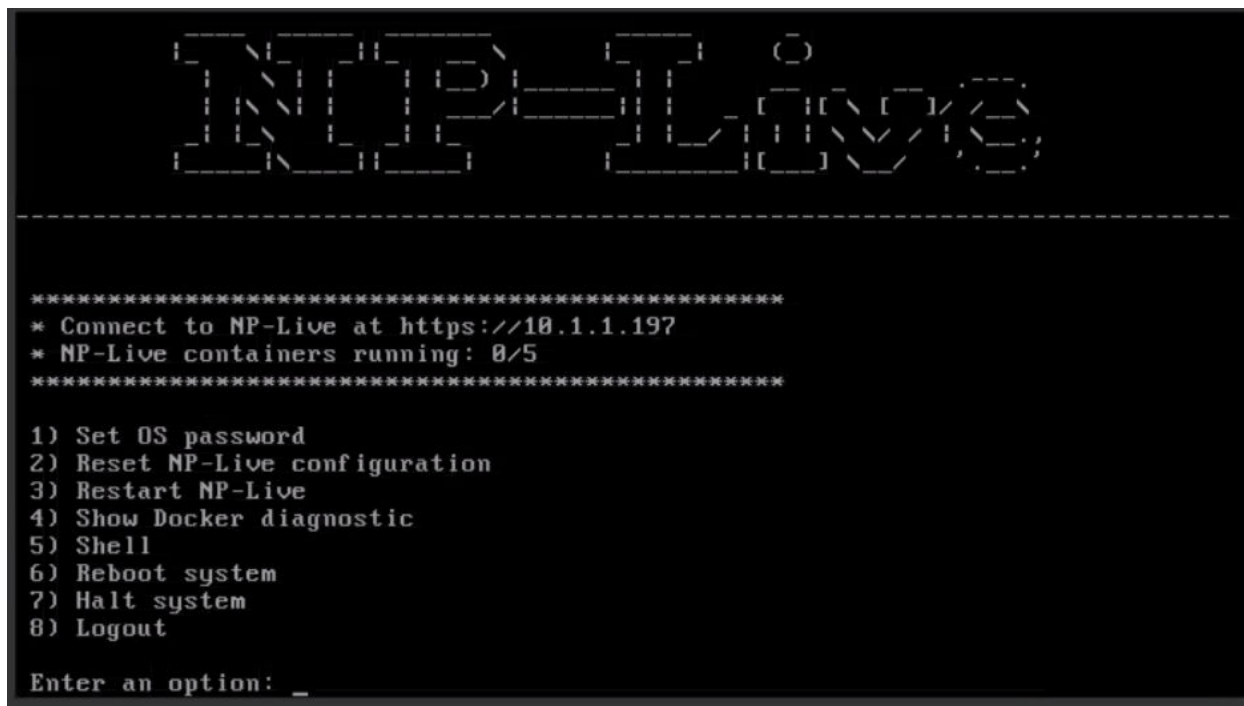


## Static Network Configuration

### Navigate To Terminal Window

- You may need to select option #5 from the NP Menu to access the Shell
- You may need to change to root user account or use “**sudo -i**” to set root level permissions

A terminal window with a black background and white text. At the top, 'NP-Live' is displayed in a large, stylized, dashed font. Below it is a horizontal dashed line. The main menu consists of several lines of text: a separator line of asterisks, connection information, container status, another separator line, a numbered list of 8 options, and a prompt 'Enter an option: \_'.

```
NP-Live

-----

*****
* Connect to NP-Live at https://10.1.1.197
* NP-Live containers running: 0/5
*****

1) Set OS password
2) Reset NP-Live configuration
3) Restart NP-Live
4) Show Docker diagnostic
5) Shell
6) Reboot system
7) Halt system
8) Logout

Enter an option: _
```

### Stop NP Live

- From the terminal (these commands are ran after “**sudo -i**” as a root user)
  - Navigate to NP directory
    - **cd /opt/np-live**
  - Issue Stop Command
    - **sh stop\_NP-Live.sh**
    - **(Or) ./stop\_NP-Live.sh**

## Find your interface

The first thing we must do is find out the name of our ethernet interface. A static IP address cannot be configured without this name.

- Find the appropriate interface name by executing the following command:
  - nmcli -p connection** (The output of this command (Figure A) will include the name of the interface. )

Figure A

```
[nplive@localhost ~]$ nmcli -p connection
=====
NetworkManager connection profiles
=====
NAME                                UUID                                TYPE    DEVICE
-----
Wired connection 1                 8b2c5f2a-9c81-38c3-9691-171d8d8dcd4e ethernet enp0s3
docker_gwbridge                   e102056f-899b-4c74-9cd7-c15ec6d073f3 bridge   docker_gwbr i
ens192                             03da7500-2101-c722-2438-d0d006c28c73 ethernet --
lines 1-8/8 (END)
```

As you can see, from the screenshot, the name of the interface is enp0s3. Now that we know the name of our interface, we can configure the static address.

