

# Дискреционное разграничение прав в Linux. Основные атрибуты

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# Цели и задачи работы

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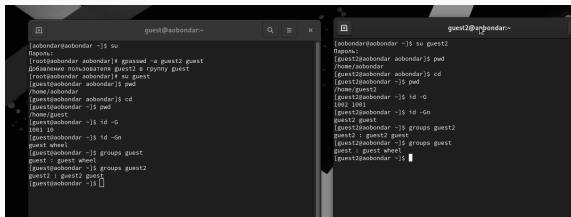
## Цель лабораторной работы

Получение практических навыков работы в консоли с атрибутами файлов для групп пользователей.

# **Процесс выполнения лабораторной работы**

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# Определяем UID и группу двух пользователей

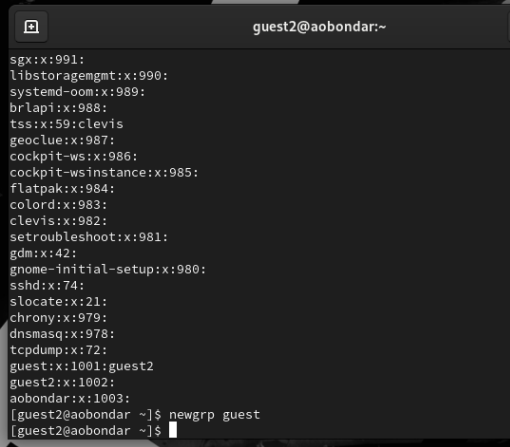


The image shows two terminal windows side-by-side. The left window is titled 'guest@aobondar-' and shows the process of creating a user named 'guest' using 'passwd', setting a password, and then switching to the user with 'su'. The user's home directory is set to '/home/guest' and they are given a shell. The user's UID is 1001 and GID is 1001. The right window is titled 'guest2@aobondar-' and shows the process of creating a user named 'guest2' using 'passwd', setting a password, and then switching to the user with 'su'. The user's home directory is set to '/home/guest2' and they are given a shell. The user's UID is 1002 and GID is 1002. Both users are members of the 'wheel' group.

```
guest@aobondar- ~  
[aobondar@aobondar ~]$ su  
Bash:  
[root@aobondar aobondar]# passwd -a guest2 guest  
Do banner not/so/astens guest2 s /p/ny guest  
[root@aobondar aobondar]# su guest  
[guest@aobondar aobondar]$ pwd  
/home/aobondar  
[guest@aobondar aobondar]$ cd  
/home/guest  
[guest@aobondar ~]$ pwd  
/home/guest  
[guest@aobondar ~]$ id -G  
1001 10  
[guest@aobondar ~]$ id -Gn  
guest wheel  
[guest@aobondar ~]$ groups guest  
guest : guest wheel  
[guest@aobondar ~]$ groups guest2  
guest2 : guest2 guest  
[guest@aobondar ~]$ groups guest  
guest : guest wheel  
[guest@aobondar ~]$  
  
guest2@aobondar- ~  
[aobondar@aobondar ~]$ su guest2  
Bash:  
[guest2@aobondar aobondar]$ pwd  
/home/aobondar  
[guest2@aobondar aobondar]$ cd  
/home/guest2  
[guest2@aobondar ~]$ pwd  
/home/guest2  
[guest2@aobondar ~]$ id -G  
1002 1001  
[guest2@aobondar ~]$ id -Gn  
guest2 guest  
[guest2@aobondar ~]$ groups guest2  
guest2 : guest2 guest  
[guest2@aobondar ~]$ groups guest  
guest : guest wheel  
[guest2@aobondar ~]$
```

Figure 1: Информация о пользователях

# Файл с данными о пользователях

A terminal window with a dark background and light text. The title bar at the top reads "guest2@aobondar:~". The terminal displays the contents of the /etc/group file, listing system users and regular users. The entries are: sgx:x:991:, libstoragemgmt:x:990:, systemd-oom:x:989:, brlapi:x:988:, tss:x:59:clevis, geoclue:x:987:, cockpit-ws:x:986:, cockpit-wsinstance:x:985:, flatpak:x:984:, colord:x:983:, clevi:x:982:, setroubleshoot:x:981:, gdm:x:42:, gnome-initial-setup:x:980:, sshd:x:74:, slocate:x:21:, chrony:x:979:, dnsmasq:x:978:, tcpdump:x:72:, guest:x:1001:guest2, guest2:x:1002:, aobondar:x:1003:. The prompt is [guest2@aobondar ~]\$. The user has entered the command newgrp guest, and the prompt has changed to [guest2@aobondar ~]\$.

```
sgx:x:991:
libstoragemgmt:x:990:
systemd-oom:x:989:
brlapi:x:988:
tss:x:59:clevis
geoclue:x:987:
cockpit-ws:x:986:
cockpit-wsinstance:x:985:
flatpak:x:984:
colord:x:983:
clevi:x:982:
setroubleshoot:x:981:
gdm:x:42:
gnome-initial-setup:x:980:
sshd:x:74:
slocate:x:21:
chrony:x:979:
dnsmasq:x:978:
tcpdump:x:72:
guest:x:1001:guest2
guest2:x:1002:
aobondar:x:1003:
[guest2@aobondar ~]$ newgrp guest
[guest2@aobondar ~]$
```

