

به نام خدا

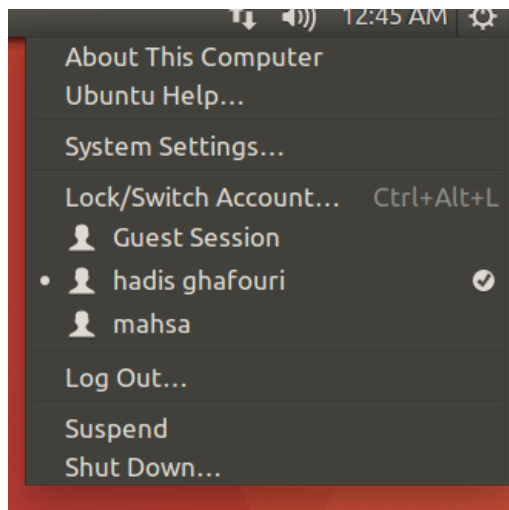


گزارش کار آزمایش شماره 3

حدیث غفوری (9825413)

ایجاد حساب کاربری جدید:

```
root@ubuntu: /home/hadis
hadis@ubuntu:~$ sudo su
[sudo] password for hadis:
root@ubuntu: /home/hadis# adduser mahsa
Adding user `mahsa' ...
Adding new group `mahsa' (1001) ...
Adding new user `mahsa' (1001) with group `mahsa' ...
Creating home directory `/home/mahsa' ...
Copying files from `/etc/skel' ...
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Changing the user information for mahsa
Enter the new value, or press ENTER for the default
  Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n] y
root@ubuntu: /home/hadis#
```



مشاهده ی تاریخ سیستم نام سیستم نام اواس نام کاربر فعلی

```
root@ubuntu: /home/hadis
hadis@ubuntu:~$ sudo su
[sudo] password for hadis:
root@ubuntu:/home/hadis# deluser mahsa
Removing user `mahsa' ...
Warning: group `mahsa' has no more members.
Done.
root@ubuntu:/home/hadis# date
Wed Mar  9 00:48:19 PST 2022
root@ubuntu:/home/hadis# uname
Linux
root@ubuntu:/home/hadis# hostname
ubuntu
```

مشاهده ی پروسه های در حال اجرا:

```
root@ubuntu: /home/hadis
root@ubuntu:/home/hadis# whoami
root
root@ubuntu:/home/hadis# ps
  PID TTY          TIME CMD
 2183 pts/1        00:00:00 sudo
 2208 pts/1        00:00:00 su
 2209 pts/1        00:00:00 bash
 2260 pts/1        00:00:00 ps
root@ubuntu:/home/hadis#
```

PID – the unique process ID

TTY – terminal type that the user is logged into

TIME – amount of CPU in minutes and seconds that the process has been running

CMD – name of the command that launched the process.

