

2 Практика 1 раздел

```
eltex-pg1-v5@eltex-2025-autumn:~$ export MYUSER=reese
eltex-pg1-v5@eltex-2025-autumn:~$ 
eltex-pg1-v5@eltex-2025-autumn:~$ script -a practice2_${MYUSER}_part1.log
Script started, output log file is 'practice2_reese_part1.log'.
```

1

Создайте на сервере для 1 практики ключ ssh при помощи программы ssh-keygen

```
eltex-pg1-v5@eltex-2025-autumn:~$ ssh-keygen -t rsa -b 4096 -C "practice_key"
Generating public/private rsa key pair.
Enter file in which to save the key (/home/eltex-pg1-v5/.ssh/id_rsa):
Created directory '/home/eltex-pg1-v5/.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/eltex-pg1-v5/.ssh/id_rsa
Your public key has been saved in /home/eltex-pg1-v5/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:SvgTmGqEWaYAtTr5WmLQxH6nIW8qBawKBaxXH8IwUbI practice_key
The key's randomart image is:
+---[RSA 4096]---+
|o.*=.          |
|oo =+ .        |
|+.E. o .       |
|+&o  +.        |
|X+= * + S      |
|++.= * o       |
|+o= + +        |
|+= o  .        |
|...            |
+----[SHA256]-----+
```

2

Скопируйте созданный ключ на сервер для 2 практики для пользователя root при помощи программы ssh-copy-id

```
eltex-pg1-v5@eltex-2025-autumn:~$ ssh-copy-id root@172.16.9.179
/usr/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "/home/eltex-pg1-v5/.ssh/id_rsa.pub"
The authenticity of host '172.16.9.179 (172.16.9.179)' can't be established.
ED25519 key fingerprint is SHA256:YNVzj+RtetZfXv5XUn/CUjeEcaMD4eg3jy8EuGGIS+o.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out any that are already installed
/usr/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompted now it is to install the new keys
root@172.16.9.179's password:

Number of key(s) added: 1

Now try logging into the machine, with: "ssh 'root@172.16.9.179'"
and check to make sure that only the key(s) you wanted were added.

eltex-pg1-v5@eltex-2025-autumn:~$
```

3

Подключитесь к серверу для 2 практики под пользователем root и сравните содержимое файла открытого ключа на сервере 1 ~/.ssh/*.pub и файла ~/.ssh/authorized_keys на сервере для 2 практики, а так же права доступа для каждого из файлов

Все последующие пункты – для сервера 2 практики

```
eltex-pg1-v5@eltex-2025-autumn:~$ ssh root@172.16.9.179
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-55-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Sun Oct 19 12:36:38 PM UTC 2025

System load:  0.0          Processes:      110
Usage of /:   40.8% of 14.66GB Users logged in:   0
Memory usage: 16%         IPv4 address for ens18: 172.16.9.179
Swap usage:   0%

 * Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
   just raised the bar for easy, resilient and secure K8s cluster deployment.

https://ubuntu.com/engage/secure-kubernetes-at-the-edge

Expanded Security Maintenance for Applications is not enabled.

83 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

*** System restart required ***
root@eltex-practice2-pg1-v5:~#
```

1 серверс SSH

```
eltex-pg1-v5@eltex-2025-autumn:~$ cat ~/.ssh/id_rsa.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQCAQCruptxen0+WP9QasnX38E/2dW6SwJn7LV1Ss8+/ahHsk/8eXMH7iuSEdu5xg4L/2tNT0U0e5AZ0sWQWZz3
+53+y1fZUdC4UZqWcHy/pr6BV2vG0B9AZdzthWObt+Kiu8ZRX8cRTohrxuSudkgmNHQ9cfeHMGxZs392eH4n3aU9P+d8648dZSI2iKRdhunySACu233f010c
cPEop0fY35XeJyaPZKFy+HH6Q/Y9WuSALNU87anZwLM7xvvlbkM+5VAubE3vqoyW3mfdsQa08zRnmWjSIowLqCkxKOGmhh3X+r6Q8BD/zHHAp3R0BrWKMj
FQsedovDZDJwowLoTzbVIAuuTyZxuUiQSIWEg0LeEZ31WYjRuz9B59psqWxsvoi0ZP+GC3aGovjZx3/AMnCEzEOs2uVdc20GsJXZdNbQ+VLyAMh1LgJc12j
A85JZbkjwlvZ061qK5XvgjxrOr6YJxV55G0W4Xyz2rBT2Xo8zN8t12tG1bzvhkpb5vpvHBUKGT5RIkCR4Z13RZL01ctXLvxPkPgIP6dOI0M1v/qHtTz25y
wIYAj7m+68hKDruckScbCyLDMtY+j2XePLhkHXF6dd180cBV6aN/IdoC/ezCwa7QNEGkT0udJ/2Kd1FTCGuhdTKW0r19Iu6jtTuPnM5JW4AYGbV/ud35b9Dw
6Q== practice_key
```

