

**Red Book: Astra Linux Special Edition .10015-01 (1.6) .
10015-16 . 1**

- Astra Linux

-

Astra Linux

- , SSD.
- - - ().
- "" BIOS .

 P.S.

- 8;
- ();
- , .

- " " ILO, RSA, iDRAC, ThinkServer EasyManage, AMT, iMana - , , IP KVM.
- (, , BIOS). BIOS , , .
- Intel Execute Disable Bit (XD-Bit) AMD No Execute Bit (NX-Bit)
- (, ,).
(WiFi, Bluetooth).
WiFi - VPN.

-
-



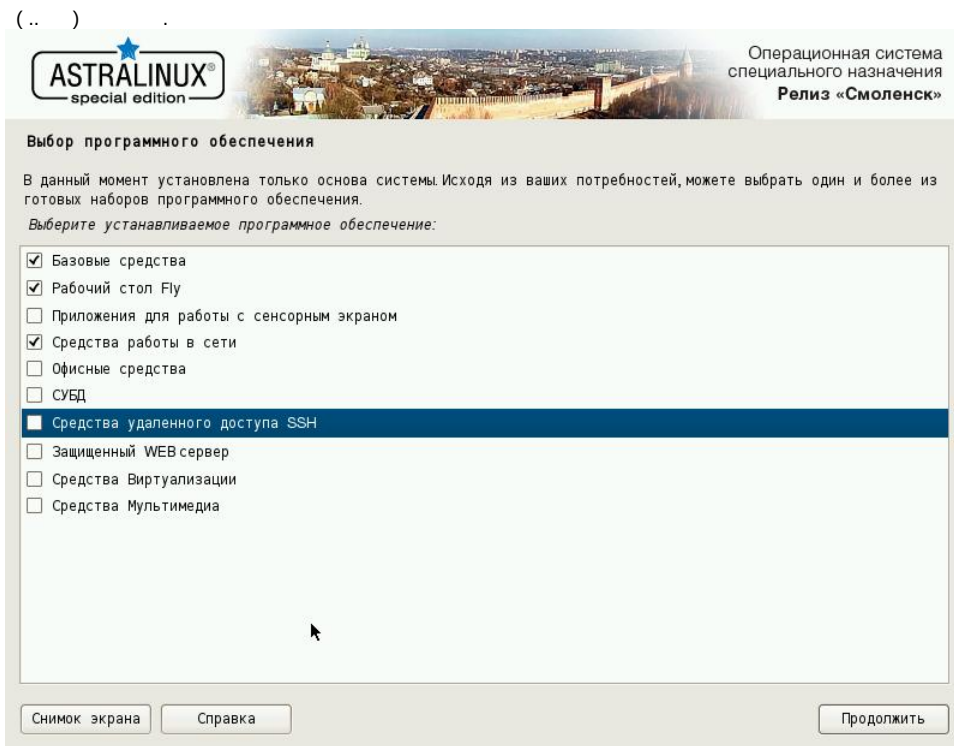
- Astra Linux Special Edition .10015-01 (1.6) [20190912SE16](#)
- Astra Linux Special Edition .10015-16 .1 [20201007SE16](#)

 /
 /boot
 /home
 /tmp
 /var/tmp

		/		
1	/	(, /boot).	ext4	defaults
2	/boot	. LVM!!! /boot (- LVM) 512.	ext2, ext3, ext4	defaults
3	/home	.	ext4	noexec,nodev,nosuid
4	/tmp	. /tmp 250 .	ext4	noexec,nodev,nosuid
5	/var	. noexec,nodev,nosuid, : o noexec , ; o noexec (, dpkg);	ext4	defaults noexec,nodev,nosuid
6	/var/tmp	. /var /var/tmp noexec,nodev,nosuid.	ext4	noexec,nodev,nosuid
7	swap	 ... (swap): - .	swap	

 (/boot) ext4.
 , /tmp 250 .
 « () Ext2/Ext3/Ext4, (..) () »
 « , 1» .10015-01 97 01-1, 2020., . 17.3.1 « »

- /home /tmp /var/tmp noexec,nodev,nosuid
- Astra Linux Special Edition .10015-01 (1.6) .
 :
 - o apache2.service
 - o bind9.service
 - o exim4 dovecot.service
 - o ejabberd.service
 - o nfs-client.target
 - o ntp
 - o nfs-server.service
 - o nmbd.service
 - o smbd.service
 - o snmpd.service
 - o pppd-dns.service
 - o ssh.service
 - o vsftpd.service
 - o winbind.service
 - o bluetooth.service
 - o openvpn.service
 - o sssd.service
 - o firewalld.service



o

SSH: SSH, , . , .

