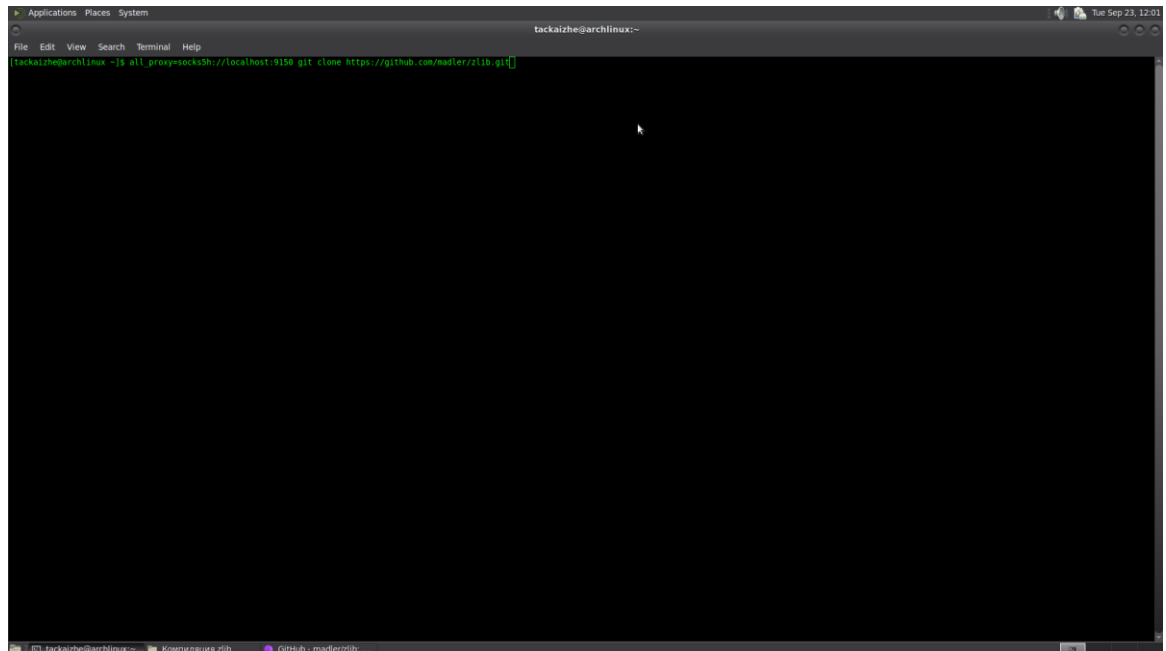


#19 Задание по кросс компиляции

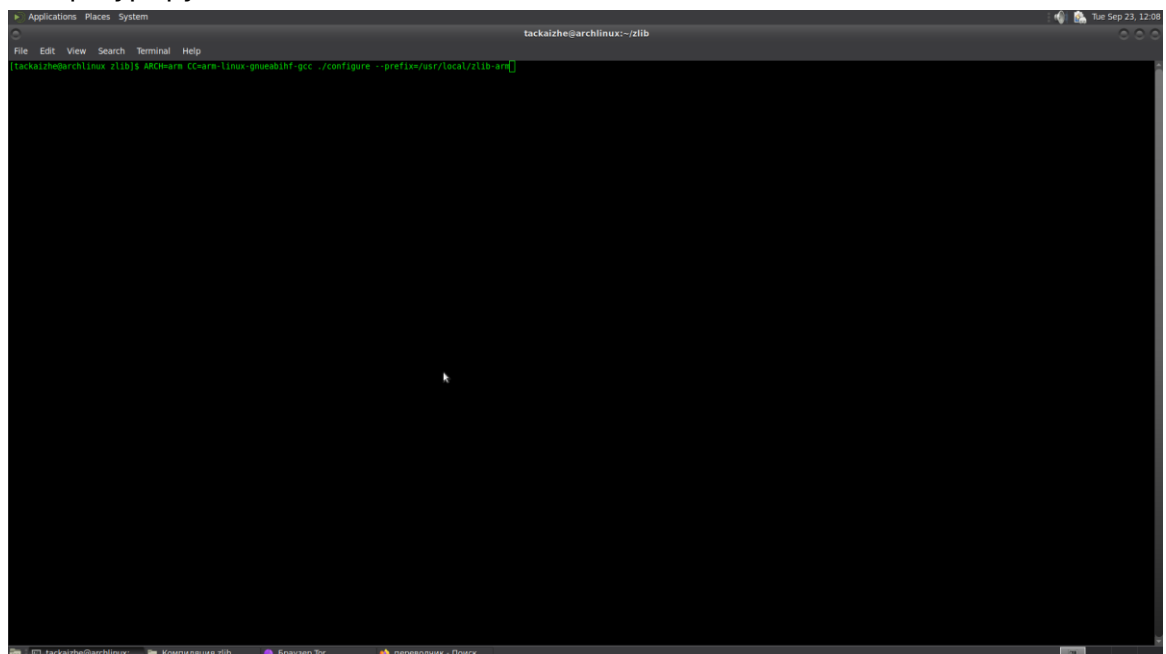
1. Компиляция zlib

1. Получение zlib



```
tackaizhe@archlinux:~  
File Edit View Search Terminal Help  
[tackaizhe@archlinux ~]$ all_proxy=socks5h://localhost:9150 git clone https://github.com/madler/zlib.git
```

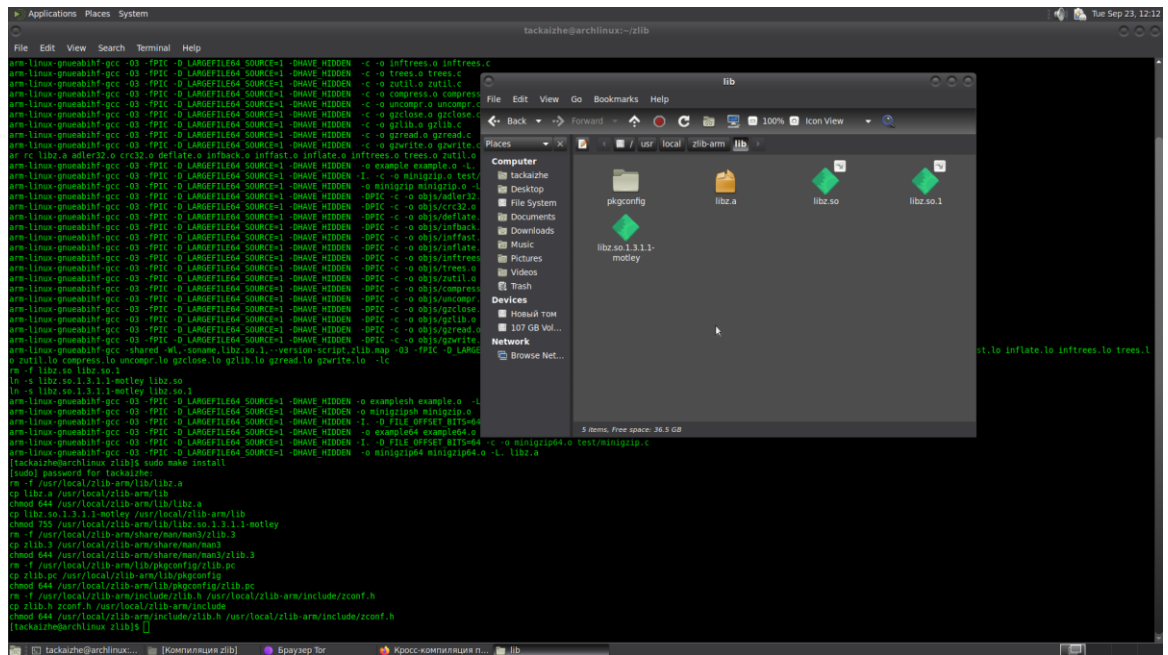
2. Конфигурируем zlib



```
tackaizhe@archlinux:~/zlib  
File Edit View Search Terminal Help  
[tackaizhe@archlinux zlib]$ ARCH=arm CC=arm-linux-gnueabi-gcc ./configure --prefix=/usr/local/zlib-arm
```

