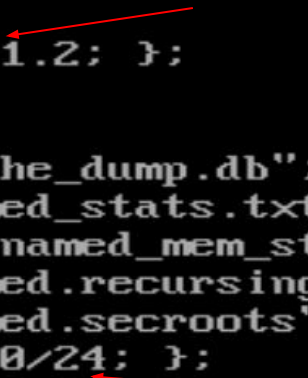


1. `vi <file>` → Open a file in vi editor
2. Press `i` → Switch to insert mode (edit the file)
3. Press `Esc` → Exit insert mode
4. `:w` → Save changes
5. `:q` → Quit the editor
6. `:wq` or `ZZ` → Save and quit
7. `:q!` → Quit without saving
8. `cd <directory>` → Change directory
9. `ls` → List files and directories
10. `cd -` → Go Back to the Previous Directory
11. `sudo <command>` → Run a command as root
12. `su - <user>` → Switch to another user

vi /etc/named.conf

```
options {  
    listen-on port 53 { 127.0.0.1; 10.0.1.2; };  
    listen-on-v6 port 53 { ::1; };  
    directory "/var/named";  
    dump-file "/var/named/data/cache_dump.db";  
    statistics-file "/var/named/data/named_stats.txt";  
    memstatistics-file "/var/named/data/named_mem_stats.txt";  
    recursing-file "/var/named/data/named.recursing";  
    secroots-file "/var/named/data/named.secroots";  
    allow-query { localhost; 10.0.1.0/24; };  
}
```



vi /etc/named.conf

```
GNU nano 2.3.1 File:
};

zone "." IN {
    type hint;
    file "named.ca";
};

## Forward lookup zone

zone "csa.lk" IN {
    type master;
    file "forward.csa.lk";
    allow-update { none; };
};

## Reverse lookup zone

zone "1.0.10.in-addr.arpa" IN {
    type master;
    file "reverse.csa.lk";
    allow-update { none; };
};

-

include "/etc/named.rfc1912.zones";
include "/etc/named.root.key";
```

```
## forward lookup zone
zone"csa.lk" IN {
    type master;
    file "forward.csa.lk";
    allow-update { none; };
};
```

```
## Reverse lookup zone
zone"1.0.10.in-addr.arpa" IN {
    type master;
    file "reverse.csa.lk";
    allow-update { none; };
};
```

vi /var/named/forward.csa.lk

```
GNU nano 2.3.1      File: /var/named/forward.csa.lk

$TTL 86400
@ IN SOA mlb-dc1-centos7.csa.lk. root.csa.lk. (
    2011071001 ; Serial
    3600      ; Refresh
    1800      ; Retry
    604800    ; Expire
    86400     ; Minimum TTL
)

@ IN NS  mlb-dc1-centos7.csa.lk.

@ IN A   10.0.1.2

@ IN A   10.0.1.3

mlb-dc1-centos7 IN A   10.0.1.2

csa-cli-fedora28 IN A  10.0.1.3
```

\$TTL 86400

@ IN SOA mlb-dc1-centos7.csa.lk. root.csa.lk. (
2011071001 ; Serial
3600 ; Refresh
1800 ; Retry
604800 ; Expire
86400 ; Minimum TTL
)

@ IN NS mlb-dc1-centos7.csa.lk.

@ IN A 10.0.1.?

@ IN A 10.0.1.?

mlb-dc1-centos7 IN A 10.0.1.?

? IN A 10.0.1.?

vi /var/named/reverse.csa.lk

```
GNU nano 2.3.1 File: /var/named/reverse.csa.lk

$TTL 86400
@ IN SOA mlb-dc1-centos7.csa.lk. root.csa.lk. (
    2011071001 ; Serial
    3600       ; Refresh
    1800       ; Retry
    604800     ; Expire
    86400      ; Minimum TTL
)

@ IN NS  mlb-dc1-centos7.csa.lk.
@ IN PTR csa.lk.

mlb-dc1-centos7 IN A 10.0.1.2
csa-cli-fedora28 IN A 10.0.1.3
2 IN PTR mlb-dc1-centos7.csa.lk.
3 IN PTR csa-cli-fedora28.csa.lk.
```

\$TTL 86400

@ IN SOA mlb-dc1-centos7.csa.lk. root.csa.lk. (
 2011071001 ; Serial
 3600 ; Refresh
 1800 ; Retry
 604800 ; Expire
 86400 ; Minimum TTL
)

@ IN NS mlb-dc1-centos7.csa.lk.

