

homework #9

인공지능학부 211852 조나현

homework #9

1.

```
nahyune@nahyune-virtual-machine: ~  
nahyune@nahyune-virtual-machine:~$ hostname  
nahyune-virtual-machine  
nahyune@nahyune-virtual-machine:~$ su  
Password:  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
root@nahyune-virtual-machine:/home/nahyune# hostname testhost  
root@nahyune-virtual-machine:/home/nahyune# domainname  
(none)  
root@nahyune-virtual-machine:/home/nahyune# domainname jnu.ac.kr  
root@nahyune-virtual-machine:/home/nahyune# hostname  
testhost  
root@nahyune-virtual-machine:/home/nahyune# domainname  
jnu.ac.kr  
root@nahyune-virtual-machine:/home/nahyune# exit  
exit
```

- 터미널을 새로 시작하면, 설정해놓은 hostname, domainname 이 원래대로 바뀐다.
- 즉 영구적이지 않다.

homework #9

2.

```
nahyune@nahyune-virtual-machine:~$ ifconfig
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
    inet 192.168.142.129  netmask 255.255.255.0  broadcast 192.168.142.255
    inet6 fe80::33a9:793e:a7bd:1b5a  prefixlen 64  scopeid 0x20<link>
    ether 00:0c:29:87:63:f4  txqueuelen 1000  (Ethernet)
    RX packets 32342  bytes 48233168 (48.2 MB)
    RX errors 0  dropped 0  overruns 0  frame 0
    TX packets 2971  bytes 225698 (225.6 KB)
    TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
    inet 127.0.0.1  netmask 255.0.0.0
    inet6 ::1  prefixlen 128  scopeid 0x10<host>
    loop txqueuelen 1000  (Local Loopback)
    RX packets 193  bytes 18475 (18.4 KB)
    RX errors 0  dropped 0  overruns 0  frame 0
    TX packets 193  bytes 18475 (18.4 KB)
    TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0

nahyune@nahyune-virtual-machine:~$ su
Password:
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

root@nahyune-virtual-machine:/home/nahyune# ifconfig ens33 down
root@nahyune-virtual-machine:/home/nahyune# ifconfig ens33
ens33: flags=4090<BROADCAST,MULTICAST>  mtu 1500
    inet 192.168.142.129  netmask 255.255.255.0  broadcast 192.168.142.255
    inet6 fe80::6022:434a:aed7:ee97  prefixlen 64  scopeid 0x20<link>
    ether 00:0c:29:87:63:f4  txqueuelen 1000  (Ethernet)
    RX packets 32346  bytes 48234045 (48.2 MB)
    RX errors 0  dropped 0  overruns 0  frame 0
    TX packets 2980  bytes 226535 (226.5 KB)
    TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0

root@nahyune-virtual-machine:/home/nahyune# ifconfig ens33 up
root@nahyune-virtual-machine:/home/nahyune# ifconfig ens33
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
    inet 192.168.142.129  netmask 255.255.255.0  broadcast 192.168.142.255
    inet6 fe80::33a9:793e:a7bd:1b5a  prefixlen 64  scopeid 0x20<link>
    ether 00:0c:29:87:63:f4  txqueuelen 1000  (Ethernet)
    RX packets 32354  bytes 48235382 (48.2 MB)
    RX errors 0  dropped 0  overruns 0  frame 0
    TX packets 3015  bytes 230990 (230.9 KB)
    TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0
```

