

Лабораторная работа №15

Управление логическими томами

Гурылев Артем Андреевич

Содержание

1	Цель работы	5
2	Выполнение лабораторной работы	6
3	Выполнение самостоятельной работы	16
4	Выводы	17

Список иллюстраций

2.1	Отмонтирование дисков	6
2.2	Подготовка диска	7
2.3	Создание раздела LVM	8
2.4	Создание физического тома	9
2.5	Создание группы томов	10
2.6	Создание логического тома lvdata	11
2.7	Файл fstab	12

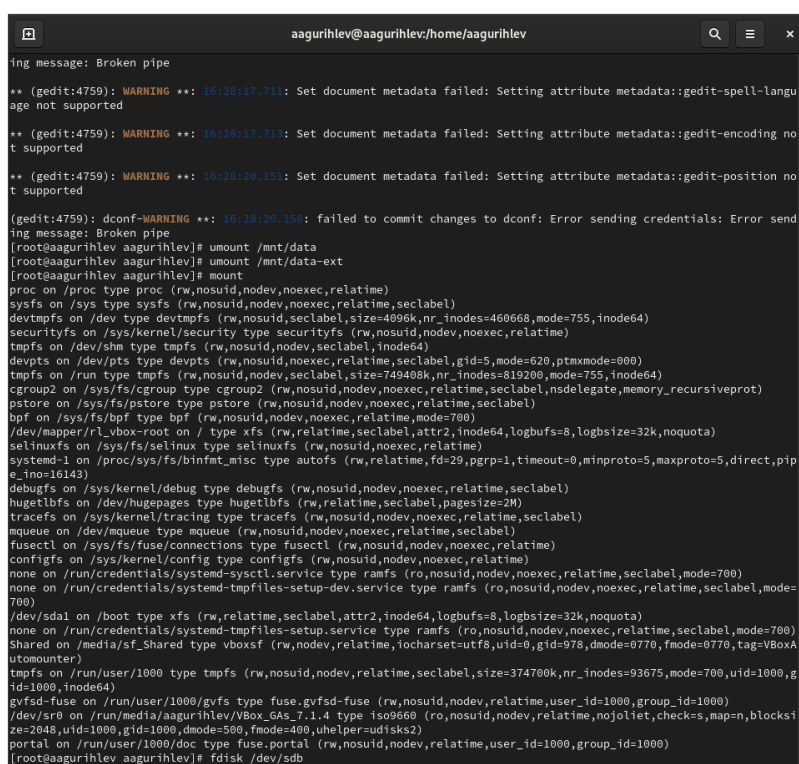
Список таблиц

1 Цель работы

Целью работы является получение навыков управления логическими томами.