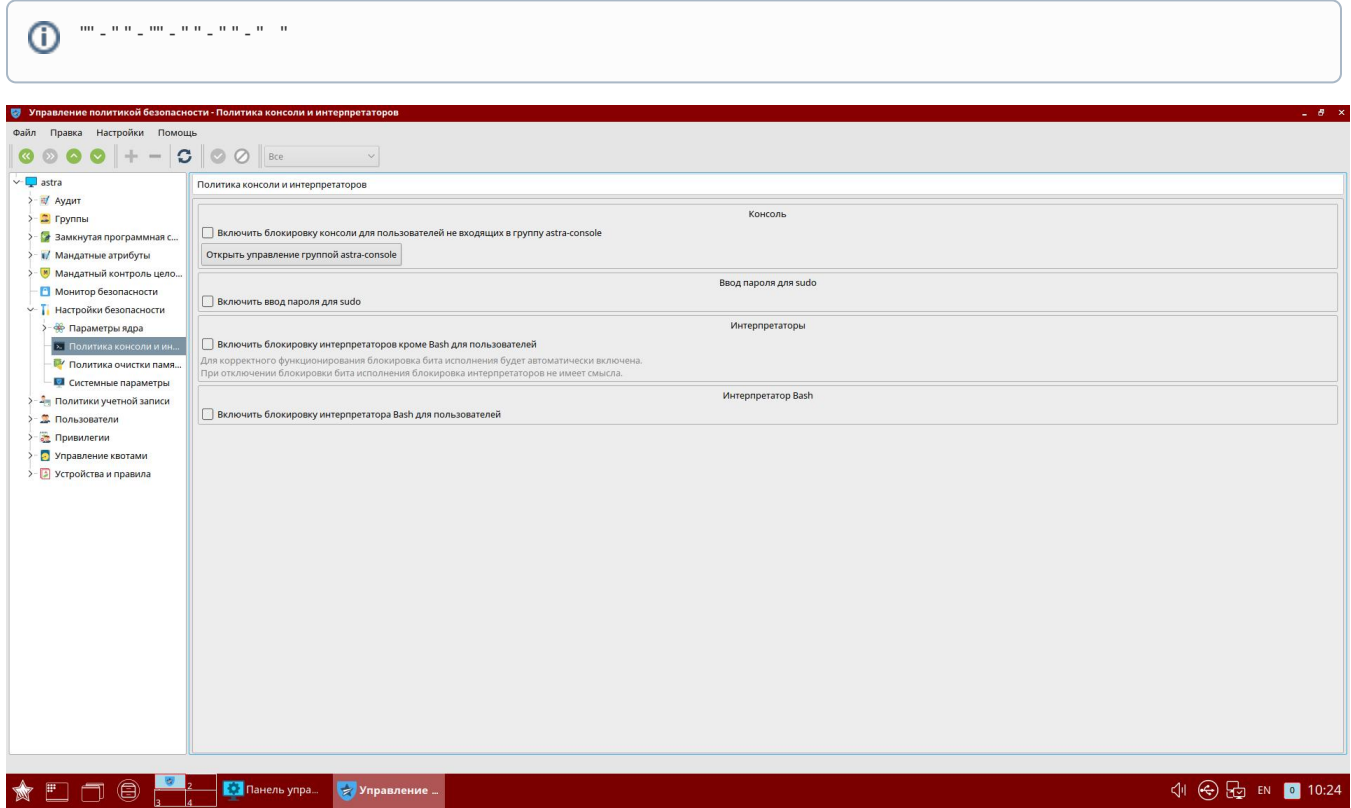
- " " :
 1. ;
 2. ;
 3. hardened. hardened lkrg generic (. [astra-safepolicy](#))
 4. ;
 5. (, SSD-);
 6. EXT- (, SSD-);
 7. ;
 8. ;
 9. ufw;
 10. ulimits;
 11. ptrace;

- "" Grub (). [Grub2](#)

- , .
- HARDENED, , .. [Grub2](#)
- , Intel Management Engine (MEI). , [Intel Management Engine \(Intel ME\)](#).
- . - .
- , Intel, .
- /boot ro (rw).
- secureboot (usb-flash astra-secureboot, , , BIOS) [Astra Linux SecureBoot](#)
- - / .
- (.. , sleep, suspend-to-disk, hibernation, ..).
- .

