

8.Remote SSH login to Raspberry Pi

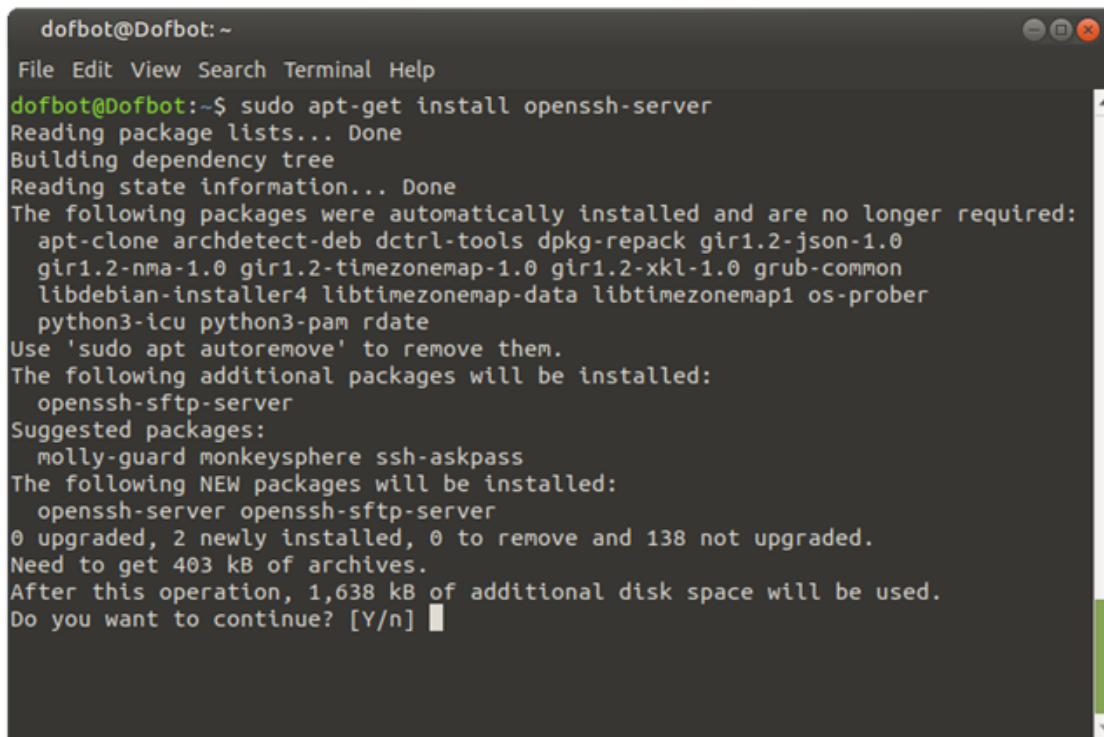
Let's take the Win10 system to log in to the Raspberry Pi through the SSH service as an example.

Note: The Win10 computer and Raspberry Pi must be in the same LAN.

1. Install SSH service

Input following command to install the SSH service.

```
sudo apt-get install openssh-server
```

A terminal window titled 'dofbot@Dofbot: ~' with a menu bar (File, Edit, View, Search, Terminal, Help). The user has entered the command 'sudo apt-get install openssh-server'. The terminal output shows the package lists being read, the dependency tree being built, and state information being read. It lists several packages that will be automatically installed and are no longer required, such as apt-clone, archdetect-deb, dctrl-tools, dpkg-repack, gir1.2-json-1.0, gir1.2-nma-1.0, gir1.2-timzone-1.0, gir1.2-xkl-1.0, grub-common, libdebian-installer4, libtimezonemap-data, libtimezonemap1, os-prober, python3-icu, python3-pam, and rdate. It suggests using 'sudo apt autoremove' to remove them. It then lists the additional packages to be installed: openssh-sftp-server. Suggested packages include molly-guard, monkeysphere, ssh-askpass. The NEW packages to be installed are openssh-server and openssh-sftp-server. The summary shows 0 upgraded, 2 newly installed, 0 to remove, and 138 not upgraded. It indicates that 403 kB of archives need to be gotten and that 1,638 kB of additional disk space will be used after the operation. The prompt 'Do you want to continue? [Y/n]' is shown with a cursor.