2 Выполнение лабораторной работы

Для начала отмонтируем два диска, с которыми мы работали в предыдущей лабораторной работе, и убедимся, что они не подмонтированы(рис. 2.1):



```
ing message: Broken pipe
** (gedit:4759): WARNING **: 16:28:17.711: Set document metadata failed: Setting attribute metadata::gedit-spell-langu
age not supported
** (gedit:4759): WARNING **: 16:28:17.713: Set document metadata failed: Setting attribute metadata::gedit-encoding no
t supported
** (gedit:4759): WARNING **: 16:28:19.151: Set document metadata failed: Setting attribute metadata::gedit-position no
t supported
(gedit:4759): dconf-WARNING **: 16:28:20.158: failed to commit changes to dconf: Error sending credentials: Error send
ing message: Broken pipe
[root@aagurihlev aagurihlev]# umount /mnt/data
[root@aagurihlev aagurihlev]# umount /mnt/data-ext
[root@aagurihlev aagurihlev]# mount
proc on /proc type proc (rw,nosuid,nodev,noexec,relatime)
sysfs on /sys type sysfs (rw,nosuid,nodev,noexec,relatime,seclabel)
devtmpfs on /dev type devtmpfs (rw,nosuid,seclabel,size=4096K,nr_inodes=460668,mode=755,inode64)
securityfs on /sys/kernel/security type securityfs (rw,nosuid,nodev,noexec,relatime)
tmpfs on /dev/shm type tmpfs (rw,nosuid,nodev,seclabel,inode64)
devpts on /dev/pts type devpts (rw,nosuid,noexec,relatime,seclabel,gid=5,mode=620,ptmxmode=000)
tmpfs on /run type tmpfs (rw,nosuid,nodev,seclabel,size=749408K,nr_inodes=619200,mode=755,inode64)
cgroup2 on /sys/fs/cgroup type cgroup2 (rw,nosuid,nodev,noexec,relatime,seclabel,nodelegate,memory_recursiveprot)
pstore on /sys/fs/pstore type pstore (rw,nosuid,nodev,noexec,relatime,seclabel)
bpf on /sys/fs/bpf type bpf (rw,nosuid,nodev,noexec,relatime,mode=700)
/dev/mapper/rl_vbox-root on / type xfs (rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32K,noquota)
selinuxfs on /sys/fs/selinux type selinuxfs (rw,nosuid,noexec,relatime)
systemd-1 on /proc/sys/fs/binfmt_misc type autofs (rw,relatime,fd=29,pgrp=1,timeout=0,minproto=5,maxproto=5,direct,pipe_ino=16143)
debugfs on /sys/kernel/debug type debugfs (rw,nosuid,nodev,noexec,relatime,seclabel)
hugetlbfs on /dev/hugepages type hugetlbfs (rw,relatime,seclabel,pagesize=2M)
tracefs on /sys/kernel/trace type tracefs (rw,nosuid,nodev,noexec,relatime,seclabel)
mqueue on /dev/mqueue type mqueue (rw,nosuid,nodev,noexec,relatime,seclabel)
fusectl on /sys/fs/fuse/connections type fusectl (rw,nosuid,nodev,noexec,relatime)
configfs on /sys/kernel/config type configfs (rw,nosuid,nodev,noexec,relatime)
none on /run/credentials/systemd-sysctl.service type ramfs (ro,nosuid,nodev,noexec,relatime,seclabel,mode=700)
none on /run/credentials/systemd-tmpfiles-setup-dev.service type ramfs (ro,nosuid,nodev,noexec,relatime,seclabel,mode=700)
/dev/sdal on /boot type xfs (rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32K,noquota)
none on /run/credentials/systemd-tmpfiles-setup.service type ramfs (ro,nosuid,nodev,noexec,relatime,seclabel,mode=700)
shared on /media/sf_shared type vboxsf (rw,nodev,relatime,iocharset=utf8,uid=0,gid=978,dmode=0770,fmode=0770,tag=VBoxA
utomounter)
tmpfs on /run/user/1000 type tmpfs (rw,nosuid,nodev,relatime,seclabel,size=374700K,nr_inodes=93675,mode=700,uid=1000,g
id=1000,inode64)
gvfsd-fuse on /run/user/1000/gvfs type fuse.gvfsd-fuse (rw,nosuid,nodev,relatime,user_id=1000,group_id=1000)
/dev/sr0 on /run/media/aagurihlev/VBox_GAs_7.1.4 type iso9660 (ro,nosuid,nodev,relatime,nojoliet,check=s,map=n,blocksi
ze=2048,uid=1000,gid=1000,dmode=500,fmode=400,uhelper=udisks2)
portal on /run/user/1000/doc type fuse.portal (rw,nosuid,nodev,relatime,user_id=1000,group_id=1000)
[root@aagurihlev aagurihlev]# dfisk /dev/sdb
```

Рис. 2.1: Отмонтирование дисков

Подготовим диск /dev/sdb для работы, удалив на нём предыдущие партии с помощью fdisk, и проверим выполнение наших действий командой cat(рис. 2.2):

```
aagurihlev@aagurihlev:/home/aagurihlev
DiskLabel type: dos
Disk identifier: 0x1e9bb497

Device Boot Start End Sectors Size Id Type
/dev/sdb1 2048 206847 204800 100M 83 Linux
/dev/sdb2 206848 1048575 841728 411M 5 Extended
/dev/sdb5 208896 415743 206848 101M 83 Linux
/dev/sdb6 417792 622591 204800 100M 82 Linux swap / Solaris

Command (m for help): o
Created a new DOS disklabel with disk identifier 0xaff07714.

Command (m for help): p
Disk /dev/sdb: 512 MiB, 536870912 bytes, 1048576 sectors
Disk model: VBOX HARDDISK
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0xaff07714

Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.

[root@aagurihlev aagurihlev]# partprobe /dev/sdb
[root@aagurihlev aagurihlev]# cat /proc/partitions
major minor #blocks name
8 16 524288 sdb
8 32 524288 sdc
8 33 102400 sdc1
8 34 102400 sdc2
8 35 102400 sdc3
8 0 41943040 sda
8 1 1048576 sda1
8 2 40893440 sda2
11 0 58300 sr0
253 0 36749312 dm-0
253 1 4141956 dm-1

[root@aagurihlev aagurihlev]# fdisk --list /dev/sdb
Disk /dev/sdb: 512 MiB, 536870912 bytes, 1048576 sectors
Disk model: VBOX HARDDISK
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0xaff07714
[root@aagurihlev aagurihlev]#
```

