

Поиск файлов. Перенаправление ввода-вывода. Просмотр запущенных процессов

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Цели и задачи работы

Цель лабораторной работы

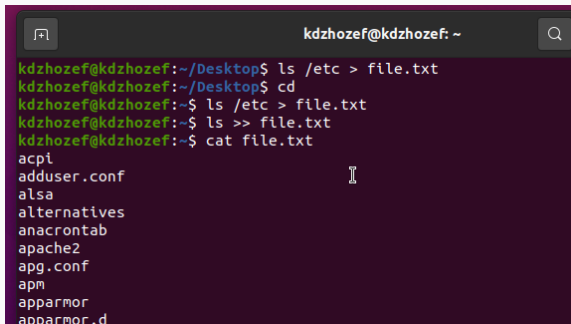
Ознакомление с файловой системой Linux, её структурой, именами и содержанием каталогов. Приобретение практических навыков по применению команд для работы с файлами и каталогами, по управлению процессами, по проверке использования диска и обслуживанию файловой системы.

Задачи лабораторной работы

- 1 Изучить перенаправление ввода-вывода
- 2 Изучить работу фильтров
- 3 Изучить команду поиска
- 4 Ознакомиться с управлением процессами
- 5 Ознакомиться с командами `df` `du`

Процесс выполнения лабораторной работы

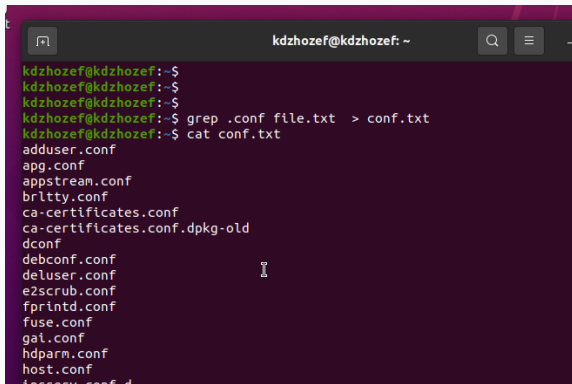
Перенаправление ввода-вывода



```
kdzhofef@kdzhofef: ~  
kdzhofef@kdzhofef:~/Desktop$ ls /etc > file.txt  
kdzhofef@kdzhofef:~/Desktop$ cd  
kdzhofef@kdzhofef:~$ ls /etc > file.txt  
kdzhofef@kdzhofef:~$ ls >> file.txt  
kdzhofef@kdzhofef:~$ cat file.txt  
acpi  
adduser.conf  
alsa  
alternatives  
anacrontab  
apache2  
apg.conf  
apm  
apparmor  
apparmor.d
```