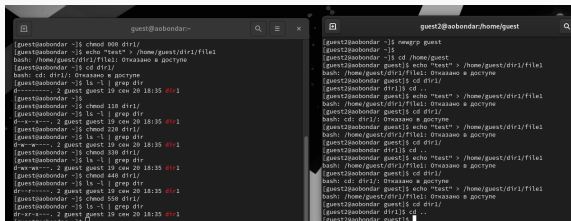
**Figure 2:** Содержимое файла /etc/group

# Атрибуты директории

```
guest2 : guest2 guest
[guest@aobondar ~]$
[guest@aobondar ~]$ chmod g+rxw /home/guest
[guest@aobondar ~]$ cd
[guest@aobondar ~]$ mkdir dir1
[guest@aobondar ~]$ echo "test" > /home/guest/dir1/file1
[guest@aobondar ~]$ cd dir1/
[guest@aobondar dir1]$ cd ..
[guest@aobondar ~]$ chmod 000 dir1/
[guest@aobondar ~]$ echo "test" > /home/guest/dir1/file1
bash: /home/guest/dir1/file1: Отказано в доступе
[guest@aobondar ~]$ cd dir1/
bash: cd: dir1/: Отказано в доступе
[guest@aobondar ~]$ ls -l | grep dir
d-----, 2 guest guest 19 сен 20 18:35 dir1
[guest@aobondar ~]$
```

**Figure 3:** Снятие атрибутов с директории

# Заполнение таблицы



The image shows two terminal windows side-by-side. The left window, titled 'guest@saobondar~', shows a series of commands and their outputs. The user creates a directory 'dir1', then a series of subdirectories '100' through '558'. For each subdirectory, they run 'ls -l | grep dir' and the output shows a line like 'd-x-x-x---, 2 guest guest 19 сен 20 18:35 dir1'. The right window, titled 'guest2@saobondar:/home/guest', shows the user creating a new group 'guest', then logging in as 'guest' and running the same sequence of commands to create and list the subdirectories.

```
guest@saobondar~  
[guest@saobondar ~]$ chmod 600 dir1/  
[guest@saobondar ~]$ echo "test" > /home/guest/dir1/file1  
bash: /home/guest/dir1/file1: Отказано в доступе  
[guest@saobondar ~]$ cd dir1/  
bash: cd: dir1/: Отказано в доступе  
[guest@saobondar ~]$ ls -l | grep dir  
d-----, 2 guest guest 19 сен 20 18:35 dir1  
[guest@saobondar ~]$  
[guest@saobondar ~]$ chmod 600 100 dir1/  
[guest@saobondar ~]$ ls -l | grep dir  
d-x-x-x---, 2 guest guest 19 сен 20 18:35 dir1  
[guest@saobondar ~]$ chmod 600 200 dir1/  
[guest@saobondar ~]$ ls -l | grep dir  
d-x-x-x---, 2 guest guest 19 сен 20 18:35 dir1  
[guest@saobondar ~]$ chmod 600 300 dir1/  
[guest@saobondar ~]$ ls -l | grep dir  
d-x-x-x---, 2 guest guest 19 сен 20 18:35 dir1  
[guest@saobondar ~]$ chmod 600 400 dir1/  
[guest@saobondar ~]$ ls -l | grep dir  
d-r--r--r--, 2 guest guest 19 сен 20 18:35 dir1  
[guest@saobondar ~]$ chmod 558 dir1/  
[guest@saobondar ~]$ ls -l | grep dir  
d-r--r--r--, 2 guest guest 19 сен 20 18:35 dir1  
[guest@saobondar ~]$
```

```
guest2@saobondar:/home/guest  
[guest2@saobondar ~]$ newgrp guest  
[guest2@saobondar ~]$  
[guest2@saobondar ~]$ cd /home/guest  
[guest2@saobondar guest]$ echo "test" > /home/guest/dir1/file1  
bash: /home/guest/dir1/file1: Отказано в доступе  
[guest2@saobondar guest]$ cd dir1/  
[guest2@saobondar dir1]$ cd ..  
[guest2@saobondar guest]$ echo "test" > /home/guest/dir1/file1  
bash: /home/guest/dir1/file1: Отказано в доступе  
[guest2@saobondar guest]$ cd dir1/  
[guest2@saobondar dir1]$ cd ..  
[guest2@saobondar dir1]$ cd ..  
[guest2@saobondar guest]$ echo "test" > /home/guest/dir1/file1  
bash: /home/guest/dir1/file1: Отказано в доступе  
[guest2@saobondar guest]$ cd dir1/  
[guest2@saobondar dir1]$ cd ..  
[guest2@saobondar dir1]$ cd ..  
[guest2@saobondar guest]$ echo "test" > /home/guest/dir1/file1  
bash: /home/guest/dir1/file1: Отказано в доступе  
[guest2@saobondar guest]$ cd dir1/  
[guest2@saobondar dir1]$ cd ..  
[guest2@saobondar dir1]$ cd ..  
[guest2@saobondar guest]$
```

Figure 4: Заполнение таблицы



# Права и разрешённые действия

Операция	Минимальные права на директорию	Минимальные права на файл
Создание файла	d---wx--- (030)	----- (000)
Удаление файла	d---wx--- (030)	----- (000)
Чтение файла	d----x--- (010)	----r----- (040)
Запись в файл	d----x--- (010)	-----w--- (020)
Переименование файла	d---wx--- (030)	----- (000)
Создание поддиректории	d---wx--- (030)	----- (000)
Удаление поддиректории	d---wx--- (030)	----- (000)

**Figure 5:** Минимальные права для совершения операций

## **Выводы по проделанной работе**

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В ходе выполнения работы, мы смогли приобрести практические навыки работы в консоли с атрибутами файлов для групп пользователей.