

20211126SE16 (10)

 .

 fly-astra-update astra-update - .

```
•
•
  ○
  ○ , ()
•
  ○
    ■
    ■
      • fly-astra-update/astra-update
      • fly-astra-update/astra-update
    ■ /boot
  ○
    ■
      •
      • ISO-
      • astra-update
    ■ fly-astra-update astra-update.
•
  ○ linux-5.10
  ○
```

 Astra Linux: **1.6.10.3**
.: Astra Linux



- , 20211126SE16 (10)
- , 20211126SE16 (10)

 2 .

 , , () .

 Astra Linux Special Edition

«Astra Linux Special Edition» .10015-01 (1.6), - Astra Linux.

 :

- 0 :
<https://dl.astralinux.ru/astra/stable/smolensk/security-updates/1.6/20211126SE16/20211126SE16.iso> ;
- :
<https://dl.astralinux.ru/astra/stable/smolensk/security-updates/1.6/devel/20211126SE16/repository-update-dev.iso>.

:

- 20211008SE16 - 9
- 20210730SE16 - 8
- 20210723SE16MD
- 20210611SE16 - 7
- 20210317SE16MD
- 20210128SE16MD
- 20201207SE16MD
- 20200921SE16MD
- 20200807SE16MD
- 20200722SE16 - 6
- 20200526SE16MD
- 20200327SE16 - 5
- 20191029SE16 - 4
- 20190912SE16 - 3
- 20190712SE16MD
- 20190621SE16MD
- 20190529SE16MD
- 20190222SE16 - 2
- 20181229SE16 - 1



().

, ()

apt-cdrom(), - . . :

1. /etc/apt/sources.list , ;
2. :

```
sudo apt update
```

3. . , - :

```
sudo apt install libvulkan1 libev4 qdbus-qt5 libunwind8 reprepro
libcurl3 qt5-image-formats-plugins \
libxml++2.6-2v5 libxml-xpath-perl libxmlrpc-core-c3 libxmlrpc-epi0
libxml2 libxml-parser-perl
```

4. [Astra Linux Special Edition](#) -;

Astra Linux (.) ISO- Astra Linux [fly-astra-update](#) [astra-update](#) ().



:

- ;
- : [fly-astra-update](#) [astra-update](#) - .



- ;
- . fly-astra-update/astra-update :

```
sudo astra-nochmodx-lock disable
```

- () Astra Linux.

:

- — astra-update;
- — fly-astra-update.

() , ([fly-astra-update/astra-update](#) [fly-astra-update/astra-update](#)).



```
apt-cdrom add .
```

```
:  
https://dl.astralinux.ru/astra/stable/smolensk/security-updates/1.6/20211126SE16/20211126SE16.iso;
```

```
ISO- /mnt .  
:
```

```
gostsum -d /mnt/20211126SE16.iso
```

```
:
```

```
0e461fa719fb564267abf74b1d70b891a1a9b2c489ac67ea195f2d21b56423b8
```



<->:

<https://dl.astralinux.ru/astra/stable/smolensk/security-updates/1.6/20211126SE16/20211126SE16.iso.sig>

```
, , :  
https://dl.astralinux.ru/astra/stable/smolensk/security-updates/1.6/devel/20211126SE16/repository-update-dev.iso  
:
```



```
7931ee04f08b650afa3daf082f03e9cf2e03166b3fbea113340bb24a8bfa09c9
```

fly-astra-update/astra-update

```
, , :
```

- fly-astra-update (astra-update):

```
sudo apt update  
sudo apt install fly-astra-update
```

- astra-update:

```
sudo apt update  
sudo apt install astra-update
```

fly-astra-update/astra-update

1. , , /media/cdrom:

```
sudo mount /mnt/20211126SE16.iso /media/cdrom
```

2. :
astra-update:

```
sudo apt install /media/cdrom/pool/non-free/a/astra-update/astra-  
update_*.deb
```

astra-update fly-astra-update:

```
sudo apt install /media/cdrom/pool/non-free/a/astra-update/astra-  
update_*.deb  
sudo apt install /media/cdrom/pool/non-free/libf/libflyadmin  
/libflyadminpackage_*.deb  
sudo apt install /media/cdrom/pool/non-free/f/fly-astra-update/fly-  
astra-update_*.deb
```

3. :

```
sudo umount /media/cdrom
```

/boot



, 9 (20211008SE16)

, . :

```
df -H /boot
```

linux 280. /boot, :

1. /boot (512).
2. , /boot , (). — .

