# Network configuration

1、 Remote login.

Choose tools such as PuTTY, SSH, and Xshell to remotely log in according to your preferences. The following is an example of the PuTTY tool. Note: If you find that the computer cannot be remotely accessed, you can try ping each other and view the IP address command on : ifconfig.

View local IP address cmd command under Windows: ipconfig. After knowing the other party's IP address, ping 192.168.1.xx will modify the IP address based on the actual command.

If you find that putty often drops automatically, you can try the following methods:
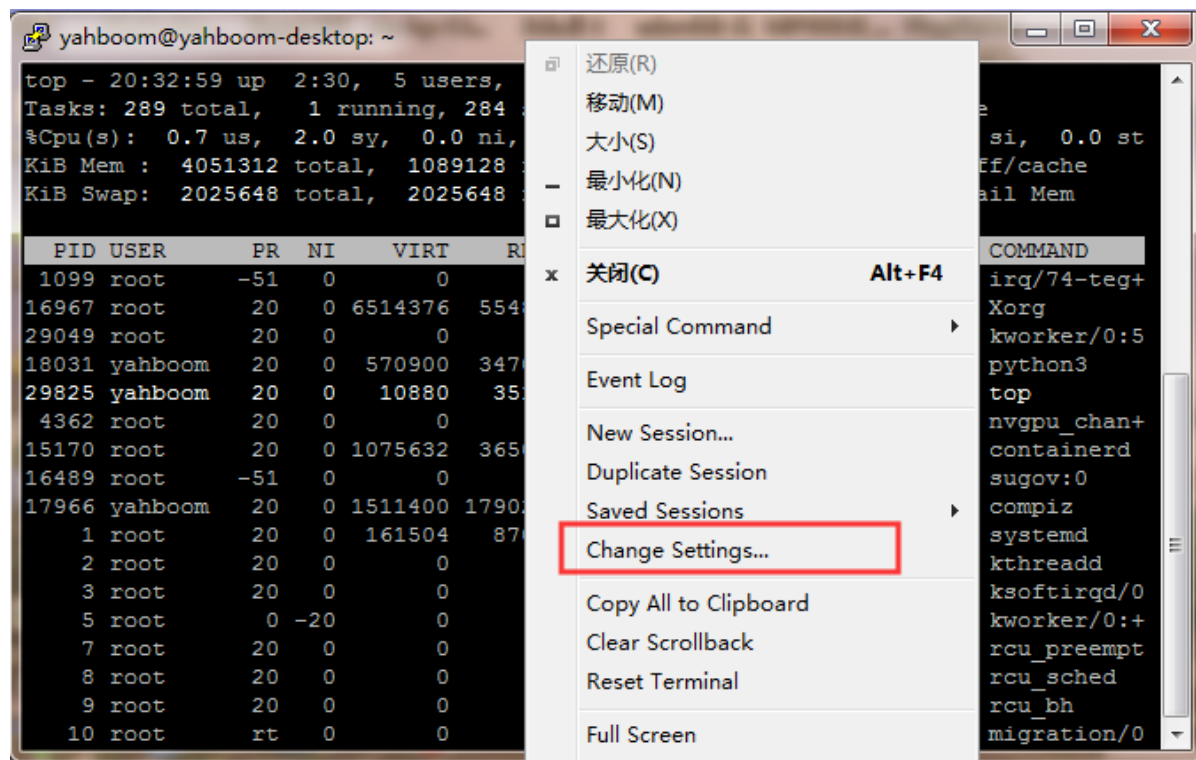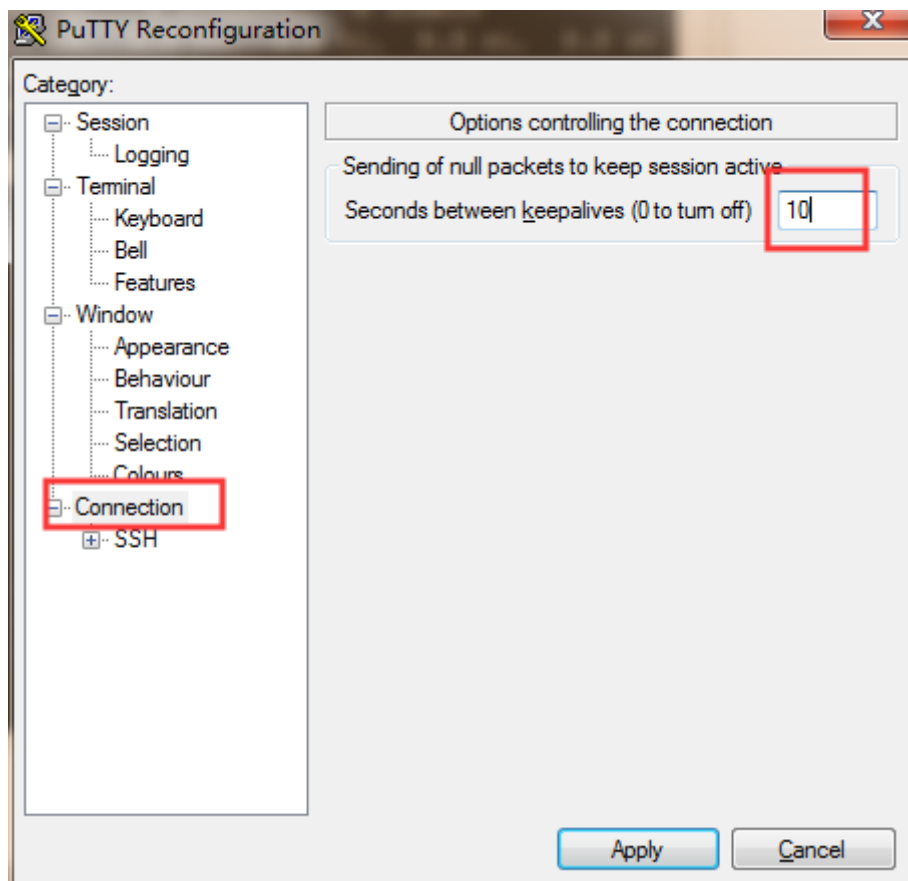
A.Enter putty and select Connection on the left side

