

# Лабораторная работа №14

Партиции, файловые системы, монтирование

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## Цель работы

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## Основная цель

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Получить навыки создания разделов, файловых систем и монтирования в Linux.

## Ход выполнения работы

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## Просмотр дисков

```
root@titukaev:~#  
root@titukaev:~# fdisk -l  
Disk /dev/sdc: 1.5 GiB, 1610612736 bytes, 3145728 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  
  
Disk /dev/sdb: 1.5 GiB, 1610612736 bytes, 3145728 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  
  
Disk /dev/sda: 40 GiB, 42949672960 bytes, 83886080 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: gpt  
Disk identifier: B51FA75B-7D93-4418-ACE4-28E57C2D2EE4  
  


| <b>Device</b> | <b>Start</b> | <b>End</b> | <b>Sectors</b> | <b>Size</b> | <b>Type</b>         |
|---------------|--------------|------------|----------------|-------------|---------------------|
| /dev/sda1     | 2048         | 4095       | 2048           | 1M          | BIOS boot           |
| /dev/sda2     | 4096         | 2101247    | 2097152        | 1G          | Linux extended boot |
| /dev/sda3     | 2101248      | 83884031   | 81782784       | 39G         | Linux LVM           |

  
Disk /dev/mapper/r1_vbox-root: 35.05 GiB, 37635489792 bytes, 73506816 sectors  
Units: sectors of 1 * 512 = 512 bytes  
Sector size (logical/physical): 512 bytes / 512 bytes
```

# Работа с fdisk: создание MBR-разделов

```
root@titukaev:~# fdisk /dev/sdb

Welcome to fdisk (util-linux 2.40.2).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Device does not contain a recognized partition table.
Created a new DOS (MBR) disklabel with disk identifier 0x62ba6ff1.

Command (m for help): m
```

Help:

#### DOS (MBR)

- a toggle a bootable flag
- b edit nested BSD disklabel
- c toggle the dos compatibility flag

#### Generic

- d delete a partition
- F list free unpartitioned space
- l list known partition types
- n add a new partition
- p print the partition table
- t change a partition type
- v verify the partition table
- i print information about a partition
- e resize a partition

#### Misc

- m print this menu
- u change display/entry units
- x extra functionality (experts only)

## Создание основного раздела

```
Command (m for help): p
Disk /dev/sdb: 1.5 GiB, 1610612736 bytes, 3145728 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: 0x62ba6ff1

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 (2048-3145727, default 2048):
Last sector, +/sectors or +/-size{K,M,G,T,P} (2048-3145727, default 3145727): +300M

Created a new partition 1 of type 'Linux' and of size 300 MiB.

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

root@titukaev:~#
```

Рис. 3: Создание основного раздела

## Проверка таблицы разделов

```
root@titukaev:~#  
root@titukaev:~# fdisk /dev/sdb -l  
Disk /dev/sdb: 1.5 GiB, 1610612736 bytes, 3145728 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: 0x62ba6ff1  
  
Device      Boot Start    End Sectors  Size Id Type  
/dev/sdb1          2048 616447  614400 300M 83 Linux  
root@titukaev:~# cat /proc/partitions  
major minor #blocks name  
  
     8        32    1572864 sdc  
     8        16    1572864 sdb  
     8        17    307200 sdb1  
     8        0    41943040 sda  
     8        1      1024 sda1  
     8        2    1048576 sda2  
     8        3   40891392 sda3  
    11        0    1048575 sr0  
  253        0   36753408 dm-0  
  253        1   4136960 dm-1  
root@titukaev:~# partprobe /dev/sdb  
root@titukaev:~#
```

## Создание расширенного и логического разделов

```
root@titukaev:~# fdisk /dev/sdb

Welcome to fdisk (util-linux 2.40.2).
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 (1 primary, 0 extended, 3 free)
  e  extended (container for logical partitions)
Select (default p): e
Partition number (2-4, default 2): 4
First sector (616448-3145727, default 616448):
Last sector, +/-sectors or +/-size{K,M,G,T,P} (616448-3145727, default 3145727):

Created a new partition 4 of type 'Extended' and of size 1.2 GiB.

Command (m for help): n
All space for primary partitions is in use.
Adding logical partition 5
First sector (618496-3145727, default 618496):
Last sector, +/-sectors or +/-size{K,M,G,T,P} (618496-3145727, default 3145727): +300M

Created a new partition 5 of type 'Linux' and of size 300 MiB.

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

root@titukaev:~#
```