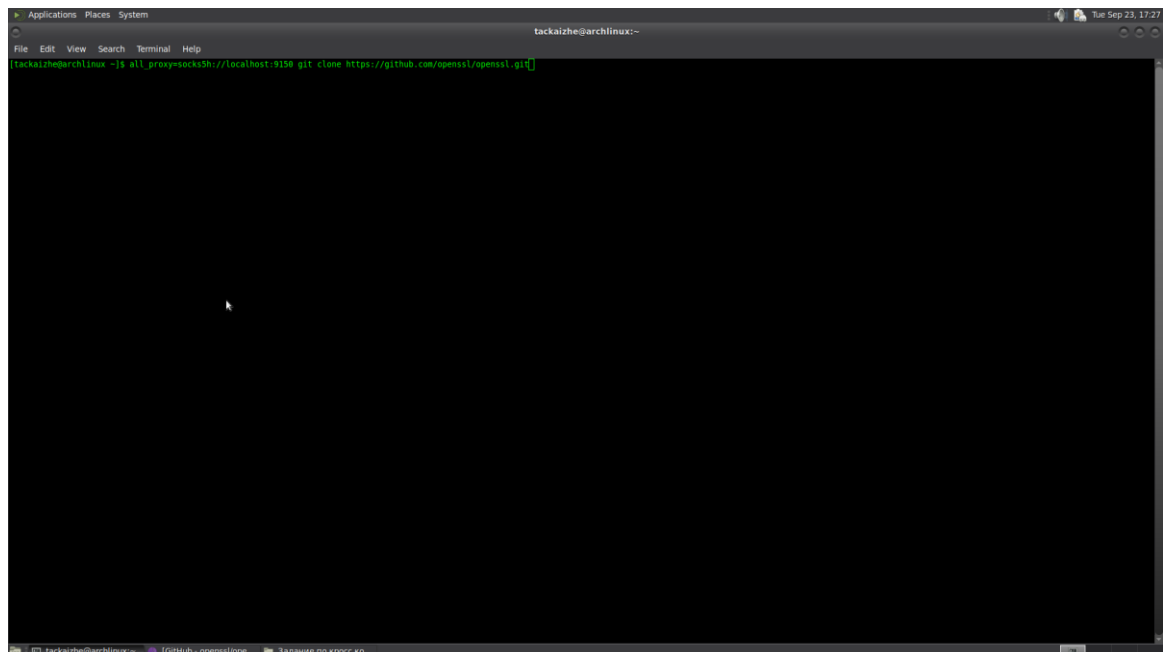
4. Устанавливаем zlib

5. Результат

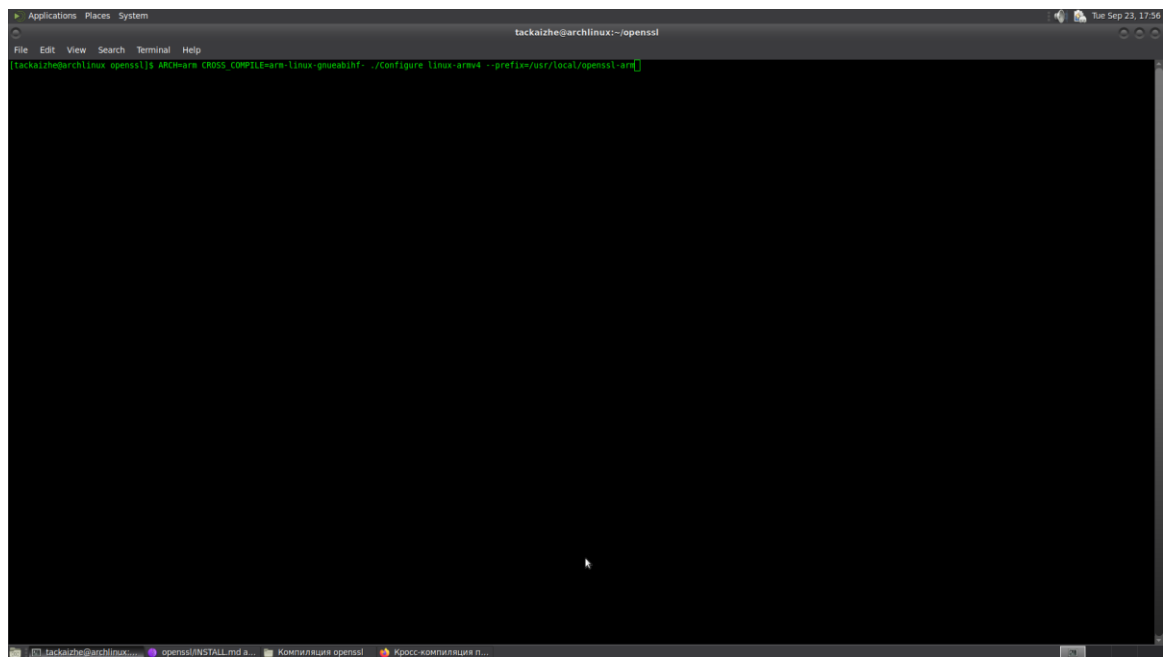


2. Компиляция openssl

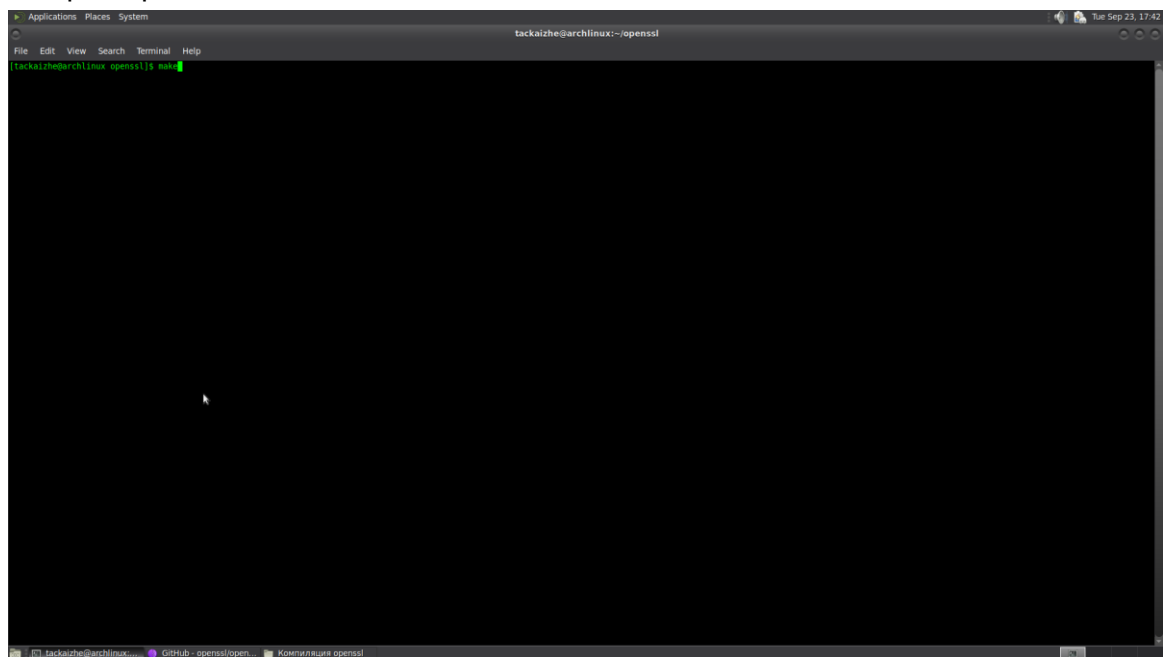
1. Получаем openssl



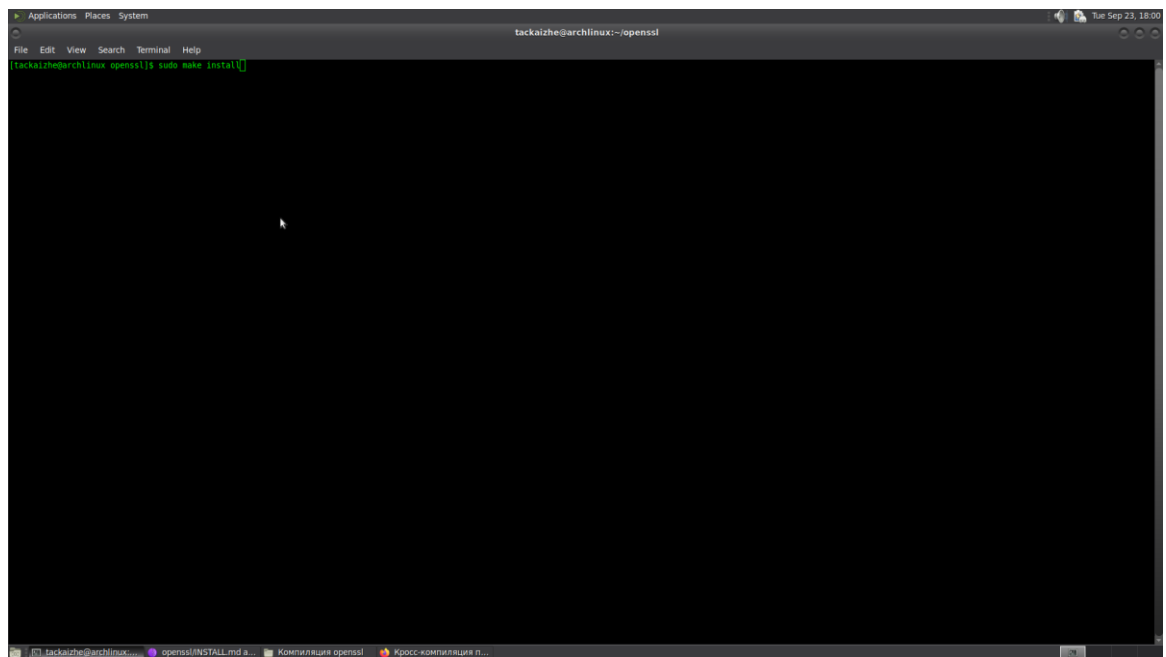
2. Конфигурация openssl



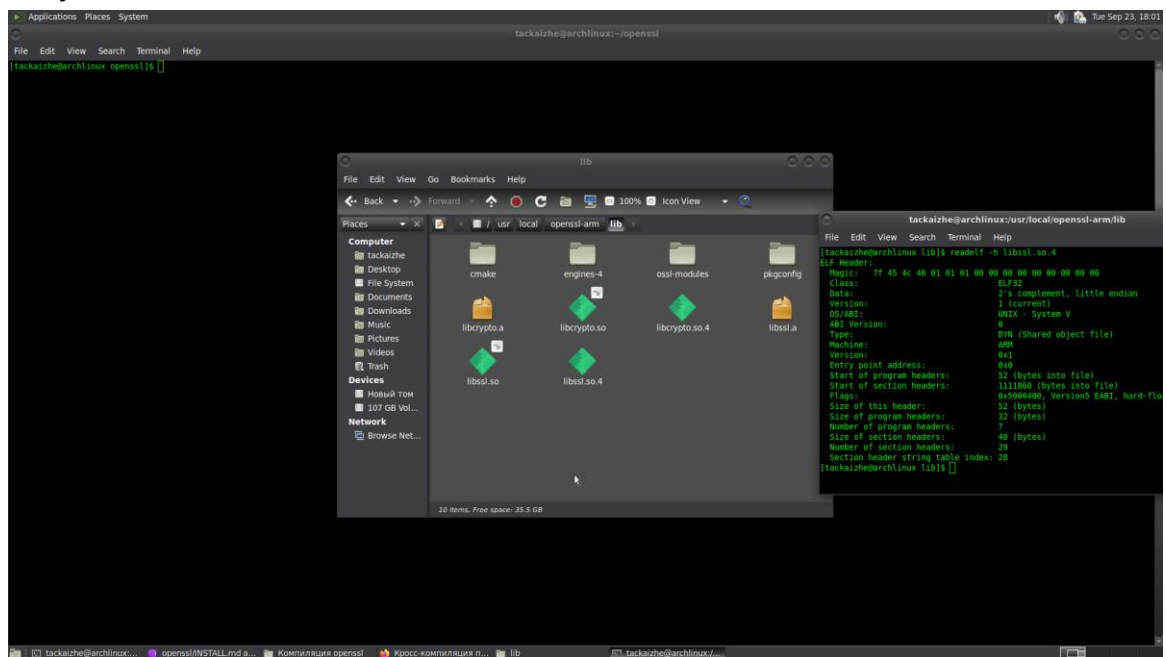
3. Сборка openssl



4. Установка openssl

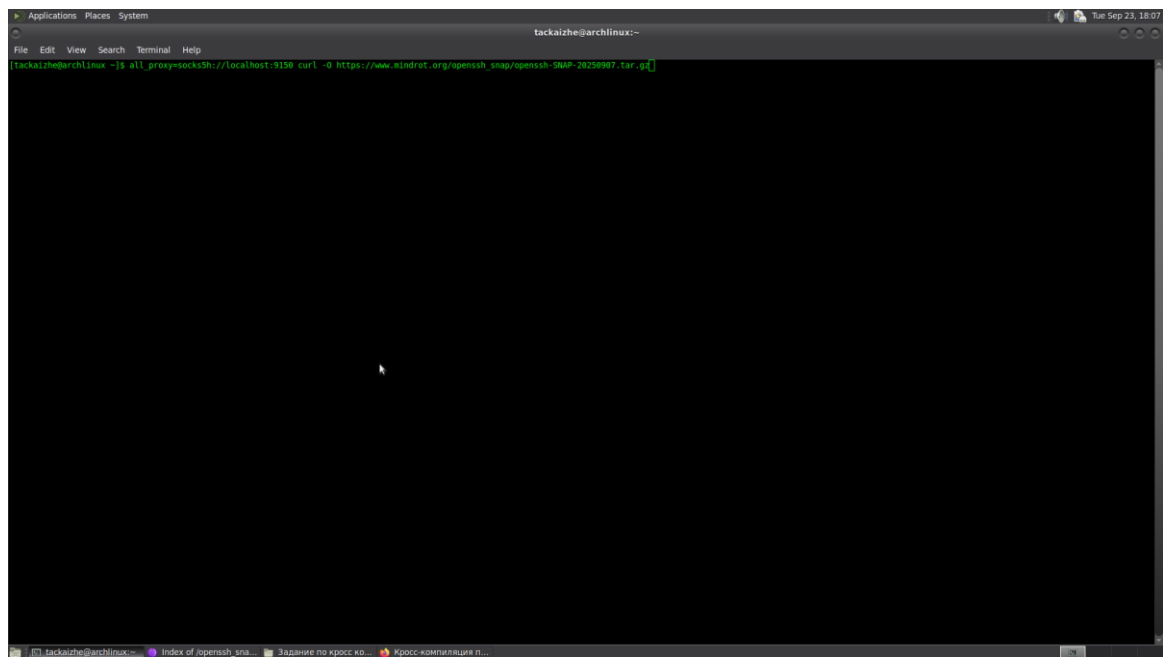


5. Результат

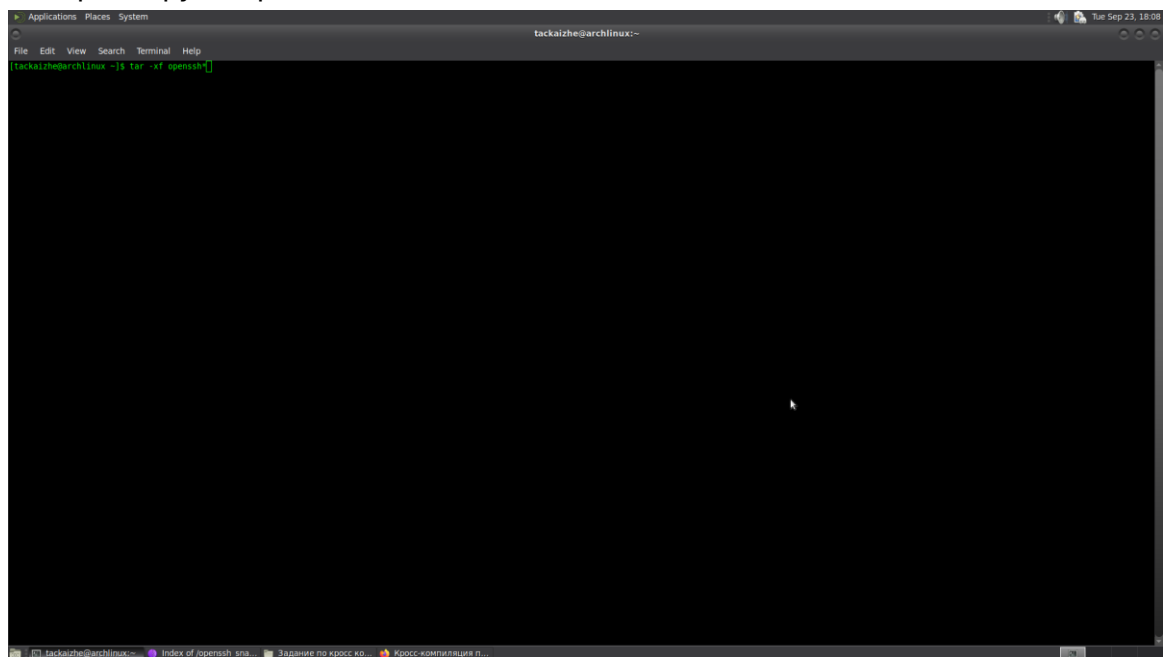


3. Компиляция openssl

1. Получение openssh



2. Разархивируем openssh



3. Конфигурация openssh

```

Applications Places System
File Edit View Search Terminal Help
tackaizhe@archlinux:~$ openssl

--with-lldflags-after Specify additional flags to pass to linker after configure
--with-libc Specify additional libraries to link with
--with-llvm Build main code with -Werror
--with-linux-memlock-onfault Enables memory locking on Linux
--with-solaris-contracks Enable Solaris process contracts (experimental)
--with-solaris-projects Enable Solaris projects (experimental)
--with-solaris-privs Enable Solaris/illumos privileges (experimental)
--with-ssl Enable Digital Unix SIA
--with-ssl-dir=PATH Use ssl in PATH
--without-zlib-version-check Disable zlib version check
--with-libedit=PATH Use libedit support (functionally in PATH)
--with-libedit=[PATH] Enable libedit support for stftp
--with-audit=module Enable audit support (enable=enable,bin,linux)
--with-pie Build Position Independent Executables if possible
--with-security-key-builtin Include builtin u2f/PIID support
--with-security-key-standalone build standalone aa-libfido2 SecurityKeyProvider
--with-ssl-dir=PATH Specify path to openssl installation
--without-openssl-header-check Disable openssl version consistency check
--with-ssl-engine Enable openssl (hardware) ENGINE support
--with-prng=port=PORT read entropy from PRNG=ID/ID TCP local host:PORT
--with-prng=socket=FILE read entropy from PRNG=ID/ID socket file (default=/var/run/egd-pool)