B.Send empty packets on the right to maintain session activity

Set it to 10

meaning to send an empty packet every ten seconds to maintain connectivity

2、About Updating Sources

Generally speaking, after installing the system, the source should be updated. However, since the Jetson Orin nano uses the aarch64 architecture Ubuntu 20.04.2 LTS system, which is different from the AMD architecture Ubuntu system, and I have not found a perfect domestic source, I do not recommend that you switch sources.

There is no source change here, so it is still updated using the default source of Jetson Orin nano. The update process is very long, everyone can execute the command and do other things. The following two actions are recommended to be carried out before starting an AI project, otherwise installing some libraries may result in missing installation addresses and frequent errors in the future.

sudo apt-get update

```
nano@nano-desktop: ~

]
获取:20 http://ports.ubuntu.com/ubuntu-ports bionic-security InRelease [88.7 kB]
获取:21 http://ports.ubuntu.com/ubuntu-ports bionic/main arm64 Packages [975 kB]
获取:22 http://ports.ubuntu.com/ubuntu-ports bionic/main Translation-en [516 kB]
获取:23 http://ports.ubuntu.com/ubuntu-ports bionic/main Translation-zh_CN [67.7
 kB]
获取:24 http://ports.ubuntu.com/ubuntu-ports bionic/main arm64 DEP-11 Metadata [
472 kB]
获取:25 http://ports.ubuntu.com/ubuntu-ports bionic/main DEP-11 48x48 Icons [118
 kB]
获取:26 http://ports.ubuntu.com/ubuntu-ports bionic/main DEP-11 64x64 Icons [245
 kB]
获取:27 http://ports.ubuntu.com/ubuntu-ports bionic/restricted arm64 Packages [6
64 B]
获取:28 http://ports.ubuntu.com/ubuntu-ports bionic/restricted Translation-en [3
,584 B]
获取:29 http://ports.ubuntu.com/ubuntu-ports bionic/restricted Translation-zh_CN
 [1,188 B]
获取:30 http://ports.ubuntu.com/ubuntu-ports bionic/universe arm64 Packages [8,3
16 kB]
获取:31 http://ports.ubuntu.com/ubuntu-ports bionic/universe Translation-zh_CN [
174 kB]
获取:32 http://ports.ubuntu.com/ubuntu-ports bionic/universe Translation-en [4,9
41 kB]
获取:33 http://ports.ubuntu.com/ubuntu-ports bionic/universe arm64 DEP-11 Metada
ta [3,243 kB]
获取:34 http://ports.ubuntu.com/ubuntu-ports bionic/universe DEP-11 48x48 Icons
[2,151 kB]
获取:35 http://ports.ubuntu.com/ubuntu-ports bionic/universe DEP-11 64x64 Icons
[8,420 kB]
80% [35 icons-64x64 6,698 kB/8,420 kB 80%]                    127 kB/s 50秒
```

```
nano@nano-desktop: ~

获取:67 http://ports.ubuntu.com/ubuntu-ports bionic-security/main arm64 DEP-11 M
etadata [14.9 kB]
获取:68 http://ports.ubuntu.com/ubuntu-ports bionic-security/main DEP-11 48x48 I
cons [10.4 kB]
获取:69 http://ports.ubuntu.com/ubuntu-ports bionic-security/main DEP-11 64x64 I
cons [20.9 kB]
获取:70 http://ports.ubuntu.com/ubuntu-ports bionic-security/restricted arm64 Pa
ckages [668 B]
获取:71 http://ports.ubuntu.com/ubuntu-ports bionic-security/restricted Translat