کار با دایرکتوری ها:

```
root@ubuntu:/home/hadis# mkdir test1
root@ubuntu:/home/hadis# mkdir test1
root@ubuntu:/home/hadis# ls
Desktop    examples.desktop  oflops    Pictures  Templates
Documents  mininet           oftest    pox       test1
Downloads  Music             openflow  Public    Videos
root@ubuntu:/home/hadis# mkdir test1/test2
root@ubuntu:/home/hadis# ls test1/
test2
root@ubuntu:/home/hadis# cd test1/
root@ubuntu:/home/hadis/test1# ls
test2
root@ubuntu:/home/hadis/test1# touch test
root@ubuntu:/home/hadis/test1# cp test test2/cp-test
root@ubuntu:/home/hadis/test1# ls test2/
cp-test
```

```
root@ubuntu:/home/hadis/test1# ls
test  test2
root@ubuntu:/home/hadis/test1# cd test2/
root@ubuntu:/home/hadis/test1/test2# ls
cp-test
root@ubuntu:/home/hadis/test1/test2# mv cp-test cp-test1
root@ubuntu:/home/hadis/test1/test2# ls
cp-test1
root@ubuntu:/home/hadis/test1/test2# cat > cp-test1
hi my name is hadis
root@ubuntu:/home/hadis/test1/test2# cat cp-test1
hi my name is hadis
root@ubuntu:/home/hadis/test1/test2#
```

```
root@ubuntu:/home/hadis/test1# find / -name test
/lib/modules/4.15.0-45-generic/kernel/drivers/firmware/efi/test
/lib/modules/4.15.0-45-generic/kernel/drivers/ntb/test
/lib/modules/4.15.0-142-generic/kernel/drivers/firmware/efi/test
/lib/modules/4.15.0-142-generic/kernel/drivers/ntb/test
/home/hadis/test1/test
/home/hadis/mininet/examples/test
/home/hadis/mininet/mininet/test
/usr/lib/python3.5/test
/usr/lib/i386-linux-gnu/espeak-data/voices/test
/usr/lib/python3/dist-packages/pyflakes/test
/usr/lib/python3/dist-packages/systemd/test
/usr/lib/python2.7/dist-packages/wheel/test
/usr/lib/python2.7/dist-packages/pyflakes/test
/usr/lib/python2.7/test
/usr/bin/test
/usr/src/linux-headers-4.15.0-142-generic/include/config/usb/ehset/test
/usr/src/linux-headers-4.15.0-142-generic/include/config/pkcs7/test
/usr/src/linux-headers-4.15.0-142-generic/include/config/test
/usr/src/linux-headers-4.15.0-142-generic/include/config/v4l/test
/usr/src/linux-headers-4.15.0-142/lib/raid6/test
/usr/src/linux-headers-4.15.0-142/drivers/firmware/efi/test
/usr/src/linux-headers-4.15.0-142/drivers/ntb/test
/usr/src/linux-headers-4.15.0-142/drivers/base/test
/usr/src/linux-headers-4.15.0-142/tools/testing/nvdimmm/test
/usr/src/linux-headers-4.15.0-45-generic/include/config/usb/ehset/test
/usr/src/linux-headers-4.15.0-45-generic/include/config/pkcs7/test
/usr/src/linux-headers-4.15.0-45-generic/include/config/test
/usr/src/linux-headers-4.15.0-45-generic/include/config/v4l/test
/usr/src/linux-headers-4.15.0-45/lib/raid6/test
/usr/src/linux-headers-4.15.0-45/drivers/firmware/efi/test
/usr/src/linux-headers-4.15.0-45/drivers/ntb/test
/usr/src/linux-headers-4.15.0-45/drivers/base/test
/usr/src/linux-headers-4.15.0-45/tools/testing/nvdimmm/test
/usr/share/alsa/init/test
find: '/run/user/1000/gvfs': Permission denied
root@ubuntu:/home/hadis/test1#
```

کار با ویرایشگر vi

```
root@ubuntu:/home/hadis/test1# ls
test test2
root@ubuntu:/home/hadis/test1# cd test2
root@ubuntu:/home/hadis/test1/test2# ls
cp-test1
root@ubuntu:/home/hadis/test1/test2# vi cp-test1
```

A screenshot of a terminal window with a dark purple background. At the top, there is a single line of white text: "hi my name is hadis and i live in Isfahan:)". Below this, there are approximately 20 rows of light blue tilde (~) characters, representing a scrollback buffer or a series of placeholder responses. In the bottom-left corner, there is a yellow rectangular box containing the text ":wq" in white, which typically signifies a quit command in some environments. The terminal has a thin orange border on the right side.

[illegible]

```
root@ubuntu:/home/hadis/test1/test2# vi cp-test1
root@ubuntu:/home/hadis/test1/test2# cat cp-test1
hi my name is hadis and i live in Isfahan:)
root@ubuntu:/home/hadis/test1/test2# S
```

مشاهده ی مجوز دسترسی فایل cp-test1

```
hadis@ubuntu: ~/test1/test2
hadis@ubuntu:~$ cd test1/test2/
hadis@ubuntu:~/test1/test2$ ls
cp-test1
hadis@ubuntu:~/test1/test2$ ls -l
total 4
-rw-r--r-- 1 root root 44 Mar  9 01:03 cp-test1
hadis@ubuntu:~/test1/test2$
```

سطح دسترسی فایل cp-test1 معادل 544 است یعنی مالک اجازه ی خواندن و نوشتن را دارد ولی گروه و بقیه ی افراد(دسته های دوم و سوم) فقط اجازه ی خواندن دارند.

معادل عدد باینری

110(owner) 100 (group) 100 (others)

```
hadis@ubuntu:~/test1/test2$ cd ..
hadis@ubuntu:~/test1$ ls -l
total 4
-rw-r--r-- 1 root root  0 Mar  9 00:51 test
drwxr-xr-x 2 root root 4096 Mar  9 01:03 test2
hadis@ubuntu:~/test1$
```

سطح دسترسی فایل test معادل 544 است یعنی مالک اجازه ی خواندن و نوشتن را دارد ولی گروه و بقیه ی افراد(دسته های دوم و سوم) فقط اجازه ی خواندن دارند.