@ IN PTR csa.lk.

server IN A 10.0.1.?

client IN A 10.0.1.?

? IN PTR mlb-dc1-centos7.csa.lk.

? IN PTR ?

vi /etc/dhcp/dhcpd.conf

```
# dhcpd.conf
#
# Sample configuration file for ISC dhcpd
#

# option definitions common to all supported networks...
option domain-name "csa.lk";
option domain-name-servers mlb-dc1-centos7.csa.lk;

default-lease-time 600;
max-lease-time 7200;

# Use this to enable / disable dynamic dns updates globally.
#ddns-update-style none;

# If this DHCP server is the official DHCP server for the local
# network, the authoritative directive should be uncommented.
authoritative;

# Use this to send dhcp log messages to a different log file (you also
# have to hack syslog.conf to complete the redirection).
log-facility local7;

# No service will be given on this subnet, but declaring it helps the
# DHCP server to understand the network topology.

subnet 10.152.187.0 netmask 255.255.255.0 {
}
```

```
# This declaration allows BOOTP clients to get dynamic addresses,
# which we don't really recommend.

subnet 10.254.239.32 netmask 255.255.255.224 {
    range dynamic-bootp 10.254.239.40 10.254.239.60;
    option broadcast-address 10.254.239.31;
    option routers rtr-239-32-1.example.org;
}

# A slightly different configuration for an internal subnet.
subnet 10.0.1.0 netmask 255.255.255.0 {
    range 10.0.1.25 10.0.1.50;
    option domain-name-servers mlb-dc1-centos7.csa.lk;
    option domain-name "csa.lk";
    option routers 10.0.1.1;
    option broadcast-address 10.0.1.255;
    default-lease-time 600;
    max-lease-time 7200;
}

# Hosts which require special configuration options can be listed in
# host statements. If no address is specified, the address will be
# allocated dynamically (if possible), but the host-specific information
# will still come from the host declaration.

host passacaglia {
    hardware ethernet 0:0:c0:5d:bd:95;
    filename "vmunix.passacaglia";
    server-name "toccata.fugue.com";
}
```

```
firewall-cmd --permanent --add-port=53/udp  
firewall-cmd --reload
```

Edit Connection

Profile name **vmnet2**

Device **ens36** (00:0C:29:AB:1E:B9)

= **ETHERNET**

<Show>

■ **IPv4 CONFIGURATION** <Manual>

<Hide>

Addresses **10.0.1.2/24**

<Remove>

<Add...>

Gateway **10.0.1.1**

```
[root@mlb-dc1-centos7 ~]# cd /etc/sysconfig/network-scripts/
```

```
[root@mlb-dc1-centos7 network-scripts]# ls
```

```
ifcfg-ens33  ifdown-ippv  ifdown-sit   ifup-bnep   ifup-plusb   ifup-TeamPort
ifcfg-ens36  ifdown-ipv6  ifdown-Team  ifup-eth    ifup-post    ifup-tunnel
ifcfg-lo     ifdown-isdn  ifdown-TeamPort ifup-ippv   ifup-ppp     ifup-wireless
ifdown      ifdown-post  ifdown-tunnel ifup-ipv6   ifup-routes  init.ipv6-global
ifdown-bnep  ifdown-ppp   ifup         ifup-isdn   ifup-sit     network-functions
ifdown-eth   ifdown-routes ifup-aliases ifup-plip   ifup-Team    network-functions-ipv6
```

```
[root@mlb-dc1-centos7 network-scripts]# vi ifcfg-ens36
```

go to nmtui > edit >
get a pictures of
vmNet2 device no

cd /etc/sysconfig/network-scripts/
ls
vi ifcfg-?

