

Ex - 18

Assigning Static IP Address

Problem

This tutorial will show you how to set a static IP address on your Pi with the release of Raspbian Jessie. At the time of writing, the latest release date of Raspbian Jessie is 18-03-2016 with Kernal version 4.1.

Solution

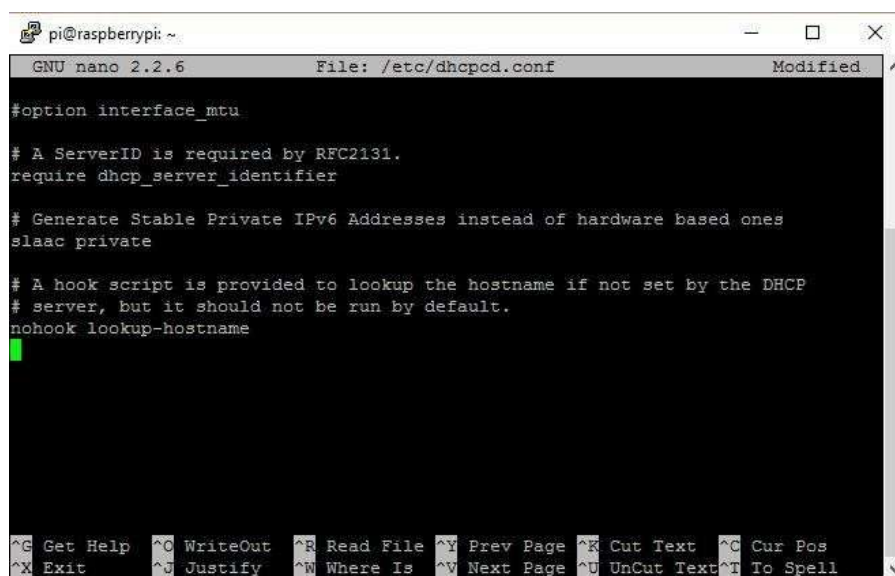
I recommend doing this on a fresh install, however if you have attempted to set a static IP address already, you may have found yourself editing the interfaces file (/etc/network/interfaces). I hope you made a backup, because you'll need to remove any edits you have made, and revert it back to its original state!

Discussion

The following is done over SSH, but you could just as well plug your Pi into a monitor, hook up a keyboard and mouse, and use the Terminal instead.

Start by editing the dhcpd.conf file

```
sudo nano /etc/dhcpd.conf
```



```
pi@raspberrypi: ~  
GNU nano 2.2.6 File: /etc/dhcpd.conf Modified  
#option interface_mtu  
  
# A ServerID is required by RFC2131.  
require dhcp_server_identifier  
  
# Generate Stable Private IPv6 Addresses instead of hardware based ones  
slaac private  
  
# A hook script is provided to lookup the hostname if not set by the DHCP  
# server, but it should not be run by default.  
nohook lookup-hostname  
  
^G Get Help ^O WriteOut ^R Read File ^Y Prev Page ^K Cut Text ^C Cur Pos  
^X Exit ^J Justify ^W Where Is ^V Next Page ^U UnCut Text ^T To Spell
```

Scroll all the way to the bottom of the file and add one, or both of the following snippets. Depending on whether you want to set a static IP address for a wired connection or a wireless connection eth0 = wired, wlan0 = wireless.

You'll need to edit the numbers in the snippet so they match your network configuration.

CODE

```
interface eth0

static ip_address=192.168.0.10/24
static routers=192.168.0.1
static domain_name_servers=192.168.0.1

interface wlan0

static ip_address=192.168.0.200/24
static routers=192.168.0.1
static domain_name_servers=192.168.0.1
```

`interface` = This defines which network interface you are setting the configuration for.

