

高性能实验 4

2023311104 | 罗艺洋

a.

```
top - 11:25:50 up 8:54, 4 users, load average: 0.80, 1.12, 0.55
Tasks: 45 total, 2 running, 43 sleeping, 0 stopped, 0 zombie
%Cpu(s): 8.3 us, 0.5 sy, 0.0 ni, 91.0 id, 0.0 wa, 0.0 hi, 0.1 si, 0.0 st
MiB Mem : 7756.4 total, 6648.7 free, 894.1 used, 213.6 buff/cache
MiB Swap: 2048.0 total, 1896.8 free, 151.2 used, 6617.1 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
140121	lukas	20	0	953880	35464	2000	R	176.7	0.4	0:05.30	test_MMult.x
1	root	20	0	167036	7212	3932	S	1.0	0.1	4:03.71	systemd
448	root	20	0	43372	13940	1292	S	0.3	0.2	2:13.33	python3
2	root	20	0	2476	4	4	S	0.0	0.0	0:00.00	init-systemd(Ub
6	root	20	0	2476	0	0	S	0.0	0.0	0:00.00	init
35	root	19	-1	47740	7064	6692	S	0.0	0.1	0:00.38	systemd-journal
59	root	20	0	22104	2880	2524	S	0.0	0.0	0:01.45	systemd-udevd
73	root	20	0	601576	6212	0	S	0.0	0.1	0:01.71	snapfuse
76	root	20	0	152992	0	0	S	0.0	0.0	0:00.00	snapfuse
78	root	20	0	152992	0	0	S	0.0	0.0	0:00.00	snapfuse
85	root	20	0	153124	0	0	S	0.0	0.0	0:00.00	snapfuse
88	root	20	0	153124	0	0	S	0.0	0.0	0:00.00	snapfuse
100	root	20	0	152992	0	0	S	0.0	0.0	0:00.00	snapfuse
103	root	20	0	302520	176	0	S	0.0	0.0	0:00.22	snapfuse
106	root	20	0	152992	0	0	S	0.0	0.0	0:00.00	snapfuse
111	root	20	0	751104	11384	0	S	0.0	0.1	0:02.31	snapfuse
120	systemd+	20	0	25540	1748	1660	S	0.0	0.0	0:00.64	systemd-resolve
141	root	20	0	4308	1560	1444	S	0.0	0.0	0:00.06	cron
143	message+	20	0	8656	2520	2092	S	0.0	0.0	0:00.15	dbus-daemon
151	root	20	0	30204	1772	1772	S	0.0	0.0	0:00.13	networkd-dispat
157	syslog	20	0	222404	2040	1660	S	0.0	0.0	0:00.11	rsyslogd
161	root	20	0	2206540	18932	2556	S	0.0	0.2	0:02.92	snapd
167	root	20	0	15332	2672	2476	S	0.0	0.0	0:00.17	systemd-logind
251	root	20	0	4784	1016	1016	S	0.0	0.0	0:00.04	subiquity-serve
261	root	20	0	3240	168	168	S	0.0	0.0	0:00.00	agetty
264	root	20	0	3196	324	324	S	0.0	0.0	0:00.00	agetty
288	root	20	0	107220	1436	1436	S	0.0	0.0	0:00.06	unattended-upgr
314	root	20	0	1432644	65056	3984	S	0.0	0.8	2:05.60	python3.10
349	root	20	0	2480	4	0	S	0.0	0.0	0:00.00	SessionLeader
350	root	20	0	2496	4	0	S	0.0	0.0	0:01.86	Relay(351)
351	lukas	20	0	6312	1292	1288	S	0.0	0.0	0:00.24	bash
352	root	20	0	7528	1464	1460	S	0.0	0.0	0:00.01	login
412	lukas	20	0	16940	2440	2008	S	0.0	0.0	0:00.13	systemd
413	lukas	20	0	103276	284	0	S	0.0	0.0	0:00.00	(sd-pam)
420	lukas	20	0	6256	1240	1240	S	0.0	0.0	0:00.03	bash
7896	lukas	20	0	5688	1812	1704	S	0.0	0.0	0:00.04	tmux: client
7898	lukas	20	0	6832	3272	2096	S	0.0	0.0	0:07.77	tmux: server
7899	lukas	20	0	6244	1268	1268	S	0.0	0.0	0:00.03	bash
8073	lukas	20	0	6376	3696	2616	S	0.0	0.0	0:00.43	bash
8236	lukas	20	0	6244	2876	2296	S	0.0	0.0	0:00.06	bash
69636	root	20	0	293048	7156	4824	S	0.0	0.1	0:00.57	packagekitd
69640	root	20	0	234512	3392	2888	S	0.0	0.0	0:00.00	polkitd
140015	lukas	20	0	7892	3684	3016	R	0.0	0.0	0:00.05	top

b.

```
lukas@Lukas:~/rubbish/lk/lab4$ pstree
systemd--2*[agetty]
├── cron
├── dbus-daemon
├── init-systemd(Ub)
│   ├── SessionLeader
│   │   ├── Relay(351)
│   │   │   └── bash
│   │   │       ├── pstree
│   │   │       └── 2*[python--{python}]
│   │   ├── init--{init}
│   │   ├── login--bash
│   │   └── init-systemd(Ub)
├── networkd-dispat
├── rsyslogd--3*[{rsyslogd}]
├── snapd--20*[{snapd}]
├── 5*[snapfuse--2*[{snapfuse}]]
├── 2*[snapfuse--8*[{snapfuse}]]
├── 2*[snapfuse--4*[{snapfuse}]]
├── subiquity-serve--python3.10
│   └── python3
│       └── 6*[{python3.10}]
├── systemd--(sd-pam)
├── systemd-journal
├── systemd-logind
├── systemd-resolve
├── systemd-udev
└── unattended-upgr--{unattended-upgr}
```

C.

time	
real	0m0.003s
user	0m0.002s
sys	0m0.001s
(user + sys)/real	1.0