ion-en [2,192 B]
获取:72 http://ports.ubuntu.com/ubuntu-ports bionic-security/universe arm64 Pack
ages [245 kB]
获取:73 http://ports.ubuntu.com/ubuntu-ports bionic-security/universe Translatio
n-en [139 kB]
获取:74 http://ports.ubuntu.com/ubuntu-ports bionic-security/universe arm64 DEP-
11 Metadata [35.8 kB]
获取:75 http://ports.ubuntu.com/ubuntu-ports bionic-security/universe DEP-11 48x
48 Icons [16.4 kB]
获取:76 http://ports.ubuntu.com/ubuntu-ports bionic-security/universe DEP-11 64x
64 Icons [97.3 kB]
获取:77 http://ports.ubuntu.com/ubuntu-ports bionic-security/multiverse arm64 Pa
ckages [1,696 B]
获取:78 http://ports.ubuntu.com/ubuntu-ports bionic-security/multiverse Translat
ion-en [2,060 B]
获取:79 http://ports.ubuntu.com/ubuntu-ports bionic-security/multiverse DEP-11 4
8x48 Icons [29 B]
获取:80 http://ports.ubuntu.com/ubuntu-ports bionic-security/multiverse DEP-11 6
4x64 Icons [2,638 B]
已下载 34.8 MB，耗时 5分 49秒 (99.5 kB/s)
正在读取软件包列表... 完成
nano@nano-desktop:~$
```

sudo apt-get full-upgrade

```
 libreoffice-style-tango libreoffice-writer libseccomp2 libsmbclient
 libsnapd-glib1 libssl1.0.0 libstdc++-7-dev libstdc++6 libswresample2
 libswscale4 libsystemd0 libtiff5 libtsan0 libubsan0 libudev1 libunistring2
 libunity-core-6.0-9 libupower-glib3 libwavpack1 libwayland-egl1-mesa
 libwbclient0 libwebkit2gtk-4.0-37 libx11-6 libx11-data libx11-dev libx11-doc
 libx11-xcb-dev libx11-xcb1 libxcb-composite0 libxcb-damage0 libxcb-dri2-0
 libxcb-dri2-0-dev libxcb-dri3-0 libxcb-dri3-dev libxcb-glx0 libxcb-glx0-dev
 libxcb-present-dev libxcb-present0 libxcb-randr0 libxcb-randr0-dev
 libxcb-render0 libxcb-render0-dev libxcb-res0 libxcb-shape0
 libxcb-shape0-dev libxcb-shm0 libxcb-sync-dev libxcb-sync1 libxcb-xfixes0
 libxcb-xfixes0-dev libxcb-xinerama0 libxcb-xkb1 libxcb-xv0 libxcb1
 libxcb1-dev libxslt1.1 linux-firmware linux-libc-dev login mesa-common-dev
 mesa-va-drivers mesa-vdpau-drivers mutter mutter-common nautilus
 nautilus-data network-manager network-manager-config-connectivity-ubuntu
 nfs-common ntfs-3g openssh-client openssh-server openssh-sftp-server
 packagekit packagekit-tools parted passwd plymouth plymouth-label
 plymouth-theme-ubuntu-logo policykit-1 poppler-utils pulseaudio
 pulseaudio-utils python-gi python3-apport python3-distro-info
 python3-distupgrade python3-gi python3-gi-cairo python3-httplib2
 python3-problem-report python3-uno python3-update-manager
 qt5-gtk-platformtheme resolvconf samba-libs snapd systemd systemd-sysv
 thunderbird thunderbird-gnome-support tzdata ubuntu-desktop
 ubuntu-drivers-common ubuntu-release-upgrader-core
 ubuntu-release-upgrader-gtk ubuntu-software udev unattended-upgrades unity
 unity-schemas unity-services uno-libs3 update-manager update-manager-core
 upower ure wget wpasupplicant
升级了 333 个软件包，新安装了 2 个软件包，要卸载 0 个软件包，有 0 个软件包未被升
级。
需要下载 426 MB 的归档。
解压缩后会消耗 168 MB 的额外空间。
您希望继续执行吗？ [Y/n]
```

