Master machine

User: isel

Machine: master

Password: swag

User: hadoop

Password: 1234

Slave 1 machine

User: isel

Password: isel1234

User: hadoop

Password: 12345

Slave 2 machine

User: isel

Password: isel

User: hadoop

Password: 1234

# Setting up the machines

First use ifconfig to see the ip addresses of each machine  
In the case of the master machine it is 192.168.0.230

ifconfig   
First use ifconfig to see the current network that is running

enp0s31f6: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500

inet **192.168.0.230**  netmask 255.255.255.0 broadcast 192.168.0.255

inet6 fe80::b679:d909:5a5b:d7ab prefixlen 64 scopeid 0x20<link>

ether 70:85:c2:3e:a9:29 txqueuelen 1000 (Ethernet)

RX packets 855796 bytes 1231538255 (1.2 GB)

RX errors 0 dropped 0 overruns 0 frame 0

TX packets 308846 bytes 31948943 (31.9 MB)

TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

device interrupt 16 memory 0xdf100000-df120000

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 10249 bytes 1591503 (1.5 MB)

RX errors 0 dropped 0 overruns 0 frame 0

TX packets 10249 bytes 1591503 (1.5 MB)

TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

## Configure each machine to have a static ip address

Because we are going to control each machine through ssh, we need to set up static ip addresses so each time the machine boots up, the addresses do not change.

To do this you need to setup,

cd /etc/netplan

ls

edit the yaml file

# Let NetworkManager manage all devices on this system

network:

version: 2

renderer: NetworkManager

ethernets:

enp0s31f6:

dhcp4: no

addresses:

- 192.168.0.230/24

routes:

- to: 0.0.0.0/0

via: 192.168.0.1

nameservers:

addresses: [8.8.8.8, 8.8.4.4]

sudo netplan apply

ip addr show enp0s31f6

Slave1

enp34s0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500

inet 192.168.0.236 netmask 255.255.255.0 broadcast 192.168.0.255

inet6 fe80::d37f:2531:45b8:b6f1 prefixlen 64 scopeid 0x20<link>

ether 2c:f0:5d:34:85:89 txqueuelen 1000 (Ethernet)

RX packets 113362 bytes 117721550 (117.7 MB)

RX errors 0 dropped 0 overruns 0 frame 0

TX packets 67072 bytes 10919260 (10.9 MB)

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 4604 bytes 731973 (731.9 KB)

RX errors 0 dropped 0 overruns 0 frame 0

TX packets 4604 bytes 731973 (731.9 KB)

TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

network:

version: 2

renderer: NetworkManager

ethernets:

enp0s31f6:

dhcp4: no

addresses:

- 192.168.0.231/24

routes:

- to: 0.0.0.0/0

via: 192.168.0.1

nameservers:

addresses: [8.8.8.8, 8.8.4.4]

Slave 2  
isel@isel-slave2:~$ ifconfig

enp0s31f6: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500

ether 8c:ec:4b:70:44:c8 txqueuelen 1000 (Ethernet)

RX packets 0 bytes 0 (0.0 B)

RX errors 0 dropped 0 overruns 0 frame 0

TX packets 0 bytes 0 (0.0 B)

TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

device interrupt 20 memory 0xf7080000-f70a0000

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 847 bytes 153904 (153.9 KB)

RX errors 0 dropped 0 overruns 0 frame 0

TX packets 847 bytes 153904 (153.9 KB)

TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

wlx705dccf27f42: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500

inet 192.168.0.62 netmask 255.255.255.0 broadcast 192.168.0.255

inet6 fe80::bd23:868:7b14:2ecd prefixlen 64 scopeid 0x20<link>

ether 70:5d:cc:f2:7f:42 txqueuelen 1000 (Ethernet)

RX packets 75197 bytes 87346457 (87.3 MB)

RX errors 0 dropped 0 overruns 0 frame 0

TX packets 31420 bytes 4444875 (4.4 MB)

TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0  
  
  
 ethernets:

wlx705dccf27f42:

dhcp4: no

addresses:

- 192.168.0.232/24

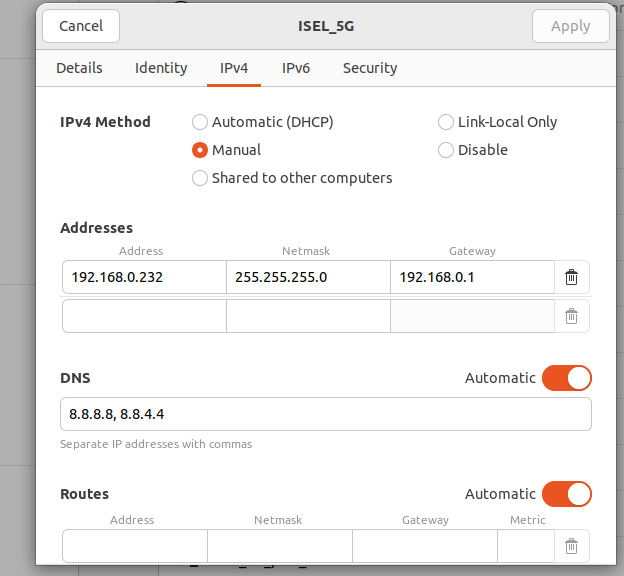
routes:

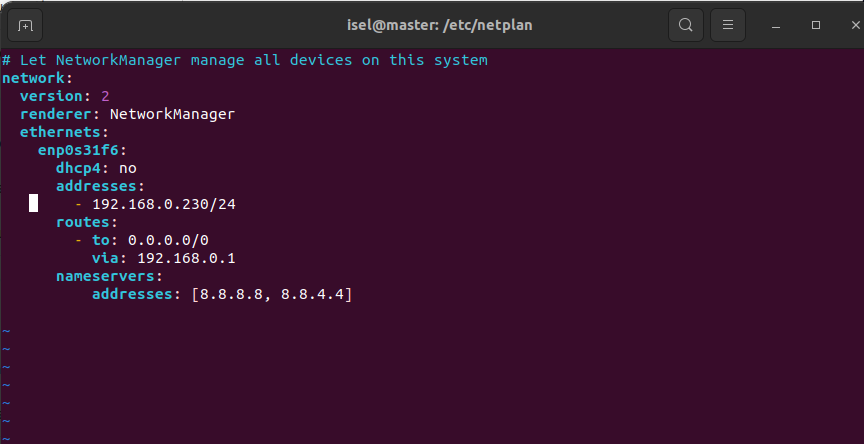
- to: 0.0.0.0/0

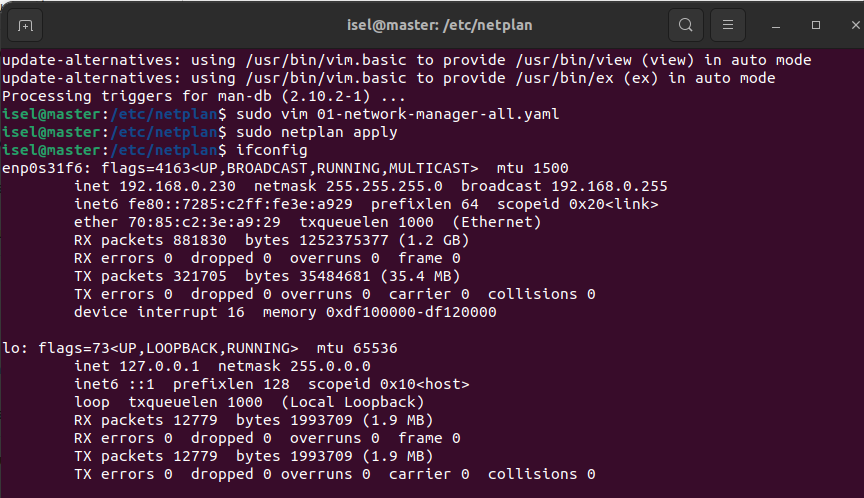
via: 192.168.0.1

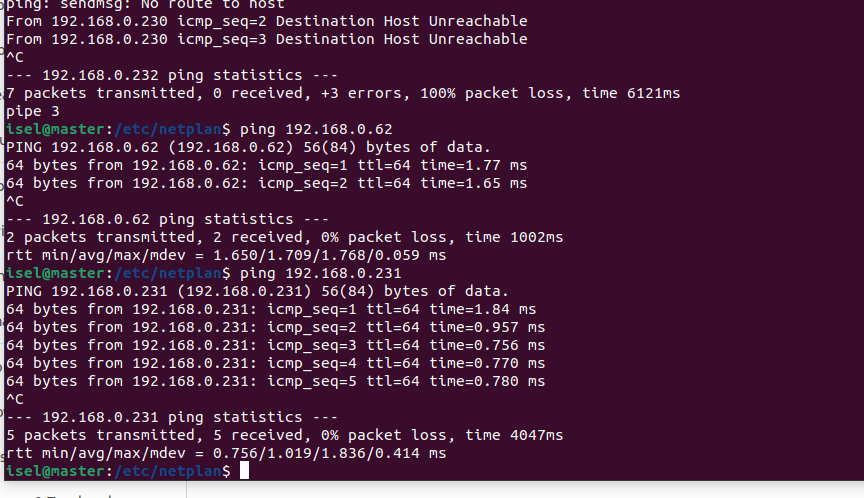
nameservers:

addresses: [8.8.8.8, 8.8.4.4]

