

Astra Linux Special Edition 1.4 Astra Linux Directory read only

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Astra Linux SE (), , microSD, ""(). .. , read only. . , /. , ALD. , , , (..) , - CIFS.
 , .. ALD. ., c , CUPS, /var/spool/cups /var/cache/cups .

Astra Linux 1.2

1. 8.5 .
2. ALD -. () ...7.6.7 . root. ALD, ald-client ald-client-parsec. :
dpkg -l | grep ald-client

"ii" , .:

ii ald-client 1.4.12 Astra Linux Directory client

, :

aptitude install ald-client-parsec

ALD /etc/hosts :

127.0.0.1 localhost
192.168.1.1 myhost.mydomain.ru

hostname . - myhost. /etc/hostname. ALD 5. :
date

. man date. NTP, . /etc/cron.d/ntpdate c :

*/10 * * * * root /usr/sbin/ntpdate <ntp->

<ntp-> ip-, NTP.

. /etc/ald/ald.conf:

DOMAIN=< >

< > . - .mydomain.ru

SERVER=< >

<> - ALD-. : myserver.mydomain.ru

CLIENT ON=1

ALD.
:

ald-client commit-config

ALD . man ald, man ald-client, .6 .

3. read only root.
3.1.. , . , .

ls -l /etc/rc2.d

:

K50cups
K60dhcp3-server
K80exim4
K80vsftpd
README
S01ald-nscd-cleaner
S05vbesave
S10rsyslog
S12acpid
S20gpm
S20nfs-common
S20nscd
S20nslcd
S20ulogd
S21dbus
S22avahi-daemon
S24hal
S29ald-mount-helper
S89atd
S89cron
S98usplash
S99acpi-support
S99console-setup
S99fly-dm
S99rc.local
S99rmnologin
S99stop-bootlogd

S , K-. update-rc.d. SMTP- exim4 . , :

update-rc.d -f exim4 remove
update-rc.d exim4 80 stop 6 5 4 3 2 1 0 .

cups, dhcp3-server vsftpd. . man update-rc.d

3.2. read only /etc/fstab. , , , .
/etc/fstab :

:

/dev/mksm_sd1 / ext2 ro 0 0

/dev/mksm_sd1 ,
/- ,
ext2- (ext2 ,..8.5.),
ro - ,
fscck.
,.. .
 , , :

tmpfs /tmp tmpfs defaults 0 0

/tmp, /var/tmp, /var/lock, /var/run, /var/log, /var/lock, /var/private, /var/cache/nscd, /var/cache/samba, /var/spool/samba, /ald_home.
fstab :

```
# /etc/fstab: static file system information.
#
# <file system> <mount point> <type> <options> <dump> <pass>
proc /proc proc defaults 0 0
/dev/mksm_sd1 / ext2 ro 0 0
/dev/scd0 /media/cdrom0 udf,iso9660 user,noauto 0 0
tmpfs /ald_home tmpfs defaults 0 0
tmpfs /tmp tmpfs defaults 0 0
tmpfs /var/lock tmpfs defaults 0 0
tmpfs /var/run tmpfs defaults 0 0
tmpfs /var/log tmpfs defaults 0 0
tmpfs /var/tmp tmpfs defaults 0 0
tmpfs /var/private tmpfs defaults 0 0
tmpfs /var/cache/nscd tmpfs defaults 0 0
tmpfs /var/cache/samba tmpfs defaults 0 0
tmpfs /var/spool/samba tmpfs defaults 0 0
```

3.3. /var/private. , (.3.2.), .../var/private , . /root, :

```
mkdir /tmp/tmpdir
cd /tmp/tmpdir
mkdir mac tmp varcache vartmp
tar -cvzf /root/private.tar.gz *
cd
rm -r /tmp/tmpdir
```

/var/private, /etc/rc.local :

```
tar -C /var/private -xzf /root/private.tar.gz
```

```
exit 0
```

3.4. /etc , , /var/private (.3.3). /etc, :

```
cd /etc
tar -cvzf /root/etc.tar.gz *
```

