

# Отчет по лабораторной работе № 5

Дискреционное разграничение прав в Linux.

Исследование влияния дополнительных атрибутов

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## Цель работы

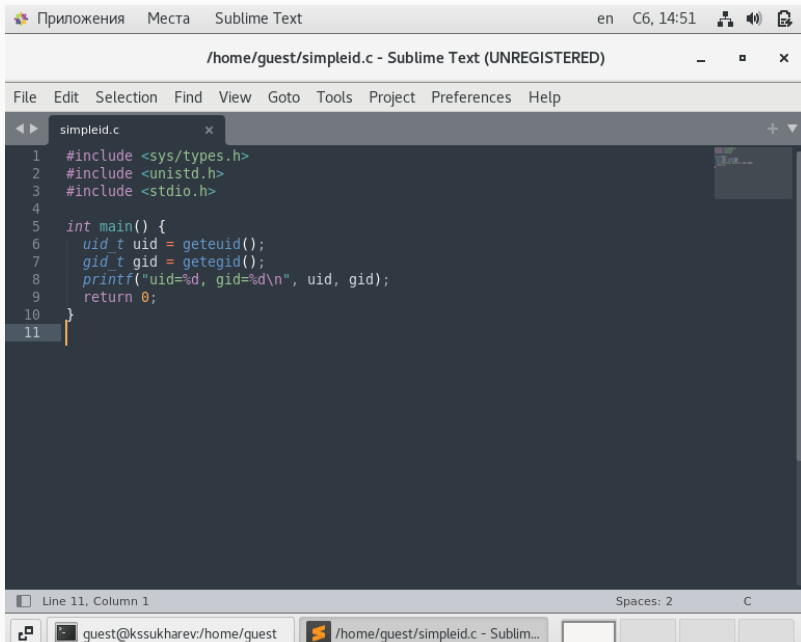
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Изучение механизмов изменения идентификаторов, применения SetUID- и Sticky-битов. Получение практических навыков работы в консоли с дополнительными атрибутами. Рассмотрение работы механизма смены идентификатора процессов пользователей, а также влияние бита Sticky на запись и удаление файлов.

## Создание simpleid.c

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# Создание simpleid.c



Приложения Места Sublime Text en C6, 14:51

/home/guest/simpleid.c - Sublime Text (UNREGISTERED)

File Edit Selection Find View Goto Tools Project Preferences Help

```
simpleid.c
1  #include <sys/types.h>
2  #include <unistd.h>
3  #include <stdio.h>
4
5  int main() {
6      uid_t uid = getuid();
7      gid_t gid = getgid();
8      printf("uid=%d, gid=%d\n", uid, gid);
9      return 0;
10 }
11
```

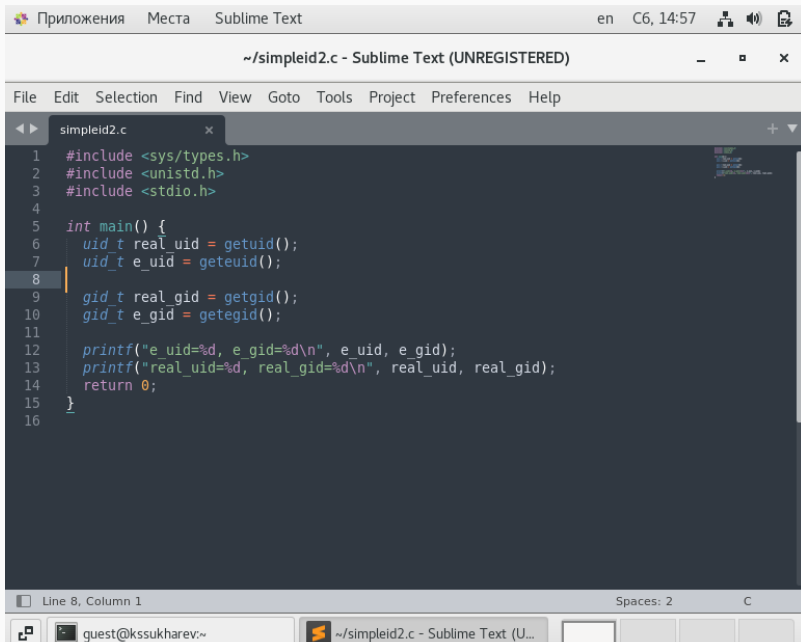
Line 11, Column 1 Spaces: 2 C

quest@kssukharev:/home/quest /home/guest/simpleid.c - Sublim...

