Router Set-Up

Before you disconnect any existing ISP gear, please read this initial section carefully, as there is information we need from the existing deployment.

There are two forms of DSL login, the most common is PPPoE and Windstream exclusively uses this for DSL. TDS uses two different approaches, one supports PPPoE and the other uses DHCP.

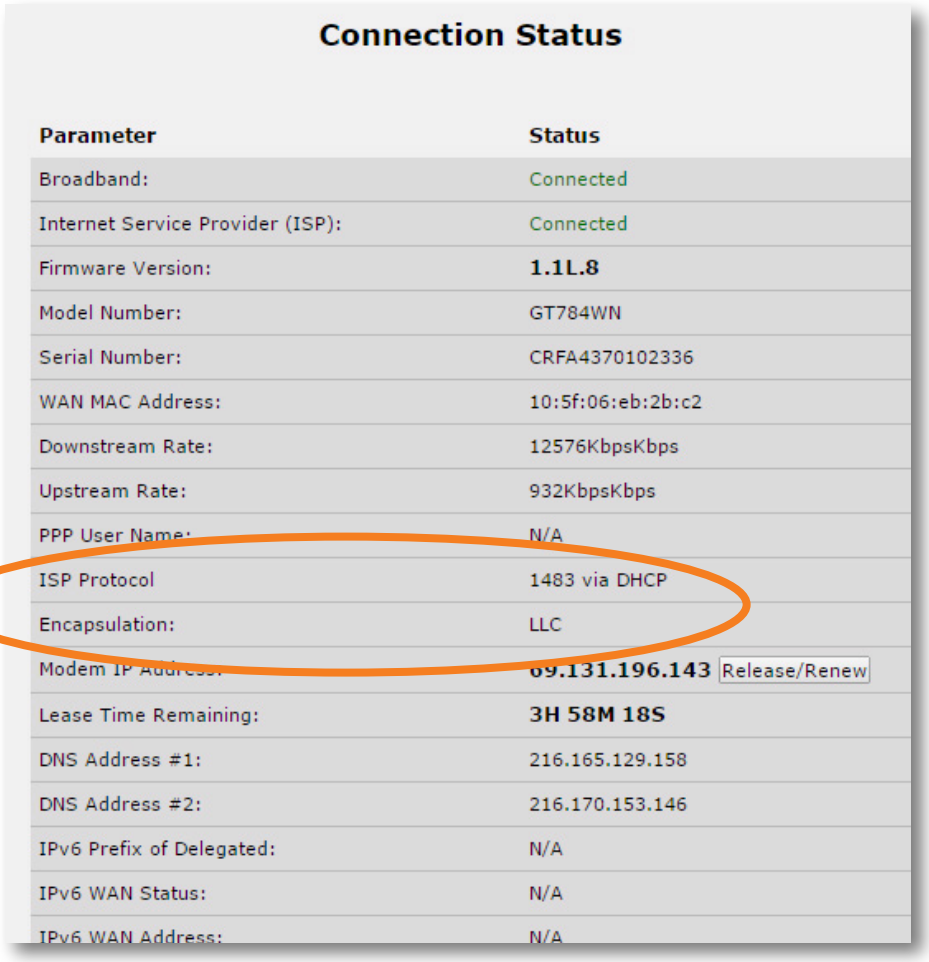
All the PPPoE cases require that you know your ISP-provided credentials.

Windstream, this is your user@windstream.net and an ISP-provided PPPoE password

TDS, this your current user@tds.net email address and current email password.

For TDS users, here's how you determine if you are on a DHCP link.

- Log into your current TDS router by going to 192.168.0.1 with a browser
- Click on Connection status and you will get a display that look like this:



