

 0 , . , .

- DD
  - TAR
    - - - Netcat (nc)
        - SSH
      - - GRUB
        - - Netcat (nc)
          - SSH
  - RSYNC
    - - - - - rsync.service
  - luckyBackup
    -
  - Astra Linux Special Edition
- , Astra Linux:
- dd;
  - tar;
  - rsync;
  - luckyBackup.

 :

- Astra Linux Special Edition .10015-01 ( 1.7)
- Astra Linux Special Edition .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 ( , ).

 BACULA. BACULA, , .



 , ( Astra Linux Special Edition - ).

DD

dd .

:

- ( , , );
- ;
- .

, dd , .

( " " /dev/sda1 /media/not-sda-device/sda.bin:

```
sudo dd if=/dev/sda1 of=/media/not-sda1-device/sda1.bin bs=4096
```

|    |   |
|----|---|
|    |   |
| if | . |

|                                              |                |
|----------------------------------------------|----------------|
| of                                           | .              |
| bs                                           | Ext2/Ext3/Ext4 |
| <div>tune2fs -l /dev/sda1   grep Block</div> |                |

/ dd :

```
sudo dd if=/dev/sda1 bs=4096 | sudo gzip > /media/not-sda1-device/sda1.bin.gz
```

( , , ):

```
sudo dd if=/media/mountpoint/sda1.bin of=/dev/sda1 bs=4096
```

, :

```
sudo gzip -dc /media/not-sda1-device/sda1.bin.gz | sudo dd of=/dev/sda1 bs=4096
```

dd ( ) :

```
sudo mount -o loop /media/mountpoint/sda1.bin /mnt
```

TAR

tar .

/backup.tar.gz ( ):

```
sudo tar --xattrs --acls -czf backup.tar.gz \
--exclude=/proc --exclude=/lost+found \
--exclude=/backup.tar.gz \
--exclude=/mnt \
--exclude=/sys \
--exclude=/parsecfs \
/
```

:

|          |                                                         |
|----------|---------------------------------------------------------|
|          |                                                         |
| --xattrs |                                                         |
| --acls   | (POSIX Access Control Lists, ACL)                       |
| -czf     | : <div> -C - -z - gzip -f - , ( - backup.tar.gz) </div> |

|           |                                                                                                                                                                                                                                        |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| --exclude | , ., .:                                                                                                                                                                                                                                |
|           | <ul style="list-style-type: none"> <li>• ;</li> <li>• /parsecfs/</li> <li>• :</li> <li>○ /tmp</li> <li>○ /var/lib/samba/private/msg.sock/</li> <li>○ /var/lib/samba/winbindd_privileged/pipe</li> <li>○ /var/lib/sss/pipes/</li> </ul> |
| /         | , .                                                                                                                                                                                                                                    |



-S (--sparse). "" (sparse). , , - "" .



"/".  
:  
• , / ;  
• , (, LiveCD) .



tar Midnight Commander, Astra Linux.

tar  
netcat (nc) tar.

## Netcat (nc)

nc , .



, nc .

nc netcat :

```
sudo apt install netcat
```

( tar ):

1. nc . (-l) 1024 (-p 1024) backup.tar.gz. , IP- - 192.168.32.97. :

```
nc -l -p 1024 > backup.tar.gz
```

2. tar . (stdout). Stdout (pipe, "", " ") nc. nc ( IP- 192.168.32.97 1024).  
-q 0 .:

```
tar -cvpz / | nc -q 0 192.168.32.97 1024
```

## SSH

SSH. SSH .  
:

```
sudo tar -cvpz / | ssh 192.168.32.97 "( cat > ssh_backup.tar.gz )"
```

:

- tar , (stdout);
- ssh;
- ssh ;

:

```
echo 1 | sudo tee /parsecfs/unsecure_setxattr
sudo /usr/sbin/execaps -c 0x1000 -- tar --xattrs --xattrs-include=security.
{PDPL,AUDIT,DEF_AUDIT} --acls -xzf backup.tar.gz -C /
echo 0 | sudo tee /parsecfs/unsecure_setxattr
```

