

DevOps Engineer 200.809

Школа DevOps

02



LINUX



Linux



Linux



Linux



Linux

Распространенные дистрибутивы

- - Debian (Ubuntu, Mint)
- RedHat (Fedora, Centos)
- OpenSuse (Enterprise)

AltLinux, Basalt, Rosa, Astra — Российские дистрибутивы.

Alpine — минималистичный дистрибутив, для Docker контейнеров.

Kali — специальный дистрибутив для тестирования безопасности.

Amazon linux — дистрибутивы, заточенные под провайдера.

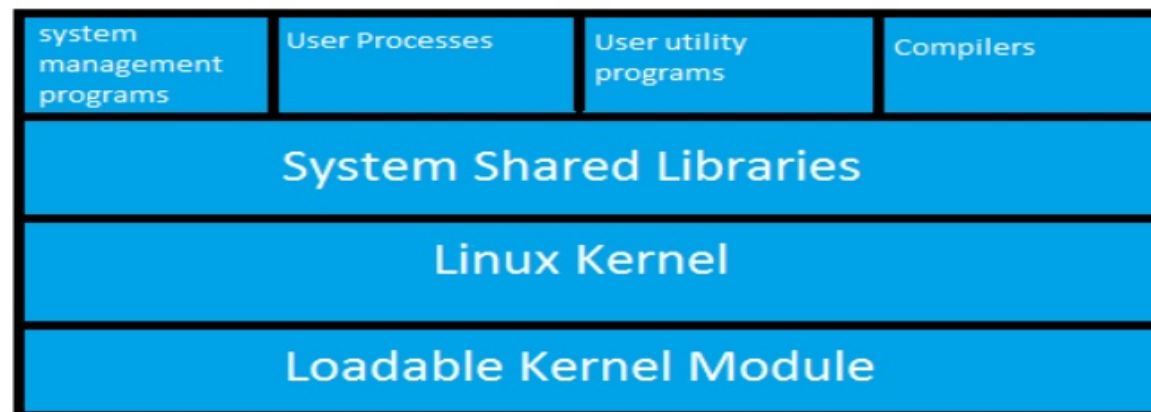
- distrowatch.com — рейтинг популярности дистрибутивов.

Linux

COMPONENTS OF LINUX SYSTEM

Linux system consists of three main bodies:

- **The kernel**
- **The system libraries**
- **The system utilities**



Linux boot process

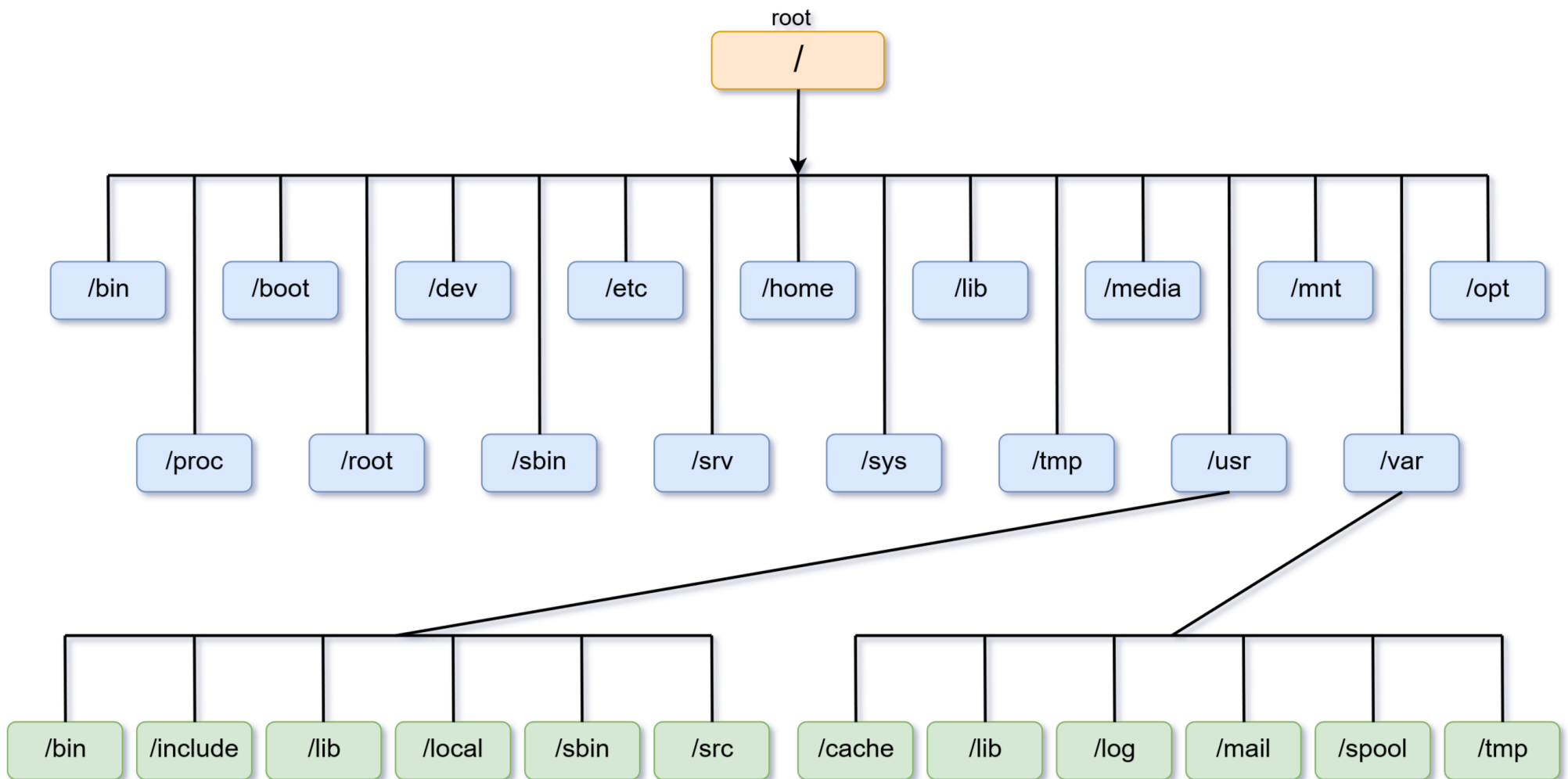


Linux

Системы инициализации:

- 1. System V Init
- 2. OpenRC
- 3. Systemd
- 4. Upstart
- 5. Runinit

Linux filesystem



Linux filesystem management

Cat, ls, pwd, mkdir, touch, rm, cp, chmod, chown, echo, diff, locate, tar, ln, ncdu, df, du.



Linux

Процесс Linux — это экземпляр программы, запущенный в памяти.

```
root@test1:~# ps -aux
```