معادل عدد باینری

110(owner) 100 (group) 100 (others)

سطح دسترسی دایرکتوری test2 معادل 755 است یعنی مالک اجازه ی خواندن و نوشتن و اجرا را دارد ولی گروه و بقیه ی افراد(دسته های دوم و سوم) فقط اجازه ی خواندن و اجرا دارند.

معادل عدد باینری

111(owner) 101 (group) 101 (others)

root@ubuntu: /home/hadis

hadis@ubuntu:~\$ sudo su

[sudo] password for hadis:

root@ubuntu:/home/hadis# ls -l

total 68

drwxr-xr-x	2	hadis	hadis	4096	Mar	4	02:28	Desktop
drwxr-xr-x	2	hadis	hadis	4096	Mar	4	02:28	Documents
drwxr-xr-x	2	hadis	hadis	4096	Mar	4	02:28	Downloads
-rw-r--r--	1	hadis	hadis	8980	Mar	4	01:41	examples.desktop
drwxrwxr-x	11	hadis	hadis	4096	Mar	4	06:26	mininet
drwxr-xr-x	2	hadis	hadis	4096	Mar	4	02:28	Music
drwxrwxr-x	14	hadis	hadis	4096	Mar	4	06:41	oflops
drwxrwxr-x	11	hadis	hadis	4096	Mar	4	06:35	oftest
drwxrwxr-x	19	hadis	hadis	4096	Mar	4	06:27	openflow
drwxr-xr-x	2	hadis	hadis	4096	Mar	4	02:28	Pictures
drwxrwxr-x	7	hadis	hadis	4096	Mar	4	06:34	pox
drwxr-xr-x	2	hadis	hadis	4096	Mar	4	02:28	Public
drwxr-xr-x	2	hadis	hadis	4096	Mar	4	02:28	Templates
drwxr-xr-x	3	root	root	4096	Mar	9	00:54	test1
drwxr-xr-x	2	hadis	hadis	4096	Mar	4	02:28	Videos

root@ubuntu: /home/hadis

root@ubuntu:/home/hadis# ls

Desktop	examples.desktop	oflops	Pictures	Templates
Documents	mininet	oftest	pox	test1
Downloads	Music	openflow	Public	Videos

root@ubuntu:/home/hadis# chmod -R 700 test1/

root@ubuntu:/home/hadis# ls -l

total 68

drwxr-xr-x	2	hadis	hadis	4096	Mar	4	02:28	Desktop
drwxr-xr-x	2	hadis	hadis	4096	Mar	4	02:28	Documents
drwxr-xr-x	2	hadis	hadis	4096	Mar	4	02:28	Downloads
-rw-r--r--	1	hadis	hadis	8980	Mar	4	01:41	examples.desktop
drwxrwxr-x	11	hadis	hadis	4096	Mar	4	06:26	mininet
drwxr-xr-x	2	hadis	hadis	4096	Mar	4	02:28	Music
drwxrwxr-x	14	hadis	hadis	4096	Mar	4	06:41	oflops
drwxrwxr-x	11	hadis	hadis	4096	Mar	4	06:35	oftest
drwxrwxr-x	19	hadis	hadis	4096	Mar	4	06:27	openflow
drwxr-xr-x	2	hadis	hadis	4096	Mar	4	02:28	Pictures
drwxrwxr-x	7	hadis	hadis	4096	Mar	4	06:34	pox
drwxr-xr-x	2	hadis	hadis	4096	Mar	4	02:28	Public
drwxr-xr-x	2	hadis	hadis	4096	Mar	4	02:28	Templates
drwx-----	3	root	root	4096	Mar	9	00:54	test1
drwxr-xr-x	2	hadis	hadis	4096	Mar	4	02:28	Videos

root@ubuntu:/home/hadis#


```

root@ubuntu: /home/hadis/test1
root@ubuntu:/home/hadis# cd test1/
root@ubuntu:/home/hadis/test1# ls -l
total 4
-rwx----- 1 root root    0 Mar  9 00:51 test
drwx----- 2 root root 4096 Mar  9 01:03 test2
root@ubuntu:/home/hadis/test1#

```

سطح دسترسی دایرکتوری test2 معادل 700 است یعنی مالک اجازه ی خواندن و نوشتن و اجرا را دارد ولی گروه و بقیه ی افراد(دسته های دوم و سوم) هیچ گونه دسترسی ندارند.