Рис. 2.2: Подготовка диска

Затем с помощью утилиты `fdisk` создадим новый раздел на 100M типа Linux LVM(рис. 2.3):

```
aagurihlev@aagurihlev: /home/aagurihlev — fdisk /dev/sdb
[root@aagurihlev aagurihlev]# cat /proc/partitions
major minor #blocks name
8 16 524288 sdb
8 32 524288 sdc
8 33 102400 sdc1
8 34 102400 sdc2
8 35 102400 sdc3
8 0 41943040 sda
8 1 1048576 sda1
8 2 40893440 sda2
11 0 58300 sr0
253 0 36749312 dm-0
253 1 4141056 dm-1
[root@aagurihlev aagurihlev]# fdisk --list /dev/sdb
Disk /dev/sdb: 512 MiB, 536870912 bytes, 1048576 sectors
Disk model: VBOX HARDDISK
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0xaff07714
[root@aagurihlev aagurihlev]# fdisk /dev/sdb

Welcome to fdisk (util-linux 2.37.4).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Command (m for help): n
Partition type
  p primary (0 primary, 0 extended, 4 free)
  e extended (container for logical partitions)
Select (default p): p
Partition number (1-4, default 1):
First sector (2048-1048575, default 2048):
Last sector, +/-sectors or +/-size{K,M,G,T,P} (2048-1048575, default 1048575): +100M

Created a new partition 1 of type 'Linux' and of size 100 MiB.
Partition #1 contains a xfs signature.

Do you want to remove the signature? [Y]es/[N]o: n

Command (m for help): t

Selected partition 1
Hex code or alias (type L to list all): 8e
Changed type of partition 'Linux' to 'Linux LVM'.

Command (m for help):
```

Рис. 2.3: Создание раздела LVM

Запишем изменения, после чего создадим физический том LVM, и проверим, успешно ли его создание командой `pvs`(рис. 2.4):


```
aagurihlev@aagurihlev:/home/aagurihlev
[root@aagurihlev aagurihlev]# fdisk --list /dev/sdb
Disk /dev/sdb: 512 MiB, 536870912 bytes, 1048576 sectors
Disk model: VBOX HARDDISK
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0xaff07714
[root@aagurihlev aagurihlev]# fdisk /dev/sdb

Welcome to fdisk (util-linux 2.37.4).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Command (m for help): n
Partition type
  p   primary (0 primary, 0 extended, 4 free)
  e   extended (container for logical partitions)
Select (default p): p
Partition number (1-4, default 1):
First sector (2048-1048575, default 2048):
Last sector, +/-sectors or +/-size{K,M,G,T,P} (2048-1048575, default 1048575): +100M

Created a new partition 1 of type 'Linux' and of size 100 MiB.
Partition #1 contains a xfs signature.

Do you want to remove the signature? [Y]es/[N]o: n

Command (m for help): t

Selected partition 1
Hex code or alias (type L to list all): 8e
Changed type of partition 'Linux' to 'Linux LVM'.

Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.

[root@aagurihlev aagurihlev]# partprobe /dev/sdb
[root@aagurihlev aagurihlev]# pvcreate /dev/sdb1
WARNING: xfs signature detected on /dev/sdb1 at offset 0. Wipe it? [y/n]: y
Wiping xfs signature on /dev/sdb1.
Physical volume "/dev/sdb1" successfully created.
[root@aagurihlev aagurihlev]# pvs
PV          VG      Fmt  Attr PSize  PFree
/dev/sda2   rl_vbox lvm2 a--  <39.00g    0
/dev/sdb1   lvm2 ---  100.00m 100.00m
[root@aagurihlev aagurihlev]#
```