--with-pam Enable PAM support
--with-pam-service=NAME Specify PAM service name
--with-privsep-user=USER Specify non-privileged user for privilege separation
--with-sandbox=style Specify privilege separation sandbox (no, capsicum, darwin, rlimit, seccomp filter)
--with-ssl=engine Enable ssl engine
--with-herberos=PATH Enable Herberos 5 support
--with-privsep-path=xxx Path for privilege separation chroot (default=/var/empty)
--with-sandbox=PATH Specify path to sandbox program
--with-maildir=/path/to/mail Specify your system mail directory
--with-maintype=man[cat]doc Set man page type
--without-shadow Disable shadow password support
--with-ipaddr-display Use ip address instead of hostname in SIDSPLAY
--with-default-path=PATH Specify default PATH environment for server
--with-superuser-path=PATH Specify different path for super-user
--with-4in6 Check for and convert IPv4 in IPv6 mapped addresses
--with-bfd=PATH Enable BFD path support
--with-pid-dir=PATH Specify location of pid,pid file
--with-lastlog=FILE[DIR] Specify lastlog location common locations

Some influential environment variables:
CC          C compiler command
CFLAGS      C compiler flags
LDFLAGS     linker flags, e.g. -Llib dir if you have libraries in a
            nonstandard directory -l lib dir
LIBS        libraries to pass to the linker, e.g. -l library
CPPFLAGS    (Objective) C/C++ preprocessor flags, e.g. -Iinclude dir if
            you have headers in a nonstandard directory -include dir
CPP         C preprocessor

Use these variables to override the choices made by 'configure' or to help
it to find libraries and programs with nonstandard names/locations.

Report bugs to openssl-unix-dev@indist.org.
[tackaizhe@archlinux: ~]$ ARCHWAVE CMake-Linux-gueahbf-gcc -configure --with-ssl-dir=/usr/local/openssl --with-zlib=/usr/local/zlib-arm -hostname=linux-gueahbf --prefix=/usr/local/openssl-arm

[1] tackaizhe@archlinux:~$ Index of openssl.sln... Задание по крипто... Кросс-компиляция n...