## Проверка логических разделов

```
root@titukaev:~#  
root@titukaev:~# partprobe /dev/sdb  
root@titukaev:~# cat /proc/partitions  
major minor #blocks name  
  
     8        32    1572864 sdc  
     8        16    1572864 sdb  
     8        17    307200 sdb1  
     8        20          0 sdb4  
     8        21    307200 sdb5  
     8        0    41943040 sda  
     8        1      1024 sda1  
     8        2    1048576 sda2  
     8        3    40891392 sda3  
    11        0    1048575 sr0  
   253        0    36753408 dm-0  
   253        1    4136960 dm-1  
root@titukaev:~# fdisk /dev/sdb -l  
Disk /dev/sdb: 1.5 GiB, 1610612736 bytes, 3145728 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: 0x62ba6ff1  
  
      Device    Boot   Start   End Sectors  Size Id Type  
/dev/sdb1           2048 616447  614400  300M 83 Linux  
/dev/sdb4           616448 3145727 2529280  1.2G  5 Extended  
/dev/sdb5           618496 1232895  614400  300M 83 Linux  
root@titukaev:~#
```

## Создание раздела подкачки

```
root@titukaev:~#  
root@titukaev:~# fdisk /dev/sdb  
  
Welcome to fdisk (util-linux 2.40.2).  
Changes will remain in memory only, until you decide to write them.  
Be careful before using the write command.  
  
Command (m for help): n  
All space for primary partitions is in use.  
Adding logical partition 6  
First sector (1234944-3145727, default 1234944):  
Last sector, +/-sectors or +/size{K,M,G,T,P} (1234944-3145727, default 3145727): +300M  
  
Created a new partition 6 of type 'Linux' and of size 300 MiB.  
  
Command (m for help): t  
Partition number (1,4-6, default 6):  
Hex code or alias (type L to list all): 82  
  
Changed type of partition 'Linux' to 'Linux swap / Solaris'.  
  
Command (m for help): w  
The partition table has been altered.  
Calling ioctl() to re-read partition table.  
Syncing disks.  
  
root@titukaev:~#
```

Рис. 7: Создание swap-раздела

## Активация swap

```
8      32    1572864 sdc
8      16    1572864 sdb
8      17    307200 sdb1
8      20        0 sdb4
8      21    307200 sdb5
8      22    307200 sdb6
8      0    41943040 sda
8      1     1024 sda1
8      2    1048576 sda2
8      3    40891392 sda3
11     0    1048575 sr0
253     0    36753408 dm-0
253     1    4136960 dm-1
root@titukaev:~# fdisk /dev/sdb -l
Disk /dev/sdb: 1.5 GiB, 1610612736 bytes, 3145728 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: 0x62ba6ff1

Device     Boot   Start     End Sectors  Size Id Type
/dev/sdb1        2048  616447  614400 300M 83 Linux
/dev/sdb4        616448 3145727 2529280 1.2G  5 Extended
/dev/sdb5        618496 1232895  614400 300M 83 Linux
/dev/sdb6        1234944 1849343  614400 300M 82 Linux swap / Solaris
root@titukaev:~# mkswap /dev/sdb6
Setting up swapspace version 1, size = 300 MiB (314568704 bytes)
no label, UUID=6cad7c30-14c7-4731-8288-c69dd4be57c0
root@titukaev:~# swapon /dev/sdb6
root@titukaev:~# free -m
              total        used         free      shared  buff/cache   available
Mem:       3652          1398        1344          20        1162        2254
Swap:      4339           0        4339
root@titukaev:~#
```

## Работа с GPT: разметка диска

```
root@titukaev:~# gdisk -l /dev/sdc
GPT fdisk (gdisk) version 1.0.10

Partition table scan:
  MBR: not present
  BSD: not present
  APM: not present
  GPT: not present

Creating new GPT entries in memory.
Disk /dev/sdc: 3145728 sectors, 1.5 GiB
Model: VBOX HARDDISK
Sector size (logical/physical): 512/512 bytes
Disk identifier (GUID): 6DE139D2-5EA8-462C-81DA-F9BD5EC3FE45
Partition table holds up to 128 entries
Main partition table begins at sector 2 and ends at sector 33
First usable sector is 34, last usable sector is 3145694
Partitions will be aligned on 2048-sector boundaries
Total free space is 3145661 sectors (1.5 GiB)

Number  Start (sector)    End (sector)  Size            Code  Name
root@titukaev:~#
```