- `vim /etc/passwd` `login_local no`

fly-admin-smc:



- `, astra-console;`
- `sudo;`
- `bash ;`
- `bash ;`





:

```
astra-console-lock enable
```

sudo:

```
astra-sudo-control enable
```



, , , /etc/sudoers



Defaults timestamp_timeout=0



/etc/sudoers :

```
sudo visudo
```

bash:

```
astra-interpreters-lock enable
```

bash:

```
astra-bash-lock enable
```

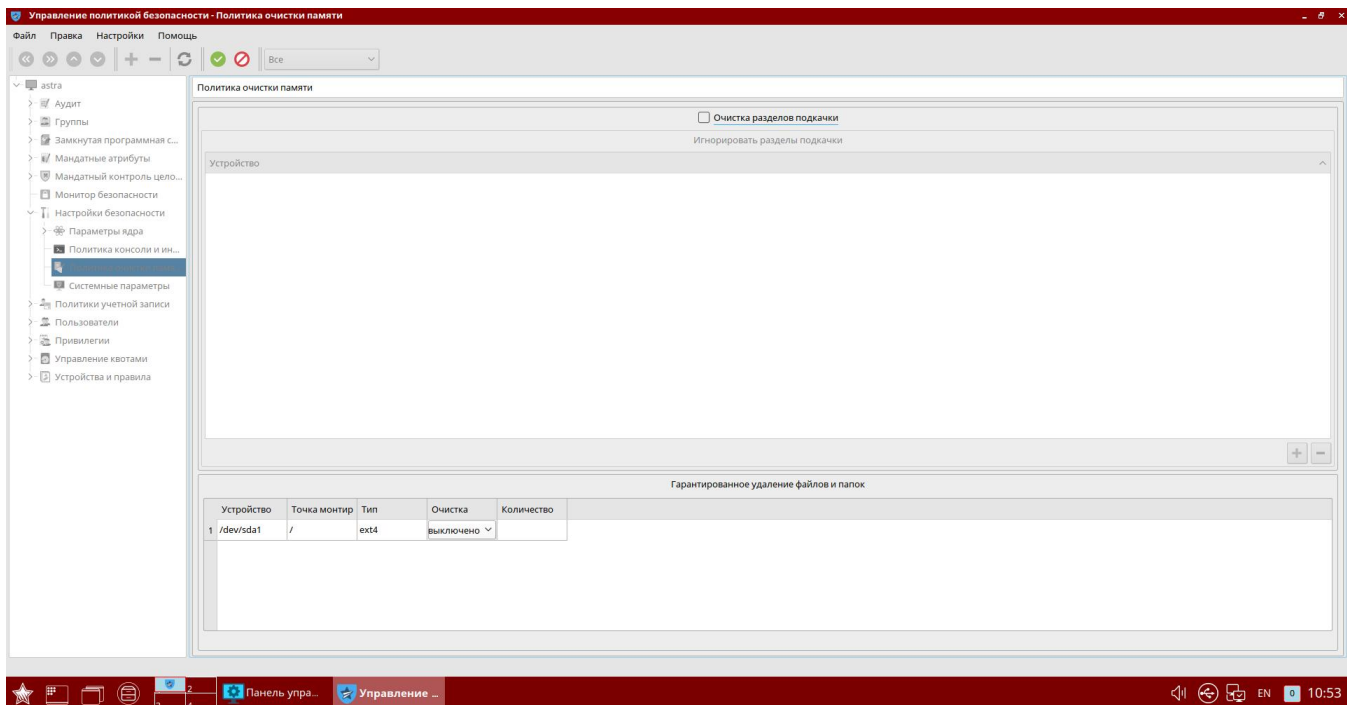


Astra Linux SE , , (), , (, , .) . , , .
SSD . (SSD): ext4

fly-admin-smc



"" _ "" _ "" _ "" _ "" _ ""



• ;
• ;