Рис. 2.4: Создание физического тома

Создадим группу томов `vgdata`, и проверим её свойства с помощью команды `vgs`(рис. 2.5):

```
aagurihlev@aagurihlev:/home/aagurihlev
Welcome to fdisk (util-linux 2.37.4).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Command (m for help): n
Partition type
  p   primary (0 primary, 0 extended, 4 free)
  e   extended (container for logical partitions)
Select (default p): p
Partition number (1-4, default 1):
First sector (2048-1048575, default 2048):
Last sector, +/-sectors or +/-size(K,M,G,T,P) (2048-1048575, default 1048575): +100M

Created a new partition 1 of type 'Linux' and of size 100 MiB.
Partition #1 contains a xfs signature.

Do you want to remove the signature? [Y]es/[N]o: n

Command (m for help): t

Selected partition 1
Hex code or alias (type L to list all): 8e
Changed type of partition 'Linux' to 'Linux LVM'.

Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.

[root@aagurihlev aagurihlev]# partprobe /dev/sdb
[root@aagurihlev aagurihlev]# pvcreate /dev/sdb1
WARNING: xfs signature detected on /dev/sdb1 at offset 0. Wipe it? [y/n]: y
Wiping xfs signature on /dev/sdb1.
Physical volume "/dev/sdb1" successfully created.
[root@aagurihlev aagurihlev]# pvs
PV          VG      Fmt  Attr PSize  PFree
/dev/sda2   rl_vbox lvm2 a--  <39.00g    0
/dev/sdb1   lvm2 ---  100.00m 100.00m
[root@aagurihlev aagurihlev]# pvs
PV          VG      Fmt  Attr PSize  PFree
/dev/sda2   rl_vbox lvm2 a--  <39.00g    0
/dev/sdb1   lvm2 ---  100.00m 100.00m
[root@aagurihlev aagurihlev]# vgcreate vgdata /dev/sdb1
Volume group "vgdata" successfully created
[root@aagurihlev aagurihlev]# vgs
VG      #PV #LV #SN Attr   VSize   VFree
rl_vbox 1  2  0 wz--n- <39.00g    0
vgdata  1  0  0 wz--n-  96.00m  96.00m
[root@aagurihlev aagurihlev]#
```

Рис. 2.5: Создание группы томов

Введём pvs, чтобы проверить, что теперь физический том принадлежит к группе vgdata. После этого создадим логический том lvdata, занимающий 50% свободного пространства группы vgdata(рис. 2.6):

```
aagurihlev@aagurihlev:/home/aagurihlev
Created a new partition 1 of type 'Linux' and of size 100 MiB.
Partition #1 contains a xfs signature.
Do you want to remove the signature? [Y]es/[N]o: n
Command (m for help): t
Selected partition 1
Hex code or alias (type L to list all): 8e
Changed type of partition 'Linux' to 'Linux LVM'.
Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.

[root@aagurihlev aagurihlev]# partprobe /dev/sdb
[root@aagurihlev aagurihlev]# pvcreate /dev/sdb1
WARNING: xfs signature detected on /dev/sdb1 at offset 0. Wipe it? [y/n]: y
Wiping xfs signature on /dev/sdb1.
Physical volume "/dev/sdb1" successfully created.
[root@aagurihlev aagurihlev]# pvs
PV          VG      Fmt Attr PSize  PFree
/dev/sda2   rl_vbox lvm2 a-- <39.00g  0
/dev/sdb1   lvm2 --- 100.00m 100.00m
[root@aagurihlev aagurihlev]# vgs
VG          #PV #LV #SN Attr   VSize  VFree
rl_vbox    1   2   0 wz--n- <39.00g  0
vgdata     1   0   0 wz--n- 96.00m 96.00m
[root@aagurihlev aagurihlev]# vgcreate vgdata /dev/sdb1
Volume group "vgdata" successfully created
[root@aagurihlev aagurihlev]# vgs
VG          #PV #LV #SN Attr   VSize  VFree
rl_vbox    1   2   0 wz--n- <39.00g  0
vgdata     1   0   0 wz--n- 96.00m 96.00m
[root@aagurihlev aagurihlev]# pvs
PV          VG      Fmt Attr PSize  PFree
/dev/sda2   rl_vbox lvm2 a-- <39.00g  0
/dev/sdb1   vgdata lvm2 a-- 96.00m 96.00m
[root@aagurihlev aagurihlev]# vcreate -n lvdata -l 50%FREE vgdata
bash: vcreate: command not found..
[root@aagurihlev aagurihlev]# lvcreate -n lvdata -l 50%FREE vgdata
Logical volume "lvdata" created.
[root@aagurihlev aagurihlev]# lvs
LV          VG      Attr   LSize  Pool Origin Data%  Meta%  Move Log Cpy%Sync Convert
root        rl_vbox -wi-ao---- <35.05g
swap        rl_vbox -wi-ao---- <3.95g
lvdata      vgdata -wi-a----- 48.00m
[root@aagurihlev aagurihlev]#
```