. boot LVM. .

(.) ISO-:

1. :
 - a. ;
 - b. ;
2. :
 - a. ;
 - b. ;

/etc/apt/sources.list, :

```
sudo astra-update -a -r
```

/etc/apt/sources.list , astra-update/fly-astra-update (fly-astra-update astra-update -).

ISO-

, ISO- :

1. ISO-:
 - a. ;
 - b. ;
2. ISO-:
 - a. ;
 - b. ;

ISO- , . astra-update/fly-astra-update, :

```
sudo astra-update -a /mnt/<__> /mnt/20211126SE16.iso /mnt/<__> /mnt
/repository-update-dev.iso
```

, /mnt , /mnt.
fly-astra-update astra-update.

astra-update

, :

```
sudo astra-update -a <__> /mnt/20211126SE16.iso
```

() , :

```
sudo astra-update -a /mnt/20211126SE16.iso
```

..

, , astra-update fly-astra-update :fly-astra-update astra-update - .

fly-astra-update astra-update.



astra-update fly-astra-update.



fly-astra-update/astra-update upgrade(sudo apt upgrade), dist-upgrade (sudo apt dist-upgrade).



Astra Linux.

1. Astra Linux, , - () :

```
sudo apt-cdrom add
```

2. ISO- -, -.
3. ISO-, , , :

```
sudo mount /mnt/20211126SE16.iso /media/cdrom
sudo apt-cdrom -m add
sudo umount /media/cdrom
```

«20211126SE16».

-m, apt-cdrom , , - .
apt-cdrom .



- - , .



/, .
, <Enter>.

Astra Linux .

- -, /media/cdrom , :

```
sudo mount /mnt/20211126SE16.iso /media/cdrom
```

4. (sudo -s) , sudo:



```
sudo -s  
... ..  
exit
```

5. - (, -s apt), , :

```
sudo -s  
apt update  
apt -s dist-upgrade  
exit
```

6. :

```
sudo -s  
apt update  
apt dist-upgrade  
apt -f install  
exit
```



fly-admin-int-check gostsums.txt, .



, ccnri _ . ccnri , , ().

linux-5.10



9 ([20211008SE16](#)) linux-5.10.

linux-5.10 (,):

```
sudo apt install linux-5.10
```

Grub.

, .. :

```
uname -r
```

:

```
5.10.0-1045-generic
```

, Linux , :

```
dpkg -l | awk '/linux-image/ {print $1,$2}'
```

:

```
ii linux-image-4.15-generic
ii linux-image-4.15-hardened
ii linux-image-4.15.3-1-generic
ii linux-image-4.15.3-1-hardened
ii linux-image-4.15.3-141-generic
ii linux-image-4.15.3-141-hardened
ii linux-image-4.15.3-154-generic
ii linux-image-4.15.3-154-hardened
ii linux-image-5.10-generic
ii linux-image-5.10-hardened
ii linux-image-5.10.0-1045-generic
ii linux-image-5.10.0-1045-hardened
ii linux-image-5.4-generic
ii linux-image-5.4-hardened
ii linux-image-5.4.0-71-generic
ii linux-image-5.4.0-71-hardened
ii linux-image-5.4.0-81-generic
ii linux-image-5.4.0-81-hardened
ii linux-image-hardened
```

, :

- «rc» — , ;
- «ij» — .

, ():

```
#!/bin/bash
```

```
set -e
```

```
# , .  
pkgs="linux-image-4.15.3-1-generic \  
linux-image-4.15.3-1-hardened \  
linux-image-4.15.3-141-generic \  
linux-image-4.15.3-141-hardened \  
linux-image-4.15.3-154-generic \  
linux-image-4.15.3-154-hardened \  
linux-image-5.4.0-71-generic \  
linux-image-5.4.0-71-hardened "
```

```
# .  
#  
# apt purge.  
[ -n "$pkgs" ] && apt remove $pkgs
```

```
# Grub.  
update-grub2
```

```
, .
```