Рис. 9: Просмотр GPT

# Создание GPT-раздела

```
Creating new GPT entries in memory.
```

```
Command (? for help): n
Partition number (1-128, default 1):
First sector (34-3145694, default = 2048) or {+-}size{KMGTP}:
Last sector (2048-3145694, default = 3143679) or {+-}size{KMGTP}: +300M
Current type is 8300 (Linux filesystem)
Hex code or GUID (L to show codes, Enter = 8300):
Changed type of partition to 'Linux filesystem'
```

```
Command (? for help): p
Disk /dev/sdc: 3145728 sectors, 1.5 GiB
Model: VBOX HARDDISK
Sector size (logical/physical): 512/512 bytes
Disk identifier (GUID): 14780023-639E-4AE9-8DF9-4229744F8B97
Partition table holds up to 128 entries
Main partition table begins at sector 2 and ends at sector 33
First usable sector is 34, last usable sector is 3145694
Partitions will be aligned on 2048-sector boundaries
Total free space is 2531261 sectors (1.2 GiB)
```

Number	Start (sector)	End (sector)	Size	Code	Name
1	2048	616447	300.0 MiB	8300	Linux filesystem

```
Command (? for help): w
```

```
Final checks complete. About to write GPT data. THIS WILL OVERWRITE EXISTING
PARTITIONS!!
```

```
Do you want to proceed? (Y/N): Y
OK; writing new GUID partition table (GPT) to /dev/sdc.
The operation has completed successfully.
root@titukaev:~#
```

# Проверка GPT

```
major minor #blocks name

    8      32   1572864 sdc
    8      33   307200 sdc1
    8      16   1572864 sdb
    8      17   307200 sdb1
    8      20       0 sdb4
    8      21   307200 sdb5
    8      22   307200 sdb6
    8       0  41943040 sda
    8       1     1024 sdal
    8       2   1048576 sda2
    8       3  40891392 sda3
   11       0   1048575 sr0
  253       0  36753408 dm-0
  253       1  4136960 dm-1
root@titukaev:~# gdisk /dev/sdc -l
GPT fdisk (gdisk) version 1.0.10

Partition table scan:
  MBR: protective
  BSD: not present
  APM: not present
  GPT: present

Found valid GPT with protective MBR; using GPT.
Disk /dev/sdc: 3145728 sectors, 1.5 GiB
Model: VBOX HARDDISK
Sector size (logical/physical): 512/512 bytes
Disk identifier (GUID): 147B0023-639E-4AE9-8DF9-4229744F8B97
Partition table holds up to 128 entries
Main partition table begins at sector 2 and ends at sector 33
First usable sector is 34, last usable sector is 3145694
Partitions will be aligned on 2048-sector boundaries
Total free space is 2531261 sectors (1.2 GiB)

Number  Start (sector)   End (sector)   Size       Code  Name
      1            2048           616447   300.0 MiB  8300  Linux filesystem
root@titukaev:~#
```

# Форматирование XFS и EXT4

```
root@titukaev:~# mkfs.xfs /dev/sdb1
meta-data=/dev/sdb1      isize=512    agcount=4, agsize=19200 blks
                        =                      sectsz=512  attr=2, projid32bit=1
                        =                      crc=1      finobt=1, sparse=1, rmapbt=1
                        =                      reflink=1 bigtime=1 inobtcount=1 nnext64=1
                        =                      exchange=0
data       =             bsize=4096   blocks=76800, imaxpct=25
                        =                     sunit=0   swidth=0 blks
naming     =version 2    bsize=4096   ascii-ci=0, ftype=1, parent=0
log        =internal log  bsize=4096   blocks=16384, version=2
                        =                     sectsz=512  sunit=0 blks, lazy-count=1
realtime   =none         extsz=4096   blocks=0, rtextents=0
root@titukaev:~# xfs_admin -L xfsdisk /dev/sdb1
writing all SBs
new label = "xfsdisk"
root@titukaev:~#
root@titukaev:~# mkfs.ext4 /dev/sdb5
mke2fs 1.47.1 (20-May-2024)
Creating filesystem with 307200 1k blocks and 76912 inodes
Filesystem UUID: cd227fff5-6a0a-40e8-a519-b85e7f85657d
Superblock backups stored on blocks:
          8193, 24577, 40961, 57345, 73729, 204801, 221185

Allocating group tables: done
Writing inode tables: done
Creating journal (8192 blocks): done
Writing superblocks and filesystem accounting information: done

root@titukaev:~# tune2fs -L ext4disk /dev/sdb5
tune2fs 1.47.1 (20-May-2024)
root@titukaev:~# tune2fs -o acl,user_xattr /dev/sdb5
tune2fs 1.47.1 (20-May-2024)
root@titukaev:~#
```

## Ручное монтирование

---

Раздел `/dev/sdb5` смонтирован в `/mnt/tmp` и затем отмонтирован.

