

# WPA\_Supplicant in WeakNet Linux Version 4+



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WPA\_Supplicant is a simple Linux tool to allow you to connect your Laptop or Wireless enabled Desktop to your WPA or WPA2 enabled Wireless Router. In this tutorial I will show you how to do so, using WeakNet Linux Assistant WEAKER THAN. If you feel uncomfortable doing this by hand, you may want to check out the Systems Administration Manual I wrote for the WICd section.

First, use the `wpa_passphrase` command to generate a Pairwise Key. This key is a hash of the ESSID and the WPA/WPA2 password. Below is a screenshot of me doing this in the Lab.

```
trevelyn@celeritas: ~  
File Edit View Terminal Help  
root@celeritas:/home/trevelyn# wpa_passphrase WeakNetLabs thepassword  
network={  
    ssid="WeakNetLabs"  
    #psk="thepassword"  
    psk=525e278521907b4f042bf14d24efebe73afab20d0ef9a5c68d8900f3b7c3de57  
}  
root@celeritas:/home/trevelyn# wpa_passphrase WeakNetLabs thepassword > /etc/  
wpa_supplicant.conf  
root@celeritas:/home/trevelyn#
```

Figure 0: Creating the PSK hash for WPA\_Supplicant in WeakNet Linux Assistant

WeakNet Linux Assistant comes with `tiny_vim`, `leafpad`, `vi`, and `nano`. In this tutorial I will be using `vim`. To install `vim`, you can do this from the command line:

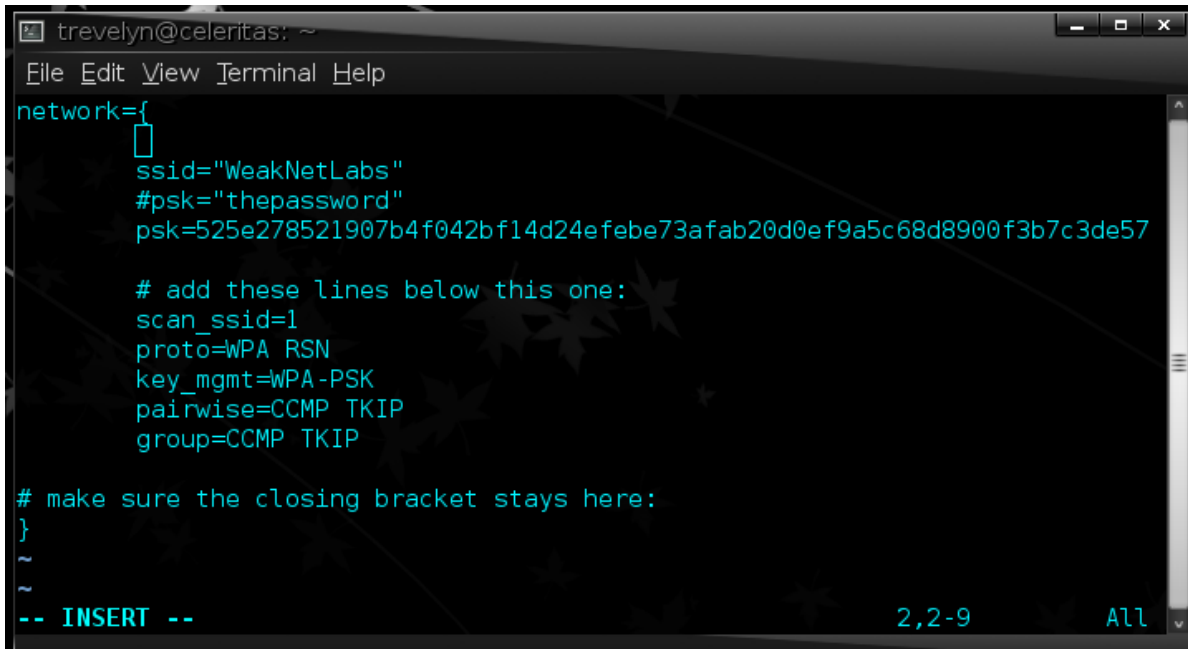
```
apt-get update  
apt-get install vim
```

or simply use `nano`, or `leafpad`, if you do not have a wired connection. `leafpad` is the GUI text editor that is in the dock at the bottom of the desktop screen. Since the default user is “root” you will be able to change any configuration files you wish, using `Leafpad` in the desktop.

In the above screenshot, I dumped the output right into the file `/etc/wpa_supplicant.conf` overwriting what was in there. This is because the output of the `wpa_passphrase` command is the exact syntax the `wpa_supplicant` configuration file needs, minus a few lines. The extra lines are in the screenshot below. Here I edit the file `/etc/wpa_supplicant.conf` with `vim`. To do so type:

```
vim /etc/wpa_supplicant.conf
```

Then press return. Once in vim, hit “I” (capital i) to enter “-- INSERT --” mode. This will allow you to make changes to the file.



```
trevelyn@celeritas: ~
File Edit View Terminal Help
network={
  ssid="WeakNetLabs"
  #psk="thepassword"
  psk=525e278521907b4f042bf14d24efebef73afab20d0ef9a5c68d8900f3b7c3de57

  # add these lines below this one:
  scan_ssid=1
  proto=WPA RSN
  key_mgmt=WPA-PSK
  pairwise=CCMP TKIP
  group=CCMP TKIP

# make sure the closing bracket stays here:
}
~
~
-- INSERT --                2,2-9                All
```

Figure 1: Editing the configuration file /etc/wpa\_supplicant.conf using vim in the command line.