:

```
astra-swapwiper-control enable
```

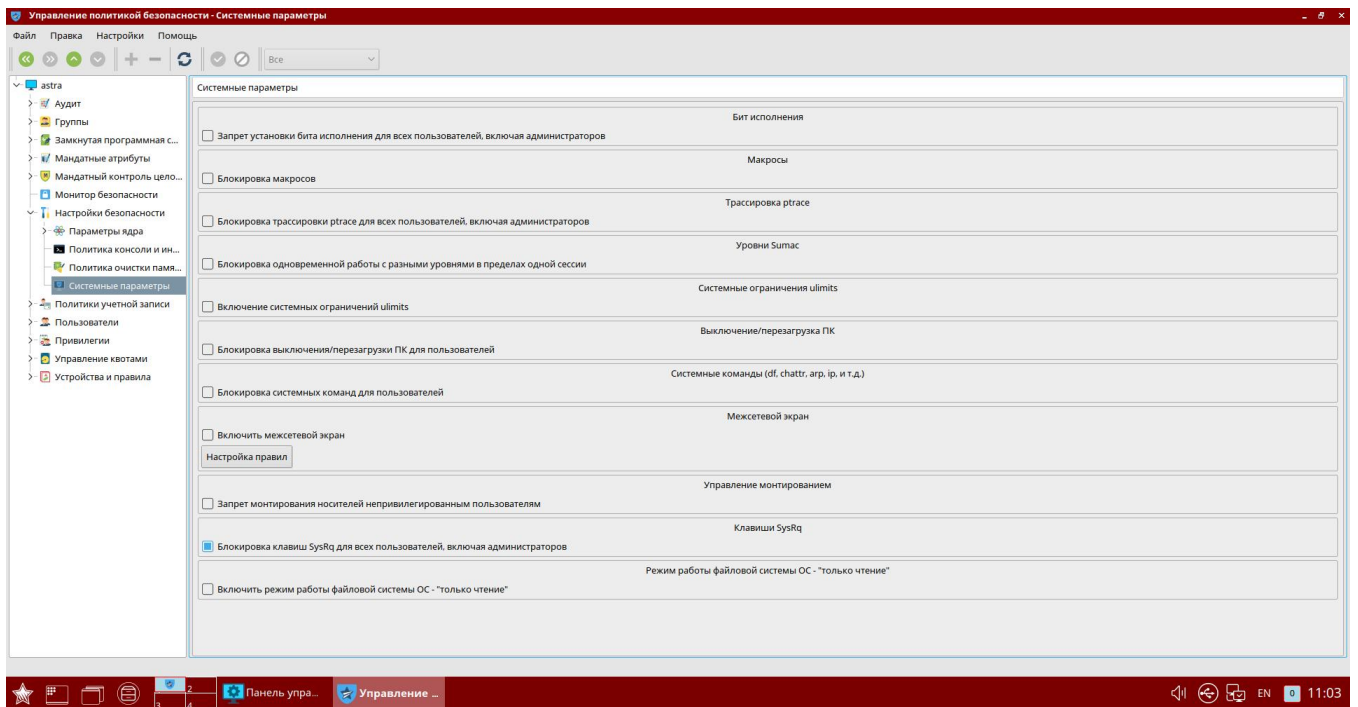
:

```
astra-secdel-control enable
```

fly-admin-smc



"" "" "" "" "" "" "" ""



- ;
- ptrace;
- ;
- ulimits;
- / ;
- ;
- ;
- ;
- SysRq , ;
- _ " "

! , , . , , (,) .



astra-nochmodx-lock enable

:

astra-macros-lock enable

ptrace:

astra-ptrace-lock enable

:

astra-sumac-lock enable

ulimits:

astra-ulimits-control enable

/ :

astra-shutdown-lock enable

:

astra-commands-lock enable

:

astra-ufw-control enable

:

astra-mount-lock enable

SysRq , :