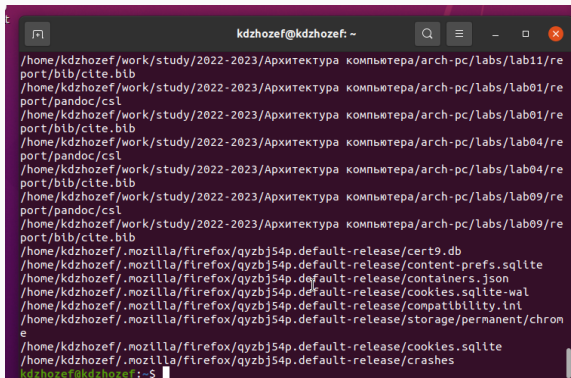
Рис. 1: Запись в файл

Работа фильтра



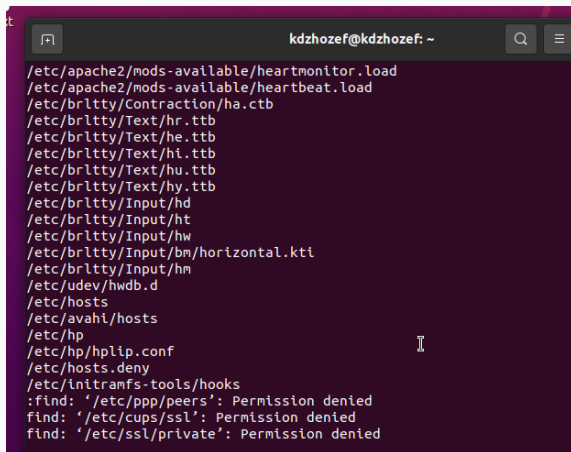
```
kdzhofef@kdzhofef: ~  
kdzhofef@kdzhofef:~$  
kdzhofef@kdzhofef:~$  
kdzhofef@kdzhofef:~$  
kdzhofef@kdzhofef:~$ grep .conf file.txt > conf.txt  
kdzhofef@kdzhofef:~$ cat conf.txt  
adduser.conf  
apg.conf  
appstream.conf  
brlty.conf  
ca-certificates.conf  
ca-certificates.conf.dpkg-old  
dconf  
debconf.conf  
deluser.conf  
e2scrub.conf  
fprintd.conf  
fuse.conf  
gal.conf  
hdparm.conf  
host.conf  
insserv.conf.d
```

Рис. 2: Поиск расширения .conf

A terminal window with a dark purple background and light green text. The window title is 'kdzhofef@kdzhofef: ~'. It displays the output of a file search command, listing various files and directories. The results are organized into groups, with some lines starting with a green hash symbol (#). The files listed include 'port/bib/cite.bib', 'port/pandoc/csl', and several files in the '.mozilla/firefox/xyzbj54p.default-release/' directory, such as 'cert9.db', 'content-prefs.sqlite', 'containers.json', 'cookies.sqlite-wal', 'compatibility.ini', 'storage/permanent/chrome', 'cookies.sqlite', and 'crashes'. The prompt 'kdzhofef@kdzhofef:~\$' is visible at the bottom.

```
kdzhofef@kdzhofef: ~  
/home/kdzhofef/work/study/2022-2023/Архитектура компьютера/arch-pc/labs/lab11/re  
port/bib/cite.bib  
/home/kdzhofef/work/study/2022-2023/Архитектура компьютера/arch-pc/labs/lab01/re  
port/pandoc/csl  
/home/kdzhofef/work/study/2022-2023/Архитектура компьютера/arch-pc/labs/lab01/re  
port/bib/cite.bib  
/home/kdzhofef/work/study/2022-2023/Архитектура компьютера/arch-pc/labs/lab04/re  
port/pandoc/csl  
/home/kdzhofef/work/study/2022-2023/Архитектура компьютера/arch-pc/labs/lab04/re  
port/bib/cite.bib  
/home/kdzhofef/work/study/2022-2023/Архитектура компьютера/arch-pc/labs/lab09/re  
port/pandoc/csl  
/home/kdzhofef/work/study/2022-2023/Архитектура компьютера/arch-pc/labs/lab09/re  
port/bib/cite.bib  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/cert9.db  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/content-prefs.sqlite  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/containers.json  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/cookies.sqlite-wal  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/compatibility.ini  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/storage/permanent/chrom  
e  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/cookies.sqlite  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/crashes  
kdzhofef@kdzhofef:~$
```

Рис. 3: Поиск файлов

A terminal window with a dark purple background and white text. The window title is 'kdzhozef@kdzhozef: ~'. It shows the output of a file search command, listing various files and directories in the /etc directory. The search results include files like heartmonitor.load, heartbeat.load, Contraction/ha.ctb, Text/hr.ttb, Text/he.ttb, Text/hi.ttb, Text/hu.ttb, Text/hy.ttb, Input/hd, Input/ht, Input/hw, Input/bm/horizontal.kti, Input/hm, udev/hwdb.d, hosts, avahi/hosts, hp, hp/hplip.conf, hosts.deny, and initramfs-tools/hooks. The search also shows permission denied messages for /etc/ppp/peers, /etc/cups/ssl, and /etc/ssl/private.

```
kdzhozef@kdzhozef: ~  
/etc/apache2/mods-available/heartmonitor.load  
/etc/apache2/mods-available/heartbeat.load  
/etc/brltty/Contraction/ha.ctb  
/etc/brltty/Text/hr.ttb  
/etc/brltty/Text/he.ttb  
/etc/brltty/Text/hi.ttb  
/etc/brltty/Text/hu.ttb  
/etc/brltty/Text/hy.ttb  
/etc/brltty/Input/hd  
/etc/brltty/Input/ht  
/etc/brltty/Input/hw  
/etc/brltty/Input/bm/horizontal.kti  
/etc/brltty/Input/hm  
/etc/udev/hwdb.d  
/etc/hosts  
/etc/avahi/hosts  
/etc/hp  
/etc/hp/hplip.conf  
/etc/hosts.deny  
/etc/initramfs-tools/hooks  
find: '/etc/ppp/peers': Permission denied  
find: '/etc/cups/ssl': Permission denied  
find: '/etc/ssl/private': Permission denied
```