USER	PID	%CPU	%MEM	VSZ	RSS	TTY	STAT	START	TIME	COMMAND
root	1	0.0	0.0	38420	6448	?	Ss	Oct04	0:03	/sbin/init
root	2	0.0	0.0	0	0	?	S	Oct04	0:00	[kthreadd]
root	3	0.0	0.0	0	0	?	S	Oct04	0:00	[ksoftirqd/0]
root	5	0.0	0.0	0	0	?	S<	Oct04	0:00	[kworker/0:0H]
root	7	0.0	0.0	0	0	?	S	Oct04	0:09	[rcu_sched]
root	8	0.0	0.0	0	0	?	S	Oct04	0:00	[rcu_bh]
root	9	0.0	0.0	0	0	?	S	Oct04	0:00	[migration/0]
root	10	0.0	0.0	0	0	?	S	Oct04	0:00	[watchdog/0]
root	11	0.0	0.0	0	0	?	S	Oct04	0:00	[watchdog/1]
root	12	0.0	0.0	0	0	?	S	Oct04	0:00	[migration/1]
root	13	0.0	0.0	0	0	?	S	Oct04	0:00	[ksoftirqd/1]
root	15	0.0	0.0	0	0	?	S<	Oct04	0:00	[kworker/1:0H]
root	16	0.0	0.0	0	0	?	S	Oct04	0:00	[watchdog/2]
root	17	0.0	0.0	0	0	?	S	Oct04	0:00	[migration/2]
root	18	0.0	0.0	0	0	?	S	Oct04	0:00	[ksoftirqd/2]
root	20	0.0	0.0	0	0	?	S<	Oct04	0:00	[kworker/2:0H]
root	21	0.0	0.0	0	0	?	S	Oct04	0:00	[watchdog/3]
root	22	0.0	0.0	0	0	?	S	Oct04	0:00	[migration/3]
root	23	0.0	0.0	0	0	?	S	Oct04	0:00	[ksoftirqd/3]
root	25	0.0	0.0	0	0	?	S<	Oct04	0:00	[kworker/3:0H]
root	26	0.0	0.0	0	0	?	S	Oct04	0:00	[watchdog/4]
root	27	0.0	0.0	0	0	?	S	Oct04	0:00	[migration/4]
root	28	0.0	0.0	0	0	?	S	Oct04	0:00	[ksoftirqd/4]
root	30	0.0	0.0	0	0	?	S<	Oct04	0:00	[kworker/4:0H]
root	31	0.0	0.0	0	0	?	S	Oct04	0:00	[watchdog/5]
root	32	0.0	0.0	0	0	?	S	Oct04	0:00	[migration/5]
root	33	0.0	0.0	0	0	?	S	Oct04	0:00	[ksoftirqd/5]

Linux networks

IPtraf

TCP Connections (Source Host:Port)	Packets	Bytes	Flags	Iface
adsl-65-71-187-105.dsl.okcyok.sw:3589	> 844	1263048	--A-	eth0
ppp08-bacd.mozcom.com:1214	> 571	26374	--A-	eth0
68.10.252.64.snet.net:3676	> 657	962504	--A-	eth0
ppp08-bacd.mozcom.com:1214	> 465	21816	--A-	eth0
pcp01238708pcs.frsrc101.mi.comca:1214	> 575	860532	--A-	eth0
ppp08-bacd.mozcom.com:1176	> 390	18066	--A-	eth0
ool-18ba0fc2.dyn.optonline.net:1063	> 316	472852	--A-	eth0
208.160.255.153:2019	> 225	10350	--A-	eth0
216.49.88.100:www	= 4	1246	-PA-	eth0
61.9.18.19:1298	= 7	878	-PA-	eth0
pc03-bacd.mozcom.com:3329	= 199	11885	--A-	eth0
server13.iicinternet.com:www	= 198	292671	--A-	eth0

TCP: 1809 entries Active

Non-IP (0x4) (162 bytes) from 00d0bacceb44 to 0180c2000000 on eth0
ARP request for 207.0.115.44 (107 bytes) from 0030f212f000 to ffffffff on eth0
ICMP echo req (84 bytes) from riker.mozcom.com to w1.scd.yahoo.com (src Hlad
ICMP echo rply (84 bytes) from w1.scd.yahoo.com to riker.mozcom.com (src Hla
Non-IP (0x4) (130 bytes) from 00d0bacceb43 to 0180c2000000 on eth0
Non-IP (0x4) (46 bytes) from 00d0bacceb44 to 0180c2000000 on eth0

Bottom Elapsed time: 0:01

Packets captured (all interfaces): 73990 Flow rate: 119.60 kbits/s
Up/Dn/PgUp/PgDn-scroll M-more TCP info W-chg actv Win S-sort TCP X-exit

Linux monitoring

Что можно мониторить?

-Мониторинг основных показателей: ЦП, Память, Диск, сеть

ЦП — Нагрузка, Load Average

Память — загрузка

Диск — нагрузка, место, swar.

Сеть — нагрузка, статистика

- Логи