

# Linux Lokaverkefni

1)

```
eythor@eythor-VirtualBox: ~  
# interfaces(5) file used by ifup(8) and ifdown(8)  
auto lo  
iface lo inet loopback  
  
#primary interface connected to Internet  
auto enp0s3  
iface enp0s3 inet dhcp  
  
#primary network interface private connection  
auto enp0s8  
iface enp0s8 inet static  
    address 192.168.100.1  
    netmask 255.255.255.192  
    network 192.168.100.0  
    broadcast 192.168.100.63  
    gateway 192.168.100.1  
    dns-nameservers 192.168.100.1  
  
eythor@server1:~$ ifconfig  
enp0s3    Link encap:Ethernet  HWaddr 08:00:27:ec:e9:16  
          inet addr:10.220.229.64  Bcast:10.220.229.255  Mask:255.255.255.0  
          inet6 addr: fe80::a00:27ff:feec:e916/64  Scope:Link  
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1  
          RX packets:250991 errors:0 dropped:0 overruns:0 frame:0  
          TX packets:38553 errors:0 dropped:0 overruns:0 carrier:0  
          collisions:0 txqueuelen:1000  
          RX bytes:346077279 (346.0 MB)  TX bytes:2390784 (2.3 MB)  
  
enp0s8    Link encap:Ethernet  HWaddr 08:00:27:23:fa:ca  
          inet addr:192.168.100.1  Bcast:192.168.100.63  Mask:255.255.255.192  
          inet6 addr: fe80::a00:27ff:fe23:fa:ca/64  Scope:Link  
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1  
          RX packets:36551 errors:0 dropped:0 overruns:0 frame:0  
          TX packets:161 errors:0 dropped:0 overruns:0 carrier:0  
          collisions:0 txqueuelen:1000  
          RX bytes:192.168.100.0/26  
          Socket/fallback/fallback-net
```

2)

```
eythor@server1:~$ hostname  
server1.eythor.local  
eythor@server1:~$ hostname -f  
server1.eythor.local  
eythor@server1:~$
```

