

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]
```

Cancel ISEL_5G Apply

Details Identity **IPv4** IPv6 Security

IPv4 Method

☐ Automatic (DHCP) ☐ Link-Local Only

☒ Manual ☐ Disable

☐ Shared to other computers

Addresses

Address	Netmask	Gateway	
192.168.0.232	255.255.255.0	192.168.0.1	

DNS Automatic ☒

8.8.8.8, 8.8.4.4

Separate IP addresses with commas

Routes Automatic ☒

Address	Netmask	Gateway	Metric	

```
isel@master: /etc/netplan
# 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]
```

```
isel@master: /etc/netplan
update-alternatives: using /usr/bin/vim.basic to provide /usr/bin/view (view) in auto mode
update-alternatives: using /usr/bin/vim.basic to provide /usr/bin/ex (ex) in auto mode
Processing triggers for man-db (2.10.2-1) ...
isel@master:/etc/netplan$ sudo vim 01-network-manager-all.yaml
isel@master:/etc/netplan$ sudo netplan apply
isel@master:/etc/netplan$ ifconfig
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::7285:c2ff:fe3e:a929 prefixlen 64 scopeid 0x20<link>
    ether 70:85:c2:3e:a9:29 txqueuelen 1000 (Ethernet)
    RX packets 881830 bytes 1252375377 (1.2 GB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 321705 bytes 35484681 (35.4 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 12779 bytes 1993709 (1.9 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 12779 bytes 1993709 (1.9 MB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

ping: sendmsg: No route to host
From 192.168.0.230 icmp_seq=2 Destination Host Unreachable
From 192.168.0.230 icmp_seq=3 Destination Host Unreachable
^C
--- 192.168.0.232 ping statistics ---
 7 packets transmitted, 0 received, 100% packet loss, time 6121ms
pipe 3
isel@master:/etc/netplan$ ping 192.168.0.62
PING 192.168.0.62 (192.168.0.62) 56(84) bytes of data.
64 bytes from 192.168.0.62: icmp_seq=1 ttl=64 time=1.77 ms
64 bytes from 192.168.0.62: icmp_seq=2 ttl=64 time=1.65 ms
^C
--- 192.168.0.62 ping statistics ---
 2 packets transmitted, 2 received, 0% packet loss, time 1002ms
rtt min/avg/max/mdev = 1.650/1.709/1.768/0.059 ms
isel@master:/etc/netplan$ ping 192.168.0.231
PING 192.168.0.231 (192.168.0.231) 56(84) bytes of data.
64 bytes from 192.168.0.231: icmp_seq=1 ttl=64 time=1.84 ms
64 bytes from 192.168.0.231: icmp_seq=2 ttl=64 time=0.957 ms
64 bytes from 192.168.0.231: icmp_seq=3 ttl=64 time=0.756 ms
64 bytes from 192.168.0.231: icmp_seq=4 ttl=64 time=0.770 ms
64 bytes from 192.168.0.231: icmp_seq=5 ttl=64 time=0.780 ms
^C
--- 192.168.0.231 ping statistics ---
 5 packets transmitted, 5 received, 0% packet loss, time 4047ms
rtt min/avg/max/mdev = 0.756/1.019/1.836/0.414 ms
isel@master:/etc/netplan$
```

slave 2

```
isel@isel-slave2:/etc/netplan$ 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 6077 bytes 965762 (965.7 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 6077 bytes 965762 (965.7 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

virbr0: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
    inet 192.168.122.1 netmask 255.255.255.0 broadcast 192.168.122.255
    ether 52:54:00:cb:81:d8 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

wlx705dccf27f42: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.0.232 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 121807 bytes 114528075 (114.5 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 58096 bytes 11071623 (11.0 MB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

isel@isel-slave2:/etc/netplan$
```

```
isel@isel-slave2:/etc/netplan$ ping 192.168.0.230
PING 192.168.0.230 (192.168.0.230) 56(84) bytes of data.
64 bytes from 192.168.0.230: icmp_seq=1 ttl=64 time=196 ms
64 bytes from 192.168.0.230: icmp_seq=2 ttl=64 time=1.78 ms
64 bytes from 192.168.0.230: icmp_seq=3 ttl=64 time=1.58 ms
64 bytes from 192.168.0.230: icmp_seq=4 ttl=64 time=96.6 ms
^C
--- 192.168.0.230 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3005ms
rtt min/avg/max/mdev = 1.579/74.102/196.469/80.573 ms
isel@isel-slave2:/etc/netplan$ ping 192.168.0.231
PING 192.168.0.231 (192.168.0.231) 56(84) bytes of data.
64 bytes from 192.168.0.231: icmp_seq=1 ttl=64 time=160 ms
64 bytes from 192.168.0.231: icmp_seq=2 ttl=64 time=51.0 ms
64 bytes from 192.168.0.231: icmp_seq=3 ttl=64 time=1.58 ms
64 bytes from 192.168.0.231: icmp_seq=4 ttl=64 time=1.78 ms
^C
--- 192.168.0.231 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3005ms
rtt min/avg/max/mdev = 1.578/53.699/160.401/64.816 ms
isel@isel-slave2:/etc/netplan$
```

