

, LVM

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- LVM
- LVM LVM
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- LVM ()

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- boot LVM.
- Astra Linux LVM LVM



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- 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

- () LVM.
- () /dev/vda:
 - /dev/vda1 — (/boot). LVM (). - ext2.
 - /dev/vda2 — LVM. LVM LVM. LVM LVM VG, LVM:
 - /dev/vda2/VG-lv_home (/dev/VG/lv_home, /dev/mapper/VG-lv_home)— LVM, /home. - ext4.
 - /dev/vda2/VG-lv_root (/dev/VG/lv_root, /dev/mapper/VG-lv_root) — LVM, . - ext4.
 - () , /dev/vda2.
- /dev/vdb — .

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- :

```
lsblk
```

:

NAME	MAJ:MIN	RM	SIZE	RO	TYPE	MOUNTPOINTS
vda	252:0	0	60G	0	disk	
vda1	252:1	0	1G	0	part	/boot
vda2	252:2	0	39G	0	part	
VG-lv_home	253:0	0	27,3G	0	lvm	/home
VG-lv_root	253:1	0	11,7G	0	lvm	/
vdb	252:16	0	40G	0	disk	

- :

```
sudo parted /dev/vda print free
```

:

```
Model: Virtio Block Device (virtblk)
Disk /dev/vda: 64,4GB
Sector size (logical/physical): 512B/512B
Partition Table: msdos
Disk Flags:

Number  Start   End     Size    Type    File system  Flags
  1      1024B   1049kB  1048kB             Free Space
  2      1049kB  1075MB  1074MB  primary ext2          boot
  3      1075MB  42,9GB  41,9GB  primary             lvm
  4      42,9GB  64,4GB  21,5GB             Free Space
```

```
21.5GB.
/dev/vdb :
```

```
sudo parted /dev/vdb print free
```

:

```
Error: /dev/vdb: unrecognised disk label
Model: Virtio Block Device (virtblk)
Disk /dev/vdb: 42,9GB
Sector size (logical/physical): 512B/512B
Partition Table: unknown
Disk Flags:
```

- LVM:
 - LVM:

```
sudo pvs
```

:

PV	VG	Fmt	Attr	PSize	PFree
/dev/vda2	VG lvm2	a--		<39,00g	0

- LVM:

```
sudo vgs
```

:

VG	#PV	#LV	#SN	Attr	VSize	VFree
VG	1	2	0	wz--n-	<39,00g	0

- LVM:

```
sudo lvs
```

:

LV	VG	Attr	LSize	Pool	Origin	Data%	Meta%	Move	Log	Cpy%	Sync	Convert
lv_home	VG	-wi-ao----	<27,28g									
lv_root	VG	-wi-ao----	<11,72g									

/home ,:

- /dev/vda;
- /dev/vdb.

:

1. /dev/vda /dev/vda2.
2. LVM VG.
3. LVM LVM lv_home.
4. LVM , .
5. /dev/vdb LVM, LVM, LVM .

ext2/ext3/ext4/xfs . (,) , , c [Live-CD](#). xfs .

- LVM — 0 ;
 - LVM - LVM LVM.
- gparted. gparted:
- ;
 - (— — Gparted);
 - , , " " (1);
 - (2), " 0" " 0":
 - blocked URL
 - " " (3);
 - , — :
 - blocked URL
 - — , " " (1) " " (2)
 - blocked URL
 - blocked URL

(gparted) LVM, parted.

```
sudo parted /dev/vda unit B print free
```

Model: Virtio Block Device (virtblk)
Disk /dev/vda: 64424509440B
Sector size (logical/physical): 512B/512B
Partition Table: msdos
Disk Flags:

Number	Start	End	Size	Type	File system	Flags
	1024B	1048575B	1047552B		Free Space	
1	1048576B	1074790399B	1073741824B	primary	ext2	boot
2	1074790400B	42949672959B	41874882560B	primary		lvm
	42949672960B	64424509439B	21474836480B		Free Space	

unit B, —.
, , resizepart parted, (2) (64424509439 End, 21474836480 Size):

```
sudo parted /dev/vda unit B resizepart 2 64424509439
```

Information: You may need to update /etc/fstab.

```
sudo parted /dev/vda unit B print free
```

Model: Virtio Block Device (virtblk)
Disk /dev/vda: 64424509440B
Sector size (logical/physical): 512B/512B
Partition Table: msdos
Disk Flags:

Number	Start	End	Size	Type	File system	Flags
	1024B	1048575B	1047552B		Free Space	
1	1048576B	1074790399B	1073741824B	primary	ext2	boot
2	1074790400B	64424509439B	63349719040B	primary		lvm

LVM lv_home 27.28G 47.28G.