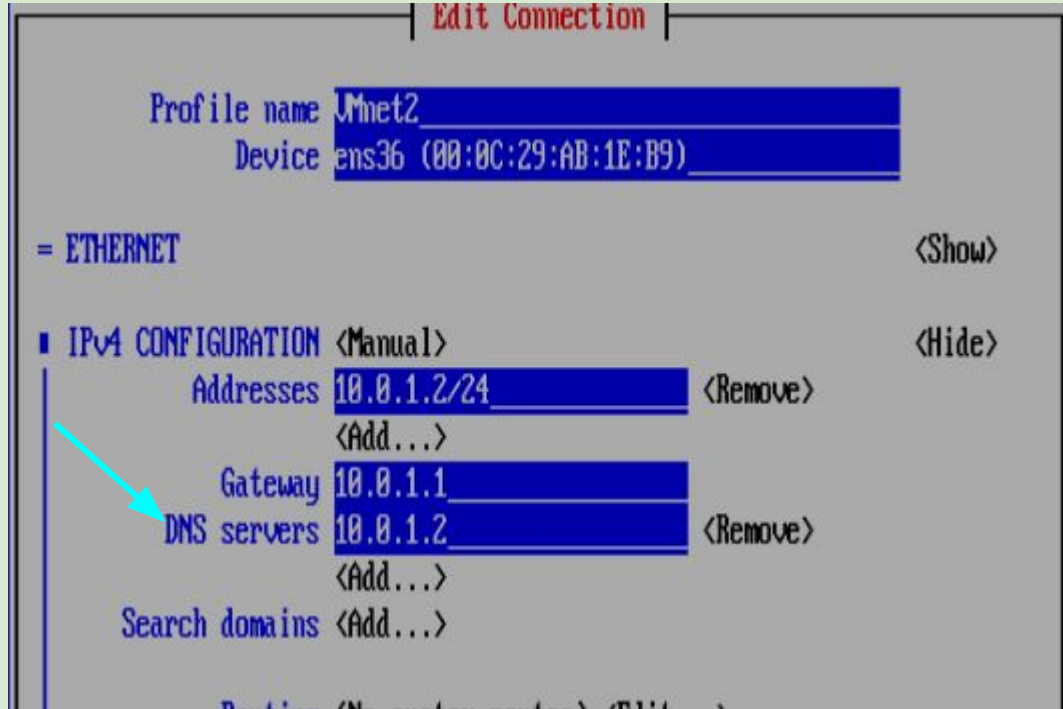
Replace “?” with vmnet2
deviceNo

add to bottom line DNS=10.0.1.2

```
ONBOOT=no
IPADDR=10.0.1.2
PREFIX=24
GATEWAY=10.0.1.1
DNS=10.0.1.2
```

Step 1

can do the same with nmtui >edit >vmnet2> add dns server > 10.0.1.2



vi /etc/resolv.conf

Step 2

```
GNU nano 2.3.1      File: /etc/resolv.conf

# Generated by NetworkManager
search mlb-dc1-centos7.csa.lk
nameserver 10.0.1.2
```

```
search mlb-dc1-centos7.csa.lk
nameserver 10.0.1.2
```

activate NAT & run

```
yum install bind-utils
```

Step 3

```
nmtui>activate >vmnet2
```

```
dig csa.lk
```

```
[root@mlb-dc1-centos7 ~]# dig csa.lk

;<<>> DiG 9.11.4-P2-RedHat-9.11.4-26.P2.el7 <<>> csa.lk
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 61132
;; flags: qr aa rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 1, ADDITIONAL: 2

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:: udp: 4096
;; QUESTION SECTION:
; csa.lk.                                IN      A

;; ANSWER SECTION:
csa.lk.                86400    IN      A      10.0.1.2
csa.lk.                86400    IN      A      10.0.1.3

;; AUTHORITY SECTION:
csa.lk.                86400    IN      NS      mlb-dc1-centos7.csa.lk.

;; ADDITIONAL SECTION:
mlb-dc1-centos7.csa.lk. 86400    IN      A      10.0.1.2

;; Query time: 0 msec
;; SERVER: 10.0.1.2#53(10.0.1.2)
;; WHEN: Wed Mar 05 13:56:11 EST 2025
;; MSG SIZE rcvd: 113

[root@mlb-dc1-centos7 ~]#
```

```
dig mlb-dc1-centos7.csa.lk
```

```
[root@mlb-dc1-centos7 ~]# dig mlb-dc1-centos7.csa.lk

;<<>> DiG 9.11.4-P2-RedHat-9.11.4-26.P2.el7 <<>> mlb-dc1-centos7.csa.lk
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 59065
;; flags: qr aa rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:: udp: 4096
;; QUESTION SECTION:
; mlb-dc1-centos7.csa.lk.              IN      A

;; ANSWER SECTION:
mlb-dc1-centos7.csa.lk. 86400    IN      A      10.0.1.2

;; AUTHORITY SECTION:
csa.lk.                86400    IN      NS      mlb-dc1-centos7.csa.lk.

;; Query time: 0 msec
;; SERVER: 10.0.1.2#53(10.0.1.2)
;; WHEN: Wed Mar 05 13:56:59 EST 2025
;; MSG SIZE rcvd: 81

[root@mlb-dc1-centos7 ~]#
```

