevd

481 - 948K 180K 0K 1% rsyslogd

535 - 1004K 0K 0K 1% hciattach

173 - 952K 0K 0K 1% systemd-udevd

500 - 868K 0K 0K 1% sudo

579 - 796K 16K 0K 0% atop

443 - 796K 0K 0K 0% dbus-daemon

442 - 764K 0K 0K 0% cron

597 - 748K 0K 0K 0% vncserver-x11-

39 - 552K 0K 0K 0% kworker/u8:1-e

150 - 552K 0K 0K 0% kworker/1:3-mm

438 - 480K 0K 0K 0% avahi-daemon

180 - 312K 0K 0K 0% systemd-udevd

516 - 260K 0K 0K 0% systemd-logind

458 - 172K 0K 0K 0% btuart

101 - 0K 172K 0K 0% jbd2/mmcblk0p2

343 - 108K 0K 0K 0% systemd-timesy

517 - 72K 0K 0K 0% thd

589 - 52K 0K 0K 0% epmd

177 - 40K 0K 0K 0% systemd-udevd

99 - 32K 0K 0K 0% kworker/1:2-ev

626 - 32K 0K 0K 0% dbus

157 - 24K 0K 0K 0% systemd-fsckd

54 - 4K 0K 0K 0% kworker/2:1-ev

9 - 0K 0K 0K 0% kworker/u8:0-e

100 - 0K 0K 0K 0% kworker/1:1H-m

49 - 0K 0K 0K 0% kworker/3:1H-m

59 - 0K 0K 0K 0% kworker/3:2-ev

98 - 0K 0K 0K 0% kworker/0:1H-m

97 - 0K 0K 0K 0% kworker/2:1H-k

15 - 0K 0K 0K 0% rcu\_preempt

607 - 0K 0K 0K 0% sshd

662 - 0K 0K 0K 0% atop

74 - 0K 0K 0K 0% kworker/u9:0-b

48 - 0K 0K 0K 0% kworker/3:1-ev

104 - 0K 0K 0K 0% kworker/2:2H-k

7 - 0K 0K 0K 0% kworker/0:0-rc

53 - 0K 0K 0K 0% kworker/1:1-ev

278 - 0K 0K 0K 0% kworker/2:3-ev

441 - 0K 0K 0K 0% atopacctd

2 - 0K 0K 0K 0% kthreadd

20 - 0K 0K 0K 0% ksoftirqd/1

608 - 0K 0K 0K 0% wpa\_supplicant

584 - 0K 0K 0K 0% rngd

14 - 0K 0K 0K 0% ksoftirqd/0

25 - 0K 0K 0K 0% ksoftirqd/2

30 - 0K 0K 0K 0% ksoftirqd/3

33 - 0K 0K 0K 0% kdevtmpfs

35 - 0K 0K 0K 0% kworker/0:1-ev

37 - 0K 0K 0K 0% kworker/0:2-cg

106 - 0K 0K 0K 0% kworker/0:2H

124 - 0K 0K 0K 0% kworker/3:2H

622 - 0K 0K 0K 0% (agetty)

624 - 0K 0K 0K 0% (agetty)

661 - 0K 0K 0K 0% timeout

660 - 0K 0K 0K 0% sh

452 - 0K 0K 0K 0% avahi-daemon

3 - 0K 0K 0K 0% rcu\_gp

4 - 0K 0K 0K 0% rcu\_par\_gp

5 - 0K 0K 0K 0% slub\_flushwq

6 - 0K 0K 0K 0% netns

8 - 0K 0K 0K 0% kworker/0:0H-m

10 - 0K 0K 0K 0% mm\_percpu\_wq

11 - 0K 0K 0K 0% rcu\_tasks\_kthr

12 - 0K 0K 0K 0% rcu\_tasks\_rude

13 - 0K 0K 0K 0% rcu\_tasks\_trac

16 - 0K 0K 0K 0% migration/0

17 - 0K 0K 0K 0% cpuhp/0

18 - 0K 0K 0K 0% cpuhp/1

19 - 0K 0K 0K 0% migration/1

21 - 0K 0K 0K 0% kworker/1:0-ev

22 - 0K 0K 0K 0% kworker/1:0H-m

23 - 0K 0K 0K 0% cpuhp/2

24 - 0K 0K 0K 0% migration/2

26 - 0K 0K 0K 0% kworker/2:0-ev

27 - 0K 0K 0K 0% kworker/2:0H-k

28 - 0K 0K 0K 0% cpuhp/3

29 - 0K 0K 0K 0% migration/3

31 - 0K 0K 0K 0% kworker/3:0-ev

32 - 0K 0K 0K 0% kworker/3:0H-e

34 - 0K 0K 0K 0% inet\_frag\_wq

36 - 0K 0K 0K 0% kauditd

38 - 0K 0K 0K 0% khungtaskd

40 - 0K 0K 0K 0% oom\_reaper

41 - 0K 0K 0K 0% writeback

42 - 0K 0K 0K 0% kcompactd0

43 - 0K 0K 0K 0% kintegrityd

44 - 0K 0K 0K 0% kblockd

45 - 0K 0K 0K 0% blkcg\_punt\_bio

46 - 0K 0K 0K 0% watchdogd

47 - 0K 0K 0K 0% kworker/u8:2-e

50 - 0K 0K 0K 0% rpciod

51 - 0K 0K 0K 0% xprtiod

52 - 0K 0K 0K 0% kworker/u8:3

55 - 0K 0K 0K 0% kswapd0

56 - 0K 0K 0K 0% nfsiod

57 - 0K 0K 0K 0% kthrotld

62 - 0K 0K 0K 0% hwrng

63 - 0K 0K 0K 0% iscsi\_conn\_cle

64 - 0K 0K 0K 0% nvme-wq

65 - 0K 0K 0K 0% nvme-reset-wq

66 - 0K 0K 0K 0% nvme-delete-wq

67 - 0K 0K 0K 0% dwc\_otg

68 - 0K 0K 0K 0% DWC Notificati

69 - 0K 0K 0K 0% uas

70 - 0K 0K 0K 0% vchiq-slot/0

71 - 0K 0K 0K 0% vchiq-recy/0

72 - 0K 0K 0K 0% vchiq-sync/0

73 - 0K 0K 0K 0% zswap-shrink

95 - 0K 0K 0K 0% kworker/2:2-ev

96 - 0K 0K 0K 0% mmc\_complete

102 - 0K 0K 0K 0% ext4-rsv-conve

103 - 0K 0K 0K 0% kworker/1:2H

107 - 0K 0K 0K 0% irq/184-usb-00

108 - 0K 0K 0K 0% mld

109 - 0K 0K 0K 0% ipv6\_addrconf

174 - 0K 0K 0K 0% kworker/0:3-ev

196 - 0K 0K 0K 0% vchiq-keep/0

197 - 0K 0K 0K 0% SMIO

223 - 0K 0K 0K 0% spi0

228 - 0K 0K 0K 0% mmal-vchiq

230 - 0K 0K 0K 0% mmal-vchiq

244 - 0K 0K 0K 0% mmal-vchiq

245 - 0K 0K 0K 0% mmal-vchiq

246 - 0K 0K 0K 0% mmal-vchiq

248 - 0K 0K 0K 0% mmal-vchiq

249 - 0K 0K 0K 0% mmal-vchiq

299 - 0K 0K 0K 0% cfg80211

309 - 0K 0K 0K 0% cec-vc4-hdmi

310 - 0K 0K 0K 0% irq/82-vc4 hdm

319 - 0K 0K 0K 0% card0-crtc0

320 - 0K 0K 0K 0% card0-crtc1

321 - 0K 0K 0K 0% card0-crtc2

322 - 0K 0K 0K 0% card0-crtc3

323 - 0K 0K 0K 0% brcmf\_wq/mmc1:

324 - 0K 0K 0K 0% brcmf\_wdog/mmc

346 - 0K 0K 0K 0% kworker/3:3-ev

350 - 0K 0K 0K 0% kworker/u9:1

663 - - - - 0% <atop>

ATOP - raspberrypi 2023/11/15 19:55:18 ---------------- 19s elapsed

PRC | sys 13.18s | user 10.56s | #proc 169 | #zombie 0 | #exit 4 |

CPU | sys 100% | user 82% | irq 2% | idle 167% | wait 49% |

cpu | sys 29% | user 20% | irq 1% | idle 39% | cpu000 w 11% |

cpu | sys 24% | user 24% | irq 1% | idle 37% | cpu001 w 15% |

cpu | sys 25% | user 18% | irq 0% | idle 47% | cpu003 w 10% |

cpu | sys 22% | user 19% | irq 0% | idle 45% | cpu002 w 13% |

CPL | avg1 1.77 | avg5 0.38 | avg15 0.12 | csw 66202 | intr 181455 |

MEM | tot 909.6M | free 572.7M | cache 156.7M | buff 20.3M | slab 42.7M |

SWP | tot 100.0M | free 100.0M | swcac 0.0M | vmcom 561.6M | vmlim 554.8M |

DSK | mmcblk0 | busy 66% | read 4436 | write 52 | avio 2.80 ms |

NET | transport | tcpi 8 | tcpo 8 | udpi 24 | udpo 11 |

NET | network | ipi 49 | ipo 39 | ipfrw 0 | deliv 40 |

NET | wlan0 0% | pcki 29 | pcko 21 | si 1 Kbps | so 1 Kbps |

NET | lo ---- | pcki 22 | pcko 22 | si 0 Kbps | so 0 Kbps |

\*\*\* system and process activity since boot \*\*\*

PID VSTACK VSIZE RSIZE PSIZE VGROW RGROW SWAPSZ MEM CMD

621 132K 1.1G 46624K 0K 1.1G 46624K 0K 5% Xorg

601 132K 30420K 15928K 0K 30420K 15928K 0K 2% vncserver-x11-

140 132K 49108K 14904K 0K 49108K 14904K 0K 2% systemd-journa

521 132K 386.5M 12816K 0K 386.5M 12816K 0K 1% udisksd

1 132K 99688K 10256K 0K 99688K 10256K 0K 1% systemd

614 132K 238.5M 9600K 0K 238.5M 9600K 0K 1% ModemManager

460 132K 233.5M 9596K 0K 233.5M 9596K 0K 1% polkitd

627 132K 169.9M 9564K 0K 169.9M 9564K 0K 1% cups-browsed

681 132K 162.6M 9556K 0K 162.6M 9556K 0K 1% lightdm

550 132K 15856K 9364K 0K 15856K 9364K 0K 1% python

427 132K 490.7M 9248K 0K 490.7M 9248K 0K 1% brltty

686 132K 16176K 8632K 0K 16176K 8632K 0K 1% systemd

599 132K 230.8M 8260K 0K 230.8M 8260K 0K 1% lightdm

588 132K 29564K 7908K 0K 29564K 7908K 0K 1% cupsd

178 132K 22872K 7756K 0K 22872K 7756K 0K 1% systemd-udevd

185 132K 24540K 7544K 0K 24540K 7544K 0K 1% systemd-udevd

181 132K 25508K 7536K 0K 25508K 7536K 0K 1% systemd-udevd

182 132K 21812K 6812K 0K 21812K 6812K 0K 1% systemd-udevd

175 132K 21980K 6808K 0K 21980K 6808K 0K 1% systemd-udevd

579 712K 7572K 6628K 0K 7572K 6628K 0K 1% atop

177 132K 23908K 6604K 0K 23908K 6604K 0K 1% systemd-udevd

728 132K 6992K 6560K 0K 6992K 6560K 0K 1% atop

516 132K 14376K 6536K 0K 14376K 6536K 0K 1% systemd-logind

607 132K 13636K 6428K 0K 13636K 6428K 0K 1% sshd

184 132K 23916K 6400K 0K 23916K 6400K 0K 1% systemd-udevd

173 132K 22124K 6248K 0K 22124K 6248K 0K 1% systemd-udevd

702 132K 19976K 6236K 0K 19976K 6236K 0K 1% pulseaudio

180 132K 23936K 5996K 0K 23936K 5996K 0K 1% systemd-udevd

626 132K 16644K 5800K 0K 16644K 5800K 0K 1% dbus

179 132K 21808K 5684K 0K 21808K 5684K 0K 1% systemd-udevd

183 132K 23916K 5384K 0K 23916K 5384K 0K 1% systemd-udevd

655 132K 10824K 5024K 0K 10824K 5024K 0K 1% vncagent

687 132K 101.1M 4832K 0K 101.1M 4832K 0K 1% (sd-pam)

523 132K 13576K 4780K 0K 13576K 4780K 0K 1% wpa\_supplicant

500 132K 12168K 4340K 0K 12168K 4340K 0K 0% sudo

443 132K 8440K 4104K 0K 8440K 4104K 0K 0% dbus-daemon

608 132K 13992K 3748K 0K 13992K 3748K 0K 0% wpa\_supplicant

343 132K 88100K 3428K 0K 88100K 3428K 0K 0% systemd-timesy

715 132K 7688K 3340K 0K 7688K 3340K 0K 0% dbus-daemon

701 132K 15388K 3324K 0K 15388K 3324K 0K 0% pipewire

481 132K 215.7M 3304K 0K 215.7M 3304K 0K 0% rsyslogd

157 132K 16848K 3188K 0K 16848K 3188K 0K 0% systemd-fsckd

622 132K 17764K 2840K 0K 17764K 2840K 0K 0% (agetty)

624 132K 17764K 2840K 0K 17764K 2840K 0K 0% (agetty)