## To return to the shell

- Press Q on your keyboard

## Configuring the address

- Check for an existing interface configuration file in the with **cd** **/etc/sysconfig/network-scripts/** then **ls** to list the items. The file within the directory is called **ifcfg-INTERFACE**. In the above example, this will be called **ifcfg-enp0s3**.

```
[nplive@localhost ~]$ cd /etc/sysconfig/network-scripts/
[nplive@localhost network-scripts]$ ls
ifcfg-ens192  ifdown-ppp      ifup-eth      ifup-sit
ifcfg-lo      ifdown-routes  ifup-ippv6    ifup-Team
ifdown       ifdown-sit     ifup-ipv6     ifup-TeamPort
ifdown-bnep  ifdown-Team    ifup-isdn     ifup-tunnel
ifdown-eth   ifdown-TeamPort ifup-plip     ifup-wireless
ifdown-ippv6 ifdown-tunnel  ifup-plusb    init.ipv6-global
ifdown-ipv6  ifup           ifup-post     network-functions
ifdown-isdn  ifup-aliases   ifup-ppp      network-functions-ipv6
ifdown-post  ifup-bnep      ifup-routes

[nplive@localhost network-scripts]$ sudo touch ifcfg-enp0s3
[nplive@localhost network-scripts]$ ls
ifcfg-enp0s3  ifdown-post     ifup-bnep     ifup-routes
ifcfg-ens192  ifdown-ppp      ifup-eth      ifup-sit
ifcfg-lo      ifdown-routes  ifup-ippv6    ifup-Team
ifdown       ifdown-sit     ifup-ipv6     ifup-TeamPort
ifdown-bnep  ifdown-Team    ifup-isdn     ifup-tunnel
ifdown-eth   ifdown-TeamPort ifup-plip     ifup-wireless
ifdown-ippv6 ifdown-tunnel  ifup-plusb    init.ipv6-global
ifdown-ipv6  ifup           ifup-post     network-functions
ifdown-isdn  ifup-aliases   ifup-ppp      network-functions-ipv6
[nplive@localhost network-scripts]$
```

- Open the appropriate file for editing using the text editor you're most comfortable with. In this example, we'll be using the nano editor. (If the file does not exist, please see Appendix A)
  - **sudo nano ifcfg-enp0s3**  
**(/etc/sysconfig/network-scripts/ifcfg-INTERFACENAME)**
  - We need to modify that file in order to not only change the protocol from dhcp to static, but to add the specific IP address. So when you open up that file, you'll want to change:
    - BOOTPROTO=dhcp
    - To:
    - **BOOTPROTO=static**
  - Set the IP address, the netmask, gateway, and DNS addresses. At the bottom of that file, add the following:
    - **IPADDR=192.168.1.200**
    - **NETMASK=255.255.255.0**
    - **GATEWAY=192.168.1.1**
    - **DNS1=1.0.0.1**
    - **DNS2=1.1.1.1**
    - **DNS3=8.8.4.4**

NOTE: All fields in bold, you will edit to reflect your networking needs. If you have fewer or more DNS entries, add or remove them as needed.

Save and close that file using nano

- **CTRL+O**
- **ENTER**
- **CTRL+X**

Restart Network to see changes

- **sudo systemctl restart network**

Restart Server to see changes

- **sudo reboot**

- Once the networking system has restarted, issue the command `ip a` to see that your IP address has changed to reflect your configuration.

## Restart NP-Live (if not already running)

- **`sudo sh /opt/np-live/start_NP-Live.sh`**

You should be able to connect to the server from your browser by typing the static IP address.

## Appendix:

### A: Create interface file

- Use **`touch ifcfg-enp0s3 (ifcfg-INTERFACENAME)`** to create the file.
- Use `ls` to verify the file has been created.

```
[root@localhost np-live]# cd /etc/sysconfig/network-scripts/
[root@localhost network-scripts]# ls
ifcfg-ens192  ifdown-ipv6  ifdown-Team  ifup-eth  ifup-post  ifup-tunnel
ifcfg-lo      ifdown-isdn  ifdown-TeamPort  ifup-ipp  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
ifdown-ipp  ifdown-sit  ifup-bnep     ifup-plusb  ifup-TeamPort

[root@localhost network-scripts]# touch ifcfg-enp0s3
[root@localhost network-scripts]# ls
ifcfg-enp0s3  ifdown-ipp  ifdown-sit  ifup-bnep  ifup-plusb  ifup-TeamPort
ifcfg-ens192  ifdown-ipv6  ifdown-Team  ifup-eth  ifup-post  ifup-tunnel
ifcfg-lo      ifdown-isdn  ifdown-TeamPort  ifup-ipp  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@localhost network-scripts]# _
```

- Use **`sudo nano ifcfg-enp0s3`** to edit. Type the following
  - **`DEVICE=device-name`**
  - **`BOOTPROTO=static`**
  - **`ONBOOT=yes`**
  - **`PREFIX=cidr-prefix`**
  - **`IPADDR=your.ip.goes.here`**
  - **`GATEWAY=your.gateway.ip.here`**

### Example:

```
GNU nano 2.3.1                               File: ifcfg-enp0s3                               Modified
DEVICE=enp0s3
BOOTPROTO=static
ONBOOT=yes
PREFIX=24
IPADDR=192.168.50.200
GATEWAY=192.168.50.1
```

