

# Отчёт по лабораторной работе №6

Поиск файлов. Перенаправление ввода-вывода. Просмотр запущенных процессов

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## Информация

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- vmokochunina@gmail.com
- [https://github.com/Vmokochunina/study\\_2022-2023\\_os-intro.git](https://github.com/Vmokochunina/study_2022-2023_os-intro.git)

## Вводная часть

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Умение управлять процессами

Процессы

Ознакомление с инструментами поиска файлов и фильтрации текстовых данных.  
Приобретение практических навыков: по управлению процессами (и заданиями), по проверке использования диска и обслуживанию файловых систем.

Команды



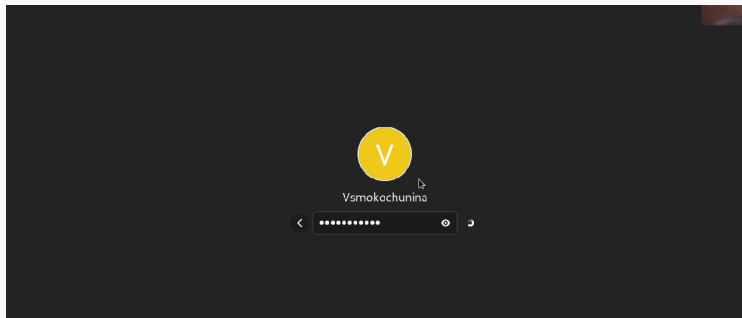
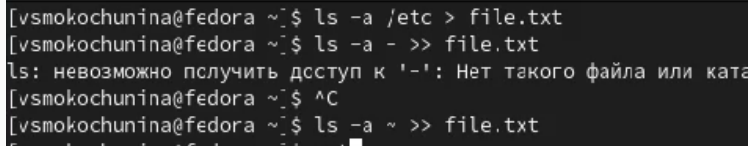


Рис. 1: Вход

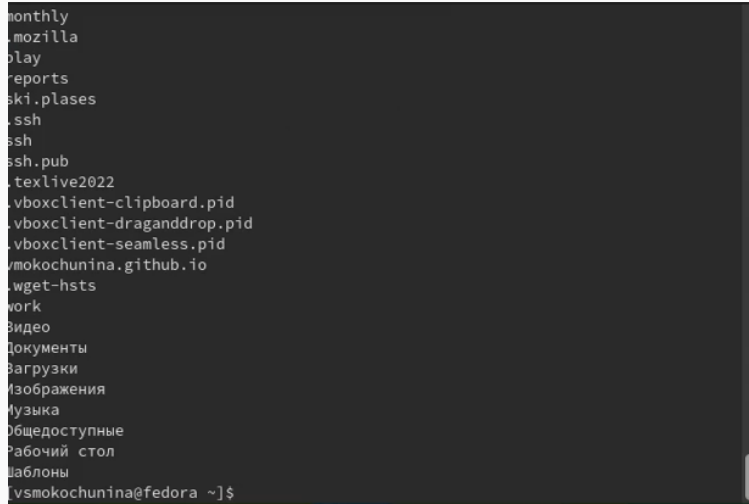
Запись в файл file.txt названия файлов, содержащихся в каталоге /etc. Дописала в этот же файл названия файлов, содержащихся в вашем домашнем каталоге.

A terminal window with a dark background and light-colored text. It shows a series of commands being entered at a prompt. The first command is 'ls -a /etc > file.txt'. The second is 'ls -a ~ >> file.txt'. The third line shows an error message: 'ls: невозможно получить доступ к '-': Нет такого файла или каталога'. The fourth line shows the user pressing the Ctrl key, indicated by '^C'. The fifth line shows the command 'ls -a ~ >> file.txt' being entered again.

```
[vsmokochunina@fedora ~]$ ls -a /etc > file.txt
[vsmokochunina@fedora ~]$ ls -a ~ >> file.txt
ls: невозможно получить доступ к '-': Нет такого файла или каталога
[vsmokochunina@fedora ~]$ ^C
[vsmokochunina@fedora ~]$ ls -a ~ >> file.txt
```

Рис. 2: Запись в файл

Вывела имена всех файлов из file.txt, имеющих расширение .conf, после чего записала их в новый текстовый файл conf.txt.