astra-sysrq-lock enable

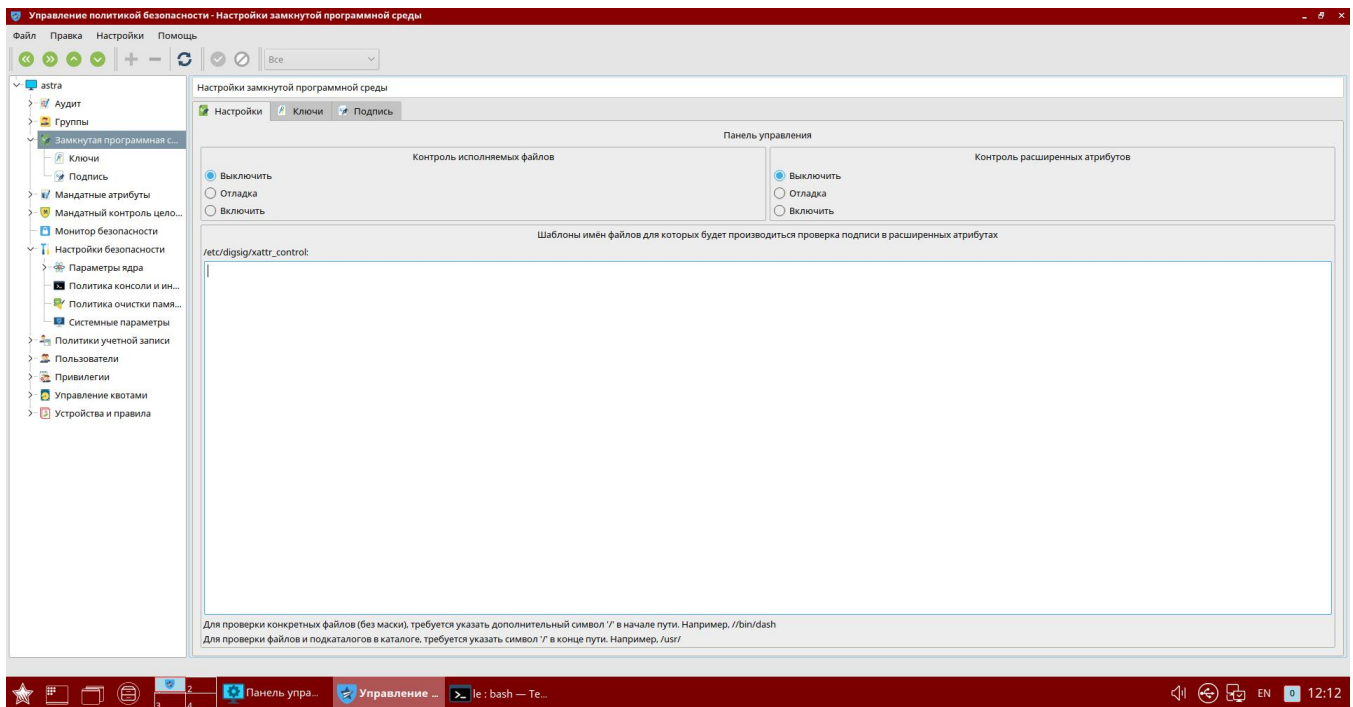
_ "

astra-overlay enable

fly-admin-smc:



"" _ "" _ "" _ "" _ "" _ ""



- (ELF-) xattr () (.16.1).
- :
 - o ;
 - o xattr , ;
 - o , () .
 - o /opt/.



/etc/digsig/digsig_initramfs.conf (. " "):

Astra Linux Special Edition .10015-01 (1.6) (.16.1):



```
DIGSIG_ELF_MODE=1
DIGSIG_XATTR_MODE=1
```

Astra Linux Special Edition .10015-01 (1.5) (.13.5):



```
DIGSIG_ENFORCE=1
DIGSIG_LOAD_KEYS=1
DIGSIG_USE_XATTR=1
```

:

```
update-initramfs -u -k all
```



:

- , , (.16.2.1). fly-admin-kiosk:



"" _ "" _ "" _ ""

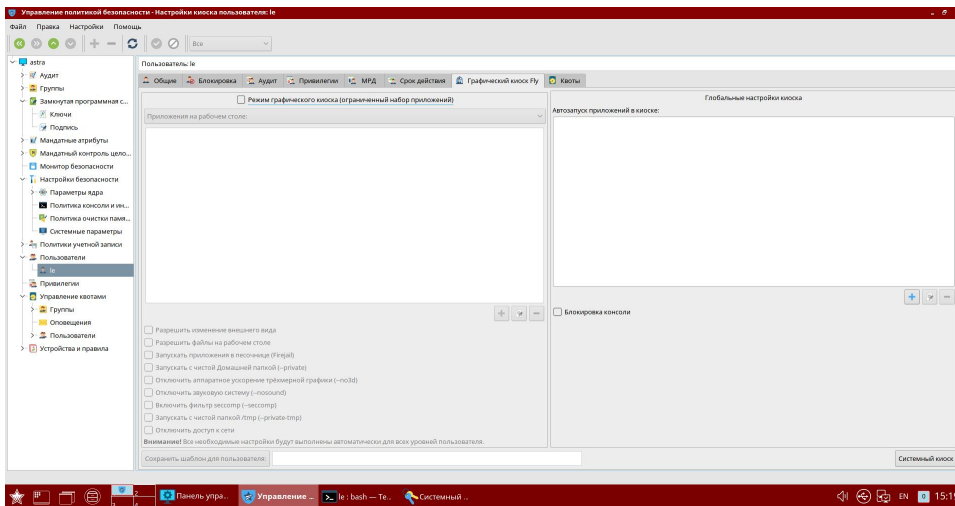
. -2: parsec-kiosk2 ().