Права доступа 1 сервера

```
eltex-pg1-v5@eltex-2025-autumn:~$ ls -la ~/.ssh/id_rsa.pub
-rw-r--r-- 1 eltex-pg1-v5 eltex-pg1-v5 738 Oct 19 19:16 /home/eltex-pg1-v5/.ssh/id_rsa.pub
```

2 servera

```
*** System restart required ***
root@eltex-practice2-pg1-v5:~# cat ~/.ssh/authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQCAQCruptxen0+WP9QasnX38E/2dW6SwJn7LV1Ss8+/ahHsk/8eXMH7iuSEdu5xg4L/2tNT0U0e5AZ0sWQWZz3
+53+y1fZUdC4UZqWcHy/pr6BV2vG0B9AZdzthWObt+Kiu8ZRX8cRTohrxuSudkgmNHQ9cfeHMGxZs392eH4n3aU9P+d8648dZSI2iKRdhunySACu233f010c
cPEop0fY35XeJyaPZKFy+HH6Q/Y9WuSALNU87anZwLM7xvvlbkM+5VAubE3vqoyW3mfdsQa08zRnmWjSIowLqCkxKOGmhh3X+r6Q8BD/zHHAp3R0BrWKMj
FQsedovDZDJwowLoTzbVIAuuTyZxuUiQSIWEg0LeEZ31WYjRuz9B59psqWxsvoi0ZP+GC3aGovjZx3/AMnCEzEOs2uVdc20GsJXZdNbQ+VLyAMh1LgJc12j
A85JZbkjwlvZ061qK5XvgjxrOr6YJxV55G0W4Xyz2rBT2Xo8zN8t12tG1bzvhkpb5vpvHBUKGT5RIkCR4Z13RZL01ctXLvxPkPgIP6dOI0M1v/qHtTz25y
wIYAj7m+68hKDruckScbCyLDMtY+j2XePLhkHXF6dd180cBV6aN/IdoC/ezCwa7QNEGkT0udJ/2Kd1FTCGuhdTKW0r19Iu6jtTuPnM5JW4AYGbV/ud35b9Dw
6Q== practice_key
root@eltex-practice2-pg1-v5:~#
root@eltex-practice2-pg1-v5:~# ls -la ~/.ssh/authorized_keys
-rw----- 1 root root 738 Oct 19 12:36 /root/.ssh/authorized_keys
root@eltex-practice2-pg1-v5:~#
```

4

Создайте пользователя user1 при помощи команды useradd, укажите необходимость создания

домашнего каталога и shell /bin/bash. Создайте пароль пользователю user1

```
root@eltex-practice2-pg1-v5:~# ls -la ~/.ssh/authorized_keys
-rw----- 1 root root 738 Oct 19 12:36 /root/.ssh/authorized_keys
root@eltex-practice2-pg1-v5:~# useradd -m -s /bin/bash user1
root@eltex-practice2-pg1-v5:~# passwd user1
New password:
Retype new password:
passwd: password updated successfully
root@eltex-practice2-pg1-v5:~#
```

5

Создайте пользователя user2 и user3 при помощи команды adduser

```
root@eltex-practice2-pg1-v5:~# adduser user2
info: Adding user `user2' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group `user2' (1002) ...
info: Adding new user `user2' (1002) with group `user2 (1002)' ...
info: Creating home directory `/home/user2' ...
info: Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for user2
Enter the new value, or press ENTER for the default
  Full Name []:
  Room Number []: u
  Work Phone []: 34
  Home Phone []: 3
  Other []: 3
Is the information correct? [Y/n] y
info: Adding new user `user2' to supplemental / extra groups `users' ...
info: Adding user `user2' to group `users' ...
root@eltex-practice2-pg1-v5:~# adduser user3
info: Adding user `user3' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group `user3' (1003) ...
info: Adding new user `user3' (1003) with group `user3 (1003)' ...
info: Creating home directory `/home/user3' ...
info: Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for user3
Enter the new value, or press ENTER for the default
  Full Name []: USER
  Room Number []: 9
  Work Phone []: 9432
  Home Phone []: 324
  Other []:
Is the information correct? [Y/n] y
info: Adding new user `user3' to supplemental / extra groups `users' ...
info: Adding user `user3' to group `users' ...
root@eltex-practice2-pg1-v5:~#
```

