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IP ADDRESS

Any device connected to a Local Area Network is assigned an IP address.

In order to connect to your Raspberry Pi from another machine using SSH or VNC, you need to know the Pi's IP address. This is easy if you have a display connected, and there are a number of methods for finding it remotely from another machine on the network.

USING THE PI WITH A DISPLAY

If you boot to the command line instead of the desktop, your IP address should be shown in the last few messages before the login prompt.

Using the terminal (boot to the command line or open a Terminal window from the desktop), simply type `hostname -I` which will reveal your Pi's IP address.

USING THE PI HEADLESS (WITHOUT A DISPLAY)

It is possible to find the IP address of your Pi without connecting to a screen using one of the following methods:

ROUTER DEVICES LIST

In a web browser navigate to your router's IP address e.g. `http://192.168.1.1` , which is usually printed on a label on your router; this will take you to a control panel. Then log in using your credentials, which is usually also printed on the router or sent to you in the accompanying paperwork. Browse to the list of connected devices or similar (all routers are different), and you should see some devices you recognise. Some devices are detected as PCs, tablets, phones, printers, etc. so you should recognise some and rule them out to figure out which is your Raspberry Pi. Also note the connection type; if your Pi is connected with a wire there should be fewer devices to choose from.

NMAP COMMAND

The `nmap` command (Network Mapper) is a free and open-source tool for network discovery, available for Linux, Mac OS, and Windows.

- To install on **Linux**, install the `nmap` package e.g. `apt-get install nmap` .

- To install on **Mac OS** or **Windows**, see the nmap.org download page.

To use `nmap` to scan the devices on your network, you need to know the subnet you are connected to. First find your own IP address, in other words the one of the computer you're using to find your Pi's IP address:

- On **Linux**, type `hostname -I` into a terminal window
- On **Mac OS**, go to `System Preferences` then `Network` and select your active network connection to view the IP address
- On **Windows**, go to the Control Panel, then under `Network and Sharing Center`, click `View network connections`, select your active network connection and click `View status of this connection` to view the IP address

Now you have the IP address of your computer, you will scan the whole subnet for other devices. For example, if your IP address is `192.168.1.5`, other devices will be at addresses like `192.168.1.2`, `192.168.1.3`, `192.168.1.4`, etc. The notation of this subnet range is `192.168.1.0/24` (this covers `192.168.1.0` to `192.168.1.255`).

Now use the `nmap` command with the `-sn` flag (ping scan) on the whole subnet range. This may take a few seconds:

```
nmap -sn 192.168.1.0/24
```

Ping scan just pings all the IP addresses to see if they respond. For each device that responds to the ping, the output shows the hostname and IP address like so:

```
Starting Nmap 6.40 ( http://nmap.org ) at 2014-03-10 12:46 GMT
Nmap scan report for hpprinter (192.168.1.2)
Host is up (0.00044s latency).
Nmap scan report for Gordons-MBP (192.168.1.4)
Host is up (0.0010s latency).
Nmap scan report for ubuntu (192.168.1.5)
```

```
Host is up (0.0010s latency).
Nmap scan report for raspberrypi (192.168.1.8)
Host is up (0.0030s latency).
Nmap done: 256 IP addresses (4 hosts up) scanned in 2.41 seconds
```

Here you can see a device with hostname `raspberrypi` has IP address `192.168.1.8` .

MORE TOOLS

Also see [lsleases](#)

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RASPBERRY PI FOUNDATION
UK REGISTERED CHARITY 1129409