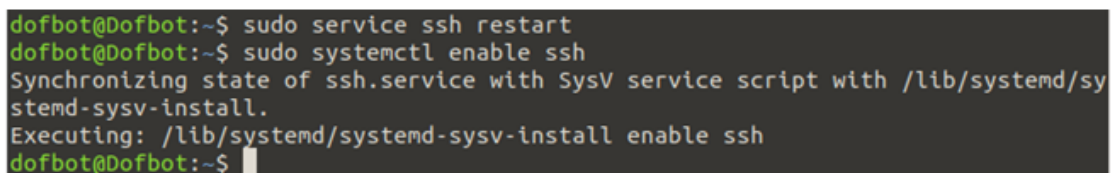
When prompted, enter **y** and press [Enter key] to confirm.

Input following command to restart SSH service

```
sudo service ssh restart
```

Input following command to add SSH service to the boot auto-start service

```
sudo systemctl enable ssh
```

A terminal window showing the execution of two commands. The first command is 'sudo service ssh restart' and the second is 'sudo systemctl enable ssh'. The output for the first command is 'Synchronizing state of ssh.service with SysV service script with /lib/systemd/sy' and 'systemd-sysv-install.'. The output for the second command is 'Executing: /lib/systemd/systemd-sysv-install enable ssh'. The prompt 'dofbot@Dofbot:~\$' is shown at the end.

2. Obtain the Raspberry Pi IP address

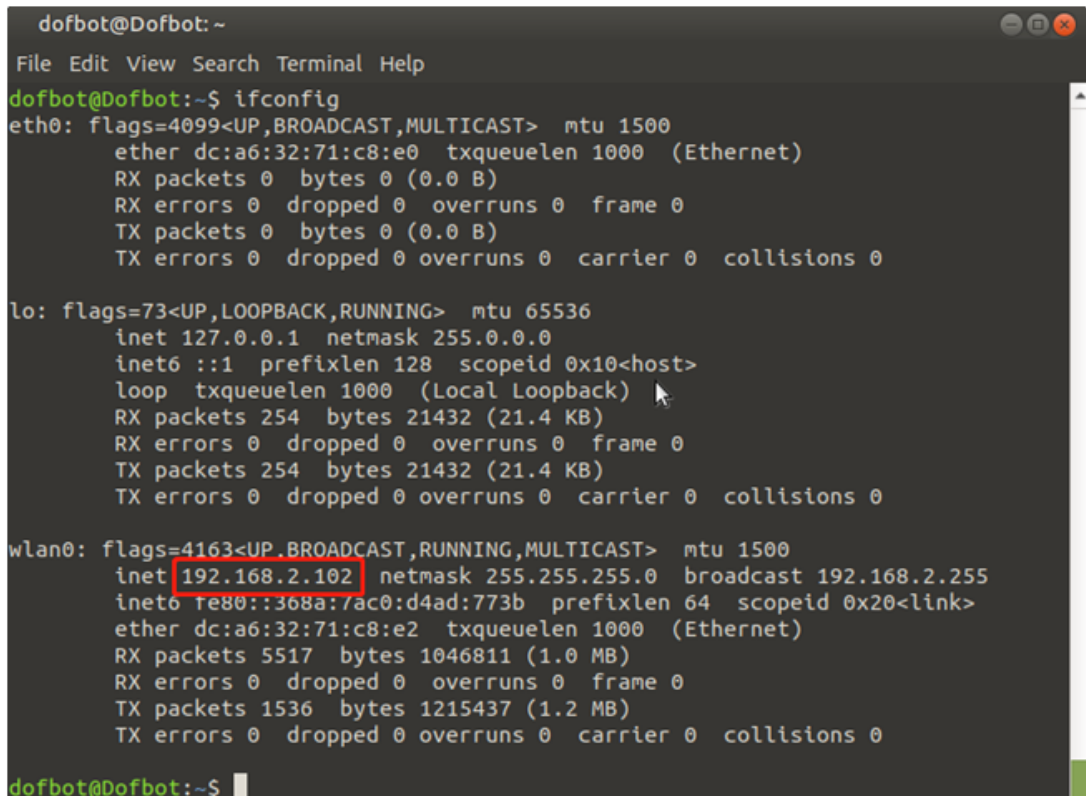
1. Input following command to install the network tool

```
sudo apt install net-tools
```

```
dofbot@dofbot:~$ sudo apt install net-tools
[sudo] password for dofbot:
Sorry, try again.
[sudo] password for dofbot:
Sorry, try again.
[sudo] password for dofbot:
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
  apt-clone archdetect-deb dctrl-tools dpkg-repack gir1.2-json-1.0
  gir1.2-nma-1.0 gir1.2-timzonemap-1.0 gir1.2-xkl-1.0 grub-common
  libdebian-installer4 libtimzonemap-data libtimzonemap1 os-prober
  python3-icu python3-pam rdate
Use 'sudo apt autoremove' to remove them.
The following NEW packages will be installed:
  net-tools
0 upgraded, 1 newly installed, 0 to remove and 138 not upgraded.
```