Рис. 4: Поиск файлов

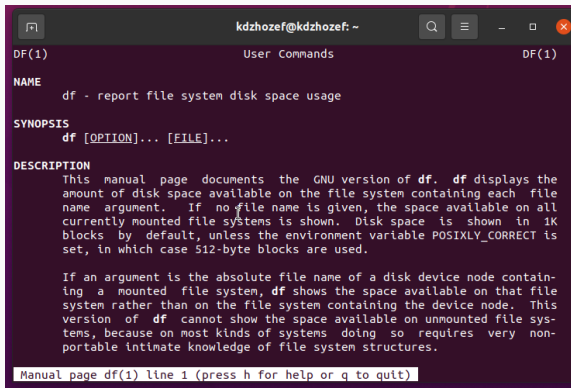
```
kdzhofef@kdzhofef:~$  
kdzhofef@kdzhofef:~$ find /etc -ma,e "h*" -print | less  
find: unknown predicate `~ma,e'  
kdzhofef@kdzhofef:~$ find /etc -name "h*" -print | less  
kdzhofef@kdzhofef:~$  
kdzhofef@kdzhofef:~$  
kdzhofef@kdzhofef:~$ find ~ -name "log*" > logfile &  
[1] 2793  
kdzhofef@kdzhofef:~$  
[1]+  Done                  find ~ -name "log*" > logfile  
kdzhofef@kdzhofef:~$ rm logfile  
kdzhofef@kdzhofef:~$
```

Рис. 5: Фоновый запуск процесса

```
kdzhozef@kdzhozef:~$  
kdzhozef@kdzhozef:~$ gedit &  
[1] 2840  
kdzhozef@kdzhozef:~$  
kdzhozef@kdzhozef:~$ ps | grep gedit  
2840 pts/0    00:00:00 gedit  
kdzhozef@kdzhozef:~$ kill 2840  
kdzhozef@kdzhozef:~$  
[1]+  Terminated                  gedit  
kdzhozef@kdzhozef:~$
```

Рис. 6: Фоновый запуск и завершение процесса

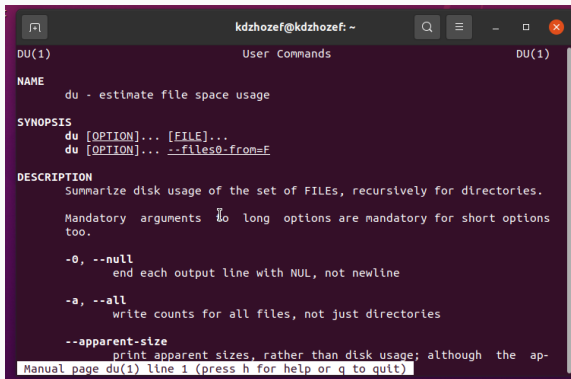
Команды df и du



```
kdzhofez@kdzhofez: ~  
DF(1) User Commands DF(1)  
  
NAME  
    df - report file system disk space usage  
  
SYNOPSIS  
    df [OPTION]... [FILE]...  
  
DESCRIPTION  
    This manual page documents the GNU version of df. df displays the  
    amount of disk space available on the file system containing each file  
    name argument. If no file name is given, the space available on all  
    currently mounted file systems is shown. Disk space is shown in 1K  
    blocks by default, unless the environment variable POSIXLY_CORRECT is  
    set, in which case 512-byte blocks are used.  
  
    If an argument is the absolute file name of a disk device node contain-  
    ing a mounted file system, df shows the space available on that file  
    system rather than on the file system containing the device node. This  
    version of df cannot show the space available on unmounted file sys-  
    tems, because on most kinds of systems doing so requires very non-  
    portable intimate knowledge of file system structures.  
  
Manual page df(1) line 1 (press h for help or q to quit)
```