Connection Status

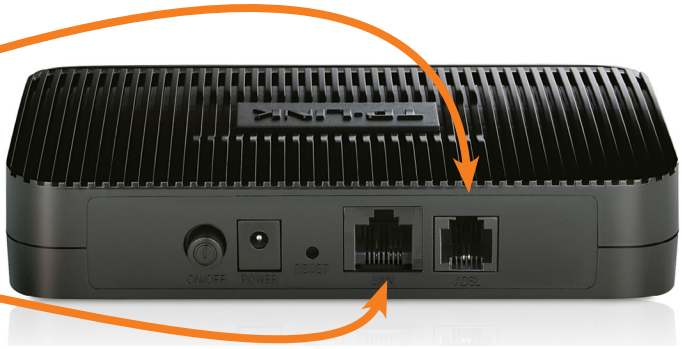
Parameter	Status
Broadband:	Connected
Internet Service Provider (ISP):	Connected
Firmware Version:	**1.1L.8**
Model Number:	GT784WN
Serial Number:	CRFA4370102336
WAN MAC Address:	10:5f:06:eb:2b:c2
Downstream Rate:	12576KbpsKbps
Upstream Rate:	932KbpsKbps
PPP User Name:	N/A
ISP Protocol	1483 via DHCP
Encapsulation:	LLC
Modem IP Address:	**69.131.196.143** Release/Renew
Lease Time Remaining:	**3H 58M 18S**
DNS Address #1:	216.165.129.158
DNS Address #2:	216.170.153.146
IPv6 Prefix of Delegated:	N/A
IPv6 WAN Status:	N/A
IPv6 WAN Address:	N/A

- If the ISP Protocol says "1483 via DHCP", then you must use DHCP as the connection style in steps 20 & 21.

Before we start, please execute a speed test on the old gear so we have a good record of the 'before' state. Instructions for this start on step 33 on page 13.

We assume you are replacing existing ISP-supplied equipment, so we start with removing that first.

1. Power off your existing ISP router / modem
2. Make note of which wires go to which ports on your old gear. Taking several pictures can help make this easy
3. Unbox the TP-Link modem (the small box)
4. Plug your DSL phone-line cable into the RJ-11 port (the smaller of the two) on the modem.
5. Plug the supplied Ethernet cable into the RJ-45 port of the modem
6. Plug in the power supply to the modem, and plug supply into AC power



Back of new TP-Link Modem

7. Unbox the TP-Link router
8. Plug the Ethernet cable from step 5 from the modem into the blue 'WAN' port of the router
9. Plug in any LAN Ethernet cables that might have been connected to the prior router into the LAN (Yellow) ports of the TP-Link router.
10. Plug in the power supply to the router and plug supply into AC power
11. Push in the power button on the modem
12. Push in the power button on the router

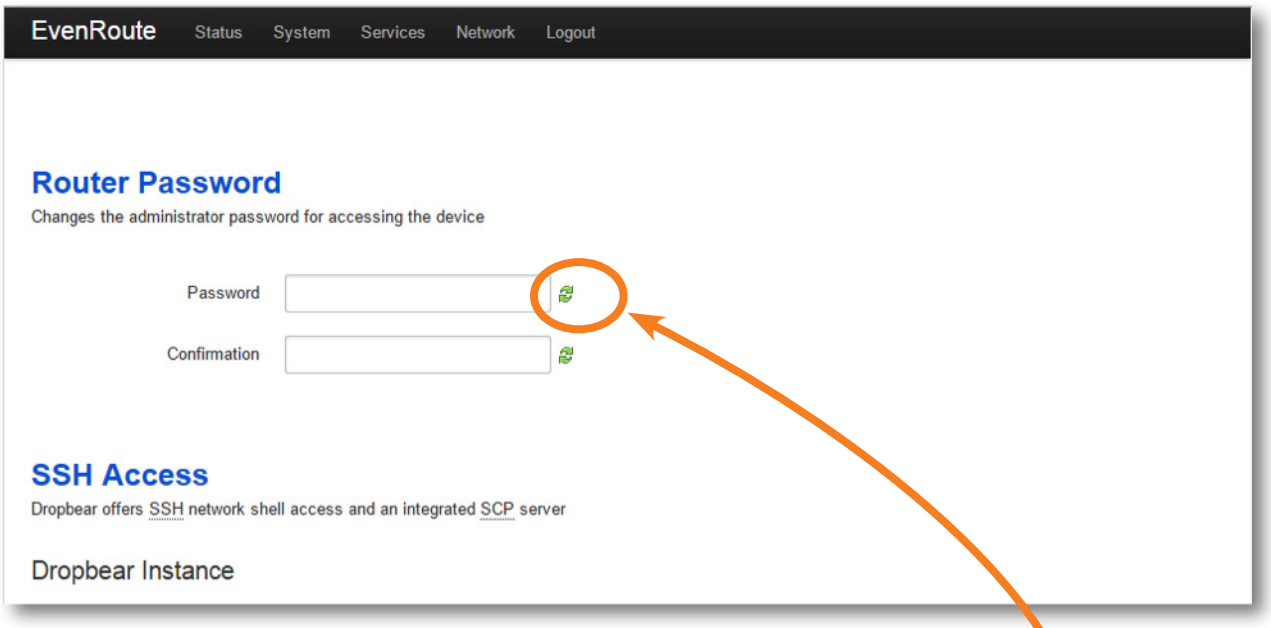

Back of new TP-Link Router

13. Connect a laptop via Ethernet cable to one of the LAN ports

    Alternate via WiFi:

    - Connect to the 'evenroute' access point
    - WPA2 Security key is 'FastRouter' (note: the caps are important)

14. Launch a Browser window and in the URL bar type **192.168.0.1**
15. You will see a prompt for user id and password. Enter "**root**" as user id and "**FastRouter**" for the password.

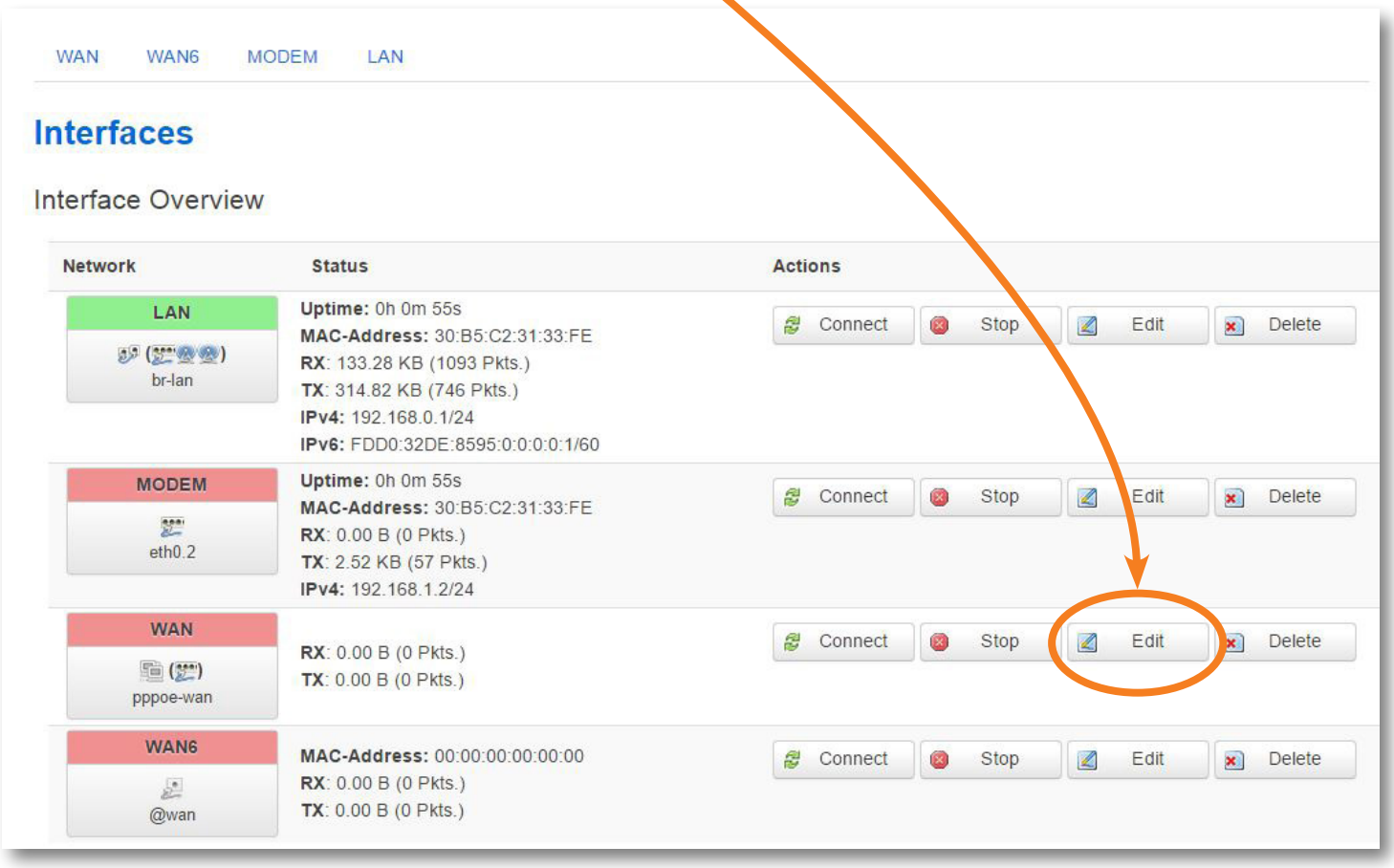


16. Once logged in, please change your password by selecting System → Administration

    - Enter a password and please make note of it, you will need to enter it to access the configuration in the future
    - Click the 'Save and Apply' button at the bottom of the screen