438 132K 7068K 2836K 0K 7068K 2836K 0K 0% avahi-daemon

713 132K 149.9M 2644K 0K 149.9M 2644K 0K 0% rtkit-daemon

723 132K 4128K 2408K 0K 4128K 2408K 0K 0% xrdb

442 132K 6692K 2404K 0K 6692K 2404K 0K 0% cron

517 132K 5480K 2388K 0K 5480K 2388K 0K 0% thd

726 132K 5848K 2324K 0K 5848K 2324K 0K 0% cpp

597 132K 6956K 2304K 0K 6956K 2304K 0K 0% vncserver-x11-

538 132K 3048K 1828K 0K 3048K 1828K 0K 0% dhcpcd

703 132K 2060K 1384K 0K 2060K 1384K 0K 0% Xsession

589 132K 6016K 1276K 0K 6016K 1276K 0K 0% epmd

727 132K 5236K 532K 0K 5236K 532K 0K 0% timeout

724 132K 2060K 516K 0K 2060K 516K 0K 0% sh

725 132K 2060K 480K 0K 2060K 480K 0K 0% sh

452 132K 6888K 312K 0K 6888K 312K 0K 0% avahi-daemon

584 132K 92288K 92K 0K 92288K 92K 0K 0% rngd

441 132K 1948K 72K 0K 1948K 72K 0K 0% atopacctd

2 0K 0K 0K 0K 0K 0K 0K 0% kthreadd

3 0K 0K 0K 0K 0K 0K 0K 0% rcu\_gp

4 0K 0K 0K 0K 0K 0K 0K 0% rcu\_par\_gp

5 0K 0K 0K 0K 0K 0K 0K 0% slub\_flushwq

6 0K 0K 0K 0K 0K 0K 0K 0% netns

7 0K 0K 0K 0K 0K 0K 0K 0% kworker/0:0+ev

8 0K 0K 0K 0K 0K 0K 0K 0% kworker/0:0H-m

9 0K 0K 0K 0K 0K 0K 0K 0% kworker/u8:0-e

10 0K 0K 0K 0K 0K 0K 0K 0% mm\_percpu\_wq

11 0K 0K 0K 0K 0K 0K 0K 0% rcu\_tasks\_kthr

12 0K 0K 0K 0K 0K 0K 0K 0% rcu\_tasks\_rude

13 0K 0K 0K 0K 0K 0K 0K 0% rcu\_tasks\_trac

14 0K 0K 0K 0K 0K 0K 0K 0% ksoftirqd/0

15 0K 0K 0K 0K 0K 0K 0K 0% rcu\_preempt

16 0K 0K 0K 0K 0K 0K 0K 0% migration/0

17 0K 0K 0K 0K 0K 0K 0K 0% cpuhp/0

18 0K 0K 0K 0K 0K 0K 0K 0% cpuhp/1

19 0K 0K 0K 0K 0K 0K 0K 0% migration/1

20 0K 0K 0K 0K 0K 0K 0K 0% ksoftirqd/1

21 0K 0K 0K 0K 0K 0K 0K 0% kworker/1:0-ev

22 0K 0K 0K 0K 0K 0K 0K 0% kworker/1:0H-m

23 0K 0K 0K 0K 0K 0K 0K 0% cpuhp/2

24 0K 0K 0K 0K 0K 0K 0K 0% migration/2

25 0K 0K 0K 0K 0K 0K 0K 0% ksoftirqd/2

26 0K 0K 0K 0K 0K 0K 0K 0% kworker/2:0-ev

27 0K 0K 0K 0K 0K 0K 0K 0% kworker/2:0H-k

28 0K 0K 0K 0K 0K 0K 0K 0% cpuhp/3

29 0K 0K 0K 0K 0K 0K 0K 0% migration/3

30 0K 0K 0K 0K 0K 0K 0K 0% ksoftirqd/3

31 0K 0K 0K 0K 0K 0K 0K 0% kworker/3:0-ev

32 0K 0K 0K 0K 0K 0K 0K 0% kworker/3:0H-e

33 0K 0K 0K 0K 0K 0K 0K 0% kdevtmpfs

34 0K 0K 0K 0K 0K 0K 0K 0% inet\_frag\_wq

35 0K 0K 0K 0K 0K 0K 0K 0% kworker/0:1-ev

36 0K 0K 0K 0K 0K 0K 0K 0% kauditd

37 0K 0K 0K 0K 0K 0K 0K 0% kworker/0:2-cg

38 0K 0K 0K 0K 0K 0K 0K 0% khungtaskd

39 0K 0K 0K 0K 0K 0K 0K 0% kworker/u8:1+e

40 0K 0K 0K 0K 0K 0K 0K 0% oom\_reaper

41 0K 0K 0K 0K 0K 0K 0K 0% writeback

42 0K 0K 0K 0K 0K 0K 0K 0% kcompactd0

43 0K 0K 0K 0K 0K 0K 0K 0% kintegrityd

44 0K 0K 0K 0K 0K 0K 0K 0% kblockd

45 0K 0K 0K 0K 0K 0K 0K 0% blkcg\_punt\_bio

46 0K 0K 0K 0K 0K 0K 0K 0% watchdogd

47 0K 0K 0K 0K 0K 0K 0K 0% kworker/u8:2-e

48 0K 0K 0K 0K 0K 0K 0K 0% kworker/3:1-ev

49 0K 0K 0K 0K 0K 0K 0K 0% kworker/3:1H-k

50 0K 0K 0K 0K 0K 0K 0K 0% rpciod

51 0K 0K 0K 0K 0K 0K 0K 0% xprtiod

52 0K 0K 0K 0K 0K 0K 0K 0% kworker/u8:3

53 0K 0K 0K 0K 0K 0K 0K 0% kworker/1:1-ev

54 0K 0K 0K 0K 0K 0K 0K 0% kworker/2:1-ev

55 0K 0K 0K 0K 0K 0K 0K 0% kswapd0

56 0K 0K 0K 0K 0K 0K 0K 0% nfsiod

57 0K 0K 0K 0K 0K 0K 0K 0% kthrotld

59 0K 0K 0K 0K 0K 0K 0K 0% kworker/3:2-ev

62 0K 0K 0K 0K 0K 0K 0K 0% hwrng

63 0K 0K 0K 0K 0K 0K 0K 0% iscsi\_conn\_cle

64 0K 0K 0K 0K 0K 0K 0K 0% nvme-wq

65 0K 0K 0K 0K 0K 0K 0K 0% nvme-reset-wq

66 0K 0K 0K 0K 0K 0K 0K 0% nvme-delete-wq

67 0K 0K 0K 0K 0K 0K 0K 0% dwc\_otg

68 0K 0K 0K 0K 0K 0K 0K 0% DWC Notificati

69 0K 0K 0K 0K 0K 0K 0K 0% uas

70 0K 0K 0K 0K 0K 0K 0K 0% vchiq-slot/0

71 0K 0K 0K 0K 0K 0K 0K 0% vchiq-recy/0

72 0K 0K 0K 0K 0K 0K 0K 0% vchiq-sync/0

73 0K 0K 0K 0K 0K 0K 0K 0% zswap-shrink

74 0K 0K 0K 0K 0K 0K 0K 0% kworker/u9:0+h

95 0K 0K 0K 0K 0K 0K 0K 0% kworker/2:2-ev

96 0K 0K 0K 0K 0K 0K 0K 0% mmc\_complete

97 0K 0K 0K 0K 0K 0K 0K 0% kworker/2:1H-k

98 0K 0K 0K 0K 0K 0K 0K 0% kworker/0:1H-k

99 0K 0K 0K 0K 0K 0K 0K 0% kworker/1:2-ev

100 0K 0K 0K 0K 0K 0K 0K 0% kworker/1:1H-m

101 0K 0K 0K 0K 0K 0K 0K 0% jbd2/mmcblk0p2

102 0K 0K 0K 0K 0K 0K 0K 0% ext4-rsv-conve

103 0K 0K 0K 0K 0K 0K 0K 0% kworker/1:2H

104 0K 0K 0K 0K 0K 0K 0K 0% kworker/2:2H-m

106 0K 0K 0K 0K 0K 0K 0K 0% kworker/0:2H

107 0K 0K 0K 0K 0K 0K 0K 0% irq/184-usb-00

108 0K 0K 0K 0K 0K 0K 0K 0% mld

109 0K 0K 0K 0K 0K 0K 0K 0% ipv6\_addrconf

124 0K 0K 0K 0K 0K 0K 0K 0% kworker/3:2H

150 0K 0K 0K 0K 0K 0K 0K 0% kworker/1:3-ev

174 0K 0K 0K 0K 0K 0K 0K 0% kworker/0:3-ev

196 0K 0K 0K 0K 0K 0K 0K 0% vchiq-keep/0

197 0K 0K 0K 0K 0K 0K 0K 0% SMIO

223 0K 0K 0K 0K 0K 0K 0K 0% spi0

228 0K 0K 0K 0K 0K 0K 0K 0% mmal-vchiq

230 0K 0K 0K 0K 0K 0K 0K 0% mmal-vchiq

244 0K 0K 0K 0K 0K 0K 0K 0% mmal-vchiq

245 0K 0K 0K 0K 0K 0K 0K 0% mmal-vchiq

246 0K 0K 0K 0K 0K 0K 0K 0% mmal-vchiq

248 0K 0K 0K 0K 0K 0K 0K 0% mmal-vchiq

249 0K 0K 0K 0K 0K 0K 0K 0% mmal-vchiq

278 0K 0K 0K 0K 0K 0K 0K 0% kworker/2:3-ev

299 0K 0K 0K 0K 0K 0K 0K 0% cfg80211

309 0K 0K 0K 0K 0K 0K 0K 0% cec-vc4-hdmi

310 0K 0K 0K 0K 0K 0K 0K 0% irq/82-vc4 hdm

319 0K 0K 0K 0K 0K 0K 0K 0% card0-crtc0

320 0K 0K 0K 0K 0K 0K 0K 0% card0-crtc1

321 0K 0K 0K 0K 0K 0K 0K 0% card0-crtc2

322 0K 0K 0K 0K 0K 0K 0K 0% card0-crtc3

323 0K 0K 0K 0K 0K 0K 0K 0% brcmf\_wq/mmc1:

324 0K 0K 0K 0K 0K 0K 0K 0% brcmf\_wdog/mmc

346 0K 0K 0K 0K 0K 0K 0K 0% kworker/3:3-ev

350 0K 0K 0K 0K 0K 0K 0K 0% kworker/u9:1-h

729 0K 0K 0K 0K 0K 0K 0K 0% <atop>

718 0K 0K 0K 0K 0K 0K 0K 0% <modprobe>

535 0K 0K 0K 0K 0K 0K 0K 0% <hciattach>

458 0K 0K 0K 0K 0K 0K 0K 0% <btuart>

ATOP - raspberrypi 2023/11/15 19:55:20 ----a----------- 21s elapsed

PRC | sys 14.17s | user 11.45s | #proc 184 | #zombie 0 | #exit 39 |

CPU | sys 100% | user 81% | irq 2% | idle 162% | wait 55% |

cpu | sys 29% | user 20% | irq 1% | idle 38% | cpu000 w 13% |

cpu | sys 24% | user 24% | irq 1% | idle 35% | cpu001 w 17% |

cpu | sys 25% | user 18% | irq 0% | idle 45% | cpu003 w 12% |

cpu | sys 22% | user 19% | irq 0% | idle 45% | cpu002 w 14% |

CPL | avg1 2.18 | avg5 0.49 | avg15 0.16 | csw 76704 | intr 205020 |

MEM | tot 909.6M | free 524.5M | cache 191.6M | buff 20.7M | slab 45.4M |

SWP | tot 100.0M | free 100.0M | swcac 0.0M | vmcom 642.2M | vmlim 554.8M |

DSK | mmcblk0 | busy 69% | read 5080 | write 55 | avio 2.82 ms |

NET | transport | tcpi 10 | tcpo 10 | udpi 30 | udpo 17 |

NET | network | ipi 60 | ipo 53 | ipfrw 0 | deliv 50 |

NET | wlan0 0% | pcki 33 | pcko 35 | si 1 Kbps | so 1 Kbps |

NET | lo ---- | pcki 24 | pcko 24 | si 0 Kbps | so 0 Kbps |

\*\*\* system and process activity since boot \*\*\*

PID SYSCPU USRCPU RDELAY VGROW RGROW RDDSK WRDSK CPU CMD

1 2.25s 1.55s 0.91s 99.0M 10260K 54579K 32K 18% systemd

9 1.74s 0.00s 0.04s 0K 0K 100K 0K 8% kworker/u8:0-e

173 0.39s 1.18s 2.30s 22124K 6248K 952K 0K 7% systemd-udevd

140 0.66s 0.46s 0.39s 49108K 16548K 7976K 8064K 5% systemd-journa

182 0.39s 0.53s 1.53s 21812K 6812K 1748K 0K 4% systemd-udevd

178 0.34s 0.54s 1.39s 22872K 7756K 2244K 0K 4% systemd-udevd

621 0.37s 0.37s 0.10s 1.1G 46624K 43388K 20K 4% Xorg

175 0.29s 0.44s 1.42s 21980K 6808K 1616K 0K 3% systemd-udevd

185 0.31s 0.41s 1.61s 24540K 7544K 1212K 0K 3% systemd-udevd

181 0.36s 0.35s 0.93s 25508K 7536K 6476K 0K 3% systemd-udevd

177 0.26s 0.41s 1.16s 23908K 6604K 40K 0K 3% systemd-udevd

179 0.24s 0.42s 1.18s 21808K 5684K 1232K 0K 3% systemd-udevd

343 0.28s 0.33s 0.26s 88100K 3428K 108K 0K 3% systemd-timesy

702 0.23s 0.34s 0.09s 268.2M 23088K 14620K 0K 3% pulseaudio

180 0.26s 0.30s 1.03s 23936K 5996K 312K 0K 3% systemd-udevd

443 0.15s 0.40s 0.34s 8440K 4104K 812K 0K 3% dbus-daemon

184 0.22s 0.30s 1.11s 23916K 6400K 1200K 0K 2% systemd-udevd

183 0.23s 0.29s 1.10s 23916K 5384K 1636K 0K 2% systemd-udevd

516 0.24s 0.27s 0.32s 14376K 6536K 260K 0K 2% systemd-logind

521 0.22s 0.23s 0.21s 386.5M 12816K 4656K 0K 2% udisksd

686 0.11s 0.30s 0.01s 16176K 8632K 1492K 0K 2% systemd

579 0.25s 0.12s 0.08s 7572K 6628K 796K 16K 2% atop

550 0.12s 0.23s 0.11s 15856K 9364K 5364K 96K 2% python

460 0.12s 0.22s 0.17s 233.5M 9596K 4532K 0K 2% polkitd

614 0.17s 0.15s 0.10s 238.5M 9600K 4508K 0K 2% ModemManager

758 0.14s 0.18s 0.05s 13888K 3180K 32K 0K 2% systemd-hostna

49 0.32s 0.00s 0.02s 0K 0K 0K 0K 2% kworker/3:1H-m

100 0.32s 0.00s 0.01s 0K 0K 0K 0K 2% kworker/1:1H-k

427 0.13s 0.13s 0.07s 498.8M 9548K 5776K 4K 1% brltty

39 0.23s 0.00s 0.10s 0K 0K 812K 0K 1% kworker/u8:1-e

98 0.22s 0.00s 0.01s 0K 0K 0K 0K 1% kworker/0:1H-m