- IP address : 192.168.142.129
- subnet mask : 255.255.255.0
- MAC address (ether) : 00:0c:29:87:63:f4

homework #9

3.

```
root@nahyune-virtual-machine:/home/nahyune# route
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
default _gateway 0.0.0.0 UG 100 0 0 ens33
link-local 0.0.0.0 255.255.0.0 U 1000 0 0 ens33
192.168.142.0 0.0.0.0 255.255.255.0 U 100 0 0 ens33
root@nahyune-virtual-machine:/home/nahyune# route -n
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
0.0.0.0 192.168.142.2 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
192.168.142.0 0.0.0.0 255.255.255.0 U 100 0 0 ens33
root@nahyune-virtual-machine:/home/nahyune# route add default gw 192.168.142.3
root@nahyune-virtual-machine:/home/nahyune# route
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
default _gateway 0.0.0.0 UG 0 0 0 ens33
default _gateway 0.0.0.0 UG 100 0 0 ens33
link-local 0.0.0.0 255.255.0.0 U 1000 0 0 ens33
192.168.142.0 0.0.0.0 255.255.255.0 U 100 0 0 ens33
root@nahyune-virtual-machine:/home/nahyune# route -n
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
0.0.0.0 192.168.142.2 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
192.168.142.0 0.0.0.0 255.255.255.0 U 100 0 0 ens33
root@nahyune-virtual-machine:/home/nahyune# route add default gw 192.168.142.3
root@nahyune-virtual-machine:/home/nahyune# route
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
default _gateway 0.0.0.0 UG 0 0 0 ens33
default _gateway 0.0.0.0 UG 100 0 0 ens33
link-local 0.0.0.0 255.255.0.0 U 1000 0 0 ens33
```

```
root@nahyune-virtual-machine:/home/nahyune# route -n
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
0.0.0.0 192.168.142.3 0.0.0.0 UG 0 0 0 ens33
0.0.0.0 192.168.142.2 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
192.168.142.0 0.0.0.0 255.255.255.0 U 100 0 0 ens33
root@nahyune-virtual-machine:/home/nahyune# route add -net 192.168.143.0 netmask
255.255.255.0 gw 192.168.142.3
root@nahyune-virtual-machine:/home/nahyune# route
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
default _gateway 0.0.0.0 UG 0 0 0 ens33
default _gateway 0.0.0.0 UG 20100 0 0 ens33
link-local 0.0.0.0 255.255.0.0 U 1000 0 0 ens33
192.168.142.0 0.0.0.0 255.255.255.0 U 100 0 0 ens33
root@nahyune-virtual-machine:/home/nahyune# route -n
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
0.0.0.0 192.168.142.3 0.0.0.0 UG 0 0 0 ens33
0.0.0.0 192.168.142.2 0.0.0.0 UG 20100 0 0 ens33
169.254.0.0 0.0.0.0 255.255.0.0 U 1000 0 0 ens33
192.168.142.0 0.0.0.0 255.255.255.0 U 100 0 0 ens33
192.168.143.0 192.168.142.3 255.255.255.0 UG 0 0 0 ens33
```

- 192.168.143.0/24 네트워크로 가는 패킷은 192.168.142.3 IP 주소를 가진 게이트웨이를 통해 전송될 것입니다. 이를 통해 목적지 네트워크로의 패킷 전송이 가능해집니다.
- route del 명령어를 통해 삭제할 수 있다.
: route del -net 192.168.143.0 netmask 255.255.255.0 gw 192.168.142.3

homework #9

4.

```
root@nahunne-virtual-machine:/home/nahunne# apt-get install openssh-server
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
openssh-server is already the newest version (1:8.9p1-3ubuntu0.1).
0 upgraded, 0 newly installed, 0 to remove and 158 not upgraded.
root@nahunne-virtual-machine:/home/nahunne# netstat -ntl
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
tcp        0      0 127.0.0.1:631           0.0.0.0:*                LISTEN
tcp        0      0 127.0.0.53:53           0.0.0.0:*                LISTEN
tcp        0      0 0.0.0.0:22              0.0.0.0:*                LISTEN
tcp6       0      0 :::1:631                :::*                    LISTEN
tcp6       0      0 :::22                   :::*                    LISTEN
tcp6       0      0 :::80                    :::*                    LISTEN
root@nahunne-virtual-machine:/home/nahunne# ssh peterpan@127.0.0.1
The authenticity of host '127.0.0.1 (127.0.0.1)' can't be established.
ED25519 key fingerprint is SHA256:PB7Dea0783pyarLp54Wwhx5NH/TbcK6ni8faI0pQNB8c.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? y
Please type 'yes', 'no' or the fingerprint: y
Please type 'yes', 'no' or the fingerprint: yes
Warning: Permanently added '127.0.0.1' (ED25519) to the list of known hosts.
```

```
peterpan@127.0.0.1's password:
Welcome to Ubuntu 22.04.2 LTS (GNU/Linux 5.19.0-42-generic x86_64)
```