## Создание simpleid2.c

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# Создание simpleid2.c



```
1  #include <sys/types.h>
2  #include <unistd.h>
3  #include <stdio.h>
4
5  int main() {
6      uid_t real_uid = getuid();
7      uid_t e_uid = geteuid();
8
9      gid_t real_gid = getgid();
10     gid_t e_gid = getegid();
11
12     printf("e_uid=%d, e_gid=%d\n", e_uid, e_gid);
13     printf("real_uid=%d, real_gid=%d\n", real_uid, real_gid);
14     return 0;
15 }
16
```

Line 8, Column 1

Spaces: 2

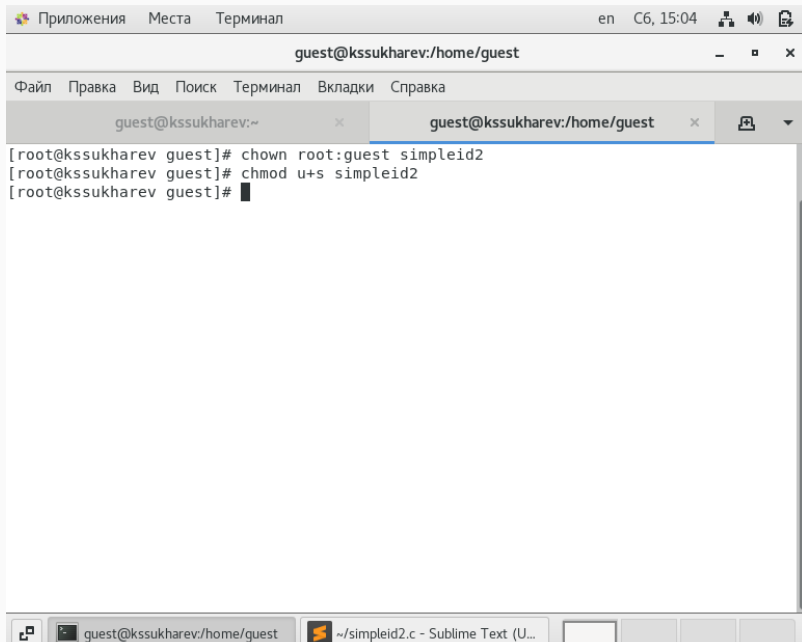
C

## Смена владельца и группы

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# Смена владельца и группы



The screenshot shows a terminal window titled "guest@kssukharev:/home/guest". The window has a menu bar with "Файл", "Правка", "Вид", "Поиск", "Терминал", "Вкладки", and "Справка". The terminal content shows the following commands and output:

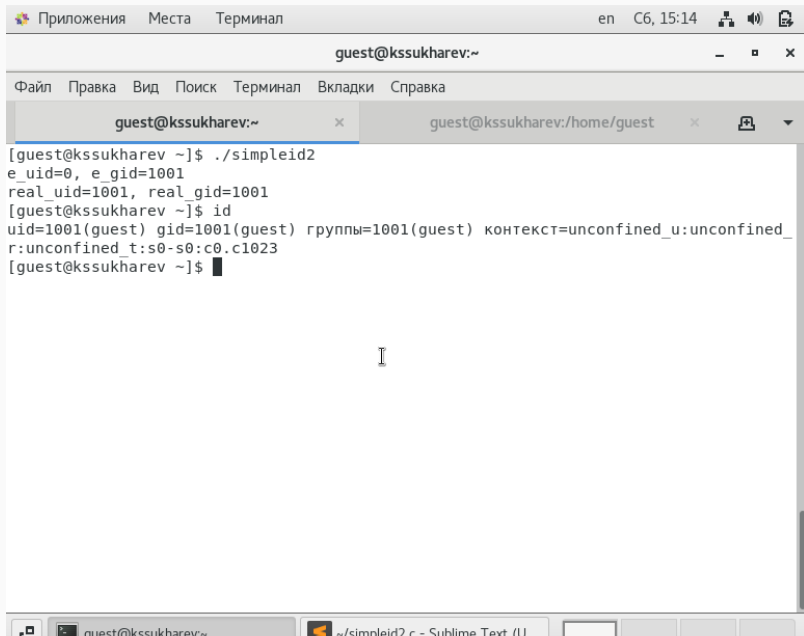
```
[root@kssukharev guest]# chown root:guest simpleid2
[root@kssukharev guest]# chmod u+s simpleid2
[root@kssukharev guest]#
```

The terminal window is part of a desktop environment with a taskbar at the bottom. The taskbar shows the terminal window, a window titled "simpleid2.c - Sublime Text (U...", and other icons. The system tray at the top right shows the language "en", the time "C6, 15:04", and icons for network, volume, and battery.