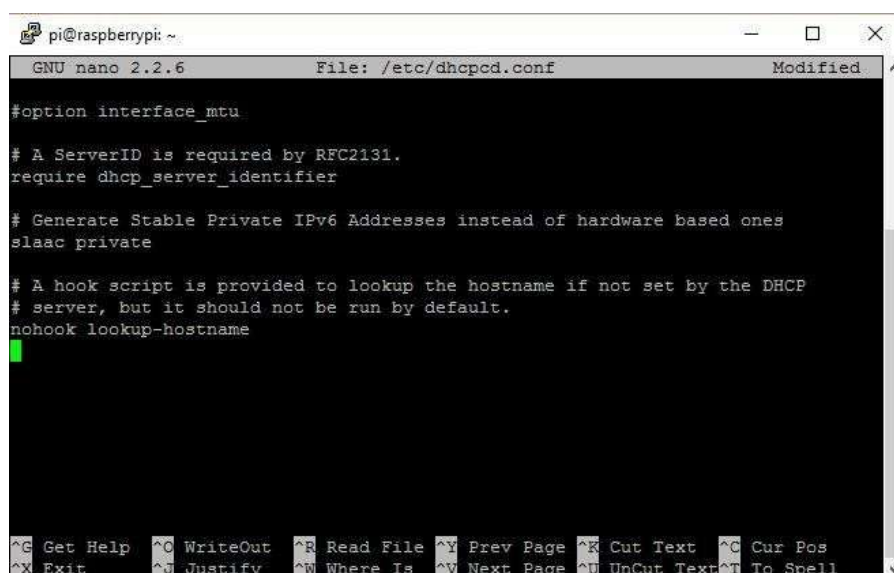
`static ip_address` = This is the IP address that you want to set your device to. (Make sure you leave the /24 at the end)

`static routers` = This is the IP address of your gateway (probably the IP address of your router)

`static domain_name_servers` = This is the IP address of your DNS (probably the IP address of your router). You can add multiple IP addresses here separated with a single space.

To exit the editor, press `ctrl+x`

To save your changes press the letter “Y” then hit enter

A screenshot of a terminal window on a Raspberry Pi. The terminal shows the nano text editor editing the file /etc/dhcpd.conf. The editor's status bar at the top indicates 'GNU nano 2.2.6', 'File: /etc/dhcpd.conf', and 'Modified'. The file content includes comments and configuration options like 'option interface_mtu', 'require dhcp_server_identifier', 'slaac private', and 'nohook lookup-hostname'. The bottom status bar shows various keyboard shortcuts for navigation and editing, such as '^G Get Help', '^O WriteOut', '^R Read File', '^Y Prev Page', '^K Cut Text', '^C Cur Pos', '^X Exit', '^J Justify', '^W Where Is', '^V Next Page', '^U UnCut Text', and '^T To Spell'. A green cursor is visible on the line 'nohook lookup-hostname'.

Now all you need to do is reboot, and everything should be set!

reboot

You can double check by typing

`ifconfig`

And checking the interfaces IP address

```
pi@raspberrypi ~$ sudo nano /etc/dhcp/dhclient.conf
pi@raspberrypi ~$ sudo nano /etc/dhcp/dhclient.conf
pi@raspberrypi ~$ ifconfig

e10 Link encap:Ethernet HWaddr b8:27:eb:15:63:7e
   inet6 addr: fe80::213a:1361:51f:c5b4/61 Scope:Link
   UP BROADCAST MULTICAST MTU:1500 Netmask:0
   RX packets:0 errors:0 dropped:0 overruns:0 frame:0
   TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
   collisions:0 txqueuelen:1000
   RX bytes:0 (0.0 B) TX bytes:0 (0.0 B)

lo Link encap:Local Loopback
   inet addr:127.0.0.1 Mask:255.0.0.0
   inet6 addr: ::1/128 Scope:Host
   UP LOOPBACK RUNNING MTU:65536 Netmask:0
   RX packets:388 errors:0 dropped:0 overruns:0 frame:0
   TX packets:388 errors:0 dropped:0 overruns:0 carrier:0
   collisions:0 txqueuelen:0
   RX bytes:33680 (32.8 KiB) TX bytes:33680 (32.8 KiB)

wlan0 Link encap:Ethernet HWaddr d4:7b:1b:11:1a:1a
   inet addr:192.168.0.200 Bcast:192.168.0.255 Mask:255.255.255.0
   inet6 addr: fe80::d57b:1b11:1a1a:1a1a/64 Scope:Link
   UP BROADCAST RUNNING MULTICAST MTU:1500 Netmask:0
   RX packets:1556 errors:0 dropped:432 overruns:0 frame:0
   TX packets:390 errors:0 dropped:0 overruns:0 carrier:0
   collisions:0 txqueuelen:1000
   RX bytes:296071 (289.2 KiB) TX bytes:56694 (55.0 KiB)

pi@raspberrypi ~$
```