Configuring an Ethernet connection by using control-center

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If you connect a host to the network over Ethernet, you can manage the connection’s settings with a graphical interface by using the GNOME Settings menu.

Note that `control-center` does not support as many configuration options as the `nmcli` utility.

Prerequisites

- A physical or virtual Ethernet Network Interface Controller (NIC) exists in the server’s configuration.
- GNOME is installed.

Procedure

1. Press the Super key, enter `Settings`, and press `Enter`.
2. Select **Network** in the navigation on the left.
3. Choose whether to add a new connection profile or to modify an existing one:
    - To create a new profile, click the + button next to the **Ethernet** entry.
    - To modify an existing profile, click the gear icon next to the profile entry.
4. Optional: On the **Identity** tab, 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.
5. Depending on your environment, configure the IP address settings on the **IPv4** and **IPv6** tabs accordingly:
    - To use DHCP or IPv6 stateless address autoconfiguration (SLAAC), select `Automatic (DHCP)` as method (default).
    - To set a static IP address, network mask, default gateway, DNS servers, and search domain, select `Manual` as method, and fill the fields on the tabs:
      Static IP address settings in `control-center`
6. Depending on whether you add or modify a connection profile, click the Add or Apply button to save the connection.

The GNOME `control-center` automatically activates the connection.

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::ffbb
```

   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 steps

- 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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