Add the lines:

```
scan_ssid=1
proto=WPA RSN
key_mgmt=WPA-PSK
pairwise=CCMP TKIP
group=CCMP TKIP
```

Making changes where applicable. To save and quit the vim editor, hit ESC, :, wq, RETURN, in the sequence. To quit vim without saving hit, ESC, q!, RETURN. Once done, you can bring up your wireless device with iwconfig. You can now start the WPA\_Supplicant service, by issuing the following command, making changes where applicable:

```
wpa_supplicant -B w -D wext -i wlan0 -c /etc/wpa_supplicant.conf
```

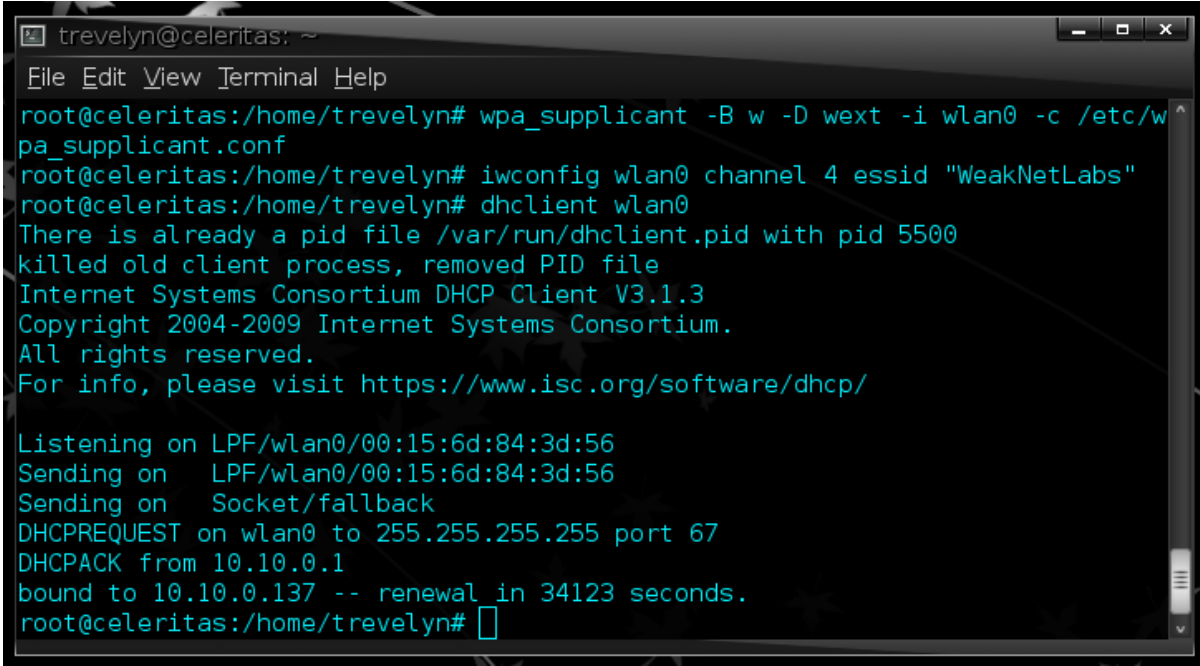
Next, set the channel and the ESSID on the device before trying to get an IP address. Here I will use my settings in the Lab:

```
iwconfig wlan0 channel 4 essid WeakNetLabs
```

Make changes where applicable. Then issue a dhclient command to get an IP address:

```
dhclient wlan0
```

You should now be on your wireless network! Below is a screenshot of me attached to my wireless network after issuing the above commands.

A terminal window titled 'trevelyn@celeritas: ~' with a menu bar (File, Edit, View, Terminal, Help). The terminal shows the following commands and output:

```
root@celeritas:/home/trevelyn# wpa_supplicant -B w -D wext -i wlan0 -c /etc/wpa_supplicant.conf
root@celeritas:/home/trevelyn# iwconfig wlan0 channel 4 essid "WeakNetLabs"
root@celeritas:/home/trevelyn# dhclient wlan0
There is already a pid file /var/run/dhclient.pid with pid 5500
killed old client process, removed PID file
Internet Systems Consortium DHCP Client V3.1.3
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For info, please visit https://www.isc.org/software/dhcp/

Listening on LPF/wlan0/00:15:6d:84:3d:56
Sending on   LPF/wlan0/00:15:6d:84:3d:56
Sending on   Socket/fallback
DHCPREQUEST on wlan0 to 255.255.255.255 port 67
DHCPACK from 10.10.0.1
bound to 10.10.0.137 -- renewal in 34123 seconds.
root@celeritas:/home/trevelyn#
```

Figure 2: I got an IP from my Wireless router after issuing the commands listed above.