601 0.10s 0.10s 0.05s 30420K 15928K 5840K 8K 1% vncserver-x11-

599 0.09s 0.10s 0.09s 230.8M 8260K 1252K 4K 1% lightdm

59 0.18s 0.00s 0.12s 0K 0K 0K 0K 1% kworker/3:2-ev

481 0.11s 0.06s 0.35s 215.7M 3304K 948K 216K 1% rsyslogd

15 0.16s 0.00s 0.26s 0K 0K 0K 0K 1% rcu\_preempt

97 0.15s 0.00s 0.01s 0K 0K 0K 0K 1% kworker/2:1H-k

150 0.15s 0.00s 0.36s 0K 0K 552K 0K 1% kworker/1:3-ev

745 0.07s 0.07s 0.02s 23872K 9396K 2860K 0K 1% bluetoothd

588 0.06s 0.08s 0.07s 29564K 7908K 3992K 8K 1% cupsd

438 0.07s 0.06s 0.07s 7068K 2836K 480K 0K 1% avahi-daemon

74 0.12s 0.00s 0.01s 0K 0K 0K 0K 1% kworker/u9:0-b

900 0.07s 0.04s 0.00s 7016K 6560K 0K 0K 1% atop

607 0.03s 0.08s 0.01s 13636K 6428K 0K 0K 1% sshd

627 0.05s 0.05s 0.01s 169.9M 9564K 1936K 0K 0% cups-browsed

681 0.04s 0.06s 0.01s 162.6M 9556K 56K 4K 0% lightdm

104 0.07s 0.02s 0.00s 0K 0K 0K 0K 0% kworker/2:2H-m

48 0.08s 0.00s 0.32s 0K 0K 0K 0K 0% kworker/3:1-ev

655 0.05s 0.02s 0.01s 10824K 5024K 1848K 0K 0% vncagent

500 0.05s 0.02s 0.11s 12168K 4340K 868K 0K 0% sudo

746 0.05s 0.01s 0.00s 85300K 5756K 680K 0K 0% pipewire-media

701 0.04s 0.02s 0.01s 91804K 5420K 1920K 0K 0% pipewire

523 0.04s 0.02s 0.11s 13576K 4780K 2848K 0K 0% wpa\_supplicant

703 0.04s 0.02s 0.03s 2060K 528K 10088K 4K 0% x-session-mana

441 0.05s 0.01s 0.05s 1948K 72K 0K 0K 0% atopacctd

54 0.06s 0.00s 0.16s 0K 0K 4K 0K 0% kworker/2:1-cg

715 0.02s 0.03s 0.00s 7688K 3340K 92K 0K 0% dbus-daemon

157 0.02s 0.03s 0.02s 16848K 3188K 24K 0K 0% systemd-fsckd

7 0.05s 0.00s 0.21s 0K 0K 0K 0K 0% kworker/0:0-ev

278 0.05s 0.00s 0.18s 0K 0K 0K 0K 0% kworker/2:3-ev

53 0.04s 0.00s 0.06s 0K 0K 0K 0K 0% kworker/1:1-ev

99 0.04s 0.00s 0.08s 0K 0K 32K 0K 0% kworker/1:2-ev

894 0.03s 0.00s 0.01s 169.5M 8432K 7908K 0K 0% systemctl

626 0.02s 0.01s 0.00s 16644K 5800K 32K 0K 0% dbus

865 0.02s 0.01s 0.00s 194.7M 5604K 24K 0K 0% brltty

732 0.01s 0.02s 0.00s 13876K 3208K 4K 0K 0% systemd-rfkill

713 0.02s 0.01s 0.00s 149.9M 2644K 64K 0K 0% rtkit-daemon

442 0.02s 0.01s 0.02s 6692K 2404K 764K 0K 0% cron

597 0.03s 0.00s 0.01s 6956K 2304K 748K 0K 0% vncserver-x11-

538 0.03s 0.00s 0.01s 3048K 1912K 1660K 16K 0% dhcpcd

517 0.02s 0.00s 0.00s 5480K 2388K 72K 0K 0% thd

589 0.02s 0.00s 0.00s 6016K 1276K 52K 0K 0% epmd

2 0.02s 0.00s 0.00s 0K 0K 0K 0K 0% kthreadd

14 0.02s 0.00s 0.06s 0K 0K 0K 0K 0% ksoftirqd/0

20 0.02s 0.00s 0.02s 0K 0K 0K 0K 0% ksoftirqd/1

30 0.00s 0.02s 0.04s 0K 0K 0K 0K 0% ksoftirqd/3

103 0.02s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/1:2H-k

608 0.00s 0.01s 0.01s 13992K 3748K 0K 0K 0% wpa\_supplicant

624 0.01s 0.00s 0.00s 5104K 1876K 48K 0K 0% agetty

622 0.01s 0.00s 0.00s 2132K 1396K 16K 0K 0% agetty

584 0.01s 0.00s 0.03s 92288K 92K 0K 0K 0% rngd

25 0.00s 0.01s 0.04s 0K 0K 0K 0K 0% ksoftirqd/2

33 0.01s 0.00s 0.00s 0K 0K 0K 0K 0% kdevtmpfs

35 0.01s 0.00s 0.09s 0K 0K 0K 0K 0% kworker/0:1-ev

37 0.01s 0.00s 0.04s 0K 0K 0K 0K 0% kworker/0:2-cg

70 0.01s 0.00s 0.00s 0K 0K 0K 0K 0% vchiq-slot/0

106 0.01s 0.00s 0.01s 0K 0K 0K 0K 0% kworker/0:2H

124 0.01s 0.00s 0.01s 0K 0K 0K 0K 0% kworker/3:2H

324 0.01s 0.00s 0.02s 0K 0K 0K 0K 0% brcmf\_wdog/mmc

913 0.01s 0.00s - 0K 0K - - 0% <resolvconf>

687 0.00s 0.00s 0.00s 101.1M 4832K 0K 0K 0% (sd-pam)

