Лабораторная работа 15

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Задача

1. Продемонстрировать навыки создания физических томов на LVM (см. раз- дел 15.4.1).

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3. Продемонстрировать навыки изменения размера логических томов на LVM (см. раздел 15.4.3).
4. Выполнить задание для самостоятельной работы (см. раздел 15.5)

Выполнение

fdisk

```
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.


Command (m for help): o
Created a new DOS disklabel with disk identifier 0x8a409485.
The device contains 'gpt' signature and it will be removed by a write command. See fdisk(8) man page and --wipe option for more details.

Command (m for help): w

The partition table has been altered.

Calling ioctl() to re-read partition table.
[  189.151094]  vdc:
Syncing disks.
[  189.171273]  vdc:

[root@dmgeneralov ~]#
[root@dmgeneralov ~]# partprobe /dev/vdb
[root@dmgeneralov ~]# [  197.831174]  vdb:

[root@dmgeneralov ~]# partprobe /dev/vdc
[  201.558015]  vdc:
[root@dmgeneralov ~]#
[root@dmgeneralov ~]# cat /proc/partitions
major minor  #blocks  name

 252        0    7340032 vda
 252        1    1048576 vda1
 252        2    6290432 vda2
 252       16     262144 vdb
 252       32     262144 vdc
  11        0    1048575 sr0
 253        0    5550080 dm-0
 253        1     737280 dm-1
[root@dmgeneralov ~]# fdisk --list /dev/vdb
Disk /dev/vdb: 256 MiB, 268435456 bytes, 524288 sectors
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: 0x0d3649b9
[root@dmgeneralov ~]# fdisk --list /dev/vdc
Disk /dev/vdc: 256 MiB, 268435456 bytes, 524288 sectors
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: 0x8a409485
[root@dmgeneralov ~]#
```

```
Command (m for help): t
Selected partition 1
Hex code or alias (type L to list all): L

00 Empty           24 NEC DOS         81 Minix / old Lin  bf Solaris
01 FAT12           27 Hidden NTFS Win 02 Linux swap / So  c1 DRDOS/sec (FAT-
02 XENIX root      39 Plan 9          83 Linux            c4 DRDOS/sec (FAT-
03 XENIX usr       3c PartitionMagic  84 OS/2 hidden or   c6 DRDOS/sec (FAT-
04 FAT16 <32M      40 Venix 80286     85 Linux extended   c7 Syrinx
05 Extended        41 PPC PReP Boot   86 NTFS volume set  da Non-FS data
06 FAT16           42 SFS             87 NTFS volume set  db CP/M / CTOS / .
07 HPFS/NTFS/exFAT 4d QNX4.x          88 Linux plaintext  de Dell Utility
09 AIX             4e QNX4.x 2nd part 8e Linux LVM        df BootIt
09 AIX bootable    4f QNX4.x 3rd part 93 Amoeba          e1 DOS access
0a OS/2 Boot Manag 50 OnTrack DM      94 Amoeba BBT      e3 DOS R/O
0b W95 FAT32       51 OnTrack DM6 Aux 9f BSD/OS          e4 SpeedStor
0c W95 FAT32 (LBA) 52 CP/M            a0 IBM Thinkpad hi ea Linux extended
0e W95 FAT16 (LBA) 53 OnTrack DM6 Aux a5 FreeBSD         eb BeOS fs
0f W95 Ext'd (LBA) 54 OnTrackDM6      a6 OpenBSD         ee GPT
10 OPUS            55 EZ-Drive        a7 NeXTSTEP        ef EFI (FAT-12/16/
11 Hidden FAT12    56 Golden Bow      a8 Darwin UFS      f0 Linux/PA-RISC b
12 Compaq diagnost 5c Priam Edisk     a9 NetBSD          f1 SpeedStor
14 Hidden FAT16 <3 61 SpeedStor       ab Darwin boot     f4 SpeedStor
16 Hidden FAT16    63 GNU HURD or Sys af HFS / HFS+      f2 DOS secondary
17 Hidden HPFS/NTF 64 Novell Netware  b7 BSDI fs         fb VMware VMFS
18 AST SmartSleep  65 Novell Netware  b8 BSDI swap       fc VMware VMKCORE
1b Hidden W95 FAT3 70 DiskSecure Mult bb Boot Wizard hid fd Linux raid auto
1c Hidden W95 FAT3 75 PC/IX           bc Acronis FAT32 L fe LANstep
1e Hidden W95 FAT1 80 Old Minix       be Solaris boot    ff BBT

Aliases:
   linux        - 83
   swap         - 82
   extended     - 05
   uefi         - EF
   raid         - FD
   lvm          - 8E
   linuxex      - 05
Hex code or alias (type L to list all): lvm
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.
[  485.590846]  vdb: vdb1
Syncing disks.
[  485.610852]  vdb: vdb1

[root@dmgeneralov ~]#
```

Рис. 3: pvcreate

Рис. 4: lvcreate

```
[root@dmgeneralov ~]# fdisk /dev/vdb

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.

This disk is currently in use - repartitioning is probably a bad idea.
It's recommended to umount all file systems, and swapoff all swap
partitions on this disk.


Command (m for help): n
Partition type
   p   primary (1 primary, 0 extended, 3 free)
   e   extended (container for logical partitions)
Select (default p): p
Partition number (2-4, default 2):
First sector (206848-524287, default 206848):
Last sector, +/-sectors or +/-size{K,M,G,T,P} (206848-524287, default 524287): +100M

Created a new partition 2 of type 'Linux' and of size 100 MiB.

Command (m for help): t
Partition number (1,2, default 2): 2
Hex code or alias (type L to list all): lvm

Changed type of partition 'Linux' to 'Linux LVM'.

Command (m for help): w
The partition table has been altered.
Syncing disks.

[root@dmgeneralov ~]# pvcreate /dev/vdb2
  Physical volume "/dev/vdb2" successfully created.
[root@dmgeneralov ~]# vgextend vgdata /dev/sdb2
  No device found for /dev/sdb2.
[root@dmgeneralov ~]# vgextend vgdata /dev/vdb2
  Volume group "vgdata" successfully extended
[root@dmgeneralov ~]# vgs
  VG      #PV #LV #SN Attr   VSize   VFree
  rl       1   2   0 wz--n- <6.00g      0
  vgdata   2   1   0 wz--n- 192.00m 144.00m
[root@dmgeneralov ~]#
```

Рис. 6: lvextend

Рис. 7: lvcreate

Рис. 8: lvextend

Я получил опыт работы с LVM в Linux.