```

4. Сборка openssh

```

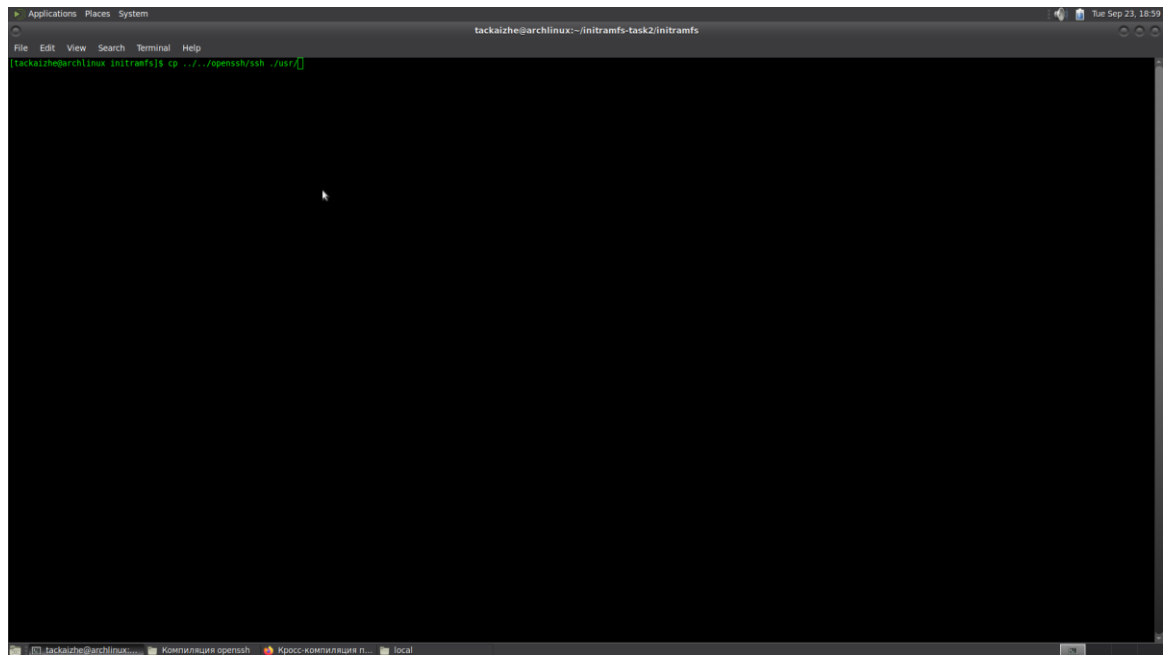
Applications Places System
tackaizhe@archlinux:~$ openssh
File Edit View Search Terminal Help

checking for struct utmp... yes
checking whether BROKEN_GETADDRINFO is declared... no
checking for pthread... no
checking for pthread... no
checking for conch... no
checking for dropper... no
checking for dclient... no
checking for dropbearkey... no
checking for dropbearconvert... no
Configure: creating ./config.status
config.status: creating Makefile
config.status: creating buildlog.sh
config.status: creating openssh.in
config.status: creating openssh.ssh
config.status: creating openssh.compat/Makefile
config.status: creating openssh.compat/regress/Makefile
config.status: creating survey.sh
config.status: creating config.h

OpenSSH has been configured with the following options:
  User binaries: /usr/local/openssh-arm/bin
  System binaries: /usr/local/openssh-arm/bin
  Configuration files: /usr/local/openssh-arm/etc
  Askpass program: /usr/local/openssh-arm/libexec/ssh-askpass
  Manual pages: /usr/local/openssh-arm/share/man/manx
  PID file: /var/run
  Privilege separation chroot path: /var/empty
  sasl default user PAM: /usr/sbin/pam:/usr/sbin/ssh:/usr/local/openssh-arm/bin
  Manpage format: doc
  PAM support: no
  OSF SIA support: no
  KerberosV support: no
  SSLinet support: no
  libedit support: no
  libltdl support: no
  Solaris process contract support: no
  Solaris project support: no
  Solaris privilege support: no
  IP address in DISPLAY hack: no
  Translate v4 in v6 hack: yes
  BSD Auth support: no
  Random number source: OpenSSL internal ONLY
  Privsep sandbox style: seccomp filter
  PKCS#11 support: yes
  U2F/FIDO support: yes

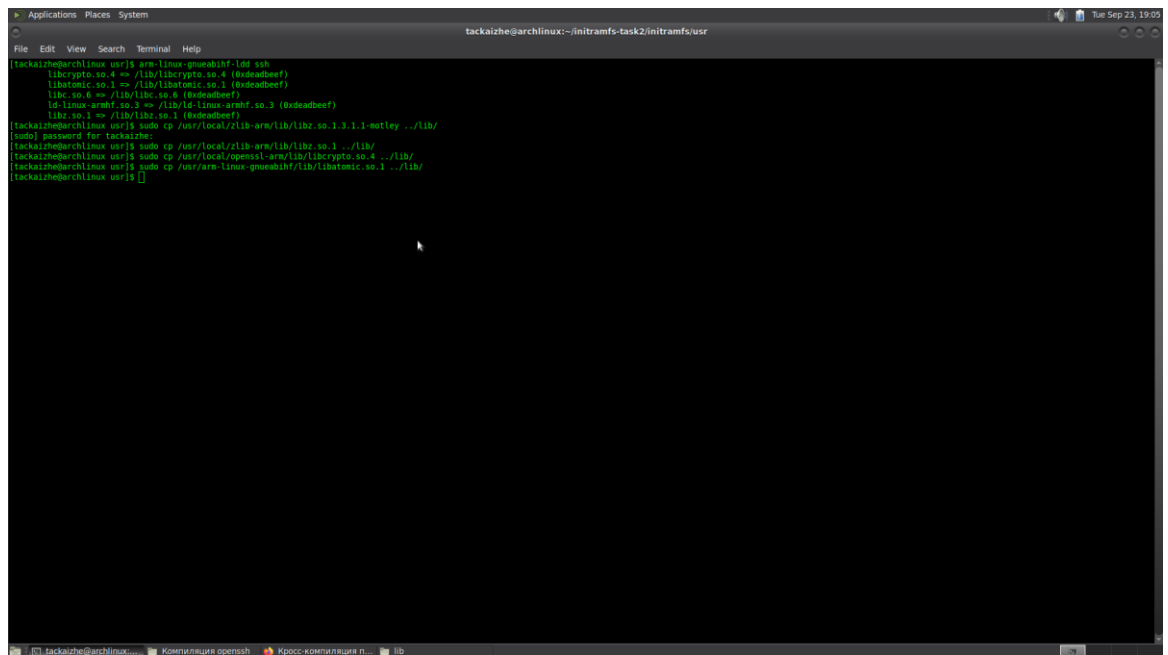
Host: arm-unknown-linux-gnueabi#f
Compiler: arm-linux-gnueabi#f-gcc
Compiler flags: -D__ARM_ARCH=7 -D__ARM_ARCH_7M__ -D__ARM_ARCH_7EM__ -D__ARM_ARCH_7T2__ -D__ARM_ARCH_7T3__ -D__ARM_ARCH_7T4__ -D__ARM_ARCH_7T5__ -D__ARM_ARCH_7T6__ -D__ARM_ARCH_7T7__ -D__ARM_ARCH_7T8__ -D__ARM_ARCH_7T9__ -D__ARM_ARCH_7T10__ -D__ARM_ARCH_7T11__ -D__ARM_ARCH_7T12__ -D__ARM_ARCH_7T13__ -D__ARM_ARCH_7T14__ -D__ARM_ARCH_7T15__ -D__ARM_ARCH_7T16__ -D__ARM_ARCH_7T17__ -D__ARM_ARCH_7T18__ -D__ARM_ARCH_7T19__ -D__ARM_ARCH_7T20__ -D__ARM_ARCH_7T21__ -D__ARM_ARCH_7T22__ -D__ARM_ARCH_7T23__ -D__ARM_ARCH_7T24__ -D__ARM_ARCH_7T25__ -D__ARM_ARCH_7T26__ -D__ARM_ARCH_7T27__ -D__ARM_ARCH_7T28__ -D__ARM_ARCH_7T29__ -D__ARM_ARCH_7T30__ -D__ARM_ARCH_7T31__ -D__ARM_ARCH_7T32__ -D__ARM_ARCH_7T33__ -D__ARM_ARCH_7T34__ -D__ARM_ARCH_7T35__ -D__ARM_ARCH_7T36__ -D__ARM_ARCH_7T37__ -D__ARM_ARCH_7T38__ -D__ARM_ARCH_7T39__ -D__ARM_ARCH_7T40__ -D__ARM_ARCH_7T41__ -D__ARM_ARCH_7T42__ -D__ARM_ARCH_7T43__ -D__ARM_ARCH_7T44__ -D__ARM_ARCH_7T45__ -D__ARM_ARCH_7T46__ -D__ARM_ARCH_7T47__ -D__ARM_ARCH_7T48__ -D__ARM_ARCH_7T49__ -D__ARM_ARCH_7T50__ -D__ARM_ARCH_7T51__ -D__ARM_ARCH_7T52__ -D__ARM_ARCH_7T53__ -D__ARM_ARCH_7T54__ -D__ARM_ARCH_7T55__ -D__ARM_ARCH_7T56__ -D__ARM_ARCH_7T57__ -D__ARM_ARCH_7T58__ -D__ARM_ARCH_7T59__ -D__ARM_ARCH_7T60__ -D__ARM_ARCH_7T61__ -D__ARM_ARCH_7T62__ -D__ARM_ARCH_7T63__ -D__ARM_ARCH_7T64__ -D__ARM_ARCH_7T65__ -D__ARM_ARCH_7T66__ -D__ARM_ARCH_7T67__ -D__ARM_ARCH_7T68__ -D__ARM_ARCH_7T69__ -D__ARM_ARCH_7T70__ -D__ARM_ARCH_7T71__ -D__ARM_ARCH_7T72__ -D__ARM_ARCH_7T73__ -D__ARM_ARCH_7T74__ -D__ARM_ARCH_7T75__ -D__ARM_ARCH_7T76__ -D__ARM_ARCH_7T77__ -D__ARM_ARCH_7T78__ -D__ARM_ARCH_7T79__ -D__ARM_ARCH_7T80__ -D__ARM_ARCH_7T81__ -D__ARM_ARCH_7T82__ -D__ARM_ARCH_7T83__ -D__ARM_ARCH_7T84__ -D__ARM_ARCH_7T85__ -D__ARM_ARCH_7T86__ -D__ARM_ARCH_7T87__ -D__ARM_ARCH_7T88__ -D__ARM_ARCH_7T89__ -D__ARM_ARCH_7T90__ -D__ARM_ARCH_7T91__ -D__ARM_ARCH_7T92__ -D__ARM_ARCH_7T93__ -D__ARM_ARCH_7T94__ -D__ARM_ARCH_7T95__ -D__ARM_ARCH_7T96__ -D__ARM_ARCH_7T97__ -D__ARM_ARCH_7T98__ -D__ARM_ARCH_7T99__ -D__ARM_ARCH_7T100__ -D__ARM_ARCH_7T101__ -D__ARM_ARCH_7T102__ -D__ARM_ARCH_7T103__ -D__ARM_ARCH_7T104__ -D__ARM_ARCH_7T105__ -D__ARM_ARCH_7T106__ -D__ARM_ARCH_7T107__ -D__ARM_ARCH_7T108__ -D__ARM_ARCH_7T109__ -D__ARM_ARCH_7T110__ -D__ARM_ARCH_7T111__ -D__ARM_ARCH_7T112__ -D__ARM_ARCH_7T113__ -D__ARM_ARCH_7T114__ -D__ARM_ARCH_7T115__ -D__ARM_ARCH_7T116__ -D__ARM_ARCH_7T117__ -D__ARM_ARCH_7T118__ -D__ARM_ARCH_7T119__ -D__ARM_ARCH_7T120__ -D__ARM_ARCH_7T121__ -D__ARM_ARCH_7T122__ -D__ARM_ARCH_7T123__ -D__ARM_ARCH_7T124__ -D__ARM_ARCH_7T125__ -D__ARM_ARCH_7T126__ -D__ARM_ARCH_7T127__ -D__ARM_ARCH_7T128__ -D__ARM_ARCH_7T129__ -D__ARM_ARCH_7T130__ -D__ARM_ARCH_7T131__ -D__ARM_ARCH_7T132__ -D__ARM_ARCH_7T133__ -D__ARM_ARCH_7T134__ -D__ARM_ARCH_7T135__ -D__ARM_ARCH_7T136__ -D__ARM_ARCH_7T137__ -D__ARM_ARCH_7T138__ -D__ARM_ARCH_7T139__ -D__ARM_ARCH_7T140__ -D__ARM_ARCH_7T141__ -D__ARM_ARCH_7T142__ -D__ARM_ARCH_7T143__ -D__ARM_ARCH_7T144__ -D__ARM_ARCH_7T145__ -D__ARM_ARCH_7T146__ -D__ARM_ARCH_7T147__ -D__ARM_ARCH_7T148__ -D__ARM_ARCH_7T149__ -D__ARM_ARCH_7T150__ -D__ARM_ARCH_7T151__ -D__ARM_ARCH_7T152__ -D__ARM_ARCH_7T153__ -D__ARM_ARCH_7T154__ -D__ARM_ARCH_7T155__ -D__ARM_ARCH_7T156__ -D__ARM_ARCH_7T157__ -D__ARM_ARCH_7T158__ -D__ARM_ARCH_7T159__ -D__ARM_ARCH_7T160__ -D__ARM_ARCH_7T161__ -D__ARM_ARCH_7T162__ -D__ARM_ARCH_7T163__ -D__ARM_ARCH_7T164__ -D__ARM_ARCH_7T165__ -D__ARM_ARCH_7T166__ -D__ARM_ARCH_7T167__ -D__ARM_ARCH_7T168__ -D__ARM_ARCH_7T169__ -D__ARM_ARCH_7T170__ -D__ARM_ARCH_7T171__ -D__ARM_ARCH_7T172__ -D__ARM_ARCH_7T173__ -D__ARM_ARCH_7T174__ -D__ARM_ARCH_7T175__ -D__ARM_ARCH_7T176__ -D__ARM_ARCH_7T177__ -D__ARM_ARCH_7T178__ -D__ARM_ARCH_7T179__ -D__ARM_ARCH_7T180__ -D__ARM_ARCH_7T181__ -D__ARM_ARCH_7T182__ -D__ARM_ARCH_7T183__ -D__ARM_ARCH_7T184__ -D__ARM_ARCH_7T185__ -D__ARM_ARCH_7T186__ -D__ARM_ARCH_7T187__ -D__ARM_ARCH_7T188__ -D__ARM_ARCH_7T189__ -D__ARM_ARCH_7T190__ -D__ARM_ARCH_7T191__ -D__ARM_ARCH_7T192__ -D__ARM_ARCH_7T193__ -D__ARM_ARCH_7T194__ -D__ARM_ARCH_7T195__ -D__ARM_ARCH_7T196__ -D__ARM_ARCH_7T197__ -D__ARM_ARCH_7T198__ -D__ARM_ARCH_7T199__ -D__ARM_ARCH_7T200__ -D__ARM_ARCH_7T201__ -D__ARM_ARCH_7T202__ -D__ARM_ARCH_7T203__ -D__ARM_ARCH_7T204__ -D__ARM_ARCH_7T205__ -D__ARM_ARCH_7T206__ -D__ARM_ARCH_7T207__ -D__ARM_ARCH_7T208__ -D__ARM_ARCH_7T209__ -D__ARM_ARCH_7T210__ -D__ARM_ARCH_7T211__ -D__ARM_ARCH_7T212__ -D__ARM_ARCH_7T213__ -D__ARM_ARCH_7T214__ -D__ARM_ARCH_7T215__ -D__ARM_ARCH_7T216__ -D__ARM_ARCH_7T217__ -D__ARM_ARCH_7T218__ -D__ARM_ARCH_7T219__ -D__ARM_ARCH_7T220__ -D__ARM_ARCH_7T221__ -D__ARM_ARCH_7T222__ -D__ARM_ARCH_7T223__ -D__ARM_ARCH_7T224__ -D__ARM_ARCH_7T225__ -D__ARM_ARCH_7T226__ -D__ARM_ARCH_7T227__ -D__ARM_ARCH_7T228__ -D__ARM_ARCH_7T229__ -D__ARM_ARCH_7T230__ -D__ARM_ARCH_7T231__ -D__ARM_ARCH_7T232__ -D__ARM_ARCH_7T233__ -D__ARM_ARCH_7T234__ -D__ARM_ARCH_7T235__ -D__ARM_ARCH_7T236__ -D__ARM_ARCH_7T237__ -D__ARM_ARCH_7T238__ -D__ARM_ARCH_7T239__ -D__ARM_ARCH_7T240__ -D__ARM_ARCH_7T241__ -D__ARM_ARCH_7T242__ -D__ARM_ARCH_7T243__ -D__ARM_ARCH_7T244__ -D__ARM_ARCH_7T245__ -D__ARM_ARCH_7T246__ -D__ARM_ARCH_7T247__ -D__ARM_ARCH_7T248__ -D__ARM_ARCH_7T249__ -D__ARM_ARCH_7T250__ -D__ARM_ARCH_7T251__ -D__ARM_ARCH_7T252__ -D__ARM_ARCH_7T253__ -D__ARM_ARCH_7T254__ -D__ARM_ARCH_7T255__ -D__ARM_ARCH_7T256__ -D__ARM_ARCH_7T257__ -D__ARM_ARCH_7T258__ -D__ARM_ARCH_7T259__ -D__ARM_ARCH_7T260__ -D__ARM_ARCH_7T261__ -D__ARM_ARCH_7T262__ -D__ARM_ARCH_7T263__ -D__ARM_ARCH_7T264__ -D__ARM_ARCH_7T265__ -D__ARM_ARCH_7T266__ -D__ARM_ARCH_7T267__ -D__ARM_ARCH_7T268__ -D__ARM_ARCH_7T269__ -D__ARM_ARCH_7T270__ -D__ARM_ARCH_7T271__ -D__ARM_ARCH_7T272__ -D__ARM_ARCH_7T273__ -D__ARM_ARCH_7T274__ -D__ARM_ARCH_7T275__ -D__ARM_ARCH_7T276__ -D__ARM_ARCH_7T277__ -D__ARM_ARCH_7T278__ -D__ARM_ARCH_7T279__ -D__ARM_ARCH_7T280__ -D__ARM_ARCH_7T281__ -D__ARM_ARCH_7T282__ -D__ARM_ARCH_7T283__ -D__ARM_ARCH_7T284__ -D__ARM_ARCH_7T285__ -D__ARM_ARCH_7T286__ -D__ARM_ARCH_7T287__ -D__ARM_ARCH_7T288__ -D__ARM_ARCH_7T289__ -D__ARM_ARCH_7T290__ -D__ARM_ARCH_7T291__ -D__ARM_ARCH_7T292__ -D__ARM_ARCH_7T293__ -D__ARM_ARCH_7T294__ -D__ARM_ARCH_7T295__ -D__ARM_ARCH_7T296__ -D__ARM_ARCH_7T297__ -D__ARM_ARCH_7T298__ -D__ARM_ARCH_7T299__ -D__ARM_ARCH_7T300__ -D__ARM_ARCH_7T301__ -D__ARM_ARCH_7T302__ -D__ARM_ARCH_7T303__ -D__ARM_ARCH_7T304__ -D__ARM_ARCH_7T305__ -D__ARM_ARCH_7T306__ -D__ARM_ARCH_7T307__ -D__ARM_ARCH_7T308__ -D__ARM_ARCH_7T3
```