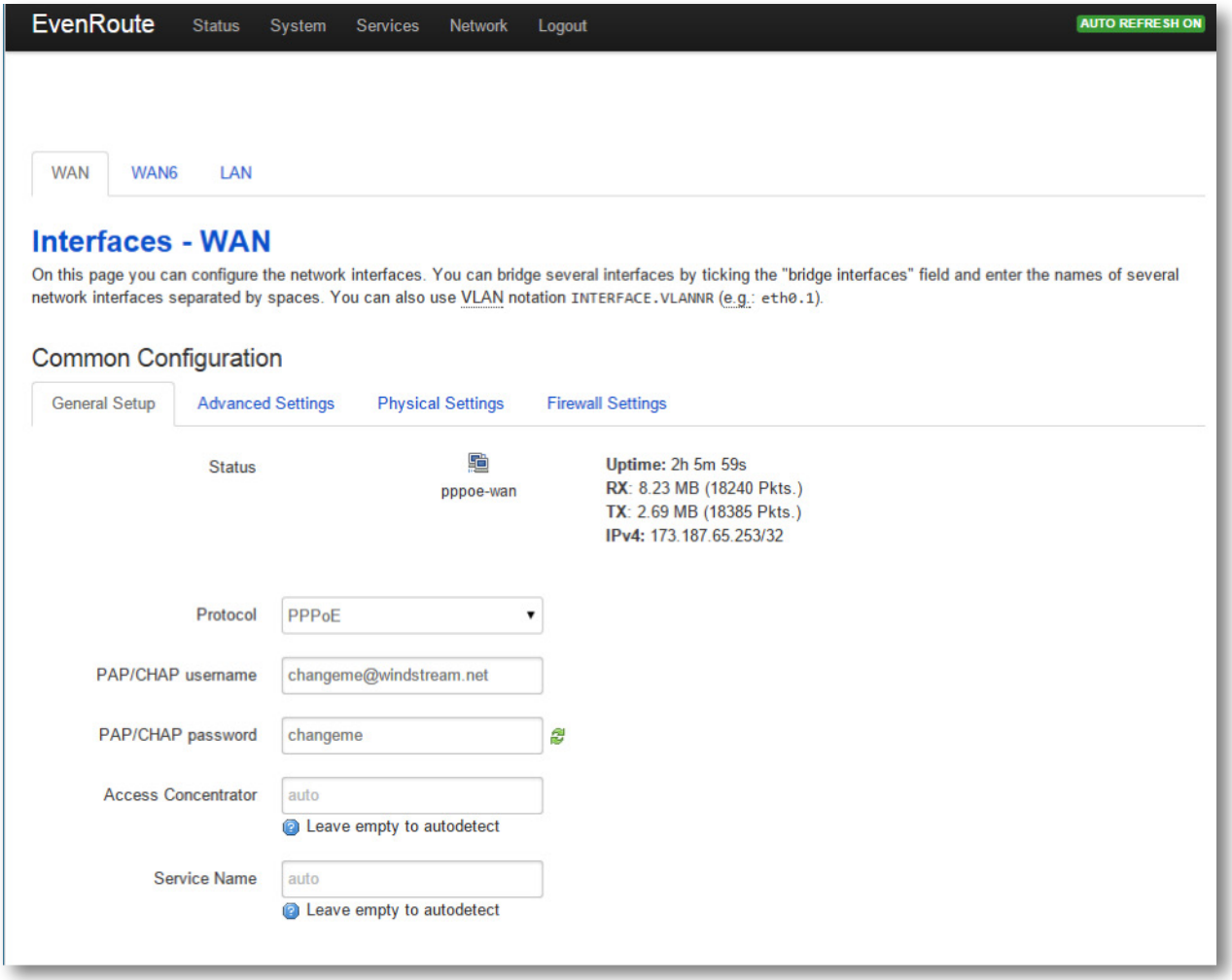
Tip: click the little green arrows to view your password

