

# QEMU/KVM Astra Linux

- 
- QEMU/KVM
  - QEMU/KVM
  - QEMU/KVM
    - Astra Linux Special Edition x.7 Astra Linux Common Edition 2.12
    - 
    - 
    - Astra Linux Special Edition .10015-01 ( 1.6), .10015-16 . 1
  - KVM
- QEMU/KVM
  - 
  - 
  - 
  - IP-
- 
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..

- VMware Workstation QEMU/KVM "";
- Windows virtio QEMU/KVM;
- QEMU/KVM Astra Linux Special Edition 1.6 ( GUI - "" )
- QEMU/KVM Astra Linux Common Edition 2.12;
- "" QEMU/KVM



:

- Astra Linux Special Edition .10015-01 .10015-10 ( 1.7)
- Astra Linux Special Edition .10015-37 ( 7.7)
- Astra Linux Special Edition .10152-02 ( 4.7)
- Astra Linux Special Edition .10015-01 ( 1.6)
- Astra Linux Special Edition .10015-16 . 1
- Astra Linux Common Edition 2.12



1. BIOS (Intel VT );
2. :
  - a. Intel:

```
lscpu | grep vmx --color=always
```

- b. AMD:

```
grep svm /proc/cpuinfo
```

## QEMU/KVM



QEMU/KVM Astra Linux Special Edition , , , (Ext4, cepfs, ocfs2, hfs).



QEMU/KVM Astra Linux Special Edition firewalld.

ufw, ufw:

```
sudo apt remove ufw
sudo systemctl stop ufw
```

firewalld .. KVM.

## QEMU/KVM

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- [Astra Linux Special Edition \( GUI - "" \);](#)
- [QEMU/KVM Astra Linux Common Edition 2.12.](#)

## QEMU/KVM

### Astra Linux Special Edition x.7 Astra Linux Common Edition 2.12

QEMU/KVM Astra Linux astra-kvm. (. [synaptic](#)) :

```
sudo apt install astra-kvm
```

virt-manager , .

:

- kvm;
- libvirt;
- libvirt-qemu;

Astra Linux Special Edition :

- libvirt-admin. - sudo , . [2023-1023SE17 \( 1.7.5\)](#) Astra Linux Special Edition ( Astra Linux x.7). [2023-1023SE17 \( 1.7.5\)](#) . libvirt-admin:

```
sudo usermod -a -G libvirt-admin $USER
```

- ( [2023-0426SE17 \( 1.7.4\)](#):
  - libvirt-dev;
  - libvirt-admvm.

libguestfs sudo, root:

```
sudo usermod -a -G kvm,libvirt,libvirt-qemu,libvirt-admin root
```

/etc/libvirt/libvirtd.conf. :

```
admin_group = "libvirt-admin"
devel_group = "libvirt-dev"
admvm_group = "libvirt-admvm"
```

, , /etc/libvirt/parsec\_roledb.conf /usr/share/polkit-1/actions/org.libvirt.api.policy.

, , ( libvirt-admin Astra Linux Common Edition):

```
sudo usermod -a -G kvm,libvirt,libvirt-qemu,libvirt-admin <_>
```

, , . , , ( ):

```
exec su - $USER
```

virtmanager . /var/lib/libvirt/images. .

/usr/share/polkit-1/actions/ Polkit, :

1. org.libvirt.unix.policy — :
  - org.libvirt.unix.monitor — ;
  - org.libvirt.unix.manage — ;
2. org.libvirt.api.policy — ( , .), , org.libvirt.unix.policy .



2022-1221SE17MD ( 1.7.3.UU.1) Astra Linux , Polkit . :

- ;
- ;
- ;
- ;

1. astra-kvm-secure:

```
sudo apt install astra-kvm-secure
```

libvirt-adm, libvirt-dev , :

- /var/lib/polkit-1/localauthority/10-vendor.d/60-libvirt.pkla, libvirt-dev, libvirt-adm libvirt ;
- /var/lib/polkit-1/localauthority/15-libvirt.d/org.libvirt.api.\*.pkla, .

2. :

- /etc/libvirt/libvirtd.conf access\_drivers [ "polkit", "parsec" ]:

```
access_drivers = [ "polkit", "parsec" ]
```

- libvirtd, :

```
sudo systemctl restart libvirtd firewalld
```

fly-polkit-viewer.

:

- , , libvirt-dev libvirt-admin;
- , :
  - libvirt-sec;
  - libvirt, libvirt-qemu, kvm
- , :
  - libvirt-adm, libvirt-admin astra-admin;
  - (63)
- , libvirt.

, - sudo /etc/sudoers.d ,:

```
%libvirt-sec ALL=(ALL:ALL) ALL
%libvirt-adm ALL=(ALL:ALL) ALL
```

libvirt , «» :

Подробнее
XML

**Модель: DAC**  
 Тип: ☒ Динамический ⓘ  
☐ Статический ⓘ  
 Метка:

**Модель: PARSEC**  
 Тип: ☒ Динамический ⓘ  
☐ Статический ⓘ  
 Метка:

**Дискреционный контроль доступа**  

| Тип          | Субъект | Права доступа |
|--------------|---------|---------------|
| Пользователь | test4   | Использование |

▼

▼

Установить

Удалить

Тип: ☒ Пользователи и группы  
☐ Пользователи  
☐ Группы  
☐ Показывать системные объекты

**Режим только чтение**  
 Тип: ☒ Отключен  
☐ Временный снимок  
☐ Снимок  
☐ Полная копия

Отмена

Применить

## Astra Linux Special Edition .10015-01 ( 1.6), .10015-16 . 1

QEMU/KVM Astra Linux Special Edition .10015-01 ( 1.6), .10015-16 . 1 :

- libvirt-daemon-system;
- libvirt0;
- qemu-kvm.