معادل عدد باینری

111(owner) 000 (group) 000 (others)

```

root@ubuntu: /home/hadis/test1/test2
root@ubuntu:/home/hadis/test1/test2# ls -l
total 4
-rwx----- 1 root root 44 Mar  9 01:03 cp-test1
root@ubuntu:/home/hadis/test1/test2#

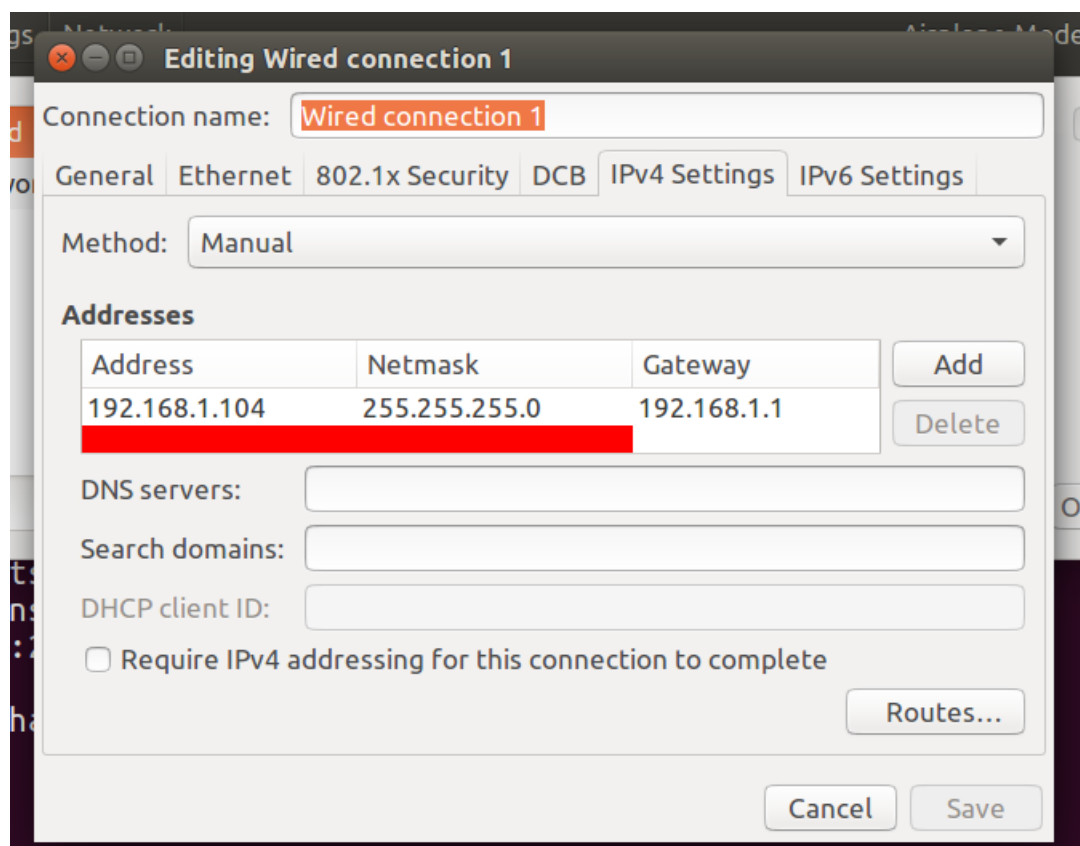
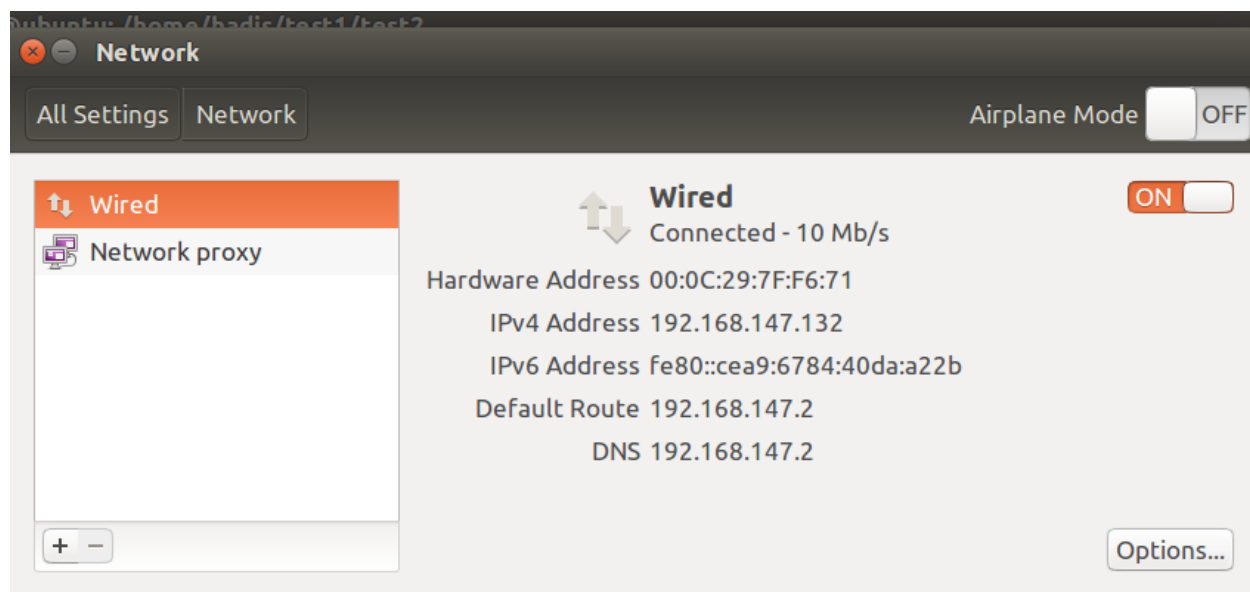
```