Рис. 7: Справка по команде df

Команды df и du



```
kdzhozef@kdzhozef: ~
DU(1) User Commands DU(1)
NAME
    du - estimate file space usage

SYNOPSIS
    du [OPTION]... [FILE]...
    du [OPTION]... --files0-from=F

DESCRIPTION
    Summarize disk usage of the set of FILES, recursively for directories.

    Mandatory arguments: To long options are mandatory for short options too.

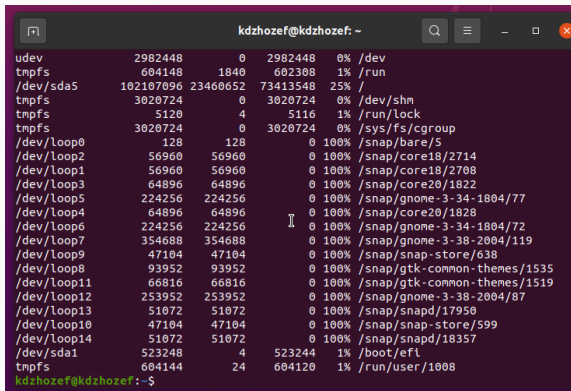
    -0, --null
        end each output line with NUL, not newline

    -a, --all
        write counts for all files, not just directories

    --apparent-size
        print apparent sizes, rather than disk usage; although the ap-
Manual page du(1) line 1 (press h for help or q to quit)
```

Рис. 8: Запуск команды df

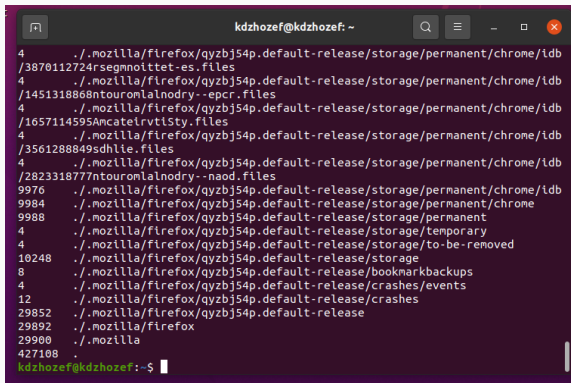
Команды df и du



```
kdzhozef@kdzhozef: ~  
dudev      2982448      0  2982448  0% /dev  
tmpfs      604148      1840  602308  1% /run  
/dev/sda5  102107096  23460652  73413548  25% /  
tmpfs      3020724      0  3020724  0% /dev/shm  
tmpfs       5120      4    5116  1% /run/lock  
tmpfs      3020724      0  3020724  0% /sys/fs/cgroup  
/dev/loop0    128      128      0 100% /snap/bare/5  
/dev/loop2    56960    56960      0 100% /snap/core18/2714  
/dev/loop1    56960    56960      0 100% /snap/core18/2708  
/dev/loop3    64896    64896      0 100% /snap/core20/1822  
/dev/loop5    224256   224256      0 100% /snap/gnome-3-34-1804/77  
/dev/loop4    64896    64896      0 100% /snap/core20/1828  
/dev/loop6    224256   224256      0 100% /snap/gnome-3-34-1804/72  
/dev/loop7    354688   354688      0 100% /snap/gnome-3-38-2004/119  
/dev/loop9    47104    47104      0 100% /snap/snap-store/638  
/dev/loop8    93952    93952      0 100% /snap/gtk-common-themes/1535  
/dev/loop11   66816    66816      0 100% /snap/gtk-common-themes/1519  
/dev/loop12   253952   253952      0 100% /snap/gnome-3-38-2004/87  
/dev/loop13   51072    51072      0 100% /snap/snapd/17950  
/dev/loop10   47104    47104      0 100% /snap/snap-store/599  
/dev/loop14   51072    51072      0 100% /snap/snapd/18357  
/dev/sda1    523248      4  523244  1% /boot/efi  
tmpfs      604144      24  604120  1% /run/user/1008  
kdzhozef@kdzhozef:~$
```