## UUID и настройка fstab

```
root@titukaev:~# mkdir -p /mnt/tmp
root@titukaev:~# mount /dev/sdb5 /mnt/tmp
root@titukaev:~# mount | grep mnt
/dev/sdb5 on /mnt/tmp type ext4 (rw,relatime,seclabel)
root@titukaev:~# umount /dev/sdb5
root@titukaev:~# mount | grep mnt
root@titukaev:~#
root@titukaev:~# mkdusr -p /mnt/data
bash: mkdusr: command not found...
root@titukaev:~# mkdir -p /mnt/data
root@titukaev:~# blkid
/dev/mapper/rl_vbox-swap: UUID="f51f7d8c-5e1e-475f-86dd-5a4d1dc28df2" TYPE="swap"
/dev/sdb4: PTTYPE="dos" PARTUUID="62ba6ff1-04"
/dev/sdb5: LABEL="ext4disk" UUID="cd227ff5-6a0a-40e8-a519-b85e7f85657d" BLOCK_SIZE="1024" TYPE="ext4" PARTUUID="62ba6ff1-05"
/dev/sdb1: LABEL="xfsdisk" UUID="9cfe9ac7-db7a-4881-8863-45a294cff23a" BLOCK_SIZE="512" TYPE="xfs" PARTUUID="62ba6ff1-01"
/dev/sdb6: UUID="6cad7c30-14c7-4731-8288-c69dd4be57c0" TYPE="swap" PARTUUID="62ba6ff1-06"
/dev/mapper/rl_vbox-root: UUID="325f0285-97c4-4ac5-a1f5-73f7bad9cc35" BLOCK_SIZE="512" TYPE="xfs"
/dev/sdcl: PARTLABEL="Linux filesystem" PARTUUID="5673a501-6290-4038-a9bb-a30288459adc"
/dev/sda2: UUID="3c70eb4e-07d0-4773-8246-8d52c68a9fb" BLOCK_SIZE="512" TYPE="xfs" PARTUUID="409156da-fff4-455e-8099-a757d451ed3f"
/dev/sda3: UUID="nRFPUV-ecVZ-Xzat-KisU-lvFT-baLE-1pYlc3" TYPE="LVM2_member" PARTUUID="8e914c12-7da0-4dab-ab61-56837a84d806"
/dev/sdal: PARTUUID="cb76a9cc-9956-4cfa-98a0-d375c3495996"
root@titukaev:~# blkid /dev/sdb1
/dev/sdb1: LABEL="xfsdisk" UUID="9cfe9ac7-db7a-4881-8863-45a294cff23a" BLOCK_SIZE="512" TYPE="xfs" PARTUUID="62ba6ff1-01"
root@titukaev:~#
```

Рис. 13: UUID устройств

Получены UUID и добавлена запись в /etc/fstab.

## Проверка fstab

```
GNU nano 8.1                               /etc/fstab

#
# /etc/fstab
# Created by anaconda on Thu Oct  9 10:35:46 2025
#
# Accessible filesystems, by reference, are maintained under '/dev/disk/'.
# See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info.
#
# After editing this file, run 'systemctl daemon-reload' to update systemd
# units generated from this file.
#
UUID=325f0285-97c4-4ac5-a1f5-73f7bad9cc35 /          xfs    defaults      0  0
UUID=3c70eb4e-07d0-4773-8246-8d52c68a9fbc /boot      xfs    defaults      0  0
UUID=f51f7d8c-5ele-475f-86dd-5a4d1dc28df2 none      swap   defaults      0  0
UUID=9cfe9ac7-db7a-4881-8863-45a294cff23a /mnt/data  xfs    defaults      1  2
```

Рис. 14: Редактирование fstab

Автоматическое монтирование подтверждено.