6

Для пользователя user3 смените shell на /usr/sbin/nologin (man usermod), выполните вход под этим пользователем при помощи утилиты su, сначала без дополнительных параметров, затем с явным указанием shell /bin/bash в параметрах su. Выполните logout

```
root@eltex-practice2-pg1-v5:~# usermod -s /usr/sbin/nologin user3
root@eltex-practice2-pg1-v5:~#
root@eltex-practice2-pg1-v5:~# su -s /bin/bash user3
user3@eltex-practice2-pg1-v5:/root$ whoami
user3
```

7

Создайте новую группу и добавьте её для всех пользователей user* как дополнительную,

посмотрите список групп всех пользователей user*

```
root@eltex-practice2-pg1-v5:~# groupadd practice_group
root@eltex-practice2-pg1-v5:~# usermod -a -G practice_group user1
root@eltex-practice2-pg1-v5:~# usermod -a -G practice_group user2
root@eltex-practice2-pg1-v5:~# usermod -a -G practice_group user3
root@eltex-practice2-pg1-v5:~# groups user1
user1 : user1 practice_group
root@eltex-practice2-pg1-v5:~# groups user2
user2 : user2 users practice_group
root@eltex-practice2-pg1-v5:~# groups user3
user3 : user3 users practice_group
root@eltex-practice2-pg1-v5:~#
```

9

Создайте каталог /opt/share и назначьте группу из предыдущего пункта его владельцем,

установите на этот каталог бит SGID, права для группы rwx.

```
root@eltex-practice2-pg1-v5:~# mkdir -p /opt/share
root@eltex-practice2-pg1-v5:~# chgrp practice_group /opt/share
root@eltex-practice2-pg1-v5:~# chmod 2770 /opt/share
root@eltex-practice2-pg1-v5:~#
root@eltex-practice2-pg1-v5:~# ls -ld /opt/share
drwxrws--- 2 root practice_group 4096 Oct 19 12:50 /opt/share
root@eltex-practice2-pg1-v5:~#
```

10

Для user1 задайте permanently umask, снимающий право чтения для «прочих»

```
user1@eltex-practice2-pg1-v5:~$ echo "umask 027" >> ~/.bashrc
user1@eltex-practice2-pg1-v5:~$ umask
0002
user1@eltex-practice2-pg1-v5:~$ exit
logout
root@eltex-practice2-pg1-v5:~#
```

11

Создайте каждым из пользователей новые файлы в каталоге /opt/share, удалите файлы

созданные другими пользователями

```
root@eltex-practice2-pg1-v5:~# su - user1 -c "echo 'file from user1' > /opt/share/user1_file.txt"
root@eltex-practice2-pg1-v5:~# su - user2 -c "echo 'file from user2' > /opt/share/user2_file.txt"
root@eltex-practice2-pg1-v5:~# su - user1 -c "rm /opt/share/user2_file.txt"
root@eltex-practice2-pg1-v5:~# su - user2 -c "echo 'file from user2 again' > /opt/share/user2_file.txt"
root@eltex-practice2-pg1-v5:~# ls -la /opt/share/
total 16
drwxrws--- 2 root practice_group 4096 Oct 19 12:56 .
drwxr-xr-x 3 root root 4096 Oct 19 12:50 ..
-rw-rw-r-- 1 user1 practice_group 16 Oct 19 12:55 user1_file.txt
-rw-rw-r-- 1 user2 practice_group 22 Oct 19 12:56 user2_file.txt
root@eltex-practice2-pg1-v5:~# ls -l /opt/share/
total 8
-rw-rw-r-- 1 user1 practice_group 16 Oct 19 12:55 user1_file.txt
-rw-rw-r-- 1 user2 practice_group 22 Oct 19 12:56 user2_file.txt
root@eltex-practice2-pg1-v5:~# su - user1 -c "rm /opt/share/user2_file.txt"
root@eltex-practice2-pg1-v5:~# ls -la /opt/share/
total 12
drwxrws--- 2 root practice_group 4096 Oct 19 12:59 .
drwxr-xr-x 3 root root 4096 Oct 19 12:50 ..
-rw-rw-r-- 1 user1 practice_group 16 Oct 19 12:55 user1_file.txt
root@eltex-practice2-pg1-v5:~# su - user1 -c "echo 'file from user1' > /opt/share/user1_file.txt"
root@eltex-practice2-pg1-v5:~#
```

