Презентация лабораторной работы №15

Управление логическими томами

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Лабораторная работа

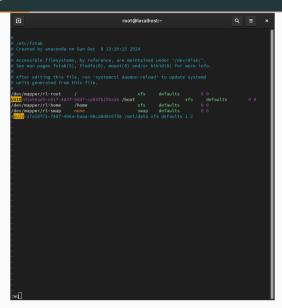
Последовательность выполнения работы

• цель: создать физического тома

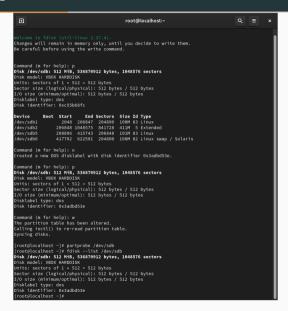
удаление партиций

- Команды:
 - vim /etc/fstab
 - (коментировать строку)
 - umount/mnt/data
 - fdisk
 - o ENTER w ENTER
 - partprobe/dev/sdb

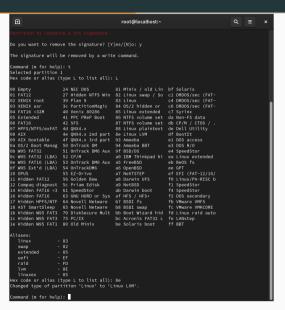
удаление партиций

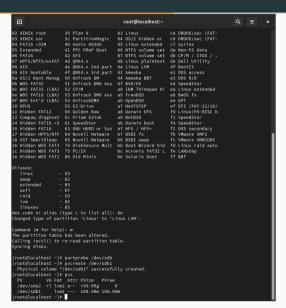


удаление партиций



- команды:
 - fdisk/dev/sdb
 - n p (по умолчанию) t 8e w
 - partprobe/dev/sdb
 - pvcreate /dev/sdb1
 - pvs



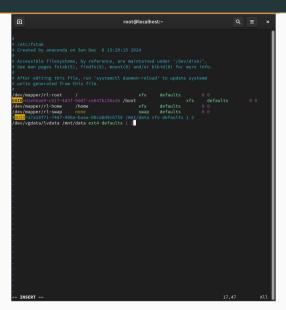


логических томов

• команды:

- · vgcreate vgdata /dev/sdb1
- vgs
- pvs
- lvcreate -n lvdata -l 50%FREE vgdata
- lvs
- mkfs.ext4 /dev/vgdata/lvdata
- mkdir -p /mnt/data
- vim /etc/fstab /dev/vgdata/lvdata /mnt/data ext4 defaults 1 2
- · systemctl daemon-reload
- · mount -a
- mount

```
root@localhost:~
 root@localhost ~l# pvs
            VG Fmt Attr PSize PFree
  /dev/sda2 rl lvm2 a-- <99.00g
 /dev/sdb1 lvm2 --- 100,00m 100,00m
 root@localhost ~l# vgcreate vgdata /dev/sdb1
 Volume group "vgdata" successfully created
 root@localhost ~1# vgs
 VG #PV #IV #SN Attr VSize VFree
        1 3 0 wz--n- <99.00g 0
 vedata 1 0 0 wz--n- 96.60m 96.60m
 root@localhost ~1# pvs
                  Fmt Attr PSize PFree
 /dev/sda2 rl lvm2 a-- <99.80g 8
  /dev/sdb1 vgdata lvm2 a-- 96.00m 96.00m
 root@localhost ~]# lvcreate -n lvdata -l 50%FREE vgdata
 Logical volume "lydata" created.
 root@localhost ~1# lys
                         LSize Pool Origin Data% Meta% Move Log Cpy%Sync Convert
 home rl
               -wi-ao---- 29.89g
 swap rl -wi-ao--- 7.87g
 lydata vgdata -wi-a---- 48,00m
 root@localhost ~1# mkfs.ext4 /dev/vgdata/lvdata
mke2fs 1.46.5 (30-Dec-2021)
Creating filesystem with 49152 1k blocks and 12288 inodes
Filesystem UUID: ae6468ae-dld2-49dd-a439-d26d7e7dce07
Superblock backups stored on blocks:
       8193, 24577, 40961
Allocating group tables: done
Writing inode tables: done
Creating journal (4096 blocks): done
Writing superblocks and filesystem accounting information: done
 root@localhost ~l# mkdir -p /mnt/data
 root@localhost ~1#
```