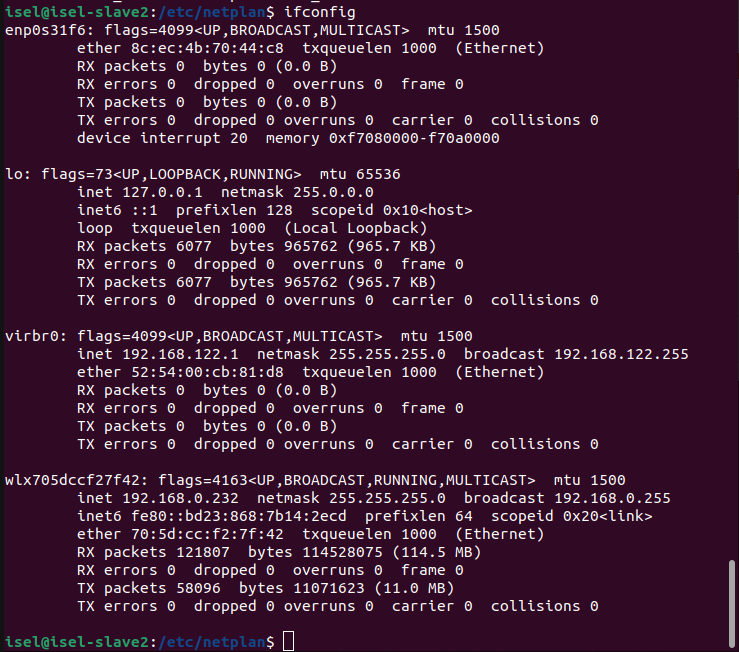


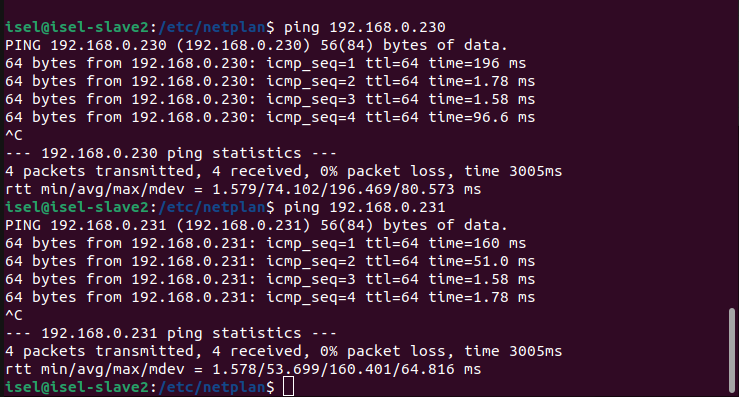


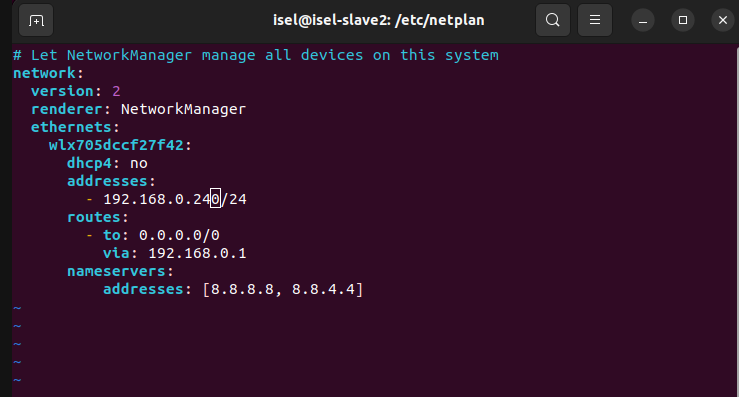


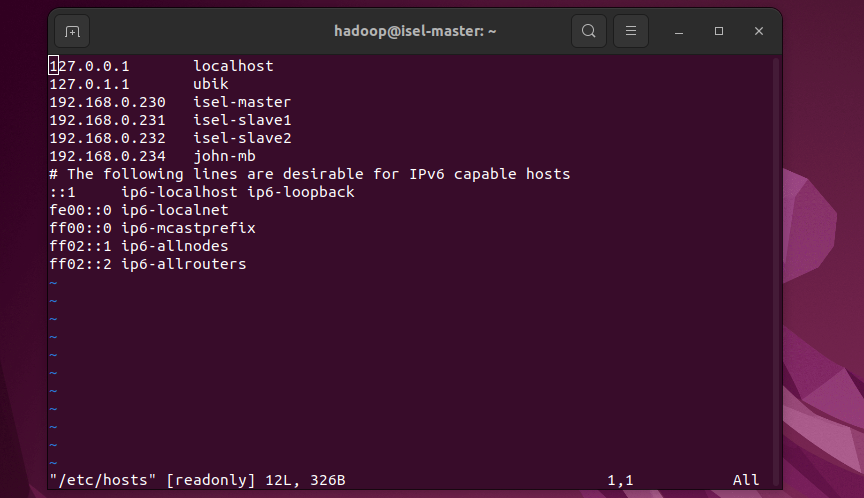


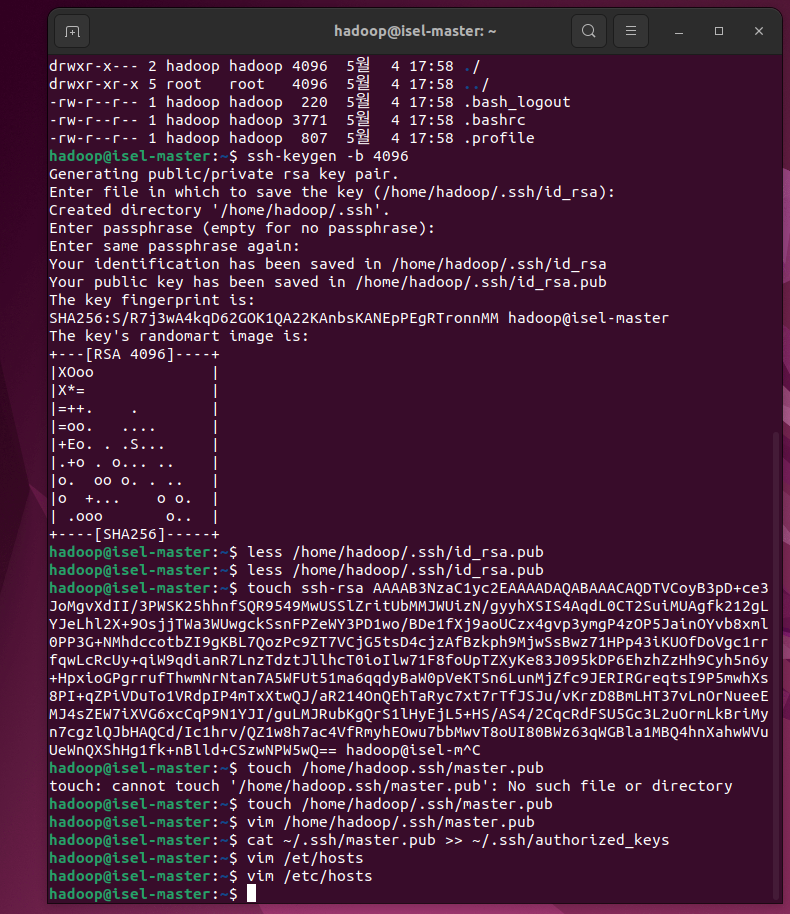
slave 2

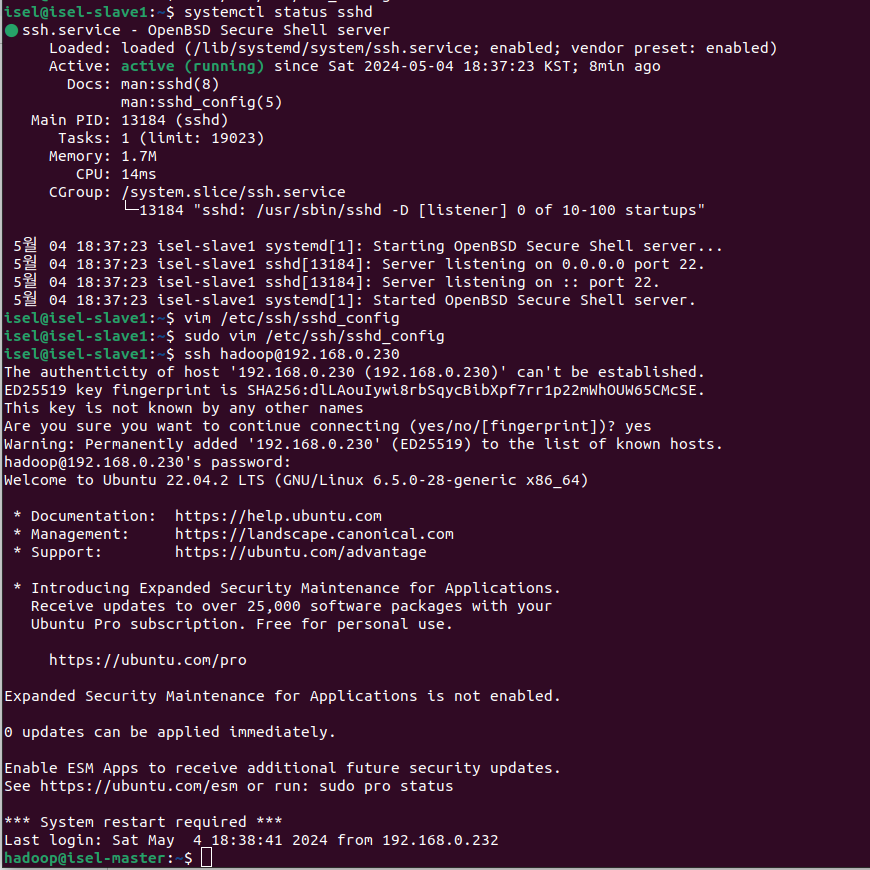












## Set up Hosts

vim /etc/hosts

192.168.0.230 isel-master

192.168.0.231 isel-slave1

192.168.0.232 isel-slave2

192.168.0.234 john-mb

## Create a hadoop user

sudo adduser hadoop

Pw: 1234

Go into node-master as the hadoop user and do

<https://dwbi.org/pages/180>

ssh-keygen -b 4096

This Is the node-master public key

less /home/hadoop/.ssh/id\_rsa.pub

ssh-rsa  hadoop@isel-master

For each node do

touch /home/hadoop/.ssh/master.pub

vim /home/hadoop/.ssh/master.pub

And put put the public key into it

Then do

cat ~/.ssh/master.pub >> ~/.ssh/authorized\_keys