# Проверка работоспособности

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# Проверка работоспособности



The screenshot shows a terminal window with a menu bar containing 'Приложения', 'Места', and 'Терминал'. The title bar indicates the user is 'en' at 'C6, 15:14'. The terminal title is 'guest@kssukharev:~'. The menu bar includes 'Файл', 'Правка', 'Вид', 'Поиск', 'Терминал', 'Вкладки', and 'Справка'. The terminal shows the following commands and output:

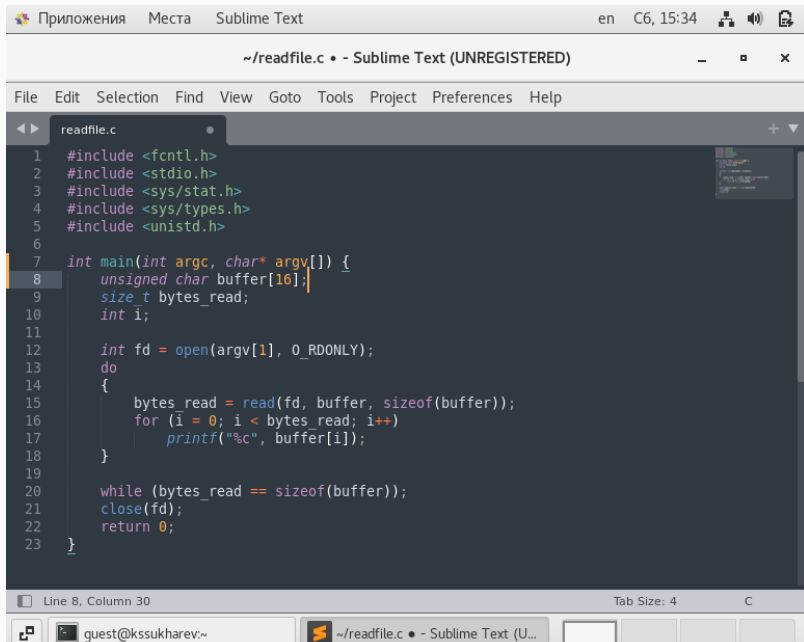
```
guest@kssukharev:~  
[guest@kssukharev ~]$ ./simpleid2  
e_uid=0, e_gid=1001  
real_uid=1001, real_gid=1001  
[guest@kssukharev ~]$ id  
uid=1001(guest) gid=1001(guest) группы=1001(guest) контекст=unconfined_u:unconfined_  
r:unconfined_t:s0-s0:c0.c1023  
[guest@kssukharev ~]$
```

The terminal window has two tabs: 'guest@kssukharev:~' (active) and 'guest@kssukharev:/home/guest'. The bottom of the image shows a taskbar with icons for a window manager, the terminal, and a Sublime Text editor editing 'simpleid2.c'.

## Создание readfile.c

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# Создание readfile.c



Приложения Места Sublime Text en C6, 15:34

~/readfile.c • - Sublime Text (UNREGISTERED)

File Edit Selection Find View Goto Tools Project Preferences Help

readfile.c

```
1  #include <fcntl.h>
2  #include <stdio.h>
3  #include <sys/stat.h>
4  #include <sys/types.h>
5  #include <unistd.h>
6
7  int main(int argc, char* argv[]) {
8      unsigned char buffer[16];
9      size_t bytes_read;
10     int i;
11
12     int fd = open(argv[1], O_RDONLY);
13     do
14     {
15         bytes_read = read(fd, buffer, sizeof(buffer));
16         for (i = 0; i < bytes_read; i++)
17             printf("%c", buffer[i]);
18     }
19
20     while (bytes_read == sizeof(buffer));
21     close(fd);
22     return 0;
23 }
```