## Проверка монтирования

```
root@titukaev:~# mount -a
mount: (hint) your fstab has been modified, but systemd still uses
      the old version; use 'systemctl daemon-reload' to reload.
root@titukaev:~# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/mapper/rl_vbox-root  35G  5.5G  30G  16% /
devtmpfs        4.0M     0  4.0M   0% /dev
tmpfs          1.8G  84K  1.8G   1% /dev/shm
tmpfs          731M  11M  721M   2% /run
tmpfs          1.0M     0  1.0M   0% /run/credentials/systemd-journald.service
/dev/sda2       960M 377M  584M  40% /boot
tmpfs          366M 152K  366M   1% /run/user/1000
tmpfs          366M  60K  366M   1% /run/user/0
/dev/sdb1       236M  20M  217M   9% /mnt/data
root@titukaev:~#
```

Рис. 15: Проверка монтирования

Раздел автоматически смонтирован в `/mnt/data`.

## Самостоятельная работа

---

# Создание GPT-партиций

```
root@titukaev:~#  
root@titukaev:~# gdisk /dev/sdc  
GPT fdisk (gdisk) version 1.0.10  
  
Partition table scan:  
  MBR: protective  
  BSD: not present  
  APM: not present  
  GPT: present  
  
  Found valid GPT with protective MBR; using GPT.  
  
Command (? for help): n  
Partition number (2-128, default 2):  
First sector (34-3145694, default = 616448) or {+-}size{KMGTP}:  
Last sector (616448-3145694, default = 3143679) or {+-}size{KMGTP}: +300M  
Current type is 8300 (Linux filesystem)  
Hex code or GUID (L to show codes, Enter = 8300):  
Changed type of partition to 'Linux filesystem'  
  
Command (? for help): n  
Partition number (3-128, default 3):  
First sector (34-3145694, default = 1230848) or {+-}size{KMGTP}:  
Last sector (1230848-3145694, default = 3143679) or {+-}size{KMGTP}: +300M  
Current type is 8300 (Linux filesystem)  
Hex code or GUID (L to show codes, Enter = 8300): 8200  
Changed type of partition to 'Linux swap'  
  
Command (? for help): w  
  
Final checks complete. About to write GPT data. THIS WILL OVERWRITE EXISTING  
PARTITIONS!!  
  
Do you want to proceed? (Y/N): Y  
OK; writing new GUID partition table (GPT) to /dev/sdc.  
The operation has completed successfully.  
root@titukaev:~#
```

## Форматирование ext4 и swap

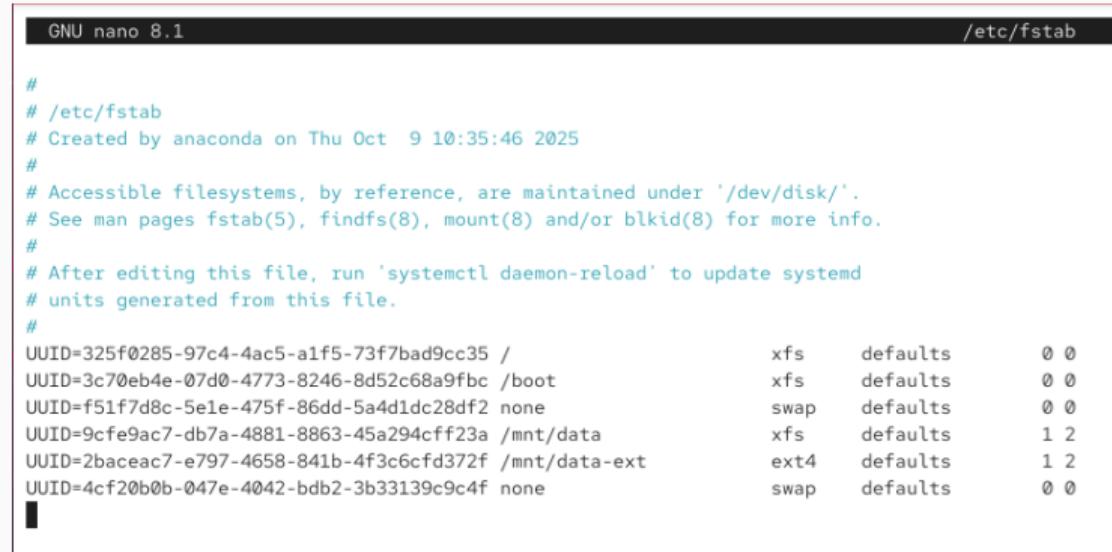
```
Number  Start (sector)   End (sector)  Size       Code  Name
      1            2048           616447  300.0 MiB  8300  Linux filesystem
      2           616448          1230847  300.0 MiB  8300  Linux filesystem
      3          1230848          1845247  300.0 MiB  8200  Linux swap

root@titukaev:~#
root@titukaev:~# mkfs.ext4 /dev/sdc2
mke2fs 1.47.1 (20-May-2024)
Creating filesystem with 307200 1k blocks and 76912 inodes
Filesystem UUID: 2baceac7-e797-4658-841b-4f3c6cf3d372f
Superblock backups stored on blocks:
            8193, 24577, 40961, 57345, 73729, 204801, 221185

Allocating group tables: done
Writing inode tables: done
Creating journal (8192 blocks): done
Writing superblocks and filesystem accounting information: done

root@titukaev:~# tune2fs -L ext4disk2 /dev/sdc2
tune2fs 1.47.1 (20-May-2024)
root@titukaev:~# tune2fs -o acl,user_xattr /dev/sdc2
tune2fs 1.47.1 (20-May-2024)
Invalid mount option set: acl,user_xattr
root@titukaev:~# tune2fs -o acl,user_xattr /dev/sdc2
tune2fs 1.47.1 (20-May-2024)
root@titukaev:~# mkswap /dev/sdc3
Setting up swapspace version 1, size = 300 MiB (314568704 bytes)
no label, UUID=4cf20b0b-047e-4042-bdb2-3b33139c9c4f
root@titukaev:~#
```