- , , () . fly-admin-smc (.16.2.2):



"" _ "" _ "" _ "" _ "" _ ""

" Fly"



- :

○ / ;
○ ;

```
■ , , " (Firejail)":  
• , "" :  
○ ;  
○ ;  
○ ;  
○ ;  
○ seccomp;  
○ /tmp;  
○ ;
```

- , pam_tally ().
- , /etc/fstab,

sudo edquota

- $\bullet, (..), :$

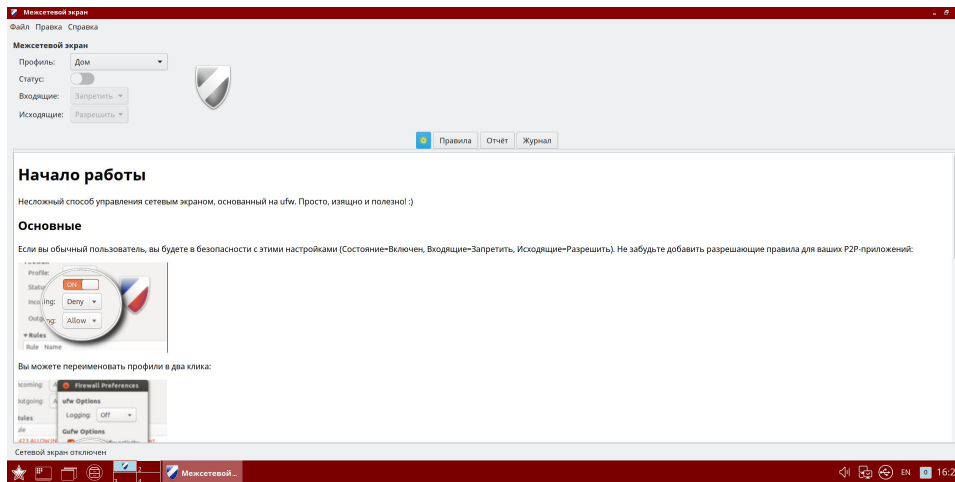
```
Astra Linux Special Edition .10015-01 ( 1.6) systemdgenie
Astra Linux Special Edition .10015-01 ( 1.5) chkconfig fly-admin-runlevel
```

- ufw iptables , : ,

 Astra Linux Special Edition .10015-01 (1.6)

- iptables
- ufw
- gufw

gufw:

 III - II - II - II

- fly-admin-smc /etc/sysctl.d/ .conf:

```
fs.suid_dumpable=0
kernel.randomize_va_space=2
kernel.sysrq=0
net.ipv4.ip_forward=0
net.ipv4.conf.all.send_redirects=0
net.ipv4.conf.default.send_redirects=0
```

• • •

```
sudo sysctl -a | more
```

- ■■■■

■■■■

- 8;
- ();
- , .

- `"",`
`( fly-fm). , , .`
- `, VPN`
`( ).`
- `, GPG- Thunderbird Enigmail`
`( ).`
- `, , :`
Astra Linux Special Edition .10015-01 (1.6) .
Astra Linux Special Edition .10015-01 (1.5) . [27082018SE15](#)
- `, .`
`, .15`
- `WEB- ( FireJail);`
- `:`
 - [QEMU/KVM Astra Linux](#)
 - [Docker Astra Linux Special Edition .10015-01 1.7](#)
 - [LXC](#)
 - [FireJail](#)
- `Astra Linux Special Edition .10015-01 ( 1.6) 20190912SE16 , (" ") .`
`, (>0) x ( Astra Linux Special Edition .10015-01 ( 1.6) Astra Linux Special Edition .10015-01 ( 1.5)), fly-admin-smc:`

- (" "):



Astra Linux Special Edition .10015-01 (1.5) 27102017SE15: . Astra Linux Special Edition .10015-01 (1.5)