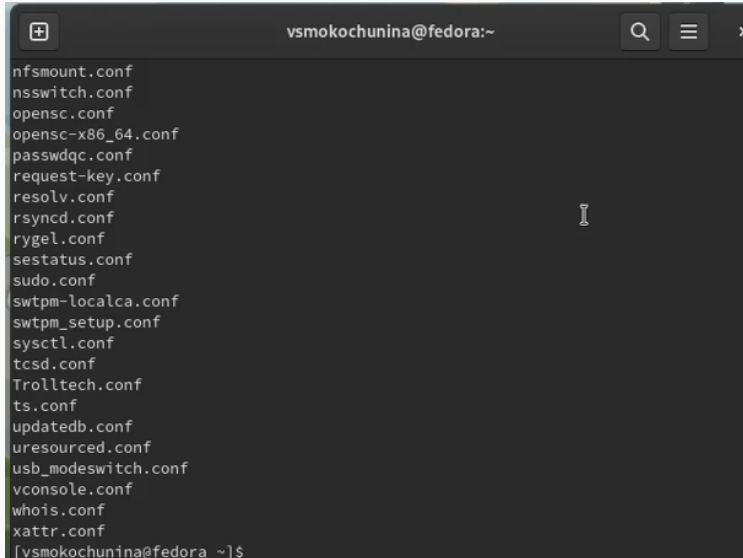
A screenshot of a terminal window with a dark background and light-colored text. The terminal displays a list of files, each followed by its extension .conf. The files are listed in a single column. At the bottom of the terminal, the prompt [vsmokochunina@fedora ~]\$ is visible.

```
monthly  
.mozilla  
play  
reports  
ski.places  
.ssh  
ssh  
ssh.pub  
.texlive2022  
.vboxclient-clipboard.pid  
.vboxclient-draganddrop.pid  
.vboxclient-seamless.pid  
vsmokochunina.github.io  
.wget-hsts  
work  
Видео  
Документы  
Загрузки  
Изображения  
Музыка  
Общедоступные  
Рабочий стол  
Шаблоны  
[vsmokochunina@fedora ~]$
```

Рис. 3: Вывод имен файлов

```
[vsmokochunina@fedora ~]$ grep -e '\conf$' file.txt > conf.txt
```

Рис. 4: Запись



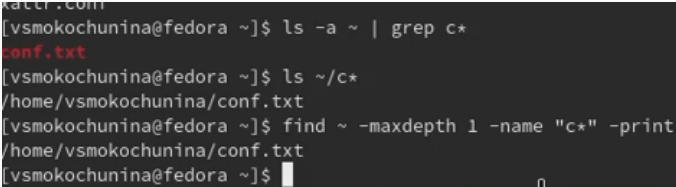
A terminal window titled 'vsmokochunina@fedora:~' with search and menu icons in the title bar. The terminal displays a list of 25 configuration files, each on a new line. The files are: nfsmount.conf, nsswitch.conf, opensc.conf, opensc-x86\_64.conf, passwdqc.conf, request-key.conf, resolv.conf, rsyncd.conf, rygel.conf, sestatus.conf, sudo.conf, swtpm-localca.conf, swtpm\_setup.conf, sysctl.conf, tcscd.conf, Trolltech.conf, ts.conf, updatedb.conf, uresourced.conf, usb\_modeswitch.conf, vconsole.conf, whois.conf, and xattr.conf. The list is followed by a prompt '[vsmokochunina@fedora ~]\$'.

```
vsmokochunina@fedora:~  
nfsmount.conf  
nsswitch.conf  
opensc.conf  
opensc-x86_64.conf  
passwdqc.conf  
request-key.conf  
resolv.conf  
rsyncd.conf  
rygel.conf  
sestatus.conf  
sudo.conf  
swtpm-localca.conf  
swtpm_setup.conf  
sysctl.conf  
tcscd.conf  
Trolltech.conf  
ts.conf  
updatedb.conf  
uresourced.conf  
usb_modeswitch.conf  
vconsole.conf  
whois.conf  
xattr.conf  
[vsmokochunina@fedora ~]$
```

Рис. 5: Вывод

## Определила, какие файлы в домашнем каталоге имеют имена, начинавшиеся

с символа с

A terminal window with a dark background and light-colored text. The prompt is [vsmokochunina@fedora ~]. The first command is ls -a ~ | grep c\*, which returns conf.txt in red text. The second command is ls ~/c\*, which returns /home/vsmokochunina/conf.txt. The third command is find ~ -maxdepth 1 -name "c\*" -print, which also returns /home/vsmokochunina/conf.txt. The prompt is followed by a cursor.

```
xattr.conf
[vsmokochunina@fedora ~]$ ls -a ~ | grep c*
conf.txt
[vsmokochunina@fedora ~]$ ls ~/c*
/home/vsmokochunina/conf.txt
[vsmokochunina@fedora ~]$ find ~ -maxdepth 1 -name "c*" -print
/home/vsmokochunina/conf.txt
[vsmokochunina@fedora ~]$
```