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▣
                                                                                 Q ≣
                                        root@localhost:~
 root@localhost ~l# pvs
            VG Fmt Attr PSize PFree
  /dev/sda2 rl lvm2 a-- <99.00g
  /dev/sdb1 lvm2 --- 100.00m 100.00m
 root@localhost ~l# vgcreate vgdata /dev/sdb1
 Volume group "vgdata" successfully created
 root@localbost ~l# vgs
 VG #PV #IV #SN Attr VSize VFree
         1 3 0 wz--n- <99.00g 0
 vedata 1 0 0 wz--n- 96.60m 96.60m
 root@localhost ~l# pvs
                  Fmt Attr PSize PFree
 /dev/sda2 rl lvm2 a-- <99.80g 8
  /dev/sdb1 vgdata lvm2 a-- 96.00m 96.00m
 root@localhost ~]# lvcreate -n lvdata -l 50%FREE vgdata
 Logical volume "lydata" created.
 root@localbost ~l# lvs
                         I Size Pool Origin Data% Meta% Move Log Cov%Sync Convert
               -wi-ao---- 29.89g
  swap rl -wi-ao--- 7.87g
 lydata vgdata -wi-a---- 48,00m
 root@localhost ~1# mkfs.ext4 /dev/vgdata/lvdata
mke2fs 1.46.5 (30-Dec-2021)
Creating filesystem with 49152 1k blocks and 12288 inodes
Filesystem UUID: ae6468ae-dld2-49dd-a439-d26d7e7dce07
Superblock backups stored on blocks:
       8193, 24577, 40961
Allocating group tables: done
Writing inode tables: done
Creating journal (4096 blocks): done
Writing superblocks and filesystem accounting information: done
 root@localhost ~l# mkdir -p /mnt/data
 root@localhost ~l# vim /etc/fstab
 root@localhost ~l# mount -a
mount: (hint) your fstab has been modified, but systemd still uses
      the old version: use 'systematl daemon-reload' to reload.
 root@localhost ~1# systemctl daemon-reload
 root@localhost ~l# mount -a
 [root@localhost ~]# mount | grep /mnt
 /dev/mapper/vgdata-lydata on /mnt/data type ext4 (rw.relatime.seclabel)
 root@localbost ~l#
```

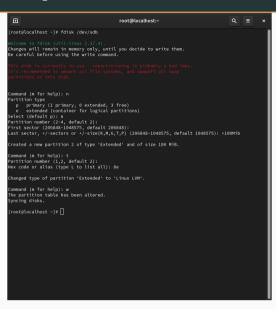
Изменение размера логических

TOMOB

создание новой партиции

- Команды:
 - pvs
 - vgs
 - fidsk/dev/sdb
 - ре (по-умолчанию) +100Mib t 8e
 - partprobe/dev/sdb

создание новой партиции



изменение размера логического тома

• Команды:

- pvcreate /dev/sdb2
- vgextend vgdata /dev/sdb2
- vgs
- lvs
- df -h
- lvextend -r -l +50%FREE /dev/vgdata/lvdata
- df -h
- lvreduce -r -L -50M /dev/vgdata/lvdata
- lvs
- df -h

изменение размера логического тома