:

|                                                  |                                                                  |
|--------------------------------------------------|------------------------------------------------------------------|
| /                                                |                                                                  |
| echo 1   sudo tee /parsecfs/unsecure_setxattr    | , /parsecfs/unsecure_setxattr 1, PARSEC_CAP_UNSAFE_SETXATTR (.). |
| /usr/bin/execaps -c 0x1000                       | , PARSEC_CAP_UNSAFE_SETXATTR, -. /parsecfs/unsecure_setxattr 1.  |
| --                                               | , .                                                              |
| tar                                              | , , PARSEC_CAP_UNSAFE_SETXATTR                                   |
| --xattrs                                         |                                                                  |
| --xattrs-include=security.{PDPL,AUDIT,DEF_AUDIT} |                                                                  |
| --acls                                           | (POSIX Access Control Lists, ACL)                                |
| -xzf                                             | :<br><br>-x -<br>-z - gunzip<br>-f - , ( backup.tar.gz)          |
| -C /                                             | , ( "I").<br>,"I".                                               |
| echo 0   sudo tee /parsecfs/unsecure_setxattr    | PARSEC_CAP_UNSAFE_SETXATTR ( Astra Linux Special Edition ).      |



, (, , LiveCD),  
--numeric-owner, / .

GRUB





tar rsync grub. :

- , /mnt
- , dpkg-reconfigure grub-pc , :

```
sudo -s
for f in dev dev/pts proc sys ; do mount --bind /$f /mnt/$f ; done
chroot /mnt
dpkg-reconfigure grub-pc
exit
exit
```

, () /etc/fstab, . UUID, :

```
sudo blkid
```

## Netcat (nc)

1. , nc. 1024 tar . tar (stdin) (f ). -C /tmp , (/tmp).:

```
nc -l 1024 | tar -xvpzf - -C /tmp
```

2. , - nc 10.0.2.2 1024.:

```
cat backup.tar.gz | nc -q 0 10.0.2.2 1024
```

## SSH

:

```
cat ssh_backup.tar.gz | ssh 10.0.2.2 "tar -xvpzf - -C /tmp"
```

## RSYNC

rsync rsync rsync.service, .

tar,  
, (, git subversion, luckyBackup, [LXC](#)), .  
, :

- ;
- ;
- , ;
- ;
- ;
- ;

rsync.service , .  
rsync.service, SSH.

tar, /backup:

```
sudo /usr/sbin/execaps -c 0x1000 -- sudo rsync -a --xattrs --acls --exclude=
/proc --exclude=/lost+found --exclude=/backup --exclude=/mnt --exclude=/sys
--exclude=/parsecfs / /backup
```

:

|                |                                                                      |
|----------------|----------------------------------------------------------------------|
|                |                                                                      |
| -a             | , .<br>:<br><br>-r -<br>-l -<br>-p -<br>-t -<br>-g -<br>-o -<br>-D - |
| --xattrs<br>-X |                                                                      |
| --acls<br>-A   | (POSIX Access Control Lists, ACL)                                    |
| --exclude      | , , .                                                                |
| /              | ( - )                                                                |
| /backup        | ,                                                                    |



.

SRC DST, SRC SUB (.. SRC/SUB) .

cp cp -a SRC DST cp -a SRC/ DST : DST/SRC/SUB.

rsync -a SRC DST DST/SRC/SUB  
rsync -a SRC/ DST DST/SUB.

- '/' -.

, ( - ssh host.astradomain.ru admin ~admin/backup/):

```
sudo rsync -a --exclude=/proc --exclude=/lost+found --exclude=/mnt --
exclude=/sys/ / admin@host.astradomain.ru:backup
```

, rsync.service - , ssh.  
, SSH.



, admin -, .



, . Ext4 ( ) . Ext2/Ext3 user\_xattr. . .