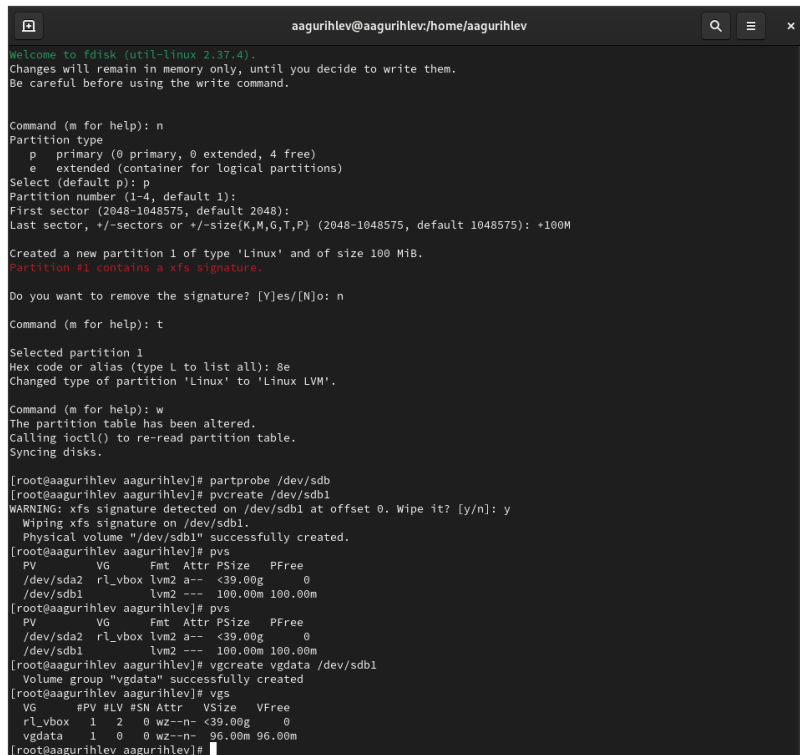
Рис. 2.6: Создание логического тома lvdata

Создадим файловую систему ext4 поверх логического диска, создадим папку для монтирования. Добавим в fstab строку для автоматического монтирования логического тома(рис. 2.7):



Рис. 2.7: Файл fstab

(рис. 2.5):



(рис. 2.5):

```
aagurihlev@aagurihlev/home/aagurihlev
Welcome to fdisk (util-linux 2.37.4).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Command (m for help): n
Partition type
  p   primary (0 primary, 0 extended, 4 free)
  e   extended (container for logical partitions)
Select (default p): p
Partition number (1-4, default 1):
First sector (2048-1048575, default 2048):
Last sector, +/-sectors or +/-size(K,M,G,T,P) (2048-1048575, default 1048575): +100M
Created a new partition 1 of type 'Linux' and of size 100 MiB.
Partition #1 contains a xfs signature.

Do you want to remove the signature? [Y]es/[N]o: n

Command (m for help): t

Selected partition 1
Hex code or alias (type L to list all): 8e
Changed type of partition 'Linux' to 'Linux LVM'.

Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.

[root@aagurihlev aagurihlev]# partprobe /dev/sdb
[root@aagurihlev aagurihlev]# pvcreate /dev/sdb1
WARNING: xfs signature detected on /dev/sdb1 at offset 0. Wipe it? [y/n]: y
Wiping xfs signature on /dev/sdb1.
Physical volume "/dev/sdb1" successfully created.
[root@aagurihlev aagurihlev]# pvs
PV          VG      Fmt  Attr PSize  PFree
/dev/sda2  rl_vbox lvm2 a--  <39.00g    0
/dev/sdb1   lvm2 ---  100.00m 100.00m
[root@aagurihlev aagurihlev]# pvs
PV          VG      Fmt  Attr PSize  PFree
/dev/sda2  rl_vbox lvm2 a--  <39.00g    0
/dev/sdb1   lvm2 ---  100.00m 100.00m
[root@aagurihlev aagurihlev]# vgcreate vgdata /dev/sdb1
Volume group "vgdata" successfully created
[root@aagurihlev aagurihlev]# vgs
VG      #PV #LV #SN Attr   VSize  VFree
rl_vbox 1  2  0 wz--n-  <39.00g    0
vgdata  1  0  0 wz--n-  96.00m  96.00m
[root@aagurihlev aagurihlev]#
```