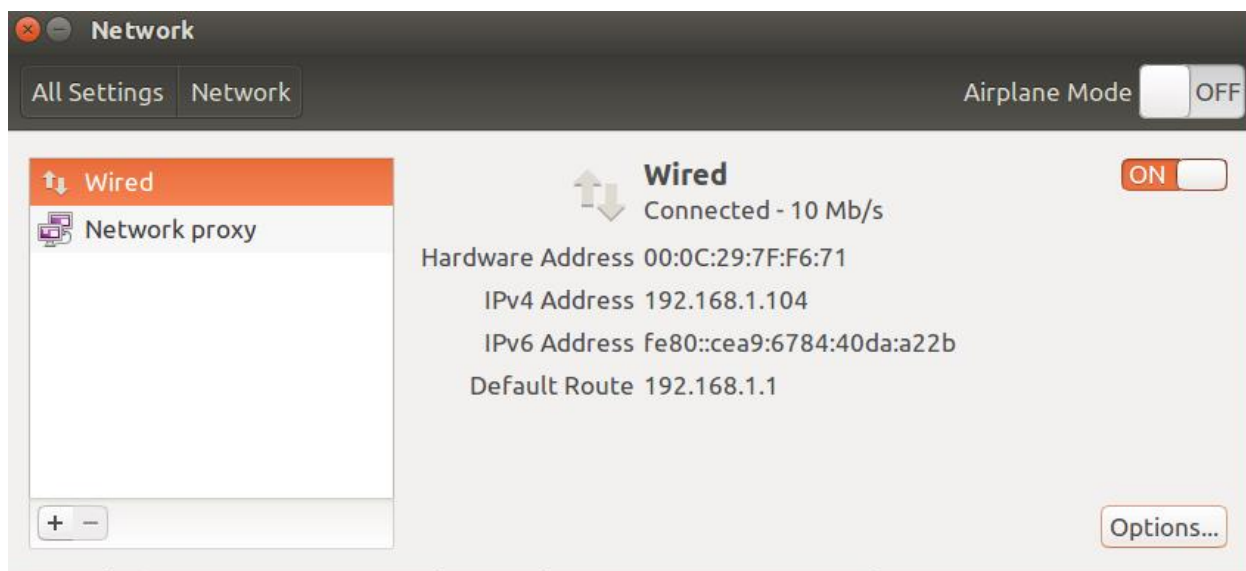
سطح دسترسی فایل cp-test1 معادل 700 است یعنی مالک اجازه ی خواندن و نوشتن و اجرا را دارد ولی گروه و بقیه ی افراد(دسته های دوم و سوم) هیچ گونه دسترسی ندارند.