3)

```
root@eythor-VirtualBox:/home/eythor# ifconfig enp0s3 up
root@eythor-VirtualBox:/home/eythor#
root@eythor-VirtualBox:/home/eythor# ifconfig
enp0s3      Link encap:Ethernet  HWaddr 08:00:27:57:7d:4b
            inet addr:192.168.100.10  Bcast:192.168.100.63  Mask:255.255.255.192
            inet6 addr: fe80::d5fd:d9b9:2ce5:42f3/64 Scope:Link
            UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
            RX packets:10 errors:0 dropped:0 overruns:0 frame:0
            TX packets:81470 errors:0 dropped:0 overruns:0 carrier:0
            collisions:0 txqueuelen:1000
            RX bytes:1448 (1.4 KB)  TX bytes:14369764 (14.3 MB)

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:1560770 errors:0 dropped:0 overruns:0 frame:0
            TX packets:1560770 errors:0 dropped:0 overruns:0 carrier:0
            collisions:0 txqueuelen:1000
            RX bytes:115671254 (115.6 MB)  TX bytes:115671254 (115.6 MB)

root@eythor-VirtualBox:/home/eythor#
root@eythor-VirtualBox:/home/eythor#
```

```
eythor@eythor-VirtualBox:~$ ifconfig
enp0s3      Link encap:Ethernet  HWaddr 08:00:27:57:7d:4b
            UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
            RX packets:0 errors:0 dropped:0 overruns:0 frame:0
            TX packets:81171 errors:0 dropped:0 overruns:0 carrier:0
            collisions:0 txqueuelen:1000
            RX bytes:0 (0.0 B)  TX bytes:14325433 (14.3 MB)

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:1556872 errors:0 dropped:0 overruns:0 frame:0
            TX packets:1556872 errors:0 dropped:0 overruns:0 carrier:0
            collisions:0 txqueuelen:1000
            RX bytes:115384160 (115.3 MB)  TX bytes:115384160 (115.3 MB)

eythor@eythor-VirtualBox:~$
```

```
root@server1:/home/eythor# tail -f /var/log/syslog
May  7 16:30:51 server1 sh[4234]: Listening on LPF/enp0s8/08:00:27:23:fa:ca/192.168.100.0/26
May  7 16:30:51 server1 sh[4234]: Sending on LPF/enp0s8/08:00:27:23:fa:ca/192.168.100.0/26
May  7 16:30:51 server1 sh[4234]: Sending on Socket/fallback/fallback-net
May  7 16:30:51 server1 dhcpcd[4234]: Sending on LPF/enp0s8/08:00:27:23:fa:ca/192.168.100.0/26
May  7 16:30:51 server1 dhcpcd[4234]: Sending on Socket/fallback/fallback-net
May  7 16:30:51 server1 dhcpcd[4234]: Server starting service.
May  7 16:30:55 server1 dhcpcd[4234]: DHCPDISCOVER from 08:00:27:57:7d:4b via enp0s8
May  7 16:30:56 server1 dhcpcd[4234]: DHCPOFFER on 192.168.100.10 to 08:00:27:57:7d:4b (eythor-VirtualBox) via enp0s8
May  7 16:30:56 server1 dhcpcd[4234]: DHCPREQUEST for 192.168.100.10 (192.168.100.1) from 08:00:27:57:7d:4b (eythor-VirtualBox) via enp0s8
May  7 16:30:56 server1 dhcpcd[4234]: DHCPACK on 192.168.100.10 to 08:00:27:57:7d:4b (eythor-VirtualBox) via enp0s8
May  7 16:31:45 server1 dhcpcd[4234]: reuse_lease: lease age 49 (secs) under 25% threshold, reply with unaltered, existing lease
May  7 16:31:45 server1 dhcpcd[4234]: DHCPREQUEST for 192.168.100.10 from 08:00:27:57:7d:4b (eythor-VirtualBox) via enp0s8
May  7 16:31:45 server1 dhcpcd[4234]: DHCPACK on 192.168.100.10 to 08:00:27:57:7d:4b via enp0s8
May  7 16:35:14 server1 dhcpcd[4234]: DHCPREQUEST for 192.168.100.10 from 08:00:27:57:7d:4b via enp0s8
May  7 16:35:14 server1 dhcpcd[4234]: DHCPACK on 192.168.100.10 to 08:00:27:57:7d:4b (eythor-VirtualBox) via enp0s8
May  7 16:39:13 server1 dhcpcd[4234]: DHCPREQUEST for 192.168.100.10 from 08:00:27:57:7d:4b (eythor-VirtualBox) via enp0s8
May  7 16:39:13 server1 dhcpcd[4234]: DHCPACK on 192.168.100.10 to 08:00:27:57:7d:4b (eythor-VirtualBox) via enp0s8
```

4)

```
sudo apt-get install bind9
```

sudo nano /etc/bind/named.conf.options

```
GNU nano 2.5.3      File: /etc/bind/named.conf.options      Modified
options {
    directory "/var/cache/bind";

    // If there is a firewall between you and nameservers you want
    // to talk to, you may need to fix the firewall to allow multiple
    // ports to talk.  See http://www.kb.cert.org/vuls/id/800113

    // If your ISP provided one or more IP addresses for stable
    // nameservers, you probably want to use them as forwarders.
    // Uncomment the following block, and insert the addresses replacing
    // the all-0's placeholder.

    forwarders {
        10.200.10.201;
    };

    //=====
    // If BIND logs error messages about the root key being expired,
    // you will need to update your keys.  See https://www.isc.org/bind-keys
```