2. Input following command to view IP address.

```
ifconfig
```



```
dofbot@dofbot: ~
File Edit View Search Terminal Help
dofbot@dofbot:~$ ifconfig
eth0: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
    ether dc:a6:32:71:c8:e0 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

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 254 bytes 21432 (21.4 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 254 bytes 21432 (21.4 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

wlan0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.2.102 netmask 255.255.255.0 broadcast 192.168.2.255
    inet6 fe80::368a:7ac0:d4ad:773b prefixlen 64 scopeid 0x20<link>
    ether dc:a6:32:71:c8:e2 txqueuelen 1000 (Ethernet)
    RX packets 5517 bytes 1046811 (1.0 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 1536 bytes 1215437 (1.2 MB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

dofbot@dofbot:~$
```

Find wlan0 in the picture, and behind inet you can see that the IP address of the Raspberry Pi is 192.168.2.102

If you are connected via a network cable, please check the Raspberry Pi IP address at eth0

3. Install putty on computer

1. Go to putty official website to download the installation package

<https://www.chiark.greenend.org.uk/~sgtatham/putty/>

PuTTY: a free SSH and Telnet client

Home | [FAQ](#) | [Feedback](#) | [Licence](#) | [Updates](#) | [Mirrors](#) | [Keys](#) | [Links](#) | [Team](#)
Download: [Stable](#) · [Snapshot](#) | [Docs](#) | [Changes](#) | [Wishlist](#)

PuTTY is a free implementation of SSH and Telnet for Windows and Unix platforms, along with an `xterm` terminal emulator. It is written and maintained primarily by [Simon Tatham](#).

The latest version is 0.74 [Download it here](#).

LEGAL WARNING: Use of PuTTY, PSCP, PSFTP and Plink is illegal in countries where encryption is outlawed. We believe it is legal to use PuTTY, PSCP, PSFTP and Plink in England and Wales and in many other countries, but we are not lawyers, and so if in doubt you should seek legal advice before downloading it. You may find useful information at [cryptolaw.org](#), which collects information on cryptography laws in many countries, but we can't vouch for its correctness.

Use of the Telnet-only binary (PuTTYtel) is unrestricted by any cryptography laws.

Latest news

2020-06-27 PuTTY 0.74 released

PuTTY 0.74, released today, is a bug-fix and security release. It fixes bugs in 0.73, including one possible vulnerability, and also adds a [new configuration option](#) to mitigate a minor information leak in SSH host key policy.

Package files

You probably want one of these. They include versions of all the PuTTY utilities.

(Not sure whether you want the 32-bit or the 64-bit version? Read the [FAQ entry](#).)

MSI ('Windows Installer')

32-bit:	putty-0.74-installer.msi	(or by FTP)	(signature)
64-bit:	putty-64bit-0.74-installer.msi	(or by FTP)	(signature)