:

```
sudo rsync -a --X --A --exclude=/proc --exclude=/lost+found --exclude=/mnt
--exclude=/sys --exclude=/parsecfs -M --fake-super / / admin@host.
astradomain.ru:backup
```

--xattrs --acls ( -X -A), -M, . --fake-super, (extended attributes) . .. rsync ( / , , rsync , ), - , rsync, -.

 rsync , rsync --rsync-path="rsync --fake-super" --rsync-path="sudo rsync --fake-super". -M --fake-super , sudo .  
rsync , ssh. .

 Astra Linux Special Edition PARSEC\_CAP\_UNSAFE\_SETXATTR rsync.

, ( , . tar):

```
echo 1 | sudo tee /parsecfs/unsecure_setxattr
/usr/sbin/execaps -c 0x1000 -- sudo rsync -a --xattrs --acls /backup/ /
echo 0 | sudo tee /parsecfs/unsecure_setxattr
```

, --fake-super :

```
sudo rsync -a --X --A -M --fake-super / admin@host.astradomain.ru:backup /
```

## rsync.service

 , rsyncd (rsync.service) \_\_,  
:  
, , .

, SSH rsync.service.  
rsync.service :

- , rsync.service , ;
- , ( , ssh);

, , Bacula ( . )

rsync.service :

1. , /etc/default/rsync  
RSYNC\_ENABLE=false  
RSYNC\_ENABLE=true
2. /etc/rsyncd.conf, :

```

i max connections = 10
  exclude = lost+found/ /tmp/
  dont compress = *.gz *.tgz *.zip *.z *.Z *.rpm *.deb *.bz *.rar *.7z *.mp3 *.jpg

[data1]
  path = /data1/
  comment = Public folders
  read only = yes
  list = yes
  auth users = rsync_d1
  secrets file = /etc/rsyncd.scr
  hosts allow = localhost 192.168.32.96 192.168.32.97
  hosts deny = *

```

:

|                                                                                  |       |
|----------------------------------------------------------------------------------|-------|
|                                                                                  |       |
| max connections = 10                                                             |       |
| exclude = lost+found/ /tmp/                                                      | ,     |
| dont compress = *.gz *.tgz *.zip *.z *.Z *.rpm *.deb *.bz *.rar *.7z *.mp3 *.jpg | , ( ) |
| [data1]                                                                          | ( )   |
| path = /data1/                                                                   |       |
| comment = Public folders                                                         |       |
| read only = yes                                                                  |       |
| list = yes                                                                       |       |
| auth users = user1 user2                                                         |       |
| secrets file = /etc/rsyncd.scr                                                   |       |
| hosts allow = localhost 192.168.32.96 192.168.32.97                              | ,     |
| hosts deny = *                                                                   | ,     |

rsync.service .

- ( - /etc/rsyncd.scr):

```

i user1:password1
  user2:password2
  backup:password3

```

:

```
sudo chmod 600 /etc/rsyncd.scr
```

- :

```
sudo systemctl start rsync
```

- rsync , SSH, - "", , rsync:

```
sudo rsync -a user1@host.astradomain.ru::data1 /tmp/
```