```
isel@isel-slave2: /etc/netplan
# Let NetworkManager manage all devices on this system
network:
  version: 2
  renderer: NetworkManager
  ethernets:
    wlan705dccb27f42:
      dhcp4: no
      addresses:
        - 192.168.0.240/24
      routes:
        - to: 0.0.0.0/0
          via: 192.168.0.1
      nameservers:
        addresses: [8.8.8.8, 8.8.4.4]
~
~
~
~
```

```
hadoop@isel-master: ~
127.0.0.1      localhost
127.0.1.1      ubik
192.168.0.230  isel-master
192.168.0.231  isel-slave1
192.168.0.232  isel-slave2
192.168.0.234  john-mb
# The following lines are desirable for IPv6 capable hosts
::1          ip6-localhost ip6-loopback
fe00::0      ip6-localnet
ff00::0      ip6-mcastprefix
ff02::1      ip6-allnodes
ff02::2      ip6-allrouters
~
~
~
~
~
~
~
~
~
~
"/etc/hosts" [readonly] 12L, 326B      1,1      All
```

```

hadoop@isel-master: ~
drwxr-x-- 2 hadoop hadoop 4096 5월 4 17:58 ./
drwxr-xr-x 5 root root 4096 5월 4 17:58 ../
-rw-r--r-- 1 hadoop hadoop 220 5월 4 17:58 .bash_logout
-rw-r--r-- 1 hadoop hadoop 3771 5월 4 17:58 .bashrc
-rw-r--r-- 1 hadoop hadoop 807 5월 4 17:58 .profile
hadoop@isel-master:~$ ssh-keygen -b 4096
Generating public/private rsa key pair.
Enter file in which to save the key (/home/hadoop/.ssh/id_rsa):
Created directory '/home/hadoop/.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/hadoop/.ssh/id_rsa
Your public key has been saved in /home/hadoop/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:S/R7j3WA4kqD62GOK1QA22KANbsKANepPEgRTronnMM hadoop@isel-master
The key's randomart image is:
+---[RSA 4096]-----+
|X0oo                |
|X*=                 |
|=+++.              |
|=oo.              .|
|+Eo. . .S...       |
|.o . o... ..       |
|o. oo o. . .       |
|o +... o o.        |
|.ooo              o..|
+---[SHA256]-----+
hadoop@isel-master:~$ less /home/hadoop/.ssh/id_rsa.pub
hadoop@isel-master:~$ less /home/hadoop/.ssh/id_rsa.pub
hadoop@isel-master:~$ touch ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQDTCoyB3pD+ce3
JoMgvXdII/3PWSK25hhnfsQR9549MwUSSlZritUbMMJWUizN/gyyhXSIS4AqdL0CT2SuiMUAgfk212gL
YJeLhl2X+90sjjTWa3WUwgckSsnFPZeWY3PD1wo/BDe1fXj9aoUCzx4gvp3ymgP4z0P5JainOYvb8xmL
0PP3G+NMhdccotbZi9gKBL7QozPc9ZT7VCjG5tsD4cjzAfBzkph9MjwSsBwz71HPp43iKU0fDoVgc1rr
fqwLcRcUy+qiW9qdianR7LnZtdztJllhcT0IoIlw71F8foUpTZxyKe83J095kDP6EhzhZzHh9Cyh5n6y
+HpxioGPgrrufThwmNrNtan7A5WFUT51ma6qqdyBaW0pVeKTSn6LunMjZfc9JERIRGreptsI9P5mwhXs
8PI+qZPiVDuTo1VRdpIP4mTxXtwQJ/aR2140nQEhTaRyc7xt7rTfJSJu/vKrZD8BmLHT37vLnOrNueeE
MJ4sZEW7iXVG6xcCqP9N1YJI/guLMJRubKgQrS1lHyEjL5+HS/AS4/2CqCRdFSUSGc3L2u0rmLkBrMy
n7cgzLQJbHAQCd/Ic1hrv/QZ1w8h7ac4VfRmyhEOwu7bbMwvT8oUI80BWz63qWGBla1MBQ4hnXahwWVu
UeWnQXShHg1fk+nBld+CSzwNPW5wQ== hadoop@isel-m^C
hadoop@isel-master:~$ touch /home/hadoop.ssh/master.pub
touch: cannot touch '/home/hadoop.ssh/master.pub': No such file or directory
hadoop@isel-master:~$ touch /home/hadoop/.ssh/master.pub
hadoop@isel-master:~$ vim /home/hadoop/.ssh/master.pub
hadoop@isel-master:~$ cat ~/.ssh/master.pub >> ~/.ssh/authorized_keys
hadoop@isel-master:~$ vim /etc/hosts
hadoop@isel-master:~$ vim /etc/hosts
hadoop@isel-master:~$

```