```
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                                       root@localhost:~
                                                                               Q ≣
Syncing disks.
 root@localhost ~1# pvcreate /dev/sdb2
WARNING: dos signature detected on /dev/sdb2 at offset 510. Wipe it? [v/n]: v
 Wining dos signature on /dev/sdb2.
 Physical volume "/dev/sdb2" successfully created.
 root@localbost ~l# wgs
 VG #PV #IV #SN Attr VSize VFree
         1 3 0 wz--n- <99.00g 0
 vedata 1 1 0 wz--n- 96.60m 48.60m
 root@localhost ~1# lvs
                        LSize Pool Origin Data% Meta% Move Log Cpv%Sync Convert
 home rl -wi-ao---- 29.89g
 root rl -wi-ao---- 61.23g
 lydata vgdata -wi-ao---- 48.00m
root@localhost ~1# df -h
                        Size Used Avail Use% Mounted on
devtmpfs
                        4.0M 0 4.0M 0% /dev
tmnfs
                        7.76 0 7.76 8% /dev/she
                     3.16 9.3M 3.16 1% /run
/dev/sdal
                        960M 457M 504M 48% /boot
/dev/mapper/rl-home
                   30G 17G 14G 56% /home
tmofs
                        1.6G 892K 1.6G 1% /run/user/1000
/dev/sr0
                        51M 51M 0 100% /run/media/giarishekka/VRox GAs 7.0.18
/dev/mapper/vgdata-lydata 40M 14K 37M 1% /mnt/data
[root@localhost ~]# lvextend -r -l +50%FREE /dev/vgdata/lvdata
 Size of logical volume vgdata/lydata changed from 48.00 MiR (12 extents) to 72.00 MiR (18 extent
 File system ext4 found on yedata/lydata mounted at /mnt/data.
 Extending file system ext4 to 72.80 MiB (75497472 bytes) on yedata/lydata...
resize2fs /dev/vgdata/lvdata
resize2fs 1.46.5 (30-Dec-2021)
Filesystem at /dev/vgdata/lydata is mounted on /mnt/data; on-line resizing required
old_desc_blocks = 1, new_desc_blocks = 1
The filesystem on /dev/vgdata/lydata is now 73728 (1k) blocks long.
resize2fs done
 Extended file system ext4 on vgdata/lydata.
 Logical volume vgdata/lvdata successfully resized.
 root@localhost ~l# lvs
                        LSize Pool Origin Data% Meta% Move Log Cpv%Svnc Convert
 home rl -wi-ao--- 29.89g
 root rl -wi-ao---- 61.23g
 swap rl -wi-a---- 7.87g
 lydata vedata -wi-ao---- 72.00m
 root@localhost ~1#
```

изменение размера логического тома

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▣
                                        root@localhost:~
                                                                                 Q ≣
 dev/mapper/rl-home
                          30G 17G 14G 56% /home
                         1.6G 892K 1.6G 1% /run/user/1800
 dev/sr0
                          51M 51M 0 180% /run/media/giarishekka/VBox GAs 7.0.18
 dev/mapper/vgdata-lvdata 63M 14K 58M 1% /mnt/data
 root@localhost ~]# lvreduce -r -L -50M /dev/vgdata/lvdata
 Rounding size to boundary between physical extents: 48.00 MiB.
 File system ext4 found on vgdata/lvdata mounted at /mnt/data.
 File system size (72.00 MiR) is larger than the requested size (24.00 MiR).
 File system reduce is required using resize2fs.
 File system unmount is needed for reduce.
 File system fack will be run before reduce.
 Continue with ext4 file system reduce steps: unmount, fsck, resize2fs? [v/n]:v
 Reducing file system ext4 to 24.88 MiB (25165824 bytes) on yedata/lydata...
 nmount /mnt/data
 inmount done
e2fsck /dev/vgdata/lydata
/dev/vgdata/lvdata: 11/18432 files (0.0% non-contiguous), 10027/73728 blocks
e2fsck done
resize2fs /dev/vgdata/lvdata 24576k
resize2fs 1.46.5 (30-Dec-2021)
Resizing the filesystem on /dev/vgdata/lydata to 24576 (1k) blocks.
The filesystem on /dev/vgdata/lydata is now 24576 (1k) blocks long.
resize2fs done
remount /dev/vgdata/lvdata /mnt/data
 emount done
 Reduced file system ext4 on yedata/lydata.
  Size of logical volume vgdata/lvdata changed from 72,00 MiB (18 extents) to 24,00 MiB (6 extents
 Logical volume vgdata/lvdata successfully resized.
 root@localbost ~l# lvs
                         LSize Pool Origin Data% Meta% Move Log Cpv%Sync Convert
              -wi-ao---- 61.23g
  swap rl -wi-a---- 7.87g
  lydata vedata -wi-ac--- 24.88m
 root@localhost ~l# df -h
                         Size Used Avail Use% Mounted on
deviments
                         4.0M 0 4.0M 0% /dev
                         7.7G 0 7.7G 0% /dev/shm
tmnfs
                         3.16 9.3M 3.16 1% /run
 /dev/mapper/rl-root
                        62G 5.3G 56G 9% /
                         960M 457M 504M 48% /hoot
 dev/mapper/rl-home
                          30G 17G 14G 56% /home
                         1.6G 892K 1.6G 1% /run/user/1800
                          51M 51M 0 100% /run/media/giarishekka/VBox GAs 7.0.18
/dev/mapper/vgdata=lvdata 18M 14K 17M 1% /mnt/data
 root@localhost ~1#
```