/etc initramfs. :

```
cp /boot/initrd.img-2.6.34-3-generic /boot/initrd.img-2.6.34-3-generic.backup
mkdir /tmp/ramdisk
gunzip -S "" /boot/initrd.img-2.6.34-3-generic -c > /tmp/ramdisk/image
cd /tmp/ramdisk
cpio -id < image
rm image
```

/tmp/ramdisk initramfs. init, "#Chain to real filesystem" :

```
mount -t tmpfs -o size=$tmpfs_size,mode=0755 /dev/ram0 ${rootmnt}/etc
tar -C ${rootmnt}/etc -xzf ${rootmnt}/root/etc.tar.gz
```

initramfs /boot, :

```
cd /tmp/ramdisk
find . | cpio -o -H newc | gzip -9 > /boot/initrd.img-2.6.34-3-generic
```

sync. . read only.

4. .

4.1 - /etc . :

- . . .

- :

```
mount -o rw,remount /
```

- :

```
cd /etc
tar -czvf /root/etc.tar.gz *
```

4.2. ALD, root. , root ,.. /root .

Astra Linux 1.4

Astra Linux SE (1.4) ALD read only.

1.2. : --/--

1. --/--

2. ALD - () .

.. 7.6.7 .
 astra-admins.

:

```
sudo apt-get install ald-client-common
```

ALD /etc/hosts :

```
127.0.0.1 localhost
192.168.1.1 myhost.mydomain.ru myhost
```

hostname . - myhost. /etc/hostname.

C ALD 5. () :

```
date
```

. man date.

NTP, . /etc/cron.d/ntpdate c:

- /10 * * * * root /usr/sbin/ntpdate <ntp->

<ntp-> ip-, NTP.

. :

sudo ald-client join < >

< >- ALD. ALD . man ald, man ald-client, .6 .

3. read only astra-admins sudo

3.1. --/--

3.2. read only /etc/fstab. , , , .
/etc/fstab :

:

/dev/mksm_sd1 / ext2 ro 0 0

/dev/mksm_sd1 ,
/- ,
ext2- (ext2 ,..8.5.),
ro - ,
fsck.
.. .
 , , :

tmpfs /tmp tmpfs defaults 0 0

:

/tmp
/run
/var/tmp
/var/lock
/var/log
/var/lock
/var/cache/nscd
/var/cache/samba
/var/spool/samba
/ald_home
/var/lib/ald

/etc /var/private. .

fstab:

...
/dev/mksm_sd1 / ext2 ro 0 0
tmpfs /ald_home tmpfs defaults 0 0
tmpfs /tmp tmpfs defaults 0 0
tmpfs /run tmpfs defaults 0 0
tmpfs /var/lock tmpfs defaults 0 0
tmpfs /var/log tmpfs defaults 0 0
tmpfs /var/tmp tmpfs defaults 0 0
tmpfs /var/cache/nscd tmpfs defaults 0 0
tmpfs /var/cache/samba tmpfs defaults 0 0
tmpfs /var/spool/samba tmpfs defaults 0 0
tmpfs /root tmpfs defaults 0 0
tmpfs /var/lib/ald tmpfs defaults 0 0
...

, . . , tmpfs /var/spool/cups /var/cache/cups.

3.3. /var/private. , (.3.2.), .

.. /var/private , . /opt, :

```
mkdir /tmp/tmpdir
cd /tmp/tmpdir
mkdir mac tmp varcache vartmp
sudo tar -cvzf /opt/private.tar.gz *
cd
rm -r /tmp/tmpdir
```

3.4. /etc , . /etc /opt, :

```
cd /etc
sudo tar -cvzf /opt/etc.tar.gz *
```

3.5. etc.tar.gz private.tar.gz /etc /var/private initramfs. /usr/share/initramfs-tools/init, "#Chain to real filesystem" :

```
mount -t tmpfs -o size=$tmpfs_size,mode=0755 /dev/ram0 ${rootmnt}/etc
mount -t tmpfs -o size=$tmpfs_size,mode=0755 /dev/ram1 ${rootmnt}/var/private
tar -C ${rootmnt}/etc -xzf ${rootmnt}/opt/etc.tar.gz
tar -C ${rootmnt}/var/private -xzf ${rootmnt}/opt/private.tar.gz
```

:

```
sudo update-initramfs -k all -ut
```