Line 8, Column 30 Tab Size: 4 C

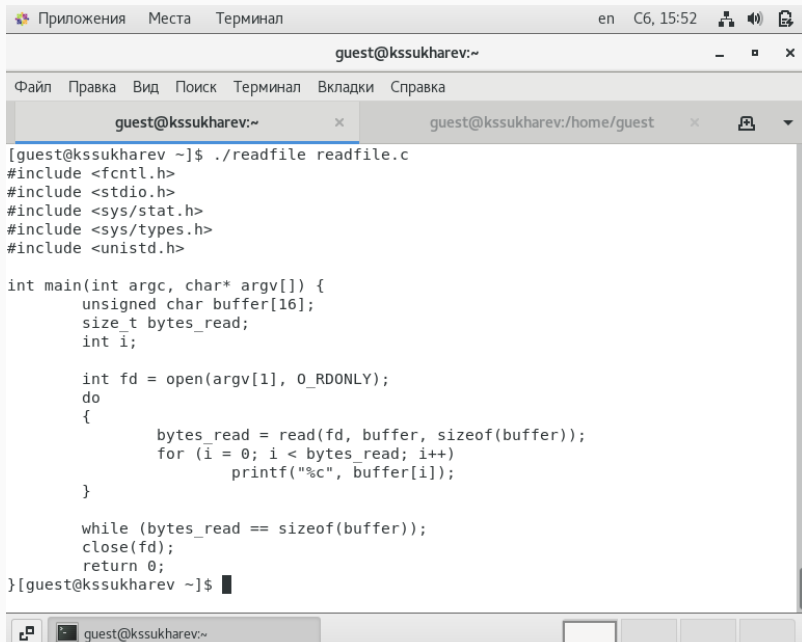
quest@kssukharev:~

~/readfile.c • - Sublime Text (U...

Проверка readfile

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# Проверка readfile



```
Приложения Места Терминал en C6, 15:52
guest@kssukharev:~
Файл Правка Вид Поиск Терминал Вкладки Справка
guest@kssukharev:~ x guest@kssukharev:/home/guest x
[guest@kssukharev ~]$ ./readfile readfile.c
#include <fcntl.h>
#include <stdio.h>
#include <sys/stat.h>
#include <sys/types.h>
#include <unistd.h>

int main(int argc, char* argv[]) {
    unsigned char buffer[16];
    size_t bytes_read;
    int i;

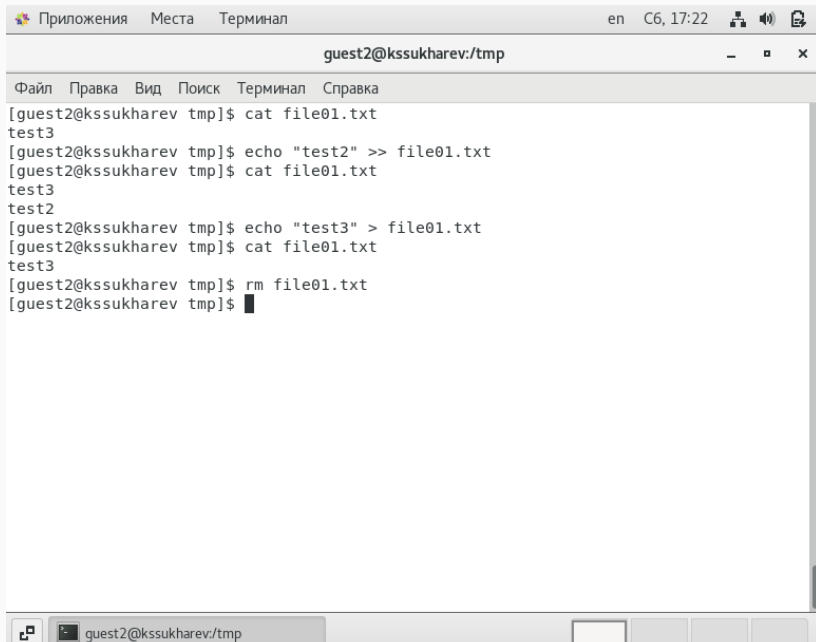
    int fd = open(argv[1], O_RDONLY);
    do
    {
        bytes_read = read(fd, buffer, sizeof(buffer));
        for (i = 0; i < bytes_read; i++)
            printf("%c", buffer[i]);
    }
    while (bytes_read == sizeof(buffer));
    close(fd);
    return 0;
}[guest@kssukharev ~]$
```

## Работа с атрибутом Sticky

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# Работа с атрибутом Sticky



The screenshot shows a terminal window titled "guest2@kssukharev:/tmp". The window has a menu bar with "Файл", "Правка", "Вид", "Поиск", "Терминал", and "Справка". The terminal content shows a series of commands and their outputs:

```
[guest2@kssukharev tmp]$ cat file01.txt
test3
[guest2@kssukharev tmp]$ echo "test2" >> file01.txt
[guest2@kssukharev tmp]$ cat file01.txt
test3
test2
[guest2@kssukharev tmp]$ echo "test3" > file01.txt
[guest2@kssukharev tmp]$ cat file01.txt
test3
[guest2@kssukharev tmp]$ rm file01.txt
[guest2@kssukharev tmp]$
```

The terminal window is part of a desktop environment with a taskbar at the bottom showing icons for a window manager, a terminal, and other applications. The terminal icon is highlighted, and the title bar of the terminal window is visible.