5. Копируем ssh в папку initramfs



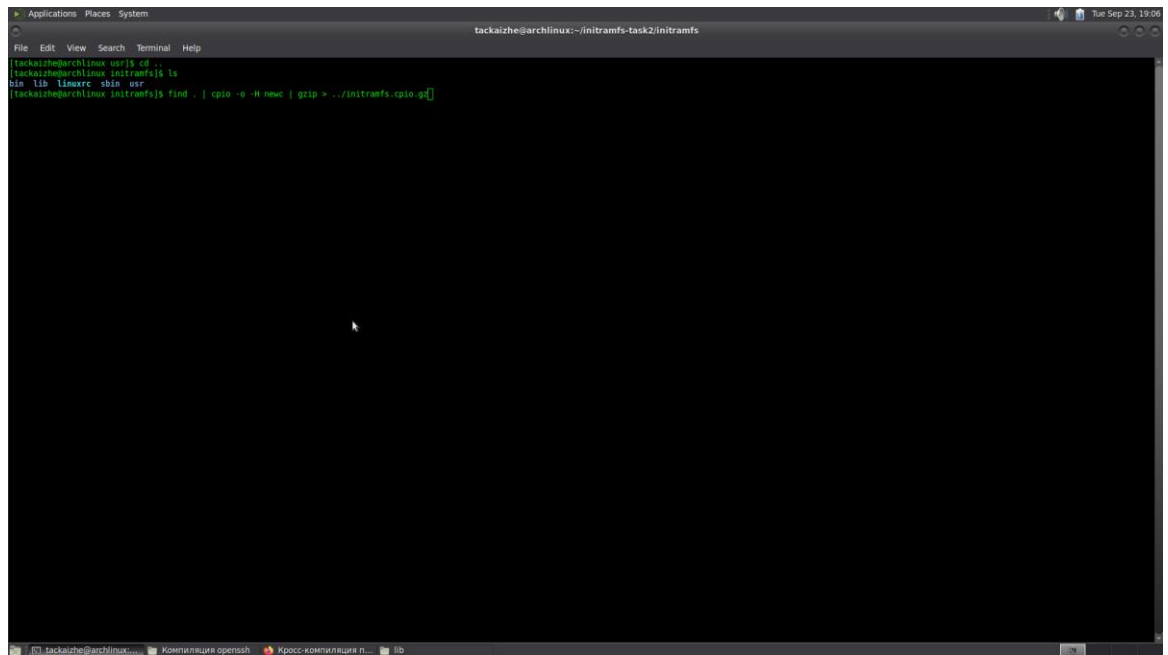
```
tackaizhe@archlinux: ~/initramfs-task2/initramfs
[ackaizhe@archlinux initramfs]$ cp ../../openssh/ssh ./usr/
```

6. Получаем все зависимости



```
tackaizhe@archlinux: ~/initramfs-task2/initramfs/usr
[ackaizhe@archlinux usr]$ arm-linux-gnueabihf-ldd ssh
        libc.so.4 => /lib/libc.so.4 (0xdeadbeef)
        libatomic.so.1 => /lib/libatomic.so.1 (0xdeadbeef)
        libc.so.6 => /lib/libc.so.6 (0xdeadbeef)
        ld-linux-armhf.so.3 => /lib/ld-linux-armhf.so.3 (0xdeadbeef)
        libz.so.1 => /lib/libz.so.1 (0xdeadbeef)
[ackaizhe@archlinux usr]$ sudo cp /usr/local/lib-arm/lib/libz.so.1.3.1-1-motley ../lib/
[sudo] password for tackaizhe:
[ackaizhe@archlinux usr]$ sudo cp /usr/local/lib-arm/lib/libz.so.1 ../lib/
[ackaizhe@archlinux usr]$ sudo cp /usr/local/openssl-arm/lib/libcrypto.so.4 ../lib/
[ackaizhe@archlinux usr]$ sudo cp /usr/arm-linux-gnueabihf/lib/libatomic.so.1 ../lib/
[ackaizhe@archlinux usr]$
```