LVM

:

```
df -h /home
```

	% C			
/dev/mapper/VG-lv_home	27G	35M	26G	1% /home

ext2/ext3/ext4:

```
sudo resize2fs /dev/VG/lv_home
```

```
resize2fs 1.47.0 (5-Feb-2023)
Filesystem at /dev/VG/lv_home is mounted on /home; on-line resizing required
old_desc_blocks = 4, new_desc_blocks = 6
The filesystem on /dev/VG/lv_home is now 12393472 (4k) blocks long.
```

xfs (xfsprogs):

```
sudo xfs_growfs <__>
```

:

```
df -h | grep /home
```

	% C			
/dev/mapper/VG-lv_home	47G	35M	45G	1% /home

0 26G 45G.

LVM ()

:

1. /dev/vdb LVM, LVM.
2. LVM LVM .
3. LVM.
4. .

, .

:

```
sudo lvmdiskscan
```

```
/dev/vda1 [ 1,00 GiB]
/dev/vda2 [ <59,00 GiB] LVM physical volume
/dev/vdb [ 40,00 GiB]
1 disk
1 partition
0 LVM physical volume whole disks
1 LVM physical volume
```

LVM /dev/vdb:

```
sudo pvcreate /dev/vdb
```

```
Physical volume "/dev/vdb" successfully created.
```

:

```
sudo lvmdiskscan
```

```
/dev/vda1 [      1,00 GiB]
/dev/vda2 [    <59,00 GiB] LVM physical volume
/dev/vdb  [      40,00 GiB] LVM physical volume
0 disks
1 partition
1 LVM physical volume whole disk
1 LVM physical volume
```

LVM /dev/vdb, LVM VG :

```
sudo vgs
```

```
VG #PV #LV #SN Attr   VSize   VFree
VG   1   2   0 wz--n- <59,00g    0
```

LVM VG:

```
sudo vgextend VG /dev/vdb
```

```
Volume group "VG" successfully extended
```

:

```
sudo vgs
```

```
VG #PV #LV #SN Attr   VSize   VFree
VG   2   2   0 wz--n- 98,99g <40,00g
```

LVM VG 40G.
LVM:

```
sudo lvs
```

```
LV          VG Attr          LSize   Pool Origin Data%  Meta%  Move Log Cpy%Sync
Convert
lv_home VG -wi-ao---- <47,
28g
lv_root VG -wi-ao---- <11,72g
```

/dev/VG/lv_home:

```
sudo lvm lvextend -l +100%FREE /dev/VG/lv_home
```

Size of logical volume VG/lv_home changed from <47,28 GiB (12103 extents) to 87,27 GiB (22342 extents).
Logical volume VG/lv_home successfully resized.

:

```
sudo lvs
```

LV	VG	Attr	LSize	Pool	Origin	Data%	Meta%	Move	Log	Cpy%
lv_home	VG	-wi-ao----	87,27							
lv_root	VG	-wi-ao----	<11,72g							

LVM lv_home 87.27G.

:

```
df -h /home
```

% C	
47G	35M 45G 1% /home

LVM:

```
sudo resize2fs /dev/VG/lv_home
```

```
resize2fs 1.47.0 (5-Feb-2023)
Filesystem at /dev/VG/lv_home is mounted on /home; on-line resizing required
old_desc_blocks = 6, new_desc_blocks = 11
The filesystem on /dev/VG/lv_home is now 22878208 (4k) blocks long.
```

:

```
df -h /home
```

% C	
86G	35M 82G 1% /home

47G 86G, 45G 82G.