## Настройка fstab



The screenshot shows a terminal window with the title "GNU nano 8.1" at the top. The window displays the contents of the "/etc/fstab" file. The file contains several comments and a list of file system entries. The entries include UUID mappings for root, swap, and data partitions, along with their respective mount points, file systems, and mount options (defaults or ext4), and priority values (0, 0, 1, 2).

```
GNU nano 8.1 /etc/fstab

#
# /etc/fstab
# Created by anaconda on Thu Oct  9 10:35:46 2025
#
# Accessible filesystems, by reference, are maintained under '/dev/disk/'.
# See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info.
#
# After editing this file, run 'systemctl daemon-reload' to update systemd
# units generated from this file.
#
UUID=325f0285-97c4-4ac5-a1f5-73f7bad9cc35 /          xfs    defaults      0 0
UUID=3c70eb4e-07d0-4773-8246-8d52c68a9fbc /boot        xfs    defaults      0 0
UUID=f51f7d8c-5e1e-475f-86dd-5a4d1dc28df2 none        swap   defaults      0 0
UUID=9cf9ac7-db7a-4881-8863-45a294cff23a /mnt/data    xfs    defaults      1 2
UUID=2baceac7-e797-4658-841b-4f3c6cf372f /mnt/data-ext ext4   defaults      1 2
UUID=4cf20b0b-047e-4042-bdb2-3b33139c9c4f none        swap   defaults      0 0
```

Рис. 18: Редактирование /etc/fstab

Добавлены записи для автоматического монтирования.

## Проверка после перезагрузки

```
titukaev@titukaev:~$ mount | grep mnt
/dev/sda1 on /mnt/data type xfs (rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32k,noquota)
/dev/sdb2 on /mnt/data-ext type ext4 (rw,relatime,seclabel)
titukaev@titukaev:~$
titukaev@titukaev:~$ df -h
Filesystem           Size   Used  Avail Use% Mounted on
/dev/mapper/rl_vbox-root  35G  5.6G   30G  16% /
devtmpfs              4.0M     0  4.0M   0% /dev
tmpfs                 1.8G  84K  1.8G   1% /dev/shm
tmpfs                 731M  9.3M  722M   2% /run
tmpfs                 1.0M     0  1.0M   0% /run/credentials/systemd-journald.service
/dev/sdc2              960M 377M  584M  40% /boot
/dev/sda1              236M   20M  217M   9% /mnt/data
/dev/sdb2              272M   14K  253M   1% /mnt/data-ext
tmpfs                 366M 140K  366M   1% /run/user/1000
titukaev@titukaev:~$
titukaev@titukaev:~$ free -m
total        used        free      shared  buff/cache   available
Mem:       3652       1293      1923          19       671      2359
Swap:      4339          0      4339
titukaev@titukaev:~$
```

Рис. 19: Проверка разделов

EXT4-раздел смонтирован, swap активен.

## Итоги работы

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## Вывод

---

Были созданы MBR и GPT разделы, выполнено форматирование, настройка swap, ручное и автоматическое монтирование. Закреплены навыки работы с блочными устройствами и таблицами разделов в Linux.