

# NFS Kerberos FreeIPA

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- 
- Kerberos
  - Kerberos

- NFSv2 NFSv3
- FreeIPA



:

- Astra Linux Special Edition .10015-01 ( 1.7), .10015-10
- Astra Linux Special Edition .10015-17
- Astra Linux Special Edition .10015-37 ( 7.7)
- Astra Linux Special Edition .10015-03 ( 7.6)
- 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 Special Edition .10015-16 . 2
- Astra Linux Special Edition .10265-01 ( 8.1)
- Astra Linux Common Edition 2.12



" , CIFS, (..) ;"

" . 1 .10015-01 97 01-1" . 17.3. " "



Kerberos NFS :

- - ;
- - ;

, NFS , , , .



NFSv4. , Kerberos.

NFS (NFSv3 NFSv4) / (SYS Kerberos), .

- FreeIPA:
  - ipa0.ipadomain0.ru;
  - admin;
  - IP- , DNS;
- - host0.ipadomain0.ru;



. NFS

1. nfs-kernel-server:

```
sudo apt install nfs-kernel-server
```

2. , Kerberos:

```
sudo sed -i 's/^[[:space:]]*NEED_SVCGSSD[[:space:]]*=.* /NEED_SVCGSSD="yes"/' /etc/default/nfs-kernel-server
```

```
sudo sed -i 's/^[[:space:]]*NEED_GSSD[[:space:]]*=.* /NEED_GSSD=yes/' /etc/default/nfs-common
```

```
sudo sed -i 's/^[[:space:]]*NEED_IDMAPD[[:space:]]*=.* /NEED_IDMAPD=yes/' /etc/default/nfs-common
```

3. nfs/<\_> , :

a. Kerberos :

```
kinit admin
```

b. :

```
ipa service-add nfs/`hostname`
```

c. Kerberos :

```
sudo kinit admin
```



Kerberos , ().

d. :

```
sudo ipa-getkeytab -s ipa0.ipadomain0.ru -p nfs/`hostname` -k /etc/krb5.keytab
```

4. :

a. , allow\_weak\_crypto = true [libdefaults] /etc/krb5.conf;

b. ( ):

```
ldapmodify -x -D "cn=directory manager" -W -h ipa0.ipadomain0.ru << EOT
dn: cn=IPADOMAIN0.RU,cn=kerberos,dc=ipadomain0,dc=ru
changetype: modify
add: krbSupportedEncSaltTypes
krbSupportedEncSaltTypes: des-cbc-crc:normal
EOT
ldapmodify -x -D "cn=directory manager" -W -h ipa0.ipadomain0.ru << EOT
dn: cn=IPADOMAIN0.RU,cn=kerberos,dc=ipadomain0,dc=ru
add: krbSupportedEncSaltTypes
krbSupportedEncSaltTypes: des-cbc-crc:special
EOT
ldapmodify -x -D "cn=directory manager" -W -h ipa0.ipadomain0.ru << EOT
dn: cn=IPADOMAIN0.RU,cn=kerberos,dc=ipadomain0,dc=ru
add: krbDefaultEncSaltTypes
krbDefaultEncSaltTypes: des-cbc-crc:special
EOT
```

5. :

```
sudo systemctl daemon-reload
sudo systemctl restart nfs-kernel-server
```

6. () . /export:

```
sudo mkdir /export
sudo chmod 777 /export
```

/etc/exports. . man exports.

❗ NFSv4 . , . fsid=0. , , , .

( /home /export):

```
/ *(rw,fsid=0,no_subtree_check,sec=krb5:krb5i:krb5p)
/home gss/krb5i(rw,sync,no_subtree_check)
/export *(rw,sync,no_subtree_check,no_root_squash,sec=krb5:krb5i:krb5p)
```

-, "" NFSv4 Kerberos.  
(root\_squash). , , nobody:nogroup Kerberos- (. Kerberos). .

❗ , "" , Kerberos, .  
no\_root\_squash , .. [Kerberos](#).

7. :

```
sudo exportfs -ra
```

8. , :

```
sudo showmount -e `hostname`

Export list for ipa0.ipadomain0.ru:
/home gss/krb5i
/export *
/ *
```

## Kerberos

. [FreeIPA](#)

1. ,:

```
sudo mkdir /mnt/nfs_mount
```

2. nfs-common:

```
sudo apt install nfs-common
```

3. :

```
sudo showmount -e ipa0.ipadomain0.ru
```

4. , Kerberos:

```
sudo sed -i 's/^[[:space:]]*NEED_GSSD[[:space:]]*=.* /NEED_SVC_GSSD="yes"
/' /etc/default/nfs-common
sudo sed -i 's/^[[:space:]]*NEED_IDMAPD[[:space:]]*=.* /NEED_IDMAPD="yes"
/' /etc/default/nfs-common
```

5. ;

6. NFS- :  
a. NFS- :

```
kinit admin  
ipa service-add nfs/`hostname`
```

b. NFS- :

```
sudo kinit admin  
sudo ipa-getkeytab -s ipa0.ipadomain0.ru -p nfs/`hostname` -k /etc  
/krb5.keytab
```

7. Kerberos:



NFSv4

:

```
sudo mount.nfs4 ipa0.ipadomain0.ru:/home/ /mnt/nfs_mount -o sec=krb5i
```

-v .



a. , (vers=4.2), -, (sec=krb5i). :

```
mount -t nfs4
```

```
ipa0.ipadomain0.ru:/export on /mnt/nfs_mount type nfs4 (rw,
relatime,vers=4.2,rsiz=524288,wsiz=524288,namlen=255,hard,
proto=tcp,timeo=600,retrans=2,sec=krb5i,clientaddr=10.0.2.5,
local_lock=none,addr=10.0.2.100,user=admin)
```

```
-, , , (mount ).
```

b. , . NFSv4 Kerberos. , ( ), ( ) .



```
'/mnt':
```

```
, , , . Kerberos, nobody:nogroup ( Kerberos -. " Kerberos ").
```

NFSv4:

```
ls -l /
```

```
ls:      '/mnt/nfs_mount':
96
drwxr-xr-x 2 root root 4096 11 11:54 bin
drwxr-xr-x 3 root root 4096  4 15:42 boot
drwxr-xr-x 18 root root 3940  1 14:35 dev
drwxr-xr-x 127 root root 12288  1 14:35 etc
d???????? ? ? ? ? ? export
...
```

8. . [FreeIPA](#).

## Kerberos



Kerberos , ( , , ).

1. /etc/default/nfs-common - :

```
GSSDARGS="-n"
```

2. /usr/lib/systemd/scripts/nfs-utils\_env.sh - :

```
echo GSSDARGS=\"${GSSDARGS}\"
```

3. :

```
sudo systemctl restart nfs-utils
```

(sudo), , - nobody:nogroup.