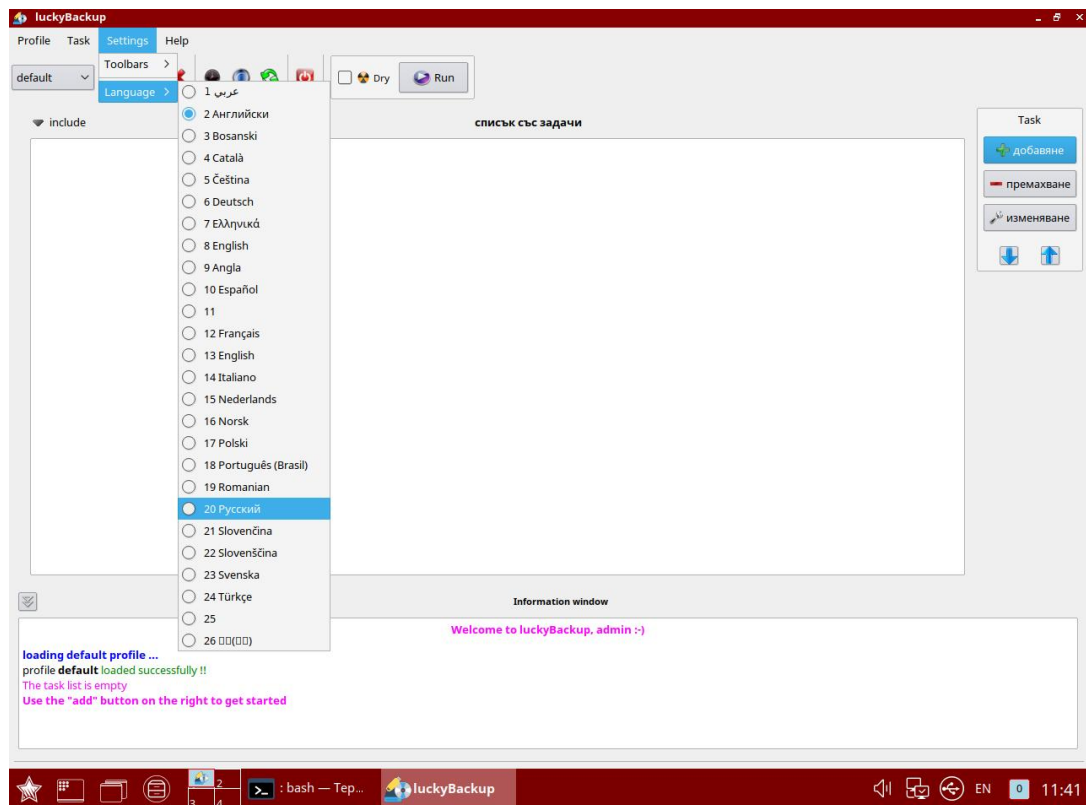
luckyBackup



```
rsync.  
, ( synaptic) :
```

```
apt install luckybackup
```

```
"" _ "" - "luckyBackup ()".  
("Settings" - "Language"):
```



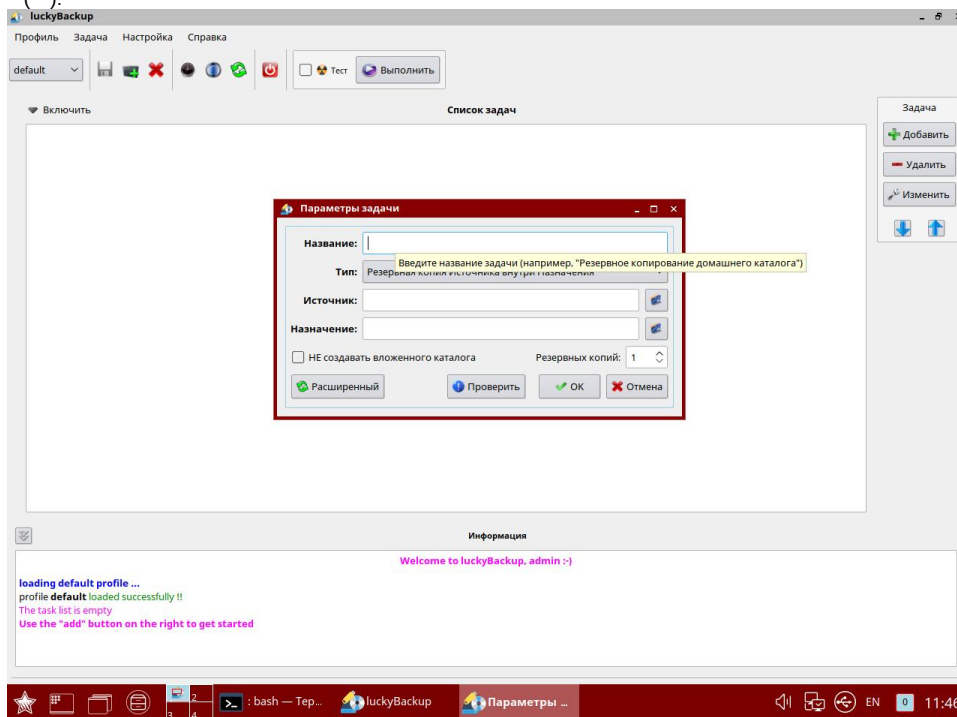
```
rsync, :  
• rsync;  
• (dry-run, "") .
```