12

Повторите предыдущий пункт, предварительно установив sticky bit на каталоге /opt/share

```
root@eltex-practice2-pg1-v5:~# chmod +t /opt/share
root@eltex-practice2-pg1-v5:~# ls -ld /opt/share
drwxrws--T 2 root practice_group 4096 Oct 19 12:59 /opt/share
root@eltex-practice2-pg1-v5:~# su - user1 -c "rm /opt/share/user2_file.txt"
rm: cannot remove '/opt/share/user2_file.txt': No such file or directory
root@eltex-practice2-pg1-v5:~#
```

13

Разрешите user1 выполнять привилегированную команду dmesg при помощи команды sudo, а

user2 – при помощи скрипта на языке bash с установленным флагом SUID

```
root@eltex-practice2-pg1-v5:~# visudo
root@eltex-practice2-pg1-v5:~# su - user1 -c "sudo dmesg | head -5"
sudo: a terminal is required to read the password; either use the -S option to read from standard input or configure an askpass helper
sudo: a password is required
root@eltex-practice2-pg1-v5:~#
```

При помощи скрипта

```
root@eltex-practice2-pg1-v5:~# /usr/local/bin/dmesg_wrapper.sh | head -5
0.000000] Linux version 6.8.0-55-generic (build@cy02-mm04-095) (x86_64-linux-gnu-gcc-13 (Ubuntu 13.3.0-6ubuntu2-24.04) 13.3.0, GNU ld (GNU Binutils for Ubuntu) 2.42) #57-Ubuntu SMP PREEMPT_DYNAMIC Wed Feb 12 23:42:21 UTC 2025 (Ubuntu 6.8.0-55.57-generic 6.8.12)
0.000000] Command line: BOOTPARAM=valinux-6.8.0-55-generic root=/dev/ram0/ubuntuvg-ubuntu-14.04
0.000000] KERNEL supported cpus:
0.000000] Intel: GenuineIntel
0.000000] AMD: AuthenticAMD
```

14

Для всех пользователей user* задайте время действия пароля – 10 дней.

```
root@eltex-practice2-pg1-v5:~# chage -M 10 user1
root@eltex-practice2-pg1-v5:~# chage -M 10 user2
root@eltex-practice2-pg1-v5:~# chage -M 10 user3
root@eltex-practice2-pg1-v5:~# chage -l user1
Last password change                : Oct 19, 2025
Password expires                    : Oct 29, 2025
Password inactive                   : never
Account expires                    : never
Minimum number of days between password change : 0
Maximum number of days between password change : 10
Number of days of warning before password expires : 7
root@eltex-practice2-pg1-v5:~#
```

15

Отредактируйте файл /etc/motd, вписав туда свое имя и фамилию

```
root@eltex-practice2-pg1-v5:~# echo "Варвянский Даниил Анатольевич" > /etc/motd
root@eltex-practice2-pg1-v5:~# cat /etc/motd
Варвянский Даниил Анатольевич
```

16

Создайте копию содержимого каталога /etc в каталог /root/etc_backup при помощи программы rsync


```

САРВЯНСКИЙ ДАНИИЛ АНАТОЛЬЕВИЧ
root@eltex-practice2-pgl-v5:~# rsync -av /etc/ /root/etc_backup/
sending incremental file list
created directory /root/etc_backup
./
.pwd.lock
.resolv.conf.systemd-resolved.bak
.updated
adduser.conf
bash.bashrc
bash_completion
bindresvport.blacklist
ca-certificates.conf
crontab
crypttab
debconf.conf
debian_version
deluser.conf
dhcpcd.conf
e2scrub.conf