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

```
* Introducing Expanded Security Maintenance for Applications.
  Receive updates to over 25,000 software packages with your
  Ubuntu Pro subscription. Free for personal use.
```

```
https://ubuntu.com/pro
```

```
Expanded Security Maintenance for Applications is not enabled.
```

```
163 updates can be applied immediately.
34 of these updates are standard security updates.
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
```

```
The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.
```

```
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.
```

```
peterpan@nahunne-virtual-machine:~$ whoami
```

```
peterpan
```

```
peterpan@nahunne-virtual-machine:~$ id
```

```
uid=2009(peterpan) gid=2009(peterpan) groups=2009(peterpan),27(sudo)
```

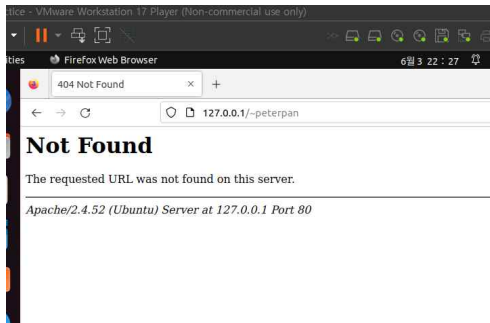
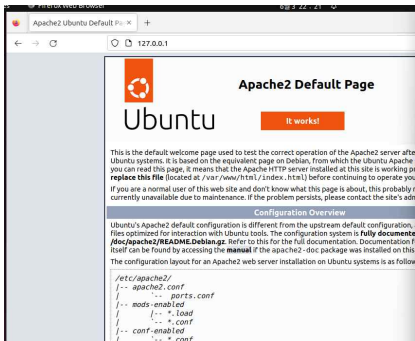
```
peterpan@nahunne-virtual-machine:~$ exit
```

```
logout
```

```
Connection to 127.0.0.1 closed.
```

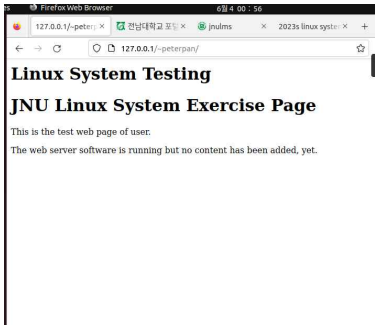
homework #9

5.



homework #9

• 5.



homework #9

• 6.

```
C:\Users\user>ssh peterpan@192.168.142.132
peterpan@192.168.142.132's password:
Welcome to Ubuntu 22.04.2 LTS (GNU/Linux 5.19.0-42-generic x86_64)

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

 * Introducing Expanded Security Maintenance for Applications.
   Receive updates to over 25,000 software packages with your
   Ubuntu Pro subscription. Free for personal use.

   https://ubuntu.com/pro

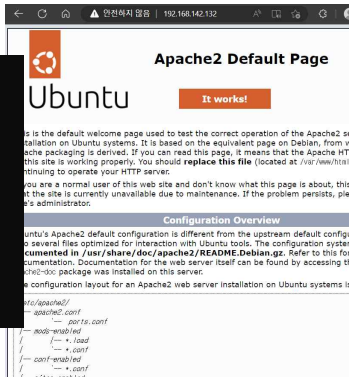
Expanded Security Maintenance for Applications is not enabled.

165 updates can be applied immediately.
69 of these updates are standard security updates.
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

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.
```



Linux System Testing

JNU Linux System Exercise Page

This is the test web page of user.

The web server software is running but no content has been added, yet.