Enter Y during the process to confirm the update. The second process may take about 2 hours depending on the network situation. Please be patient and wait. After completion, as shown in the following figure.


```
正在设置 python3-distupgrade (1:18.04.32) ...
正在设置 libreoffice-common (1:6.0.7-0ubuntu0.18.04.5) ...
正在设置 libreoffice-core (1:6.0.7-0ubuntu0.18.04.5) ...
正在设置 ubuntu-release-upgrader-core (1:18.04.32) ...
正在设置 python3-uno (1:6.0.7-0ubuntu0.18.04.5) ...
正在设置 libreoffice-gtk3 (1:6.0.7-0ubuntu0.18.04.5) ...
正在设置 libreoffice-style-breeze (1:6.0.7-0ubuntu0.18.04.5) ...
正在设置 libreoffice-gnome (1:6.0.7-0ubuntu0.18.04.5) ...
正在设置 libreoffice-pdfimport (1:6.0.7-0ubuntu0.18.04.5) ...
正在设置 libreoffice-draw (1:6.0.7-0ubuntu0.18.04.5) ...
正在设置 libreoffice-avmedia-backend-gstreamer (1:6.0.7-0ubuntu0.18.04.5) ...
正在设置 ubuntu-release-upgrader-gtk (1:18.04.32) ...
正在设置 update-manager-core (1:18.04.11.10) ...
正在设置 libreoffice-impress (1:6.0.7-0ubuntu0.18.04.5) ...
正在设置 libreoffice-math (1:6.0.7-0ubuntu0.18.04.5) ...
正在设置 libreoffice-base-core (1:6.0.7-0ubuntu0.18.04.5) ...
正在设置 libreoffice-calc (1:6.0.7-0ubuntu0.18.04.5) ...
正在设置 update-manager (1:18.04.11.10) ...
正在设置 libreoffice-ogltrans (1:6.0.7-0ubuntu0.18.04.5) ...
正在设置 libreoffice-writer (1:6.0.7-0ubuntu0.18.04.5) ...
正在设置 ubuntu-desktop (1.417.1) ...
正在处理用于 libc-bin (2.27-3ubuntu1) 的触发器 ...
正在处理用于 resolvconf (1.79ubuntu10.18.04.3) 的触发器 ...
正在处理用于 initramfs-tools (0.130ubuntu3.7) 的触发器 ...
update-initramfs: Generating /boot/initrd.img-4.9.140-tegra
Warning: couldn't identify filesystem type for fsck hook, ignoring.
/sbin/ldconfig.real: Warning: ignoring configuration file that cannot be opened:
 /etc/ld.so.conf.d/aarch64-linux-gnu_EGL.conf: No such file or directory
/sbin/ldconfig.real: Warning: ignoring configuration file that cannot be opened:
 /etc/ld.so.conf.d/aarch64-linux-gnu_GL.conf: No such file or directory
nano@nano-desktop:~$
```