863 0.00s 0.00s 0.00s 43848K 3196K 0K 0K 0% xbrlapi

904 0.00s 0.00s 0.00s 2060K 1432K 0K 0K 0% resolvconf

895 0.00s 0.00s 0.00s 6040K 676K 0K 0K 0% grep

899 0.00s 0.00s 0.00s 5236K 568K 0K 0K 0% timeout

901 0.00s 0.00s 0.00s 2060K 516K 0K 0K 0% dhcpcd-run-hoo

744 0.00s 0.00s 0.00s 4932K 476K 36K 0K 0% sleep

898 0.00s 0.00s 0.00s 2060K 464K 0K 0K 0% sh

869 0.00s 0.00s 0.00s 5444K 456K 0K 0K 0% ssh-agent

452 0.00s 0.00s 0.00s 6888K 312K 0K 0K 0% avahi-daemon

733 0.00s 0.00s 0.00s 2120K 132K 0K 0K 0% hciattach

893 0.00s 0.00s 0.00s 2060K 100K 0K 0K 0% x-session-mana

743 0.00s 0.00s 0.00s 2060K 96K 0K 0K 0% bthelper

3 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% rcu\_gp

4 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% rcu\_par\_gp

5 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% slub\_flushwq

6 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% netns

8 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/0:0H-m

10 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% mm\_percpu\_wq

11 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% rcu\_tasks\_kthr

12 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% rcu\_tasks\_rude

13 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% rcu\_tasks\_trac

16 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% migration/0

17 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% cpuhp/0

18 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% cpuhp/1

19 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% migration/1

21 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/1:0-ev

22 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/1:0H-m

23 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% cpuhp/2

24 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% migration/2

26 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/2:0-ev

27 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/2:0H-k

28 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% cpuhp/3

29 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% migration/3

31 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/3:0-ev

32 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/3:0H-e

34 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% inet\_frag\_wq

36 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kauditd

38 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% khungtaskd

40 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% oom\_reaper

41 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% writeback

42 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kcompactd0

43 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kintegrityd

44 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kblockd

45 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% blkcg\_punt\_bio

46 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% watchdogd

47 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/u8:2-e

50 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% rpciod

51 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% xprtiod

52 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/u8:3

55 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kswapd0

56 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% nfsiod

57 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kthrotld

62 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% hwrng

63 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% iscsi\_conn\_cle

64 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% nvme-wq

65 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% nvme-reset-wq

66 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% nvme-delete-wq

67 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% dwc\_otg

68 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% DWC Notificati

69 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% uas

71 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% vchiq-recy/0

72 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% vchiq-sync/0

73 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% zswap-shrink

95 0.00s 0.00s 0.01s 0K 0K 0K 0K 0% kworker/2:2-ev

96 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% mmc\_complete

101 0.00s 0.00s 0.00s 0K 0K 0K 384K 0% jbd2/mmcblk0p2

102 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% ext4-rsv-conve

107 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% irq/184-usb-00

108 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% mld

109 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% ipv6\_addrconf

174 0.00s 0.00s 0.06s 0K 0K 0K 0K 0% kworker/0:3-ev

196 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% vchiq-keep/0

197 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% SMIO

223 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% spi0

228 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% mmal-vchiq

230 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% mmal-vchiq

244 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% mmal-vchiq

245 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% mmal-vchiq

246 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% mmal-vchiq

248 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% mmal-vchiq

249 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% mmal-vchiq

299 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% cfg80211

309 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% cec-vc4-hdmi

310 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% irq/82-vc4 hdm

319 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% card0-crtc0

320 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% card0-crtc1

321 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% card0-crtc2

322 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% card0-crtc3

323 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% brcmf\_wq/mmc1:

346 0.00s 0.00s 0.01s 0K 0K 0K 0K 0% kworker/3:3-ev

350 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/u9:1-h

730 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/u9:2-b

734 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% kworker/u9:3-h

897 0.00s 0.00s 0.00s 0K 0K 0K 0K 0% krfcommd

902 0.00s 0.00s - 0K 0K - - 0% <atop>

903 0.00s 0.00s - 0K 0K - - 0% <dhcpcd-run-h>

905 0.00s 0.00s - 0K 0K - - 0% <mkdir>

906 0.00s 0.00s - 0K 0K - - 0% <cat>

907 0.00s 0.00s - 0K 0K - - 0% <rm>

909 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

914 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

911 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

912 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

915 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

916 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

917 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

918 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

919 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

920 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

921 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

922 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

923 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

924 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

925 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

926 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

927 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

910 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

928 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

929 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

930 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

931 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

932 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

933 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

934 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

908 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

936 0.00s 0.00s - 0K 0K - - 0% <dbus-send>

937 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

938 0.00s 0.00s - 0K 0K - - 0% <cat>

939 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

935 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

941 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

942 0.00s 0.00s - 0K 0K - - 0% <resolvconf>

ATOP - raspberrypi 2023/11/15 19:55:22 ---------------- 23s elapsed

PRC | sys 15.10s | user 12.39s | #proc 194 | #zombie 0 | #exit 12 |

CPU | sys 98% | user 78% | irq 2% | idle 166% | wait 56% |

cpu | sys 28% | user 19% | irq 1% | idle 38% | cpu000 w 14% |

cpu | sys 23% | user 23% | irq 1% | idle 37% | cpu001 w 17% |

cpu | sys 25% | user 17% | irq 0% | idle 45% | cpu003 w 13% |

cpu | sys 22% | user 18% | irq 0% | idle 47% | cpu002 w 13% |

CPL | avg1 2.18 | avg5 0.49 | avg15 0.16 | csw 87735 | intr 227713 |

MEM | tot 909.6M | free 486.5M | cache 211.6M | buff 21.3M | slab 46.9M |

SWP | tot 100.0M | free 100.0M | swcac 0.0M | vmcom 788.6M | vmlim 554.8M |

DSK | mmcblk0 | busy 71% | read 5426 | write 411 | avio 2.81 ms |

NET | transport | tcpi 12 | tcpo 12 | udpi 35 | udpo 22 |

NET | network | ipi 78 | ipo 71 | ipfrw 0 | deliv 68 |

NET | wlan0 0% | pcki 38 | pcko 51 | si 1 Kbps | so 2 Kbps |

NET | lo ---- | pcki 27 | pcko 27 | si 0 Kbps | so 0 Kbps |

\*\*\* system and process activity since boot \*\*\*

PID TID S CPU COMMAND-LINE (horizontal scroll with <- and -> keys)

1 - S 17% /sbin/init splash

9 - I 8% kworker/u8:0-wr

173 - S 7% /lib/systemd/systemd-udevd

140 - S 5% /lib/systemd/systemd-journald

182 - S 4% /lib/systemd/systemd-udevd

178 - S 4% /lib/systemd/systemd-udevd

621 - S 3% /usr/lib/xorg/Xorg :0 -seat seat0 -auth /var/run/lightdm/root/:0 -nolisten tcp vt7 -novtswitch