Рис. 6: Файлы

Вывела на экран (по странично) имена файлов из каталога /etc, начинающиеся

с символа h.



```
[vsmokochunina@fedora ~]$ find /etc -maxdepth 1 -name "h*" | less
```

Рис. 7: Вывод имен файлов

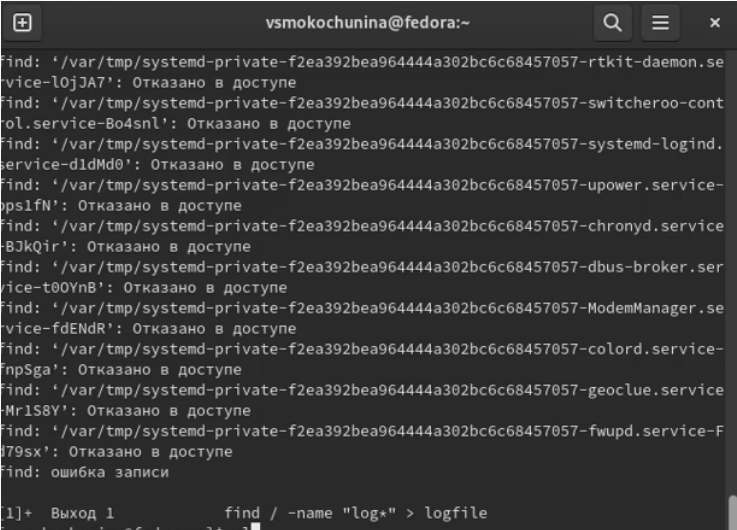
```
/etc/hp  
/etc/httpd  
/etc/host.conf  
/etc/hosts  
/etc/hostname  
(END)
```

Рис. 8: Название рисунка

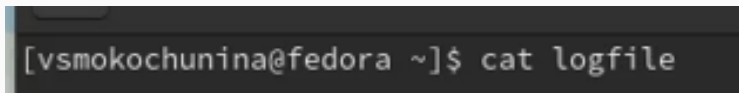


Запустила в фоновом режиме процесс, который будет записывать в файл ~/logfile

файлы, имена которых начинаются с log.



```
vsmokochunina@fedora:~  
find: '/var/tmp/systemd-private-f2ea392bea964444a302bc6c68457057-rtkit-daemon.service-10jJA7': Отказано в доступе  
find: '/var/tmp/systemd-private-f2ea392bea964444a302bc6c68457057-switcheroo-control.service-Bo4snl': Отказано в доступе  
find: '/var/tmp/systemd-private-f2ea392bea964444a302bc6c68457057-systemd-logind.service-dldMd0': Отказано в доступе  
find: '/var/tmp/systemd-private-f2ea392bea964444a302bc6c68457057-upower.service-0pslfN': Отказано в доступе  
find: '/var/tmp/systemd-private-f2ea392bea964444a302bc6c68457057-chronyd.service-BJkQir': Отказано в доступе  
find: '/var/tmp/systemd-private-f2ea392bea964444a302bc6c68457057-dbus-broker.service-t00YnB': Отказано в доступе  
find: '/var/tmp/systemd-private-f2ea392bea964444a302bc6c68457057-ModemManager.service-fdENdR': Отказано в доступе  
find: '/var/tmp/systemd-private-f2ea392bea964444a302bc6c68457057-colord.service-fnpSga': Отказано в доступе  
find: '/var/tmp/systemd-private-f2ea392bea964444a302bc6c68457057-geoclue.service-Mr1S8Y': Отказано в доступе  
find: '/var/tmp/systemd-private-f2ea392bea964444a302bc6c68457057-fwupd.service-F879sx': Отказано в доступе  
find: ошибка записи  
[1]+  Выход 1                  find / -name "log*" > logfile
```

A screenshot of a terminal window with a dark background. The prompt is [vsmokochunina@fedora ~]\$ and the command being entered is cat logfile. The text is in a light gray monospaced font.