17. Go to Network → Interfaces to set your ISP information for PPPoE
18. Click the Edit button on the WAN interface



If you use PPPoE then follow steps 19 to 21, else skip to page 6:

19. In the 'PAP/Chap username' field, enter the user ID your ISP gave you
20. In the PAP/Chap password' field, enter the password your ISP gave you
21. Click the "Save and Apply" button



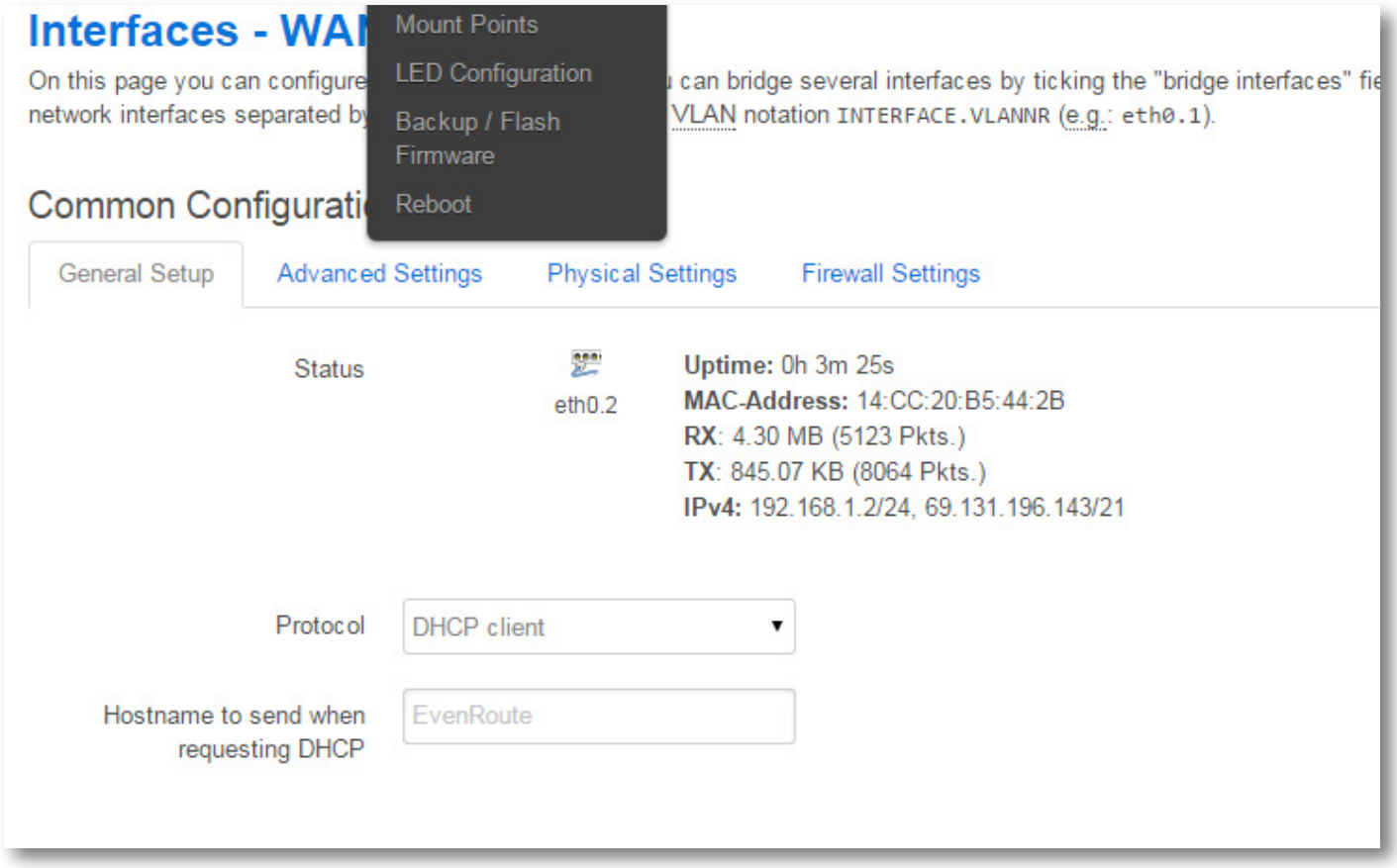
Continue with step 22 on page 9.