sudo nano /etc/network/interfaces

sudo nano /etc/bind/named.conf.local

```
//
// Do any local configuration here
//

// Consider adding the 1918 zones here, if they are not used in your
// organization
//include "/etc/bind/zones.rfc1918";
zone "eythor.lan" IN {
    type master;
    file "/etc/bind/zones/eythor.lan.db";
};
```

```
sudo mkdir /etc/bind/zone
```

```
//  
// Do any local configuration here  
//  
  
// Consider adding the 1918 zones here, if they are not used in your  
// organization  
//include "/etc/bind/zones.rfc1918";  
zone "eythor.lan" IN {  
    type master;  
    file "/etc/bind/zones/eythor.lan.db";  
};
```

```
sudo nano /etc/bind/for.eythor.lan
```

```
eythor@server1: ~  
GNU nano 2.5.3      File: /etc/bind/for.eythor.lan      Modified  
  
$TTL 86400  
@ IN SOA pri.ostechnix.lan. root.ostechnix.lan. (  
    2011071001 ;Serial  
    3600      ;Refresh  
    1800      ;Retry  
    604800    ;Expire  
    86400     ;Minimum TTL  
)  
@ IN NS pri.eythor.lan.  
@ IN NS sec.eythor.lan.  
@ IN A 192.168.1.200  
@ IN A 192.168.1.201  
@ IN A 192.168.1.202  
pri IN A 192.168.1.200  
sec IN A 192.168.1.201  
client IN A 192.168.1.202  
  
^G Get Help  ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify    ^C Cur Pos  
^X Exit      ^R Read File  ^\ Replace    ^U Uncut Text ^T To Spell   ^_ Go To Line
```

```
dig -x 127.0.0.1
```

```

eythor@server1:~$ dig -x 127.0.0.1

; <<>> DiG 9.10.3-P4-Ubuntu <<>> -x 127.0.0.1
;; global options: +cmd
;; Got answer:
;; ->HEADER<- opcode: QUERY, status: NOERROR, id: 61904
;; flags: qr aa rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 3

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 4096
;; QUESTION SECTION:
;1.0.0.127.in-addr.arpa.          IN      PTR

;; ANSWER SECTION:
1.0.0.127.in-addr.arpa. 604800 IN      PTR      localhost.

;; AUTHORITY SECTION:
127.in-addr.arpa.      604800 IN      NS      localhost.

;; ADDITIONAL SECTION:
localhost.             604800 IN      A       127.0.0.1
localhost.             604800 IN      AAAA    ::1

;; Query time: 20 msec
;; SERVER: 127.0.0.1#53(127.0.0.1)
;; WHEN: Wed May 09 10:50:23 GMT 2018
;; MSG SIZE rcvd: 132

```

sudo named-checkzone aron.lan /etc/bind/for.aron.lan

```

eythor@server1: ~
Setting up ubuntu-desktop (1.361.1) ...
Setting up unattended-upgrades (0.90ubuntu0.9) ...
Setting up unity-control-center-faces (15.04.0+16.04.20171130-0ubuntu1) ...
Setting up unity-scopes-runner (7.1.4+16.04.20180209.1-0ubuntu1) ...
Setting up xserver-xorg-video-amdgpu-hwe-16.04 (1.4.0-1~16.04.1) ...
Setting up xserver-xorg-video-radeon-hwe-16.04 (1:7.10.0-1~16.04.1) ...
Setting up xserver-xorg-video-ati-hwe-16.04 (1:7.10.0-1~16.04.1) ...
Setting up xserver-xorg-video-nouveau-hwe-16.04 (1:1.0.15-2~16.04.1) ...
Processing triggers for libc-bin (2.23-0ubuntu10) ...
Processing triggers for initramfs-tools (0.122ubuntu8.11) ...
update-initramfs: Generating /boot/initrd.img-4.13.0-39-generic
Processing triggers for resolvconf (1.78ubuntu6) ...
W: Operation was interrupted before it could finish
eythor@server1:~$ sudo nano /etc/bind/named.conf
eythor@server1:~$ sudo nano /etc/bind/named.conf.local
eythor@server1:~$ sudo nano /etc/bind/for.eythor.lan
eythor@server1:~$ sudo named-checkzone eythor.lan /etc/bind/for.eythor.lan
zone eythor.lan/IN: loaded serial 2011071001
OK