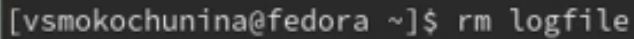
```
[vsmokochunina@fedora ~]$ cat logfile
```

Рис. 10: Процесс

```
vsmokochunina@fedora:~  
/usr/local/texlive/2022/texmf-dist/doc/latex/toptesi/logoquattro.pdf  
/usr/local/texlive/2022/texmf-dist/doc/latex/toptesi/logotre.pdf  
/usr/local/texlive/2022/texmf-dist/doc/latex/toptesi/logouno.pdf  
/usr/local/texlive/2022/texmf-dist/doc/latex/unswwcover/logo_unsw_short.pdf  
/usr/local/texlive/2022/texmf-dist/doc/latex/uwmslide/logo.eps  
/usr/local/texlive/2022/texmf-dist/doc/latex/visualpstricks/Source/logoitut-eps  
converted-to.pdf  
/usr/local/texlive/2022/texmf-dist/doc/latex/visualpstricks/Source/logoitut.eps  
/usr/local/texlive/2022/texmf-dist/doc/latex/xebaposter/images/logo.png  
/usr/local/texlive/2022/texmf-dist/doc/latex/yathesis/french/documentation/log  
lcofondblanc.pdf  
/usr/local/texlive/2022/texmf-dist/doc/latex/beamertheme-pure-minimalistic/log  
/usr/local/texlive/2022/texmf-dist/doc/generic/knuth-errata/logmac.tex  
/usr/local/texlive/2022/texmf-dist/doc/support/asymptote-manual-zh-cn/src/logo  
sy  
/usr/local/texlive/2022/texmf-dist/doc/support/epspdf/images/logo.pdf  
/usr/local/texlive/2022/texmf-dist/doc/support/epspdf/images/logo.svg  
/usr/local/texlive/2022/texmf-dist/doc/support/latexindent/logo.png  
/usr/local/texlive/2022/texmf-dist/doc/support/tlcockpit/logo  
/usr/local/texlive/2022/texmf-dist/doc/fonts/logix  
/usr/local/texlive/2022/texmf-dist/doc/fonts/logix/logix.math  
/usr/local/texlive/2022/texmf-dist/doc/fonts/logix/logix.pdf  
/usr/local/texlive/2022/texmf-dist/doc/fonts/logix/logix.tex  
/usr/local/texlive/2[vsmokochunina@fedora ~]$
```

Рис. 11: Вывод

Удалила файл ~/logfile.

A terminal window with a dark background. The prompt is [vsmokochunina@fedora ~]\$. The command rm logfile has been entered.

```
[vsmokochunina@fedora ~]$ rm logfile
```

Рис. 12: Удаление

Запустила из консоли в фоновом режиме редактор gedit. Определила идентификатор процесса gedit, используя команду ps, конвейер и фильтр grep.

```
[vsmokochunina@10 ~]$ gedit &  
[1] 2959  
[vsmokochunina@10 ~]$ ps | grep -i "gedit"  
  2959 pts/0    00:00:00 gedit  
[vsmokochunina@10 ~]$
```

Рис. 13: Процесс

Прочитала справку (man) команды kill, после чего использовала её для завершения

процесса gedit.

```
KILL(1)                                User Commands                                KILL(1)

NAME
    kill - terminate a process

SYNOPSIS
    kill [-signal|-s signal|-p] [-q value] [-a] [--timeout milliseconds
    signal] [--] pid|name...

    kill -l [number] | -L

DESCRIPTION
    The command kill sends the specified signal to the specified processes
    or process groups.

    If no signal is specified, the TERM signal is sent. The default action
    for this signal is to terminate the process. This signal should be used
    in preference to the KILL signal (number 9), since a process may
    install a handler for the TERM signal in order to perform clean-up
    steps before terminating in an orderly fashion. If a process does not
    terminate after a TERM signal has been sent, then the KILL signal may
    be used; be aware that the latter signal cannot be caught, and so does
    not give the target process the opportunity to perform any clean-up

Manual page kill(1) line 1 (press h for help or q to quit)
```

```
[vsmokochunina@10 ~]$ kill 2959  
[1]+  Завершено      gedit  
[vsmokochunina@10 ~]$
```

Рис. 15: Команда

Выполнила команды `df` и `du`, предварительно получив более подробную информацию об этих командах, с помощью команды `man`.

```
DF(1)                                User Commands                                DF(1)

NAME
    df - report file system space usage

SYNOPSIS
    df [OPTION]... [FILE]...

DESCRIPTION
    This manual page documents the GNU version of df. df displays the
    amount of space available on the file system containing each file name
    argument. If no file name is given, the space available on all cur-
    rently mounted file systems is shown. 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 device node containing a
    mounted file system, df shows the space available on that file system
    rather than on the file system containing the device node. This ver-
    sion of df cannot show the space available on unmounted file systems,
    because on most kinds of systems doing so requires very nonportable in-
    timate knowledge of file system structures.

Manual page df(1) line 1 (press h for help or q to quit)
```



```
DU(1)                                User Commands                                DU(1)

NAME
    du - estimate file space usage

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

DESCRIPTION
    Summarize device 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
Manual page du(1) line 1 (press h for help or q to quit)
```

