Лабораторная работа №2

Управление пользователями и группами

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Цель работы

Основная цель

Получение практических навыков управления учётными записями пользователей и групп в операционной системе Linux.

Ход выполнения работы

Определение текущего пользователя

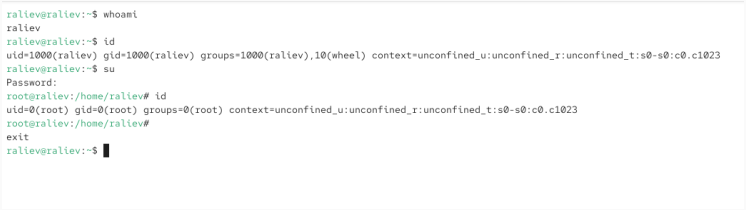

Рис. 1: Определение текущего пользователя

Переключение на root

```
raliev@raliev:~$ whoami
raliev
raliev@raliev:~$ id
uid=1000(raliev) gid=1000(raliev) groups=1000(raliev),10(wheel) context=unconfined_u:unconfined_r:unconfined_t:s0-s0:c0.c1023
raliev@raliev:~$ su
Password:
root@raliev:/home/raliev# id
uid=0(root) gid=0(root) groups=0(root) context=unconfined_u:unconfined_r:unconfined_t:s0-s0:c0.c1023
root@raliev:/home/raliev#
exit
raliev@raliev:~$
```

Рис. 2: Работа под пользователем root

Просмотр конфигурации sudo

raliev@raliev:~ — sudo -i visudo

```
#
# Defaults   env_keep += "HOME"

Defaults    secure_path = /sbin:/bin:/usr/sbin:/usr/bin

## Next comes the main part: which users can run what software on
## which machines (the sudoers file can be shared between multiple
## systems).
## Syntax:
##
##      user    MACHINE=COMMANDS
##
## The COMMANDS section may have other options added to it.
##
## Allow root to run any commands anywhere
root    ALL=(ALL)       ALL

## Allows members of the 'sys' group to run networking, software,
## service management apps and more.
# %sys ALL = NETWORKING, SOFTWARE, SERVICES, STORAGE, DELEGATING, PROCESSES, LOCATE, DRIVERS

## Allows people in group wheel to run all commands
%wheel  ALL=(ALL)       ALL

## Same thing without a password
# %wheel        ALL=(ALL)       NOPASSWD: ALL

## Allows members of the users group to mount and unmount the
## cdrom as root
# %users  ALL=/sbin/mount /mnt/cdrom, /sbin/umount /mnt/cdrom

## Allows members of the users group to shutdown this system
# %users  localhost=/sbin/shutdown -h now

## Read drop-in files from /etc/sudoers.d (the # here does not mean a comment)
#includedir /etc/sudoers.d
```

Пользователь alice

```
raliev@raliev:~$ sudo -i visudo
[sudo] password for raliev:
raliev@raliev:~$
raliev@raliev:~$ sudo -i useradd -G wheel alice
raliev@raliev:~$ id alice
uid=1001(alice) gid=1001(alice) groups=1001(alice),10(wheel)
raliev@raliev:~$ sudo -i passwd alice
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
```

Рис. 4: Создание пользователя alice

Пользователь bob

```
raliev@raliev:~$ su alice
Password:
alice@raliev:/home/raliev$ sudo useradd bob

We trust you have received the usual lecture from the local System
Administrator. It usually boils down to these three things:

    #1) Respect the privacy of others.
    #2) Think before you type.
    #3) With great power comes great responsibility.

For security reasons, the password you type will not be visible.

[sudo] password for alice:
alice@raliev:/home/raliev$ sudo passwd bob
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
alice@raliev:/home/raliev$ id bob
uid=1002(bob) gid=1002(bob) groups=1002(bob)
```

Рис. 5: Создание пользователя bob

Файл login.defs

Каталог /etc/skel

alice@raliev:/etc/skel — vim .bashrc
/etc/skel

```
# .bashrc

# Source global definitions
if [ -f /etc/bashrc ]; then
    . /etc/bashrc
fi

# User specific environment
if ! [[ "$PATH" =~ "$HOME/.local/bin:$HOME/bin:" ]]; then
    PATH="$HOME/.local/bin:$HOME/bin:$PATH"
fi
export PATH

# Uncomment the following line if you don't like systemctl's auto-paging feature:
# export SYSTEMD_PAGER=

# User specific aliases and functions
if [ -d ~/.bashrc.d ]; then
    for rc in ~/.bashrc.d/*; do
        if [ -f "$rc" ]; then
            . "$rc"
        fi
    done
fi
unset rc
export EDITOR=/usr/bin/vim
```