(рис. 2.5):

```
aagurihlev@aagurihlev/home/aagurihlev
Welcome to fdisk (util-linux 2.37.4).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Command (m for help): n
Partition type
  p   primary (0 primary, 0 extended, 4 free)
  e   extended (container for logical partitions)
Select (default p): p
Partition number (1-4, default 1):
First sector (2048-1048575, default 2048):
Last sector, +/-sectors or +/-size(K,M,G,T,P) (2048-1048575, default 1048575): +100M
Created a new partition 1 of type 'Linux' and of size 100 MiB.
Partition #1 contains a xfs signature.

Do you want to remove the signature? [Y]es/[N]o: n

Command (m for help): t

Selected partition 1
Hex code or alias (type L to list all): 8e
Changed type of partition 'Linux' to 'Linux LVM'.

Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.

[root@aagurihlev aagurihlev]# partprobe /dev/sdb
[root@aagurihlev aagurihlev]# pvcreate /dev/sdb1
WARNING: xfs signature detected on /dev/sdb1 at offset 0. Wipe it? [y/n]: y
Wiping xfs signature on /dev/sdb1.
Physical volume "/dev/sdb1" successfully created.
[root@aagurihlev aagurihlev]# pvs
PV          VG      Fmt  Attr PSize  PFree
/dev/sda2  rl_vbox lvm2 a--  <39.00g    0
/dev/sdb1   lvm2 ---  100.00m 100.00m
[root@aagurihlev aagurihlev]# pvs
PV          VG      Fmt  Attr PSize  PFree
/dev/sda2  rl_vbox lvm2 a--  <39.00g    0
/dev/sdb1   lvm2 ---  100.00m 100.00m
[root@aagurihlev aagurihlev]# vgcreate vgdata /dev/sdb1
Volume group "vgdata" successfully created
[root@aagurihlev aagurihlev]# vgs
VG      #PV #LV #SN Attr   VSize  VFree
rl_vbox 1  2  0 wz--n-  <39.00g    0
vgdata  1  0  0 wz--n-  96.00m  96.00m
[root@aagurihlev aagurihlev]#
```

(рис. 2.5):

```
aagurihlev@aagurihlev/home/aagurihlev
Welcome to fdisk (util-linux 2.37.4).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Command (m for help): n
Partition type
  p   primary (0 primary, 0 extended, 4 free)
  e   extended (container for logical partitions)
Select (default p): p
Partition number (1-4, default 1):
First sector (2048-1048575, default 2048):
Last sector, +/-sectors or +/-size(K,M,G,T,P) (2048-1048575, default 1048575): +100M

Created a new partition 1 of type 'Linux' and of size 100 MiB.
Partition #1 contains a xfs signature.

Do you want to remove the signature? [Y]es/[N]o: n

Command (m for help): t

Selected partition 1
Hex code or alias (type L to list all): 8e
Changed type of partition 'Linux' to 'Linux LVM'.

Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.

[root@aagurihlev aagurihlev]# partprobe /dev/sdb
[root@aagurihlev aagurihlev]# pvcreate /dev/sdb1
WARNING: xfs signature detected on /dev/sdb1 at offset 0. Wipe it? [y/n]: y
Wiping xfs signature on /dev/sdb1.
Physical volume "/dev/sdb1" successfully created.
[root@aagurihlev aagurihlev]# pvs
PV          VG      Fmt  Attr PSize  PFree
/dev/sda2  rl_vbox lvm2 a--  <39.00g    0
/dev/sdb1   lvm2 ---  100.00m 100.00m
[root@aagurihlev aagurihlev]# pvs
PV          VG      Fmt  Attr PSize  PFree
/dev/sda2  rl_vbox lvm2 a--  <39.00g    0
/dev/sdb1   lvm2 ---  100.00m 100.00m
[root@aagurihlev aagurihlev]# vgcreate vgdata /dev/sdb1
Volume group "vgdata" successfully created
[root@aagurihlev aagurihlev]# vgs
VG      #PV #LV #SN Attr   VSize  VFree
rl_vbox 1  2  0 wz--n-  <39.00g    0
vgdata  1  0  0 wz--n-  96.00m  96.00m
[root@aagurihlev aagurihlev]#
```