sudo vi /etc/resolv.conf

GNU nano 6.4

/etc/resolv.conf

```
# /etc/resolv.conf and seeing this text, you have followed the symlink.
#
# This is a dynamic resolv.conf file for connecting local clients to the
# internal DNS stub resolver of systemd-resolved. This file lists all
# configured search domains.
#
# Run "resolvectl status" to see details about the uplink DNS servers
# currently in use.
#
# Third party programs should typically not access this file directly, but only
# through the symlink at /etc/resolv.conf. To manage man:resolv.conf(5) in a
# different way, replace this symlink by a static file or a different symlink.
#
# See man:systemd-resolved.service(8) for details about the supported modes of
# operation for /etc/resolv.conf.

nameserver 10.0.1.2
options edns0 trust-ad
search mlb-dc1-centos7.csa.lk
```

search mlb-dc1-centos7.csa.lk
nameserver 10.0.1.5

dig csa.lk

```
client1@ndm-cli-fedora28:~  
ndm-cli-fedora28.ndm.lk  
[client1@ndm-cli-fedora28 ~]$ dig csa.lk  
  
;<<> DiG 9.18.7 <<> csa.lk  
;; global options: +cmd  
;; Got answer:  
;; ->HEADER<- opcode: QUERY, status: NOERROR, id: 27806  
;; flags: qr aa rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 1, ADDITIONAL: 2  
  
;; OPT PSEUDOSECTION:  
; EDNS: version: 0, flags:; udp: 4096  
; COOKIE: 6c1f002e2278314b00fbf76367c88504a5020c0acaa65d3c (good)  
;; QUESTION SECTION:  
;csa.lk.                IN      A  
  
;; ANSWER SECTION:  
csa.lk.                 86400   IN      A      10.0.1.3  
csa.lk.                 86400   IN      A      10.0.1.2  
  
;; AUTHORITY SECTION:  
csa.lk.                 86400   IN      NS      mlb-dc1-centos7.csa.lk.  
  
;; ADDITIONAL SECTION:  
mlb-dc1-centos7.csa.lk. 86400   IN      A      10.0.1.2  
  
;; Query time: 2 msec  
;; SERVER: 10.0.1.2#53(10.0.1.2) (UDP)  
;; WHEN: Wed Mar 05 22:38:17 +0530 2025
```

dig mlb-dc1-centos7.csa.lk

```
client1@ndm-cli-fedora28:~  
[client1@ndm-cli-fedora28 ~]$ dig mlb-dc1-centos7.csa.lk  
  
;<<> DiG 9.18.7 <<> mlb-dc1-centos7.csa.lk  
;; global options: +cmd  
;; Got answer:  
;; ->HEADER<- opcode: QUERY, status: NOERROR, id: 60427  
;; flags: qr aa rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1  
  
;; OPT PSEUDOSECTION:  
; EDNS: version: 0, flags:; udp: 4096  
; COOKIE: 7b44a91d8da8137b83b47bb767c885385c399800ed777f04 (good)  
;; QUESTION SECTION:  
;mlb-dc1-centos7.csa.lk.      IN      A  
  
;; ANSWER SECTION:  
mlb-dc1-centos7.csa.lk. 86400   IN      A      10.0.1.2  
  
;; AUTHORITY SECTION:  
csa.lk.                 86400   IN      NS      mlb-dc1-centos7.csa.lk.  
  
;; Query time: 2 msec  
;; SERVER: 10.0.1.2#53(10.0.1.2) (UDP)  
;; WHEN: Wed Mar 05 22:39:10 +0530 2025  
;; MSG SIZE rcvd: 109  
  
[client1@ndm-cli-fedora28 ~]$ dig mlb-dc1-centos7.csa.lk  
  
;<<> DiG 9.18.7 <<> mlb-dc1-centos7.csa.lk
```