The network configuration is now complete

3.Jetson Orin nano connect wifi
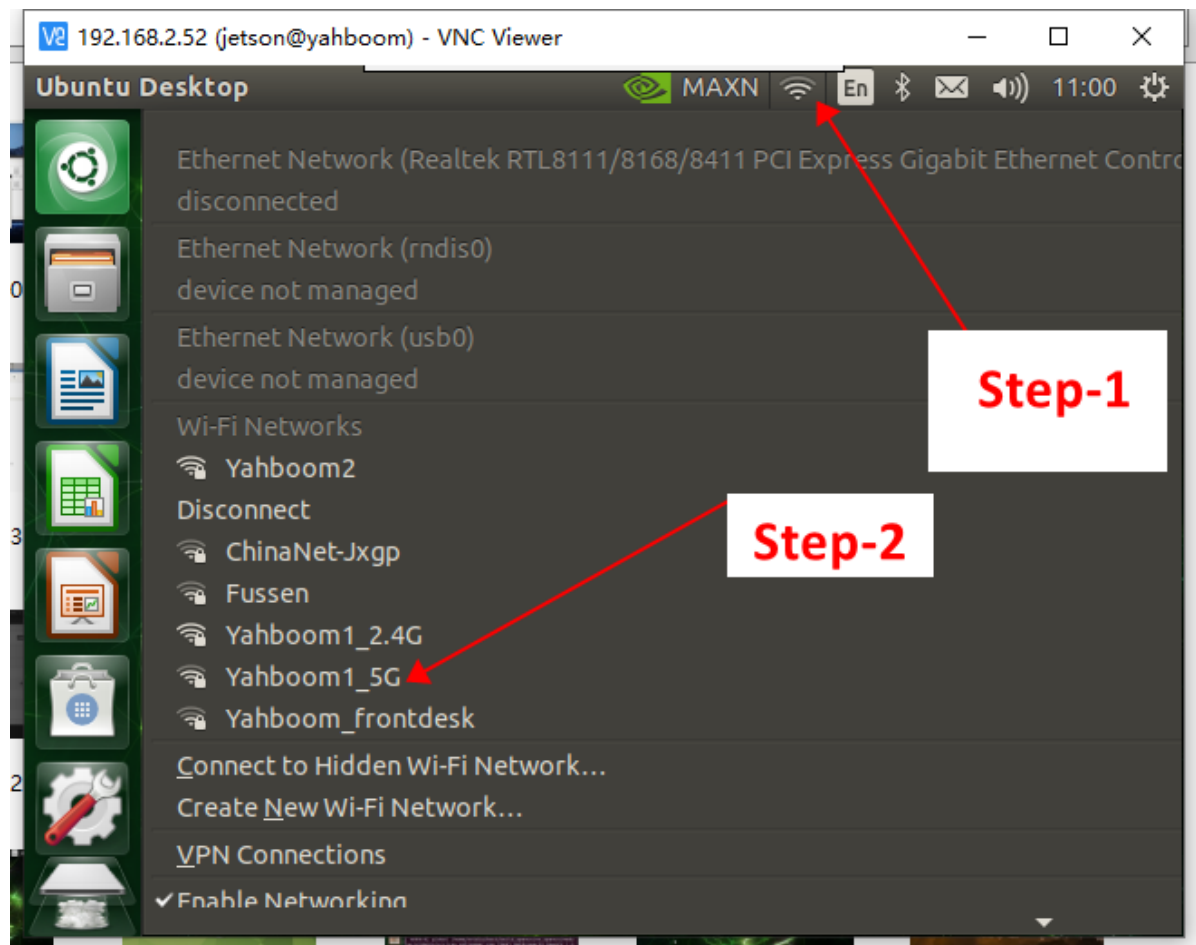
The first step is to click on the network symbol above. The second step is to select the network we need to connect to, and enter the password. I have already connected to the network of yahboom2

Obtain the IP address of the motherboard (when connected to the network)

```
ifconfig
```

Because I am using WiFi, looking at the IP address in the wlan0 line, I can see that my IP address here is 192.168.2.52.

4.Jetson Orin nano Connection Network Cable

If we want to know the IP address without a display screen, we can use the method of directly plugging in the network cable, and then the computer and a router will also be connected to the network. Download an IP scanning software to perform IP scanning, which is Advanced IP Scanner.

scan ip