معادل عدد باینری

111(owner) 000 (group) 000 (others)

کار با محیط گرافیکی:





```
root@ubuntu: /home/hadis/test1/test2
root@ubuntu: /home/hadis/test1/test2# ifconfig
ens33:  Link encap:Ethernet  HWaddr 00:0c:29:7f:f6:71
        inet addr:192.168.147.132  Bcast:192.168.147.255  Mask:255.255.255.0
        inet6 addr: fe80::cea9:6784:40da:a22b/64 Scope:Link
        UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
        RX packets:545 errors:0 dropped:0 overruns:0 frame:0
        TX packets:151 errors:0 dropped:0 overruns:0 carrier:0
        collisions:0 txqueuelen:1000
        RX bytes:48619 (48.6 KB)  TX bytes:15270 (15.2 KB)
        Interrupt:19 Base address:0x2000

lo:      Link encap:Local Loopback
        inet addr:127.0.0.1  Mask:255.0.0.0
        inet6 addr: ::1/128 Scope:Host
        UP LOOPBACK RUNNING  MTU:65536  Metric:1
        RX packets:260 errors:0 dropped:0 overruns:0 frame:0
        TX packets:260 errors:0 dropped:0 overruns:0 carrier:0
        collisions:0 txqueuelen:1000
        RX bytes:20467 (20.4 KB)  TX bytes:20467 (20.4 KB)

root@ubuntu: /home/hadis/test1/test2#
```

تغییر ادرس شبکه:

```
root@ubuntu: /home/hadis/test1/test2# ifconfig ens33 192.168.58.2
root@ubuntu: /home/hadis/test1/test2#
```

```

root@ubuntu: /home/hadis/test1/test2
root@ubuntu:/home/hadis/test1/test2# ifconfig
ens33      Link encap:Ethernet  HWaddr 00:0c:29:7f:f6:71
           inet addr:192.168.58.2  Bcast:192.168.58.255  Mask:255.255.255.0
           inet6 addr: fe80::cea9:6784:40da:a22b/64 Scope:Link
           UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
           RX packets:690 errors:0 dropped:0 overruns:0 frame:0
           TX packets:355 errors:0 dropped:0 overruns:0 carrier:0
           collisions:0 txqueuelen:1000
           RX bytes:60842 (60.8 KB)  TX bytes:40912 (40.9 KB)
           Interrupt:19 Base address:0x2000

lo         Link encap:Local Loopback
           inet addr:127.0.0.1  Mask:255.0.0.0
           inet6 addr: ::1/128 Scope:Host
           UP LOOPBACK RUNNING  MTU:65536  Metric:1
           RX packets:574 errors:0 dropped:0 overruns:0 frame:0
           TX packets:574 errors:0 dropped:0 overruns:0 carrier:0
           collisions:0 txqueuelen:1000
           RX bytes:41180 (41.1 KB)  TX bytes:41180 (41.1 KB)

```

کار با دستور route

```

root@ubuntu:/home/hadis/test1/test2# route -n
Kernel IP routing table
Destination        Gateway            Genmask           Flags Metric Ref    Use Iface
0.0.0.0            192.168.147.2     0.0.0.0           UG        100    0        0 ens33
169.254.0.0        0.0.0.0           255.255.0.0       U         1000    0        0 ens33
192.168.147.0      0.0.0.0           255.255.255.0     U         100    0        0 ens33
root@ubuntu:/home/hadis/test1/test2#

```

```

root@ubuntu:/home/hadis/test1/test2# route add default gw 192.168.147.1
root@ubuntu:/home/hadis/test1/test2# route -n
Kernel IP routing table
Destination        Gateway            Genmask           Flags Metric Ref    Use Iface
0.0.0.0            192.168.147.1     0.0.0.0           UG        0       0        0 ens33
0.0.0.0            192.168.147.2     0.0.0.0           UG        100    0        0 ens33
169.254.0.0        0.0.0.0           255.255.0.0       U         1000    0        0 ens33
192.168.147.0      0.0.0.0           255.255.255.0     U         100    0        0 ens33
root@ubuntu:/home/hadis/test1/test2#

```

```

root@ubuntu: /home/hadis/test1/test2
root@ubuntu:/home/hadis/test1/test2# route
Kernel IP routing table
Destination      Gateway          Genmask          Flags Metric Ref    Use Iface
default          192.168.147.1   0.0.0.0          UG      0      0      0 ens33
default          192.168.147.2   0.0.0.0          UG      100    0      0 ens33
link-local       *               255.255.0.0      U       1000   0      0 ens33
192.168.147.0    *               255.255.255.0    U       100    0      0 ens33
root@ubuntu:/home/hadis/test1/test2#

```

مشاهده ی اطلاعات کش شده:

```

root@ubuntu: /home/hadis/test1/test2
root@ubuntu:/home/hadis/test1/test2# route -Cn
Kernel IP routing cache
Source           Destination      Gateway          Flags Metric Ref    Use Iface
root@ubuntu:/home/hadis/test1/test2#

```