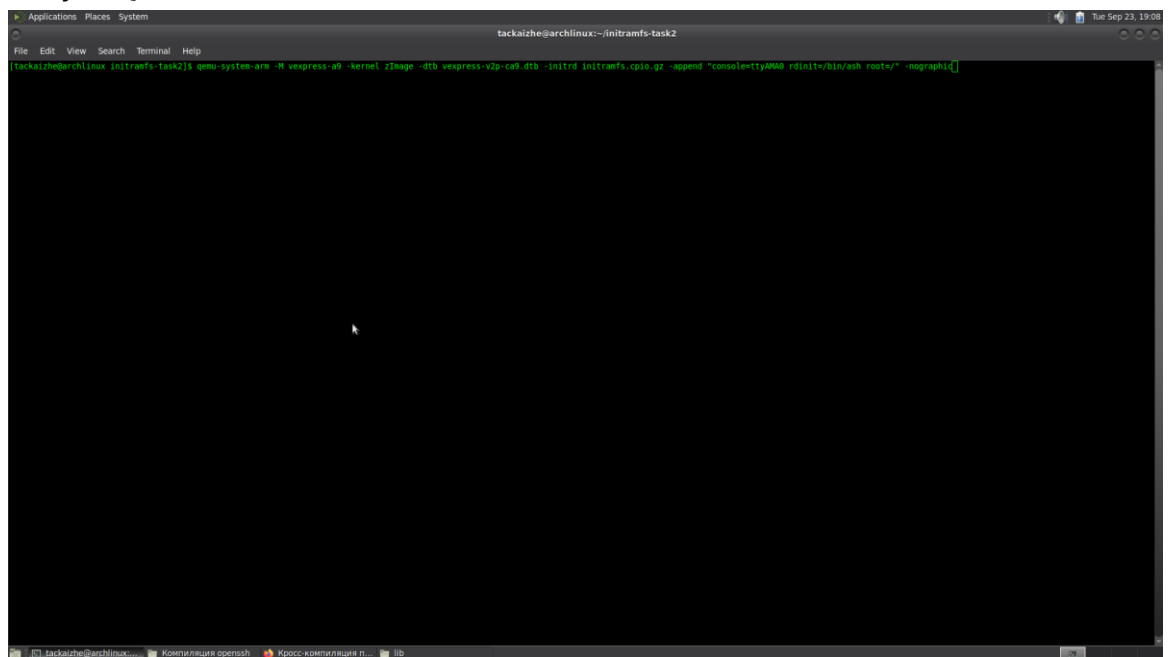

7. Собираем архив



A terminal window titled 'tackaizhe@archlinux: ~/initramfs-task2/initramfs'. The user is in the 'initramfs' directory. They run 'ls' and see 'bin lib linuxrc/sbin usr'. Then they run 'find . | cpio -o -H newc | gzip > ../initramfs.cpio.gz'. The terminal output shows the command being executed and the resulting file size.

```
tackaizhe@archlinux: ~/initramfs-task2/initramfs
File Edit View Search Terminal Help
tackaizhe@archlinux: ~/initramfs-task2/initramfs$ cd ..
tackaizhe@archlinux: ~/initramfs-task2$ ls
bin lib linuxrc/sbin usr
tackaizhe@archlinux: ~/initramfs-task2$ find . | cpio -o -H newc | gzip > ../initramfs.cpio.gz
```

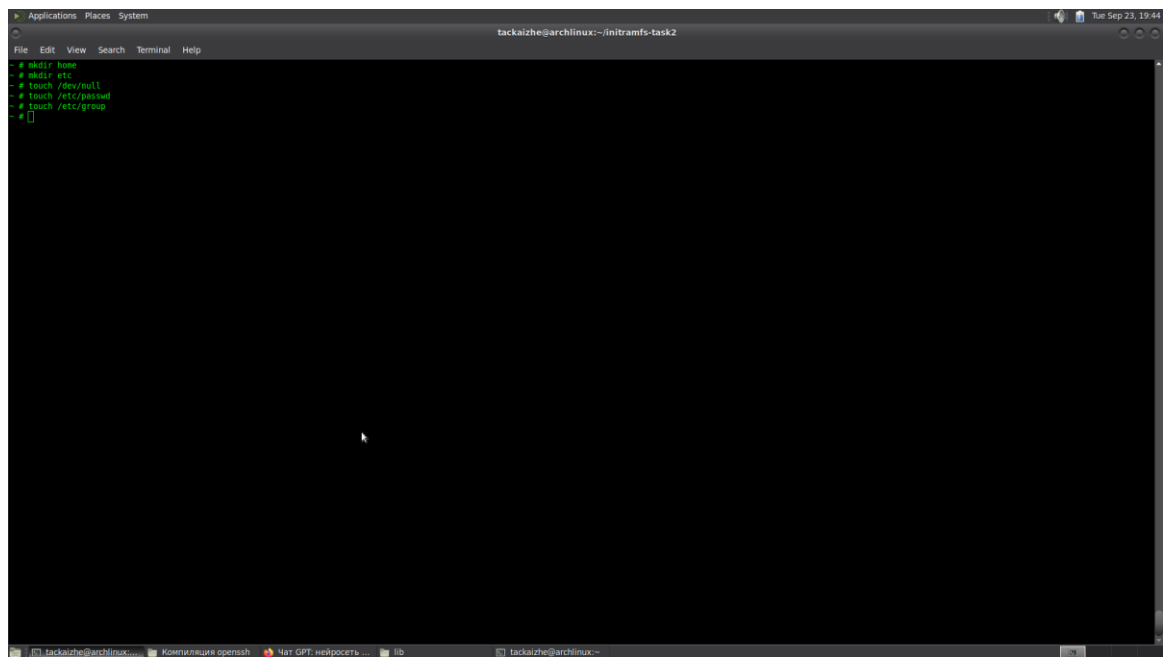
8. Запуск QEMU



A terminal window titled 'tackaizhe@archlinux: ~/initramfs-task2'. The user runs 'qemu-system-arm -M vespress-a9 -kernel zImage -dtb vespress-v2p-ca9.dtb -initrd initramfs.cpio.gz -append "console=ttyAMA0 rdinit=/bin/rash root=/ -nographic'.

```
tackaizhe@archlinux: ~/initramfs-task2
File Edit View Search Terminal Help
tackaizhe@archlinux: ~/initramfs-task2$ qemu-system-arm -M vespress-a9 -kernel zImage -dtb vespress-v2p-ca9.dtb -initrd initramfs.cpio.gz -append "console=ttyAMA0 rdinit=/bin/rash root=/ -nographic"
```

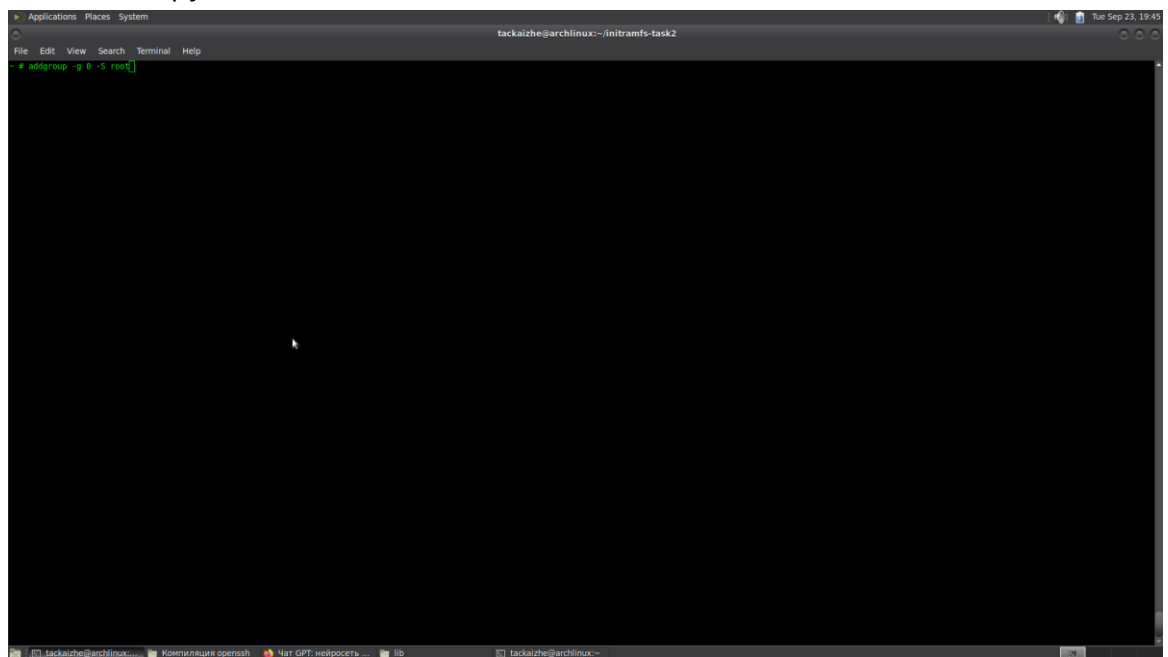
9. Создание папок и файлов для работы ssh



```
tackaizhe@archlinux: ~/initramfs-task2
# mkdir home
# mkdir etc
# touch /dev/null
# touch /etc/passwd
# touch /etc/group
#
```