175 - S 3% /lib/systemd/systemd-udevd

185 - S 3% /lib/systemd/systemd-udevd

181 - S 3% /lib/systemd/systemd-udevd

177 - S 3% /lib/systemd/systemd-udevd

179 - S 3% /lib/systemd/systemd-udevd

702 - S 3% /usr/bin/pulseaudio --daemonize=no --log-target=journal

443 - S 3% /usr/bin/dbus-daemon --system --address=systemd: --nofork --nopidfile --systemd-activation --syslog-only

343 - S 3% /lib/systemd/systemd-timesyncd

180 - S 2% /lib/systemd/systemd-udevd

184 - S 2% /lib/systemd/systemd-udevd

183 - S 2% /lib/systemd/systemd-udevd

516 - S 2% /lib/systemd/systemd-logind

521 - S 2% /usr/libexec/udisks2/udisksd

460 - S 2% /usr/libexec/polkitd --no-debug

686 - S 2% /lib/systemd/systemd --user

579 - S 2% /usr/bin/atop -R -w /var/log/atop/atop\_20231115 600

550 - S 2% python /home/pi/Desktop/MESA/Project 2/Module 3/main.py

49 - I 2% kworker/3:1H-kb

614 - S 1% /usr/sbin/ModemManager

758 - S 1% /lib/systemd/systemd-hostnamed

100 - I 1% kworker/1:1H-kb

703 - S 1% /usr/bin/lxsession -s LXDE-pi -e LXDE -w openbox-lxde-pi

427 - S 1% /bin/brltty --no-daemon

98 - D 1% kworker/0:1H+kb

39 - I 1% kworker/u8:1-ex

601 - S 1% /usr/bin/vncserver-x11-core -service

599 - S 1% /usr/sbin/lightdm

59 - I 1% kworker/3:2-eve

481 - S 1% /usr/sbin/rsyslogd -n -iNONE

15 - I 1% rcu\_preempt

150 - I 1% kworker/1:3-eve

1068 - R 1% openbox --config-file /home/pi/.config/openbox/lxde-pi-rc.xml

1100 - R 1% /usr/bin/python3 /usr/bin/orca

1112 - R 1% atop -c

97 - I 1% kworker/2:1H-kb

745 - S 1% /usr/libexec/bluetooth/bluetoothd

588 - S 1% /usr/sbin/cupsd -l

438 - S 1% avahi-daemon: running [raspberrypi.local]

74 - I 1% kworker/u9:0-br

1070 - S 0% lxpolkit

607 - S 0% sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups

627 - S 0% /usr/sbin/cups-browsed

681 - S 0% lightdm --session-child 14 17

1081 - D 0% pcmanfm --desktop --profile LXDE-pi

865 - S 0% /bin/brltty -b ba -s no -x a2 -N

655 - S 0% /usr/bin/vncagent service 0

104 - I 0% kworker/2:2H-mm

715 - S 0% /usr/bin/dbus-daemon --session --address=systemd: --nofork --nopidfile --systemd-activation --syslog-only

48 - I 0% kworker/3:1-eve

1107 - D 0% /usr/libexec/at-spi-bus-launcher --launch-immediately

1059 - S 0% /usr/libexec/gvfsd-fuse /run/user/1000/gvfs -f

500 - S 0% sudo python /home/pi/Desktop/MESA/Project 2/Module 3/main.py

441 - S 0% /usr/sbin/atopacctd

7 - I 0% kworker/0:0-eve

746 - S 0% /usr/bin/pipewire-media-session

1077 - R 0% lxpanel --profile LXDE-pi

701 - S 0% /usr/bin/pipewire

523 - S 0% /sbin/wpa\_supplicant -u -s -O /run/wpa\_supplicant

54 - I 0% kworker/2:1-cgr

1054 - S 0% /usr/libexec/gvfsd

157 - S 0% /lib/systemd/systemd-fsckd

278 - I 0% kworker/2:3-eve

53 - I 0% kworker/1:1-eve

99 - I 0% kworker/1:2-eve

1094 - E 0% pactl

626 - S 0% /usr/lib/cups/notifier/dbus dbus://

1095 - S 0% /usr/libexec/geoclue-2.0/demos/agent

732 - S 0% /lib/systemd/systemd-rfkill

713 - S 0% /usr/libexec/rtkit-daemon

442 - S 0% /usr/sbin/cron -f

597 - S 0% /usr/bin/vncserver-x11-serviced -fg

538 - S 0% /usr/sbin/dhcpcd -b -q

103 - I 0% kworker/1:2H-mm

1123 - E 0% pactl

1116 - D 0% zenity --warning --width=400 --text=SSH is enabled and the default password for the 'pi' user has not been changed.\n\nThis is a security risk - please login as the 'pi' user and run Raspberry Pi Configuration to set a new password.

1088 - S 0% lxsession-xdg-autostart -d LXDE

517 - S 0% /usr/sbin/thd --triggers /etc/triggerhappy/triggers.d/ --socket /run/thd.socket --user nobody --deviceglob /dev/input/event\*

589 - S 0% /usr/bin/epmd -systemd

2 - S 0% kthreadd

14 - S 0% ksoftirqd/0

20 - S 0% ksoftirqd/1

30 - S 0% ksoftirqd/3

70 - S 0% vchiq-slot/0

124 - I 0% kworker/3:2H

608 - S 0% wpa\_supplicant -B -c/etc/wpa\_supplicant/wpa\_supplicant.conf -iwlan0

624 - S 0% /sbin/agetty -o -p -- \u --keep-baud 115200,57600,38400,9600 ttyS0 vt220

622 - S 0% /sbin/agetty --autologin pi --noclear tty1 linux

584 - S 0% /usr/sbin/rngd -r /dev/hwrng

25 - S 0% ksoftirqd/2

33 - S 0% kdevtmpfs

35 - I 0% kworker/0:1-eve

37 - I 0% kworker/0:2-cgr

106 - I 0% kworker/0:2H

324 - S 0% brcmf\_wdog/mmc1

687 - S 0% (sd-pam)

863 - S 0% /bin/xbrlapi

1108 - S 0% sh -c timeout 2 atop -c > /home/pi/Desktop/OS\_Info/9\_background\_processes.txt

1111 - S 0% timeout 2 atop -c

1102 - S 0% sh /etc/xdg/lxsession/LXDE-pi/sshpwd.sh

1117 - S 0% /bin/sh /usr/lib/raspi-config/cmstart.sh

1119 - S 0% /bin/sh /usr/bin/raspi-config nonint is\_kms

744 - S 0% sleep 5

1096 - S 0% /usr/bin/ssh-agent -s

869 - S 0% /usr/bin/ssh-agent x-session-manager

452 - S 0% avahi-daemon: chroot helper

733 - S 0% /usr/bin/hciattach /dev/serial1 bcm43xx 921600 noflow - b8:27:eb:9c:95:c6