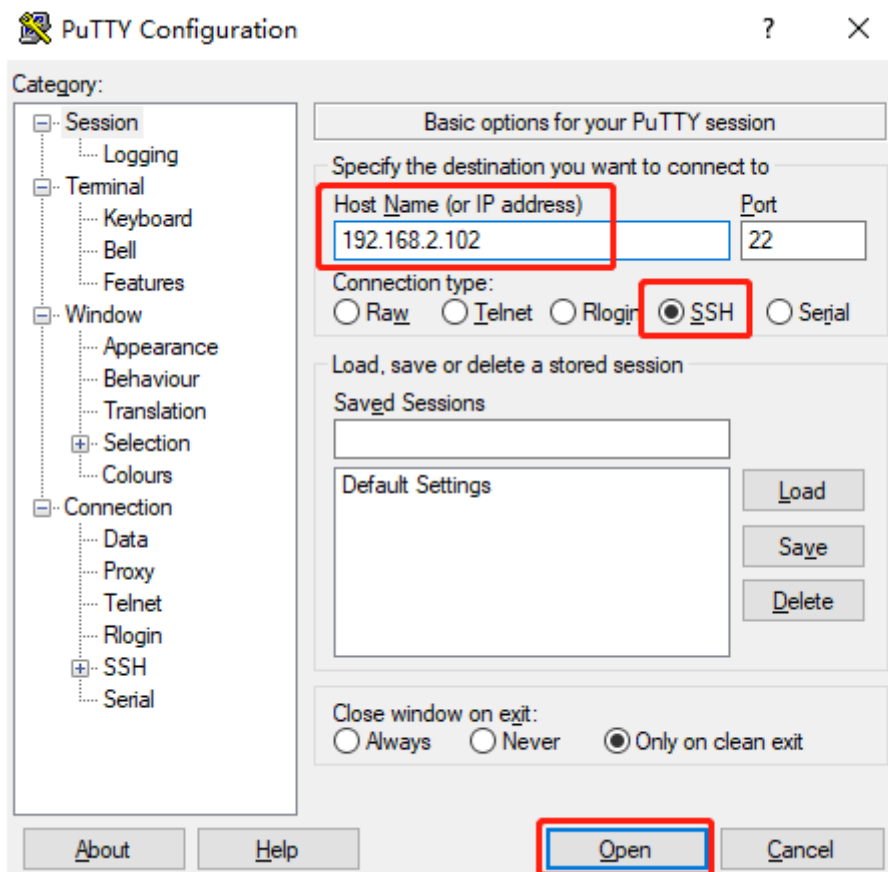
Unix source archive

.tar.gz:	putty-0.74.tar.gz	(or by FTP)	(signature)
----------	-----------------------------------	-----------------------------	-----------------------------

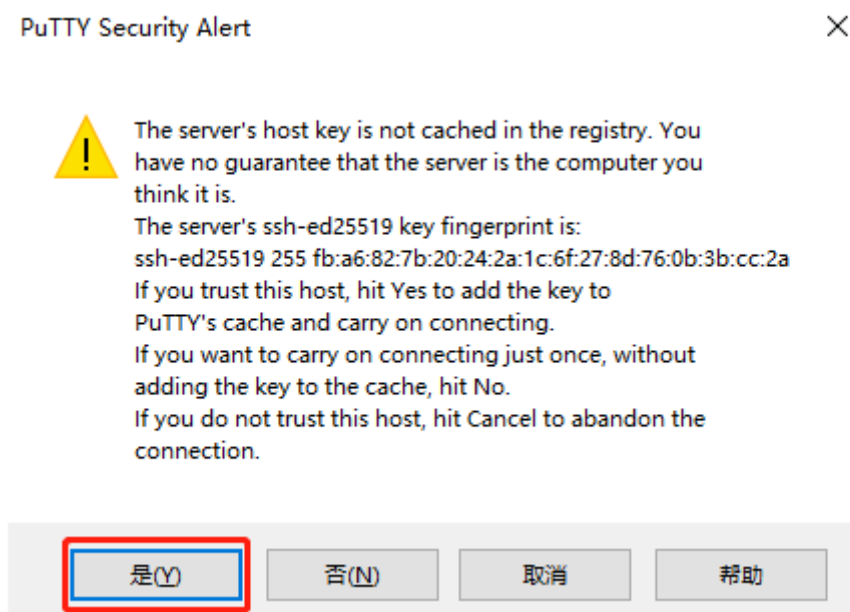
2. Install directly after downloading

4. Remote login to Raspberry Pi by Putty

1. Open Putty on the computer, select the SSH connection method, and fill in the IP address of the Raspberry Pi you just found in the Host Name column.



2. The system prompts, select "Yes"



3. Input your username and password and press Enter.

Note: The password will not be displayed

dofbot@Dofbot: ~

login as: dofbot

dofbot@192.168.2.102's password:

Welcome to Ubuntu 20.04.1 LTS (GNU/Linux 5.4.0-1022-raspi aarch64)

- * Documentation: <https://help.ubuntu.com>
- * Management: <https://landscape.canonical.com>
- * Support: <https://ubuntu.com/advantage>

135 updates can be installed immediately.

0 of these updates are security updates.

To see these additional updates run: `apt list --upgradable`

Last login: Mon Oct 26 10:53:11 2020 from 192.168.2.100

dofbot@Dofbot:~\$