The screenshot shows a terminal window titled "tackaizhe@archlinux:~/initramfs-task2". The user has executed a series of commands to create the necessary directory structure for SSH: creating the 'home' and 'etc' directories, and then creating empty files for '/dev/null', '/etc/passwd', and '/etc/group'. The terminal output shows each command being executed successfully, with the prompt returning to the root symbol '#' after each command.

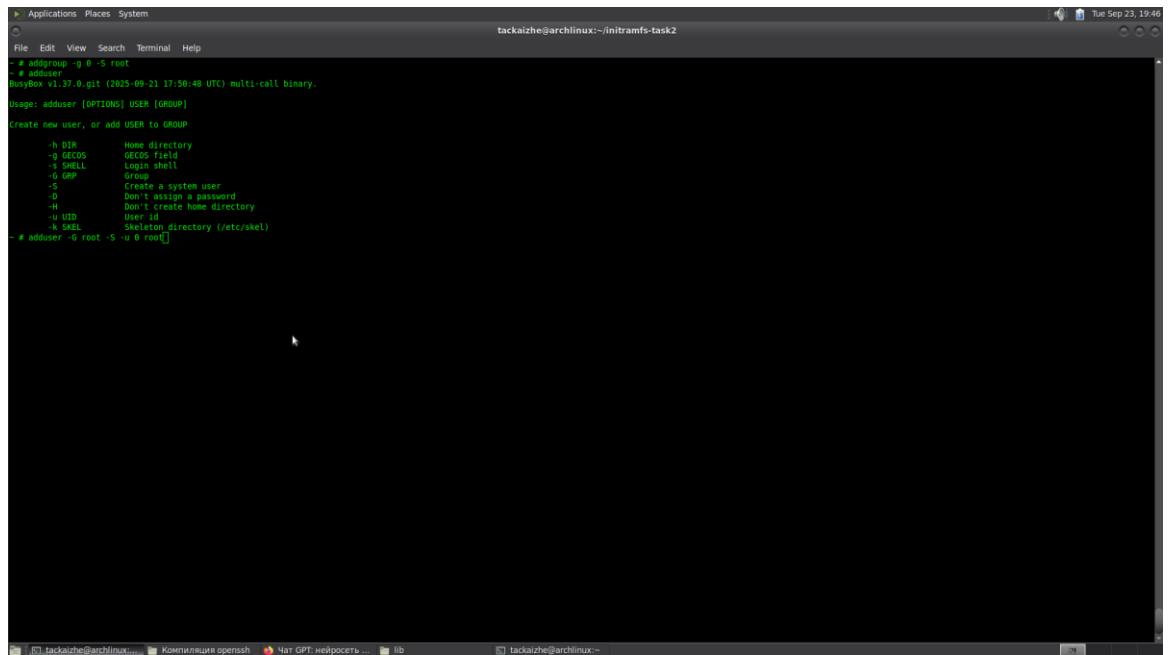
10. Создание группы



```
tackaizhe@archlinux: ~/initramfs-task2
# addgroup -g 0 -s root
```

The screenshot shows the same terminal window as before, but now with the command to create a group. The user has entered the command 'addgroup -g 0 -s root', which creates a new group named 'root' with a group ID of 0 and a shell of '/s'. The terminal output shows the command being executed successfully, with the prompt returning to the root symbol '#'.

11. Создание системного пользователя



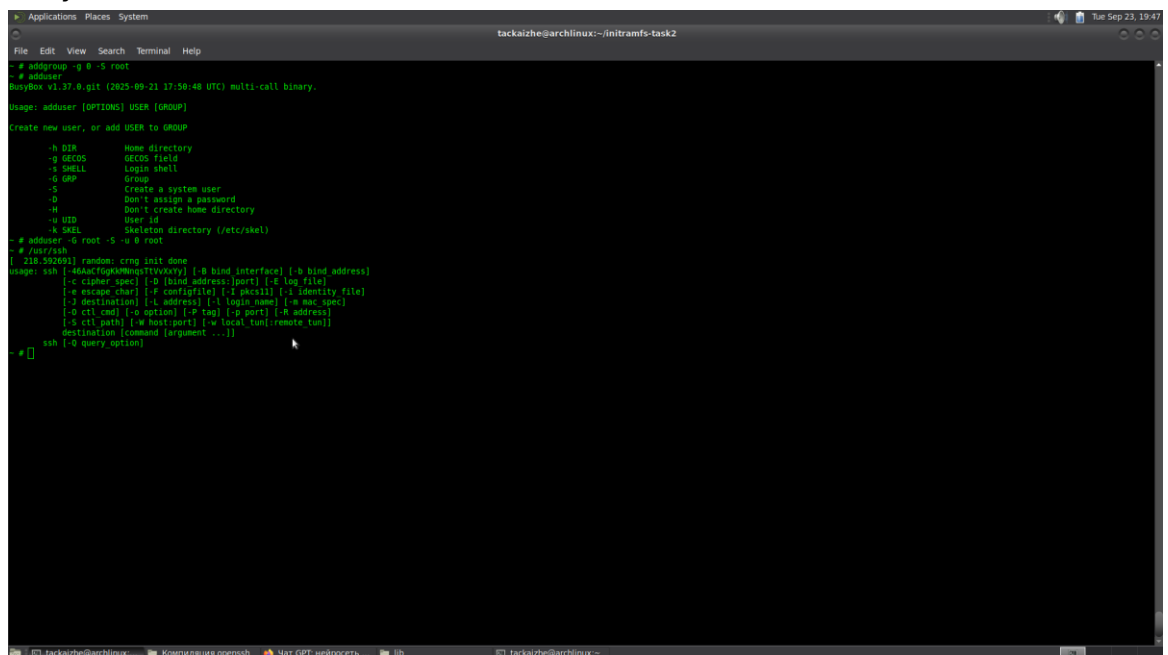
```
Applications Places System
tackaizhe@archlinux:~/initramfs-task2
File Edit View Search Terminal Help
# addgroup -g 0 -s root
# adduser
BusyBox v1.37.0.git (2025-09-21 17:39:48 UTC) multi-call binary.

Usage: adduser [OPTIONS] USER [GROUP]

Create new user, or add USER to GROUP

-h DIR      Home directory
-b GEOS     GEOS field
-s SHELL    Login shell
-g GID      Group
-S          Create a system user
-D          Don't assign a password
-H          Don't create home directory
-u UID      User id
-k SKEL     Skeleton directory (/etc/skel)
# adduser -g root -s -u 0 root[]
```

12. Запуск ssh



```
Applications Places System
tackaizhe@archlinux:~/initramfs-task2
File Edit View Search Terminal Help
# addgroup -g 0 -s root
# adduser
BusyBox v1.37.0.git (2025-09-21 17:39:48 UTC) multi-call binary.

Usage: adduser [OPTIONS] USER [GROUP]

Create new user, or add USER to GROUP

-h DIR      Home directory
-b GEOS     GEOS field
-s SHELL    Login shell
-g GID      Group
-S          Create a system user
-D          Don't assign a password
-H          Don't create home directory
-u UID      User id
-k SKEL     Skeleton directory (/etc/skel)
# adduser -g root -s -u 0 root
# /usr/ssh
[ Zlib:592681] random: crng init done
Usage: ssh [-i identity_file] [-o option] [-p port] [-R rport] [-L local_bind_address] [-N] [-X] [-Y] [-C] [-E escape_char] [-F config_file] [-S macspec] [-A] [-a cipher_spec] [-D bind_address:port] [-d log_file]
[-o ctl_cmd] [-o option] [-p tag] [-p port] [-R address]
[-S ctl_path] [-W host:port] [-w local_tun|remote_tun]
destination [command [argument ...]]
ssh [-O query_option]
```