743 - S 0% /bin/sh /usr/bin/bthelper hci0

3 - I 0% rcu\_gp

4 - I 0% rcu\_par\_gp

5 - I 0% slub\_flushwq

6 - I 0% netns

8 - I 0% kworker/0:0H-mm

10 - I 0% mm\_percpu\_wq

11 - I 0% rcu\_tasks\_kthre

12 - I 0% rcu\_tasks\_rude\_

13 - I 0% rcu\_tasks\_trace

16 - S 0% migration/0

17 - S 0% cpuhp/0

18 - S 0% cpuhp/1

19 - S 0% migration/1

21 - I 0% kworker/1:0-eve

22 - I 0% kworker/1:0H-mm

23 - S 0% cpuhp/2

24 - S 0% migration/2

26 - I 0% kworker/2:0-eve

27 - I 0% kworker/2:0H-kb

28 - S 0% cpuhp/3

29 - S 0% migration/3

31 - I 0% kworker/3:0-eve

32 - I 0% kworker/3:0H-ev

34 - I 0% inet\_frag\_wq

36 - S 0% kauditd

38 - S 0% khungtaskd

40 - S 0% oom\_reaper

41 - I 0% writeback

42 - S 0% kcompactd0

43 - I 0% kintegrityd

44 - I 0% kblockd

45 - I 0% blkcg\_punt\_bio

46 - S 0% watchdogd

47 - I 0% kworker/u8:2-ev

50 - I 0% rpciod

51 - I 0% xprtiod

52 - I 0% kworker/u8:3

55 - S 0% kswapd0

56 - I 0% nfsiod

57 - I 0% kthrotld

62 - S 0% hwrng

63 - I 0% iscsi\_conn\_clea

64 - I 0% nvme-wq

65 - I 0% nvme-reset-wq

66 - I 0% nvme-delete-wq

67 - I 0% dwc\_otg

68 - I 0% DWC Notificatio

69 - I 0% uas

71 - S 0% vchiq-recy/0

72 - S 0% vchiq-sync/0

73 - I 0% zswap-shrink

95 - I 0% kworker/2:2-eve

96 - I 0% mmc\_complete

101 - S 0% jbd2/mmcblk0p2-

102 - I 0% ext4-rsv-conver

107 - S 0% irq/184-usb-001

108 - I 0% mld

109 - I 0% ipv6\_addrconf

174 - I 0% kworker/0:3-eve

196 - S 0% vchiq-keep/0

197 - S 0% SMIO

223 - S 0% spi0

228 - I 0% mmal-vchiq

230 - I 0% mmal-vchiq

244 - I 0% mmal-vchiq

245 - I 0% mmal-vchiq

246 - I 0% mmal-vchiq

248 - I 0% mmal-vchiq

249 - I 0% mmal-vchiq

299 - I 0% cfg80211

309 - S 0% cec-vc4-hdmi

310 - S 0% irq/82-vc4 hdmi

319 - S 0% card0-crtc0

320 - S 0% card0-crtc1

321 - S 0% card0-crtc2

322 - S 0% card0-crtc3

323 - I 0% brcmf\_wq/mmc1:0

346 - I 0% kworker/3:3-eve

350 - I 0% kworker/u9:1-hc

730 - I 0% kworker/u9:2-br

734 - I 0% kworker/u9:3-hc

897 - S 0% krfcommd

1114 - E 0% atop

1113 - E 0% gettext

1115 - E 0% lxsession-xdg-a

1121 - E 0% who

1122 - E 0% awk

1120 - E 0% raspi-config

1118 - E 0% lxsession-xdg-a

1127 - E 0% lxsession-xdg-a

1130 - E 0% lxsession-xdg-a

1092 - E 0% start-pulseaudi

ATOP - raspberrypi 2023/11/15 19:55:24 ----a----------- 25s elapsed

PRC | sys 16.55s | user 16.10s | #proc 193 | #zombie 0 | #exit 1 |

CPU | sys 98% | user 88% | irq 2% | idle 154% | wait 58% |

cpu | sys 28% | user 21% | irq 1% | idle 35% | cpu000 w 15% |

cpu | sys 23% | user 26% | irq 1% | idle 34% | cpu001 w 17% |

cpu | sys 24% | user 20% | irq 0% | idle 42% | cpu003 w 13% |

cpu | sys 22% | user 21% | irq 0% | idle 43% | cpu002 w 13% |

CPL | avg1 2.81 | avg5 0.65 | avg15 0.21 | csw 99476 | intr 250881 |

MEM | tot 909.6M | free 400.9M | cache 241.4M | buff 22.8M | slab 49.0M |

SWP | tot 100.0M | free 100.0M | swcac 0.0M | vmcom 872.4M | vmlim 554.8M |

DSK | mmcblk0 | busy 73% | read 5971 | write 411 | avio 2.85 ms |

NET | transport | tcpi 19 | tcpo 19 | udpi 36 | udpo 23 |

NET | network | ipi 91 | ipo 86 | ipfrw 0 | deliv 81 |

NET | wlan0 0% | pcki 40 | pcko 59 | si 1 Kbps | so 2 Kbps |

NET | lo ---- | pcki 34 | pcko 34 | si 0 Kbps | so 0 Kbps |

\*\*\* system and process activity since boot \*\*\*

NPROCS SYSCPU USRCPU RSIZE PSIZE RDDSK WRDSK RNET SNET CPU RUID

159 13.99s 10.35s 317.1M 0K 174.5M 9680K 0 0 97% root

27 1.94s 4.78s 322.6M 0K 89264K 24K 0 0 27% pi

1 0.18s 0.56s 4300K 0K 812K 0K 0 0 3% messageb

1 0.28s 0.33s 3428K 0K 108K 0K 0 0 2% systemd-

2 0.08s 0.06s 3148K 0K 480K 0K 0 0 1% avahi

1 0.02s 0.01s 5800K 0K 32K 0K 0 0 0% lp

1 0.02s 0.01s 2644K 0K 64K 0K 0 0 0% rtkit

1 0.02s 0.00s 2388K 0K 72K 0K 0 0 0% nobody

1 0.02s 0.00s 1276K 0K 52K 0K 0 0 0% epmd

10.0.0.185

Physical Memory Stats in MB: Total: 909 Used: 252 Free: 339 Shared: 1 Buff/Cache: 317 Available: 596

Swap Memory Stats in MB: Total: 99 Used: 0 Free: 99 Shared: Buff/Cache: Available:

Architecture: aarch64

CPU op-mode(s): 32-bit, 64-bit

Byte Order: Little Endian

CPU(s): 4

On-line CPU(s) list: 0-3

Thread(s) per core: 1

Core(s) per socket: 4

Socket(s): 1

Vendor ID: ARM

Model: 4

Model name: Cortex-A53

Stepping: r0p4

CPU max MHz: 1200.0000

CPU min MHz: 600.0000

BogoMIPS: 38.40

L1d cache: 128 KiB

L1i cache: 128 KiB

L2 cache: 512 KiB

Vulnerability Itlb multihit: Not affected

Vulnerability L1tf: Not affected

Vulnerability Mds: Not affected

Vulnerability Meltdown: Not affected

Vulnerability Mmio stale data: Not affected

Vulnerability Retbleed: Not affected

Vulnerability Spec store bypass: Not affected

Vulnerability Spectre v1: Mitigation; \_\_user pointer sanitization

Vulnerability Spectre v2: Not affected

Vulnerability Srbds: Not affected

Vulnerability Tsx async abort: Not affected

Flags: fp asimd evtstrm crc32 cpuid