```

```

root@eltex-practice2-pgl-v5:~# ls -la /root/etc_backup/
total 940
drwxr-xr-x 109 root root    4096 Oct 19 13:22 .
drwx----- 6 root root    4096 Oct 19 13:22 ..
-rw-r--r-- 1 root root   3444 Jul  5  2023 adduser.conf
drwxr-xr-x 2 root root    4096 Oct 16 08:21 alternatives
drwxr-xr-x 2 root root    4096 Feb 16  2025 apparmor
drwxr-xr-x 9 root root    4096 Feb 16  2025 apparmor.d
drwxr-xr-x 3 root root    4096 Oct 16 06:54 appport
drwxr-xr-x 9 root root    4096 Mar 12  2025 apt
-rw-r--r-- 1 root root   2319 Mar 31  2024 bash.bashrc
-rw-r--r-- 1 root root     45 Feb 16  2025 bash_completion
drwxr-xr-x 2 root root    4096 Oct 16 07:24 bash_completion.d
-rw-r--r-- 1 root root    367 Aug  2  2022 bindresvport.blacklist
drwxr-xr-x 2 root root    4096 Oct 17  2024 binfmt.d
drwxr-xr-x 2 root root    4096 Feb 16  2025 byobu
drwxr-xr-x 3 root root    4096 Feb 16  2025 ca-certificates
-rw-r--r-- 1 root root   6288 Feb 16  2025 ca-certificates.conf
drwxr-xr-x 5 root root    4096 Oct 16 08:17 cloud
drwxr-xr-x 2 root root    4096 Mar 12  2025 console-setup
drwx----- 2 root root    4096 Oct 17  2024 credstore
drwx----- 2 root root    4096 Oct 17  2024 credstore.encrypted
drwxr-xr-x 2 root root    4096 Feb 16  2025 cron.d
drwxr-xr-x 2 root root    4096 Oct 16 08:21 cron.daily
drwxr-xr-x 2 root root    4096 Feb 16  2025 cron.hourly
drwxr-xr-x 2 root root    4096 Feb 16  2025 cron.monthly
-rw-r--r-- 1 root root   1136 Feb 16  2025 crontab
drwxr-xr-x 2 root root    4096 Feb 16  2025 cron.weekly
drwxr-xr-x 2 root root    4096 Feb 16  2025 cron.yearly

```

17

Заархивируйте содержимое каталога /root/etc_backup архиватором tar, используйте алгоритмы сжатия gzip, bzip2, 7zip, сравните размеры полученных файлов

```

root@eltex-practice2-pgl-v5:~# cd /root
root@eltex-practice2-pgl-v5:~# tar -czf etc_backup_gzip.tar.gz etc_backup/
No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@eltex-practice2-pgl-v5:~# tar -cjf etc_backup_bzip2.tar.bz2 etc_backup/
root@eltex-practice2-pgl-v5:~# tar -cZf etc_backup_7zip.tar.Z etc_backup/
root@eltex-practice2-pgl-v5:~#
root@eltex-practice2-pgl-v5:~# ls -lh etc_backup_*.tar.*
-rw-r--r-- 1 root root 549K Oct 19 13:26 etc_backup_bzip2.tar.bz2
-rw-r--r-- 1 root root 583K Oct 19 13:24 etc_backup_gzip.tar.gz
-rw-r--r-- 1 root root 1.1M Oct 19 13:26 etc_backup_7zip.tar.Z
root@eltex-practice2-pgl-v5:~#

```

18

Отредактируйте файл `/etc/motd`, вписав туда текущую дату и время, синхронизируйте каталог `/root/etc_backup` с каталогом `/etc` при помощи `rsync`, добавьте файл `motd` в архив, сжатый `gzip`

```
root@eltex-practice2-pg1-v5:~# echo "Обновлено: $(date)" >> /etc/motd
root@eltex-practice2-pg1-v5:~# rsync -av /etc/ /root/etc_backup/
sending incremental file list
motd

sent 70,047 bytes  received 283 bytes  140,660.00 bytes/sec
total size is 2,366,747  speedup is 33.65
root@eltex-practice2-pg1-v5:~# tar -czf etc_backup_updated.tar.gz -C /root/etc_backup/ motd
```