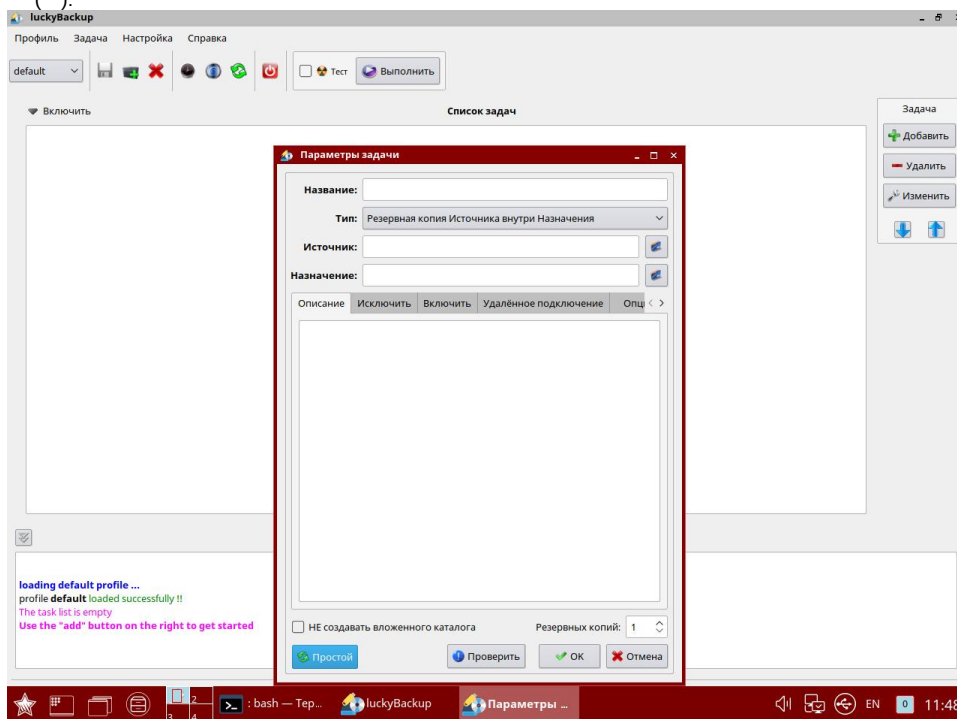
luckyBackup PARSEC\_CAP\_UNSAFE\_SETXATTR.

luckyBackup :