(рис. 2.5):

```
aagurihlev@aagurihlev/home/aagurihlev
Welcome to fdisk (util-linux 2.37.4).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Command (m for help): n
Partition type
  p   primary (0 primary, 0 extended, 4 free)
  e   extended (container for logical partitions)
Select (default p): p
Partition number (1-4, default 1):
First sector (2048-1048575, default 2048):
Last sector, +/-sectors or +/-size(K,M,G,T,P) (2048-1048575, default 1048575): +100M

Created a new partition 1 of type 'Linux' and of size 100 MiB.
Partition #1 contains a xfs signature.

Do you want to remove the signature? [Y]es/[N]o: n

Command (m for help): t

Selected partition 1
Hex code or alias (type L to list all): 8e
Changed type of partition 'Linux' to 'Linux LVM'.

Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.

[root@aagurihlev aagurihlev]# partprobe /dev/sdb
[root@aagurihlev aagurihlev]# pvcreate /dev/sdb1
WARNING: xfs signature detected on /dev/sdb1 at offset 0. Wipe it? [y/n]: y
Wiping xfs signature on /dev/sdb1.
Physical volume "/dev/sdb1" successfully created.
[root@aagurihlev aagurihlev]# pvs
PV          VG      Fmt  Attr PSize  PFree
/dev/sda2  rl_vbox lvm2 a--  <39.00g    0
/dev/sdb1   lvm2 ---  100.00m 100.00m
[root@aagurihlev aagurihlev]# pvs
PV          VG      Fmt  Attr PSize  PFree
/dev/sda2  rl_vbox lvm2 a--  <39.00g    0
/dev/sdb1   lvm2 ---  100.00m 100.00m
[root@aagurihlev aagurihlev]# vgcreate vgdata /dev/sdb1
Volume group "vgdata" successfully created
[root@aagurihlev aagurihlev]# vgs
VG      #PV #LV #SN Attr   VSize  VFree
rl_vbox 1  2  0 wz--n-  <39.00g    0
vgdata  1  0  0 wz--n-  96.00m  96.00m
[root@aagurihlev aagurihlev]#
```

(рис. 2.5):

```
aagurihlev@aagurihlev/home/aagurihlev
Welcome to fdisk (util-linux 2.37.4).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Command (m for help): n
Partition type
  p   primary (0 primary, 0 extended, 4 free)
  e   extended (container for logical partitions)
Select (default p): p
Partition number (1-4, default 1):
First sector (2048-1048575, default 2048):
Last sector, +/-sectors or +/-size(K,M,G,T,P) (2048-1048575, default 1048575): +100M

Created a new partition 1 of type 'Linux' and of size 100 MiB.
Partition #1 contains a xfs signature.

Do you want to remove the signature? [Y]es/[N]o: n

Command (m for help): t

Selected partition 1
Hex code or alias (type L to list all): 8e
Changed type of partition 'Linux' to 'Linux LVM'.

Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.

[root@aagurihlev aagurihlev]# partprobe /dev/sdb
[root@aagurihlev aagurihlev]# pvcreate /dev/sdb1
WARNING: xfs signature detected on /dev/sdb1 at offset 0. Wipe it? [y/n]: y
Wiping xfs signature on /dev/sdb1.
Physical volume "/dev/sdb1" successfully created.
[root@aagurihlev aagurihlev]# pvs
PV          VG      Fmt Attr PSize  PFree
/dev/sda2   rl_vbox lvm2 a--  <39.00g    0
/dev/sdb1   rl_vbox lvm2 ---  100.00m 100.00m
[root@aagurihlev aagurihlev]# pvs
PV          VG      Fmt Attr PSize  PFree
/dev/sda2   rl_vbox lvm2 a--  <39.00g    0
/dev/sdb1   rl_vbox lvm2 ---  100.00m 100.00m
[root@aagurihlev aagurihlev]# vgcreate vgdata /dev/sdb1
Volume group "vgdata" successfully created
[root@aagurihlev aagurihlev]# vgs
VG      #PV #LV #SN Attr   VSize  VFree
rl_vbox 1  2  0 wz--n-  <39.00g    0
vgdata  1  0  0 wz--n-  96.00m 96.00m
[root@aagurihlev aagurihlev]#
```

3 Выполнение самостоятельной работы

4 Выводы

В этой работе я научился использовать циклы и ветвления для более эффективного программирования в ОС UNIX.