

1. Indoor network configuration

Find the device number of WiFi

First, let's check the device name of the Wi-Fi on the motherboard and enter the command in the terminal:

```
ifconfig
```

We can see that the name of the Wi-Fi device is wlan0

```
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 10.168.1.100 netmask 255.255.255.0 broadcast 10.168.1.255
    inet6 fe80::1a4e:8c08:faf4:f53a prefixlen 64 scopeid 0x20<link>
    ether 48:b0:2d:ea:b3:ea txqueuelen 1000 (Ethernet)
    RX packets 11329425 bytes 13986065803 (13.9 GB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 4520203 bytes 6164513611 (6.1 GB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 630841 bytes 16789648516 (16.7 GB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 630841 bytes 16789648516 (16.7 GB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

rndis0: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
    ether aa:58:77:17:8c:99 txqueuelen 1000 (Ethernet)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 0 bytes 0 (0.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

usb0: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
    ether aa:58:77:17:8c:9b txqueuelen 1000 (Ethernet)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 0 bytes 0 (0.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

wlan0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.2.244 netmask 255.255.255.0 broadcast 192.168.2.255
    inet6 fe80::c9ae:e8d5:baa2:c52a prefixlen 64 scopeid 0x20<link>
    ether 74:04:f1:fd:39:55 txqueuelen 1000 (Ethernet)
    RX packets 576449 bytes 49489164 (49.4 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 2878250 bytes 4079770000 (4.0 GB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

yahboom@ubuntu: ~/YBAMR-COBOT-EDU-00001$
```

Then enter the command in the terminal:

```
sudo nano /etc/systemd/system/wifi-hotspot.service
```

Then enter the code in the file:

```
[Unit]
Description=Create AP Service
wants=network.target
After=network.target
```

```
[Service]
Type=simple

ExecStart=/usr/bin/nmcli device wifi hotspot ifname wlan0 con-name
navroboHostspot ssid navrobo_ap password yahboom890729
ExecStop=/usr/bin/nmcli connection down navroboHostspot_
Restart=on-failure

[Install]
wantedBy=multi-user.target
```

After entering, save the file.

Then enter the command in the terminal:

```
sudo nano /etc/systemd/system/wifi-hotspot-stop.service
```

Then enter the following code:

```
[Unit]
Description=Create AP Service
wants=network.target
After=network.target

[Service]
Type=simple

ExecStart=/usr/bin/nmcli connection down navroboHostspot
ExecStop=/usr/bin/nmcli connection down navroboHostspot_
Restart=on-failure

[Install]
wantedBy=multi-user.target
```

Save the file after entering.

Then enter the command in the terminal:

```
sudo systemctl enable wifi-hotspot.service
```

This way, we will automatically start the hotspot mode when we turn on the computer.

To turn on hotspot mode, enter the following command:

```
sudo systemctl start wifi-hotspot.service
```

To turn off hotspot mode, enter the following command:

```
sudo systemctl start wifi-hotspot-stop.service
```