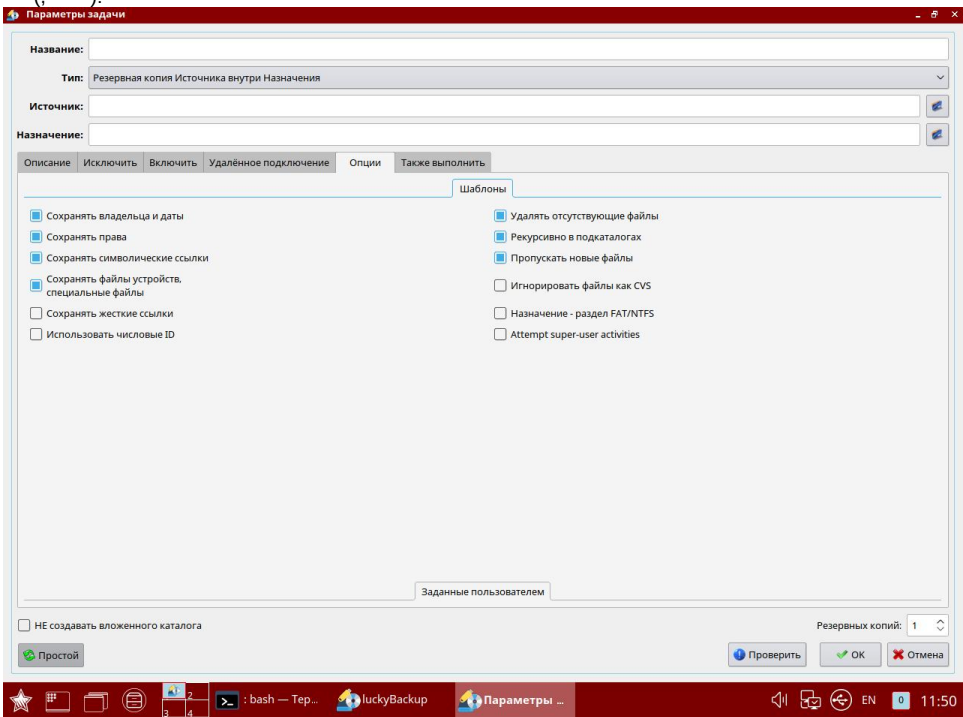
1. (""):



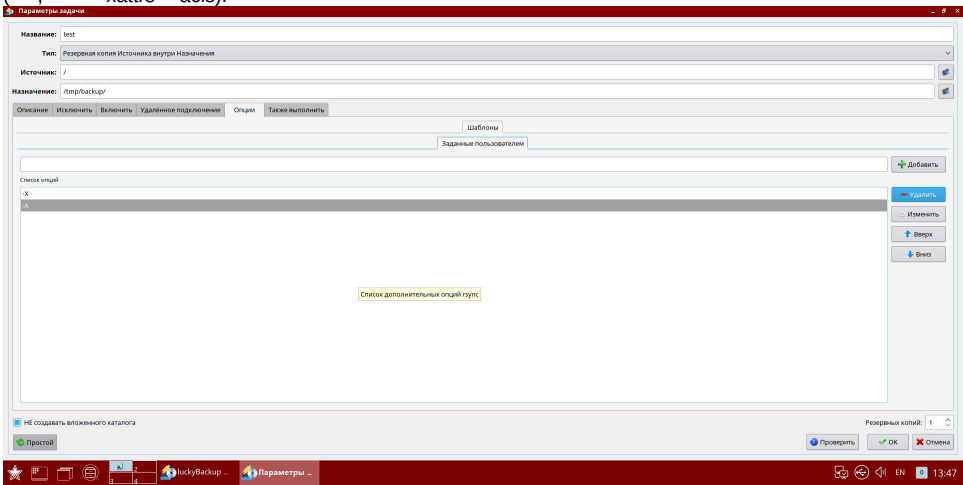
2. (""):



3. "" (, ):



4. ""  
(, : --xattr --acls):



5. (" - ").

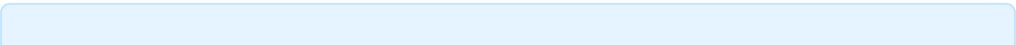
# Astra Linux Special Edition

, dd. , :

- , :  
○ :  
■ :

grep <\_\_> /etc/passwd

- :
  - FreeIPA - web- FreeIPA :



```
ipa user-show <__>
```

- ALD - fly-admin-ald-server
  - :
    - FreeIPA - /home;
    - ALD - /ald\_home;
- , :
  - :
    - Astra Linux Special Edition Astra Linux Special Edition FreeIPA - /home/.pdp;
    - Astra Linux Special Edition ALD - /ald\_export\_home.