```

5)

sudo useradd AleRag

sudo useradd AndHau

sudo useradd GudSte

sudo useradd HalJon

sudo useradd HarHja

sudo useradd HraAra

sudo useradd IngGud

```
sudo useradd IsaLei
sudo useradd JohKri
sudo useradd JohHaf
sudo useradd KriSva
sudo useradd LarGun
sudo useradd LinMag
sudo useradd RudBjo
sudo useradd SigSte
sudo useradd SigJen
sudo groupadd IT
sudo groupadd Management
sudo groupadd Accounting
sudo groupadd Manufacturing
sudo usermod -a -G IT AleRag
sudo usermod -a -G IT AndHau
sudo usermod -a -G Management GudSte
sudo usermod -a -G Management HalJon
sudo usermod -a -G Management HarHja
sudo usermod -a -G Accounting HraAra
sudo usermod -a -G Accounting IngGud
sudo usermod -a -G Manufacturing IsaLei
sudo usermod -a -G Manufacturing JohKri
sudo usermod -a -G Manufacturing JohHaf
sudo usermod -a -G Manufacturing KriSva
sudo usermod -a -G Manufacturing LarGun
sudo usermod -a -G Manufacturing LinMag
sudo usermod -a -G Manufacturing RudBjo
sudo usermod -a -G Manufacturing SigSte
```

```
sudo usermod -a -G Manufacturing SigJen
```

**6)**

```
sudo apt update
```

```
sudo apt install samba
```

```
mkdir /home/eythor/sambashare/
```

```
sudo nano /etc/samba/smb.conf
```

```
[sambashare]
```

```
comment = Samba on Ubuntu
```

```
path = /home/eythor/sambashare
```

```
read only = no
```

```
browsable = yes
```

```
Sudo smbpasswd -a AleRag (pass.123)
```

```
Sudo smbpasswd -a AndHau (pass.123)
```

```
Sudo smbpasswd -a GudSte (pass.123)
```

```
Sudo smbpasswd -a HalJon (pass.123)
```

```
Sudo smbpasswd -a HarHja (pass.123)
```

**7)**

```
Sudo apt-get upgrade
```

```
Sudo apt-get install openssh-server
```

```
Sudo vi /etc/ssh/sshd_config
```

```
AllowUsers AleRag AndHau GudSte HalJon HarHja
```

```
eythor@server1: ~  
#UseLogin no  
  
#MaxStartups 10:30:60  
#Banner /etc/issue.net  
  
# Allow client to pass locale environment variables  
AcceptEnv LANG LC_*  
  
Subsystem sftp /usr/lib/openssh/sftp-server  
  
# Set this to 'yes' to enable PAM authentication, account processing,  
# and session processing. If this is enabled, PAM authentication will  
# be allowed through the ChallengeResponseAuthentication and  
# PasswordAuthentication. Depending on your PAM configuration,  
# PAM authentication via ChallengeResponseAuthentication may bypass  
# the setting of "PermitRootLogin without-password".  
# If you just want the PAM account and session checks to run without  
# PAM authentication, then enable this but set PasswordAuthentication  
# and ChallengeResponseAuthentication to 'no'.  
UsePAM yes  
  
AllowUsers AleRag AndHau GudSte HalJon HarHja
```

Sudo systemctl restart sshd

8)

Sudo apt-get install apache2

Sudo a2enmod ssl

Sudo service apache2 restart

## Create a Self-Signed SSL Certificate

```
sudo mkdir /etc/apache2/ssl
```

```
sudo openssl req -x509 -nodes -days 365 -newkey rsa:2048 -keyout  
/etc/apache2/ssl/apache.key -out /etc/apache2/ssl/apache.crt
```