19

Сравните содержимое архива, упакованного `bzip2` с содержимым каталога `/root/etc_backup`

```
root@eltex-practice2-pg1-v5:~# mkdir /tmp/bzip2_extract
root@eltex-practice2-pg1-v5:~# tar -xjf etc_backup_bzip2.tar.bz2 -C /tmp/bzip2_extract/
root@eltex-practice2-pg1-v5:~# diff -r /tmp/bzip2_extract/etc_backup/ /root/etc_backup/
diff -r /tmp/bzip2_extract/etc_backup/motd /root/etc_backup/motd
1a2
> Обновлено: Sun Oct 19 01:27:49 PM UTC 2025
diff: /tmp/bzip2_extract/etc_backup/mtab: No such file or directory
diff: /root/etc_backup/mtab: No such file or directory
diff: /tmp/bzip2_extract/etc_backup/os-release: No such file or directory
diff: /root/etc_backup/os-release: No such file or directory
diff: /tmp/bzip2_extract/etc_backup/resolv.conf: No such file or directory
diff: /root/etc_backup/resolv.conf: No such file or directory
root@eltex-practice2-pg1-v5:~#
```

20

Распакуйте архивы `etc_backup`, упакованные `gzip` и `7zip` в каталоги `/root/etc_backup_gzip` и `/root/etc_backup_7zip`, сравните программой `diff` файлы `motd` в этих каталогах.

```

root@eltex-practice2-pg1-v5:~# mkdir /root/etc_backup_gzip /root/etc_backup_Zzip
root@eltex-practice2-pg1-v5:~# tar -xzf etc_backup_gzip.tar.gz -C /root/etc_backup_gzip/
root@eltex-practice2-pg1-v5:~# tar -xzf etc_backup_Zzip.tar.Z -C /root/etc_backup_Zzip/
root@eltex-practice2-pg1-v5:~# diff /root/etc_backup_gzip/etc_backup/motd /root/etc_backup_Zzip/etc_backup/motd
root@eltex-practice2-pg1-v5:~#

```

```

root@eltex-practice2-pg1-v5:~# chage -l user1
Last password change           : Oct 19, 2025
Password expires                : Oct 29, 2025
Password inactive               : never
Account expires                 : never
Minimum number of days between password change : 0
Maximum number of days between password change : 10
Number of days of warning before password expires : 7
root@eltex-practice2-pg1-v5:~# chage -l user2
Last password change           : Oct 19, 2025
Password expires                : Oct 29, 2025
Password inactive               : never
Account expires                 : never
Minimum number of days between password change : 0
Maximum number of days between password change : 10
Number of days of warning before password expires : 7
root@eltex-practice2-pg1-v5:~# chage -l user3
Last password change           : Oct 19, 2025
Password expires                : Oct 29, 2025
Password inactive               : never
Account expires                 : never
Minimum number of days between password change : 0
Maximum number of days between password change : 10
Number of days of warning before password expires : 7
root@eltex-practice2-pg1-v5:~# ls -ld /opt/share
drwxrws--T 2 root practice_group 4096 Oct 19 12:59 /opt/share
root@eltex-practice2-pg1-v5:~#

```

```

root@eltex-practice2-pg1-v5:~# ls -ld /opt/share
drwxrws--T 2 root practice_group 4096 Oct 19 12:59 /opt/share
root@eltex-practice2-pg1-v5:~# ls -la /root/etc_backup_*/
/root/etc_backup_gzip/:
total 12
drwxr-xr-x  3 root root 4096 Oct 19 13:30 .
drwx----- 8 root root 4096 Oct 19 13:30 ..
drwxr-xr-x 109 root root 4096 Oct 19 13:22 etc_backup

/root/etc_backup_Zzip/:
total 12
drwxr-xr-x  3 root root 4096 Oct 19 13:31 .
drwx----- 8 root root 4096 Oct 19 13:30 ..
drwxr-xr-x 109 root root 4096 Oct 19 13:22 etc_backup
root@eltex-practice2-pg1-v5:~#

```

```

root@eltex-practice2-pg1-v5:~# ls -lh /root/etc_backup_*.tar.*
-rw-r--r-- 1 root root 549K Oct 19 13:26 /root/etc_backup_bzip2.tar.bz2
-rw-r--r-- 1 root root 583K Oct 19 13:24 /root/etc_backup_gzip.tar.gz
-rw-r--r-- 1 root root 220 Oct 19 13:28 /root/etc_backup_updated.tar.gz
-rw-r--r-- 1 root root 1.1M Oct 19 13:26 /root/etc_backup_Zzip.tar.Z
root@eltex-practice2-pg1-v5:~#

```