Создание и проверка

```
root@raliev:/etc/skel# su alice
alice@raliev:/etc/skel$ sudo -i useradd carol
alice@raliev:/etc/skel$ sudo passwd carol
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
alice@raliev:/etc/skel$ su carol
Password:
carol@raliev:/etc/skel$ id
uid=1003(carol) gid=100(users) groups=100(users) context=unconfined_u:unconfined_r:unconfined_t:s0-s0:c0.c1023
carol@raliev:/etc/skel$ cd
carol@raliev:~$ ls -Al
total 12
-rw-r--r--. 1 carol users  18 Oct 29  2024 .bash_logout
-rw-r--r--. 1 carol users 144 Oct 29  2024 .bash_profile
-rw-r--r--. 1 carol users 549 Dec 14 11:27 .bashrc
drwxr-xr-x. 2 carol users   6 Dec 14 11:26 Documents
drwxr-xr-x. 4 carol users  39 Oct  2 18:52 .mozilla
drwxr-xr-x. 2 carol users   6 Dec 14 11:26 Pictures
carol@raliev:~$
```

Рис. 8: Домашний каталог carol

Управление паролем

```
alice@raliev:/etc/skel$ sudo cat /etc/shadow | grep carol
carol:$y$j9T$kfu0eKV3Hk0WSPLRDUSvl.$EhupcKWkTMDT8r6BDRQGdT/CKKsRm5Q059KPHB3zPlA:20436:0:99999:7:::
alice@raliev:/etc/skel$ sudo passwd -n 30 -w 3 -x 90 carol
passwd: password changed.
alice@raliev:/etc/skel$ sudo cat /etc/shadow | grep carol
carol:$y$j9T$kfu0eKV3Hk0WSPLRDUSvl.$EhupcKWkTMDT8r6BDRQGdT/CKKsRm5Q059KPHB3zPlA:20436:30:90:3:::
alice@raliev:/etc/skel$
alice@raliev:/etc/skel$ sudo grep alice /etc/passwd /etc/shadow /etc/group
/etc/passwd:alice:x:1001:1001::/home/alice:/bin/bash
/etc/shadow:alice:$y$j9T$NN0VCQbu/maUVuIzdia.w/$MA2tWxe/2g8JiCEcWkgqRs8RhkeybY.mb1fDX8DCwh4:20436:0:99999:7:::
/etc/group:wheel:x:10:raliev,alice
/etc/group:alice:x:1001:
alice@raliev:/etc/skel$ sudo grep carol /etc/passwd /etc/shadow /etc/group
/etc/passwd:carol:x:1003:100::/home/carol:/bin/bash
/etc/shadow:carol:$y$j9T$kfu0eKV3Hk0WSPLRDUSvl.$EhupcKWkTMDT8r6BDRQGdT/CKKsRm5Q059KPHB3zPlA:20436:30:90:3:::
alice@raliev:/etc/skel$
```

Рис. 9: Параметры пароля carol

Создание групп

```
alice@raliev:/etc/skel$ sudo groupadd main
alice@raliev:/etc/skel$ sudo groupadd third
alice@raliev:/etc/skel$ sudo usermod -aG main alice
alice@raliev:/etc/skel$ sudo usermod -aG main bob
alice@raliev:/etc/skel$ sudo usermod -aG third carol
alice@raliev:/etc/skel$ id carol
uid=1003(carol) gid=100(users) groups=100(users),1004(third)
alice@raliev:/etc/skel$ id bob
uid=1002(bob) gid=1002(bob) groups=1002(bob),1003(main)
alice@raliev:/etc/skel$ id alice
uid=1001(alice) gid=1001(alice) groups=1001(alice),10(wheel),1003(main)
alice@raliev:/etc/skel$
```

Рис. 10: Проверка групп

Заключение

Вывод

В ходе лабораторной работы были получены практические навыки администрирования пользователей и групп в Linux.

Освоены механизмы разграничения прав доступа, настройки sudo, управления паролями и группами, что является основой администрирования многопользовательских систем.