:

```
sudo apt install libvirt-daemon-system libvirt0 qemu-kvm
```

Astra Linux Special Edition /var/lib/libvirt/images ( ) , :

```
sudo pdp-ls -lMd /var/lib/libvirt/images
```

```
drwx--x--x-- 2 root root _3::_1,_2,0xfffffffffffffc:ccnr /var/lib  
/libvirt/images
```

, ( - ) :

- kvm;
- libvirt;
- libvirt-admin (! Astra Linux Common Edition);
- libvirt-qemu.

```
sudo usermod -a -G kvm,libvirt,libvirt-admin,libvirt-qemu <_>
```

, , ,

## KVM

QEMU/KVM Astra Linux Special Edition . firewalld. , . :

```
sudo firewall-cmd --list-all
```

:

```
sudo firewall-cmd --get-services
```



(, ) --permanent. .

:

```
sudo firewall-cmd --permanent --add-port=<_>
```

, RDP:

```
sudo firewall-cmd --permanent --add-service=rdp
```

( ) :

```
sudo firewall-cmd --permanent --add-port=<_>/<_>
```

, RDP:

```
sudo firewall-cmd --permanent --add-port=3389/tcp
```

:

```
sudo firewall-cmd --reload
```

..

```
man firewallld  
man firewall-cmd
```

## QEMU/KVM



/var/lib/libvirt/images .

Astra Linux Special Edition x.7 Astra Linux Common Edition 2.12 virt-manager. Astra Linux Special Edition .10152-02 Astra Linux Special Edition .10015-01 ( 1.6) . [XML Astra Linux Special Edition \( .7 2.12\)](#).



Astra Linux Special Edition ( ) . , - .

```
sudo mkdir -p /vrt/pool1
sudo chmod 750 /vrt/pool1
sudo chown <_> /vrt/pool1
```

(r-x).

```
virsh -c qemu:///system pool-define-as pool1 --type dir --target /vrt/pool1
virsh -c qemu:///system pool-build pool1
virsh -c qemu:///system pool-start pool1
virsh -c qemu:///system pool-autostart pool1
virsh -c qemu:///system pool-list --all
```

```
$ virsh -c qemu:///system pool-define-as pool1 --type dir --target /vrt/pool1
Pool pool1 defined
$ virsh -c qemu:///system pool-build pool1
Pool pool1 built
$ virsh -c qemu:///system pool-start pool1
Pool pool1 started
$ virsh -c qemu:///system pool-autostart pool1
Pool pool1 marked as autostarted
$ virsh -c qemu:///system pool-list --all
Name State Autostart
-----
pool1 active yes
```

Astra Linux Special Edition ( , [20190222SE16 \( 2\)](#)).

```
pdp-ls -Md /vrt/pool1
```

```
$ pdp-ls -Md /vrt/pool1
drwxr-xr-x-- 2 vrtadmin vrtadmin _3::_1,_2,0xfffffffffffffc:CCNRA /vrt/pool1
```

```
virsh -c qemu:///system define vm1.xml
virsh -c qemu:///system start vm1
```

```
$ virsh -c qemu:///system define vm1.xml
Domain vm1 defined from vm1.xml

$ virsh -c qemu:///system start vm1
Domain vm1 started
```

:

```
virsh -c qemu:///system list --all
```

:

```
$ virsh -c qemu:///system list --all
Id Name State
```

```
-----
3 vm1 running
```

```
$ virsh -c qemu:///system domdisplay vm1
```

:

```
virsh -c qemu:///system domdisplay vm1
spice://127.0.0.1:5900
```

```
spicy -h 127.0.0.1 -p 5900
```

```
virt-manager .config/dconf/user
```

```
custom " ".
```

```
network 'default' not active :
```

```
sudo virsh net-start default
sudo virsh net-autostart default
```

```
network 'default' .
```

IP-

IP- :

```
sudo virsh net-edit default
```

:

```
<range start='192.168.122.2' end='192.168.122.254' />
```

- , , :

```
<host mac='52:54:00:a2:99:c2' name='host1' ip='192.168.122.133' />
<host mac='52:54:00:de:2e:58' name='host2' ip='192.168.122.134' />
```

:

```
sudo virsh net-destroy default
sudo virsh net-start default
```

:

```
sudo virsh list --all  
sudo virsh start < >
```

:

```
echo "#!/bin/bash" | sudo tee /etc/rc.local  
echo "virsh start < >" | sudo tee -a /etc/rc.local  
sudo chmod +x /etc/rc.local
```

/etc/sysctl.d/ .conf. :

```
cat << EOF | sudo tee -a /etc/sysctl.d/net_bridge.conf  
net.bridge.bridge-nf-call-ip6tables = 0  
net.bridge.bridge-nf-call-iptables = 0  
net.bridge.bridge-nf-call-arptables = 0  
net.ipv4.ip_forward=1  
EOF
```