Рис. 17: Справка

```
[vsmokochunina@10 ~]$ df
```

Файловая система	1K-блоков	Использовано	Доступно	Использовано%	Смонтировано в
devtmpfs	4096	0	4096	0%	/dev
tmpfs	5408476	14084	5394392	1%	/dev/shm
tmpfs	2163392	1364	2162028	1%	/run
/dev/sda3	13081600	12057608	547208	96%	/
tmpfs	5408480	16	5408464	1%	/tmp
/dev/sda2	996780	295904	632064	32%	/boot
/dev/sda3	13081600	12057608	547208	96%	/home
tmpfs	1081692	160	1081532	1%	/run/user/1000

```
[vsmokochunina@10 ~]$
```

Рис. 18: Команда

```
4      ./blog/.git/modules/public/objects/6c
4      ./blog/.git/modules/public/objects/db
7936   ./blog/.git/modules/public/objects
8      ./blog/.git/modules/public/logs/refs/remotes/origin
8      ./blog/.git/modules/public/logs/refs/remotes
4      ./blog/.git/modules/public/logs/refs/heads
12     ./blog/.git/modules/public/logs/refs
16     ./blog/.git/modules/public/logs
8068   ./blog/.git/modules/public
8068   ./blog/.git/modules
14208  ./blog/.git
4      ./blog/.github/workflows
8      ./blog/.github
1728   ./blog/assets/media/albums/demo
1728   ./blog/assets/media/albums
8      ./blog/assets/media/icons/brands
8      ./blog/assets/media/icons
1756   ./blog/assets/media
1760   ./blog/assets
16     ./blog/config/_default
16     ./blog/config
4      ./blog/content/admin
1360   ./blog/content/authors/admin
1364   ./blog/content/authors
```

Рис. 19: Команда

Воспользовавшись справкой команды `find`, вывела имена всех директорий, имеющих в домашнем каталоге.

```
FIND(1)                                General Commands Manual                                FIND(1)

NAME
    find - search for files in a directory hierarchy

SYNOPSIS
    find [-H] [-L] [-P] [-D debugopts] [-Olevel] [starting-point...] [ex-
    pression]

DESCRIPTION
    This manual page documents the GNU version of find.  GNU find searches
    the directory tree rooted at each given starting-point by evaluating
    the given expression from left to right, according to the rules of
    precedence (see section OPERATORS), until the outcome is known (the
    left hand side is false for and operations, true for or), at which
    point find moves on to the next file name.  If no starting-point is
    specified, `.` is assumed.

    If you are using find in an environment where security is important
    (for example if you are using it to search directories that are
    writable by other users), you should read the 'Security Considerations'
    chapter of the findutils documentation, which is called Finding Files
    and comes with findutils.  That document also includes a lot more de-
    Manual page find(1) line 1 (press h for help or q to quit)
```

```
/home/vsmokochunina/vmokochunina.github.io/.git/refs/remotes
/home/vsmokochunina/vmokochunina.github.io/.git/refs/remotes/origin
/home/vsmokochunina/vmokochunina.github.io/.git/objects
/home/vsmokochunina/vmokochunina.github.io/.git/objects/pack
/home/vsmokochunina/vmokochunina.github.io/.git/objects/info
/home/vsmokochunina/vmokochunina.github.io/.git/objects/e6
/home/vsmokochunina/vmokochunina.github.io/.git/objects/f9
/home/vsmokochunina/vmokochunina.github.io/.git/objects/3f
/home/vsmokochunina/vmokochunina.github.io/.git/logs
/home/vsmokochunina/vmokochunina.github.io/.git/logs/refs
/home/vsmokochunina/vmokochunina.github.io/.git/logs/refs/heads
/home/vsmokochunina/vmokochunina.github.io/.git/logs/refs/remotes
/home/vsmokochunina/vmokochunina.github.io/.git/logs/refs/remotes/origin
/home/vsmokochunina/monthly
/home/vsmokochunina/reports
/home/vsmokochunina/reports/monthly
/home/vsmokochunina/reports/monthly/monthly
/home/vsmokochunina/ski.plases
/home/vsmokochunina/ski.plases/equipment
/home/vsmokochunina/ski.plases/plans
/home/vsmokochunina/play
/home/vsmokochunina/play/games
/home/vsmokochunina/play/games/play
[vsmokochunina@10 ~]$
```

Рис. 21: Команда

## Результаты

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Я ознакомилась с инструментами поиска файлов и фильтрации текстовых данных.  
Приобрела практические навыки: по управлению процессами (и заданиями), по проверке использования диска и обслуживанию файловых систем.

Спасибо за внимание!