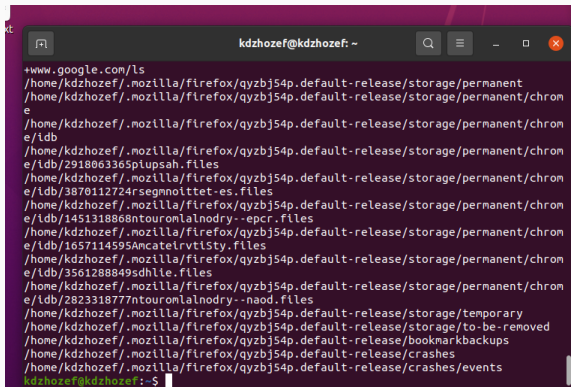
Рис. 9: Справка по команде du

Команды df и du



```
kdzhofef@kdzhofef: ~  
4      ./mozilla/firefox/qyzbj54p.default-release/storage/permanent/chrome/idb  
/3870112724rsegmnoittet-es.files  
4      ./mozilla/firefox/qyzbj54p.default-release/storage/permanent/chrome/idb  
/1451318868ntouromlalnody--epcr.files  
4      ./mozilla/firefox/qyzbj54p.default-release/storage/permanent/chrome/idb  
/1657114595AmcateirvtiSty.files  
4      ./mozilla/firefox/qyzbj54p.default-release/storage/permanent/chrome/idb  
/3561288849sdhlie.files  
4      ./mozilla/firefox/qyzbj54p.default-release/storage/permanent/chrome/idb  
/282331877ntouromlalnody--naod.files  
9976   ./mozilla/firefox/qyzbj54p.default-release/storage/permanent/chrome/idb  
9984   ./mozilla/firefox/qyzbj54p.default-release/storage/permanent/chrome  
9988   ./mozilla/firefox/qyzbj54p.default-release/storage/permanent  
4      ./mozilla/firefox/qyzbj54p.default-release/storage/temporary  
4      ./mozilla/firefox/qyzbj54p.default-release/storage/to-be-removed  
10248  ./mozilla/firefox/qyzbj54p.default-release/storage  
8      ./mozilla/firefox/qyzbj54p.default-release/bookmarkbackups  
4      ./mozilla/firefox/qyzbj54p.default-release/crashes/events  
12     ./mozilla/firefox/qyzbj54p.default-release/crashes  
29852  ./mozilla/firefox/qyzbj54p.default-release  
29892  ./mozilla/firefox  
29900  ./mozilla  
427108 .  
kdzhofef@kdzhofef:~$
```

Рис. 10: Запуск команды du



```
kdzhofef@kdzhofef: ~  
+www.google.com/ls  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/storage/permanent  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/storage/permanent/chrom  
e  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/storage/permanent/chrom  
e/ldb  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/storage/permanent/chrom  
e/ldb/2918063365piupsah.files  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/storage/permanent/chrom  
e/ldb/3870112724rsegnnoittet-es.files  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/storage/permanent/chrom  
e/ldb/1451318868ntouromlalnodry--epcr.files  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/storage/permanent/chrom  
e/ldb/1657114595Amcateirvtlsty.files  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/storage/permanent/chrom  
e/ldb/3561288849sdhllt.files  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/storage/permanent/chrom  
e/ldb/2823318777ntouromlalnodry--naod.files  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/storage/temporary  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/storage/to-be-removed  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/bookmarkbackups  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/crashes  
/home/kdzhofef/.mozilla/firefox/xyzbj54p.default-release/crashes/events  
kdzhofef@kdzhofef:~$
```

Рис. 11: Поиск директорий

Выводы по проделанной работе

В данной работе мы ознакомились с инструментами поиска файлов и фильтрации текстовых данных. А также приобрели практические навыки по управлению процессами.