```
isel@isel-slave1:~$ systemctl status sshd
● ssh.service - OpenBSD Secure Shell server
   Loaded: loaded (/lib/systemd/system/ssh.service; enabled; vendor preset: enabled)
   Active: active (running) since Sat 2024-05-04 18:37:23 KST; 8min ago
     Docs: man:sshd(8)
           man:sshd_config(5)
  Main PID: 13184 (sshd)
    Tasks: 1 (limit: 19023)
   Memory: 1.7M
      CPU: 14ms
   CGroup: /system.slice/ssh.service
           └─13184 "sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups"

5월 04 18:37:23 isel-slave1 systemd[1]: Starting OpenBSD Secure Shell server...
5월 04 18:37:23 isel-slave1 sshd[13184]: Server listening on 0.0.0.0 port 22.
5월 04 18:37:23 isel-slave1 sshd[13184]: Server listening on :: port 22.
5월 04 18:37:23 isel-slave1 systemd[1]: Started OpenBSD Secure Shell server.
isel@isel-slave1:~$ vim /etc/ssh/sshd_config
isel@isel-slave1:~$ sudo vim /etc/ssh/sshd_config
isel@isel-slave1:~$ ssh hadoop@192.168.0.230
The authenticity of host '192.168.0.230 (192.168.0.230)' can't be established.
ED25519 key fingerprint is SHA256:dLLAouIywi8rb5qycBibXpf7rr1p22mWhOUW65CMcSE.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '192.168.0.230' (ED25519) to the list of known hosts.
hadoop@192.168.0.230's password:
Welcome to Ubuntu 22.04.2 LTS (GNU/Linux 6.5.0-28-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.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

*** System restart required ***
Last login: Sat May  4 18:38:41 2024 from 192.168.0.232
hadoop@isel-master:~$
```

```

isel@isel-slave2:~$ systemctl enable ssh
Synchronizing state of ssh.service with SysV service script with /lib/systemd/sy
stemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install enable ssh
isel@isel-slave2:~$ vim /etc/ssh/sshd_config
isel@isel-slave2:~$ vim /etc/ssh/sshd_config
isel@isel-slave2:~$ vim /etc/ssh/sshd_config
isel@isel-slave2:~$ sudo vim /etc/ssh/sshd_config
isel@isel-slave2:~$ ssh hadoop@192.168.0.230
The authenticity of host '192.168.0.230 (192.168.0.230)' can't be established.
ED25519 key fingerprint is SHA256:dLLAouIywi8rbSqycBibXpf7rr1p22mWhOUW6SCMcSE.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '192.168.0.230' (ED25519) to the list of known hosts.
hadoop@192.168.0.230's password:
Permission denied, please try again.
hadoop@192.168.0.230's password:
Permission denied, please try again.
hadoop@192.168.0.230's password:
Welcome to Ubuntu 22.04.2 LTS (GNU/Linux 6.5.0-28-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.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

*** System restart required ***

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.

hadoop@isel-master:~$ exit
logout
Connection to 192.168.0.230 closed.

```

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

```
AAAAB3NzaC1yc2EAAAADAQABAAQCAQDTVCoyB3pD+ce3JoMgvXdII/3PWSK25hhnfSQR9549MwU
SSIZritUbMMJWUizN/gyyhXSIS4AqdL0CT2SuiMUAgfk212gLYJeLhl2X+9OsjjTWa3WUwgckSsnFPZeW
Y3PD1wo/BDe1fXj9aoUCzx4gvp3ymgP4zOP5JainOYvb8xml0PP3G+NMhdccotbZI9gKBL7QozPc9ZT7V
CjG5tsD4cjzAfBzkph9MjwSsBwz71HPp43iKUOfDoVgc1rrfqwLcRcUy+qiW9qdianR7LnzTdzTJllhcT0iollw7
1F8foUpTZxyKe83J095kDP6EhzhZzHh9Cyh5n6y+HpxioGPgrufThwmNrNtan7A5WFUt51ma6qqdyBaW
0pVeKTSn6LunMjZfc9JERIRGreqtsl9P5mwhXs8PI+qZPiVDuTo1VRdplP4mTxXtwQJ/aR214OnQEhTaR
yc7xt7rTfJSJu/vKrzD8BmLHT37vLnOrNueeEMJ4sZEW7iXVG6xcCqP9N1YJl/guLMJRubKgQrS1lHyEjL5
+HS/AS4/2CqcRdFSU5Gc3L2uOrmLkBriMyn7cgzIQJbHAQcd/lc1hrv/QZ1w8h7ac4VfRmyhEOwu7bbMw
vT8oUI80BWz63qWGBla1MBQ4hnXahwWVuUeWnQXShHg1fk+nBlld+CSzwNPW5wQ== hadoop@isel-
master
```

For each node do
touch /home/hadoop/.ssh/master.pub
vim /home/hadoop/.ssh/master.pub
And put the public key into it

Then do
cat ~/.ssh/master.pub >> ~/.ssh/authorized_keys