

# Configuring an Ethernet connection by using nmtui

If you connect a host to an Ethernet network, you can manage the connection's settings in a text-based user interface. Use the `nmtui` application to create new profiles and to update existing ones on a host without a graphical interface.

## Note

In `nmtui`:

- Navigate by using the cursor keys.
- Press a button by selecting it and hitting `Enter`.
- Select and clear checkboxes by using `Space`.
- To return to the previous screen, use `ESC`.

## Prerequisites

- A physical or virtual Ethernet Network Interface Controller (NIC) exists in the server's configuration.

## Procedure

1. If you do not know the network device name you want to use in the connection, display the available devices:

```
# nmcli device status
DEVICE    TYPE      STATE      CONNECTION
enp1s0    ethernet  unavailable --
...
```

2. Start `nmtui`:

```
# nmtui
```

3. Select **Edit a connection**, and press `Enter`.
4. Choose whether to add a new connection profile or to modify an existing one:
  - To create a new profile:
    1. Press **Add**.

2. Select **Ethernet** from the list of network types, and press `Enter`.
- To modify an existing profile, select the profile from the list, and press `Enter`.
5. Optional: Update the name of the connection profile.  
On hosts with multiple profiles, a meaningful name makes it easier to identify the purpose of a profile.
6. If you create a new connection profile, enter the network device name into the **Device** field.
7. Depending on your environment, configure the IP address settings in the `IPv4 configuration` and `IPv6 configuration` areas accordingly. For this, press the button next to these areas, and select:
  - **Disabled**, if this connection does not require an IP address.
  - **Automatic**, if a DHCP server dynamically assigns an IP address to this NIC.
  - **Manual**, if the network requires static IP address settings. In this case, you must fill further fields:
    1. Press **Show** next to the protocol you want to configure to display additional fields.
    2. Press **Add** next to **Addresses**, and enter the IP address and the subnet mask in Classless Inter-Domain Routing (CIDR) format.  
If you do not specify a subnet mask, NetworkManager sets a `/32` subnet mask for IPv4 addresses and `/64` for IPv6 addresses.
    3. Enter the address of the default gateway.
    4. Press **Add** next to **DNS servers**, and enter the DNS server address.
    5. Press **Add** next to **Search domains**, and enter the DNS search domain.

**Figure 2.1. Example of an Ethernet connection with static IP address settings**  
[Static IP address settings in `nmtui`](#)

8. Press **OK** to create and automatically activate the new connection.
9. Press **Back** to return to the main menu.
10. Select **Quit**, and press `Enter` to close the `nmtui` application.

## Verification

1. Display the IP settings of the NIC:

```
# ip address show enp1s0
2: enp1s0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group
default qlen 1000
    link/ether 52:54:00:17:b8:b6 brd ff:ff:ff:ff:ff:ff
    inet 192.0.2.1/24 brd 192.0.2.255 scope global noprefixroute enp1s0
        valid_lft forever preferred_lft forever
    inet6 2001:db8:1::fffe/64 scope global noprefixroute
```

```
valid_lft forever preferred_lft forever
```

2. Display the IPv4 default gateway:

```
# ip route show default
default via 192.0.2.254 dev enp1s0 proto static metric 102
```

3. Display the IPv6 default gateway:

```
# ip -6 route show default
default via 2001:db8:1::fffe dev enp1s0 proto static metric 102 pref medium
```

4. Display the DNS settings:

```
# cat /etc/resolv.conf
search example.com
nameserver 192.0.2.200
nameserver 2001:db8:1::fbb
```

If multiple connection profiles are active at the same time, the order of `nameserver` entries depend on the DNS priority values in these profiles and the connection types.

5. Use the `ping` utility to verify that this host can send packets to other hosts:

```
# ping <host-name-or-IP-address>
```

## Troubleshooting

- Verify that the network cable is plugged-in to the host and a switch.
- Check whether the link failure exists only on this host or also on other hosts connected to the same switch.
- Verify that the network cable and the network interface are working as expected. Perform hardware diagnosis steps and replace defective cables and network interface cards.
- If the configuration on the disk does not match the configuration on the device, starting or restarting NetworkManager creates an in-memory connection that reflects the configuration of the device. For further details and how to avoid this problem, see the Red Hat Knowledgebase solution [NetworkManager duplicates a connection after restart of NetworkManager service](#).

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