If you are a TDS user with DHCP, follow steps A to F:

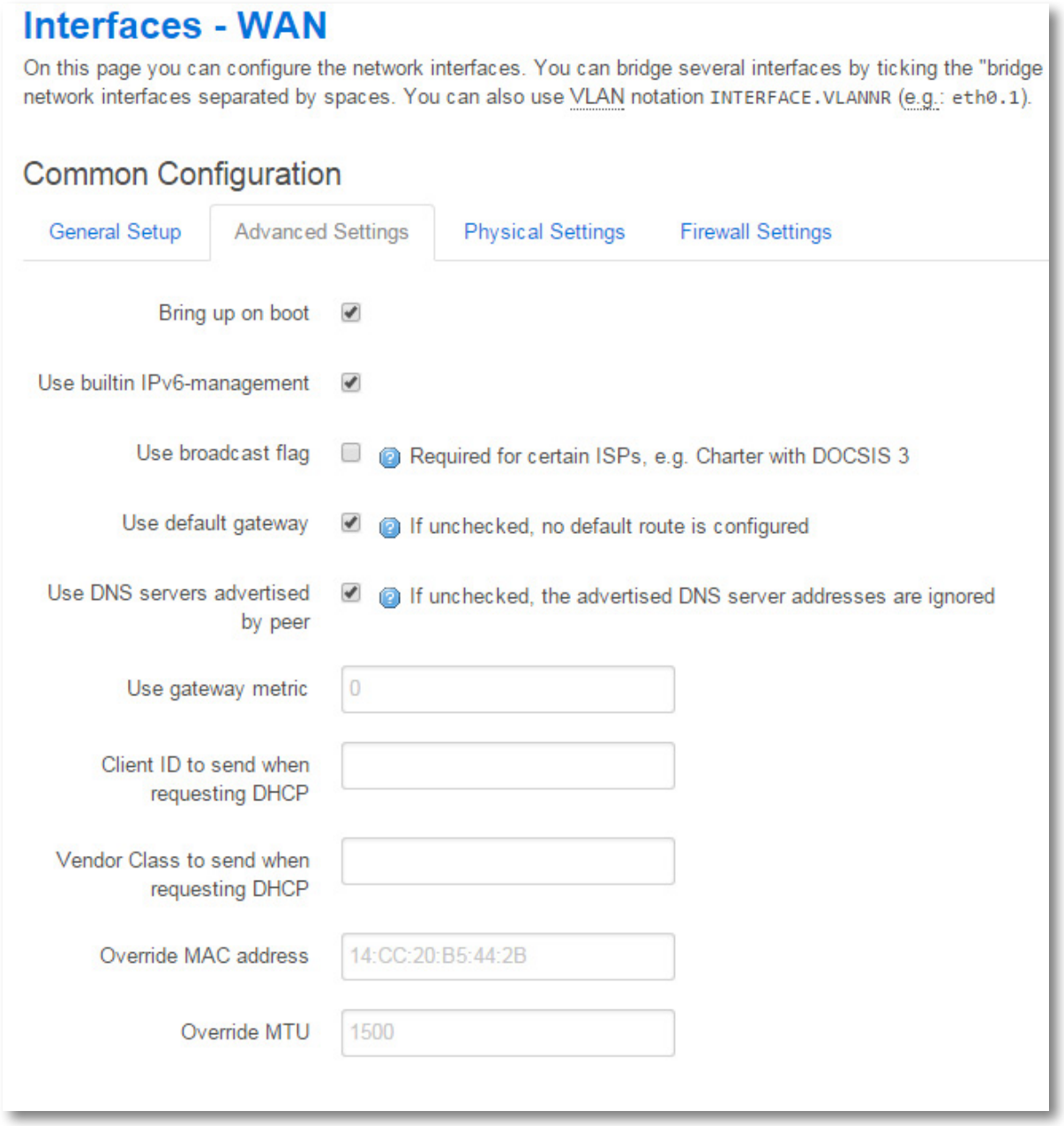
A. Since we need to use DHCP, we must change the 'Protocol' drop-down to DHCP.

B. Click 'Save & Apply' button

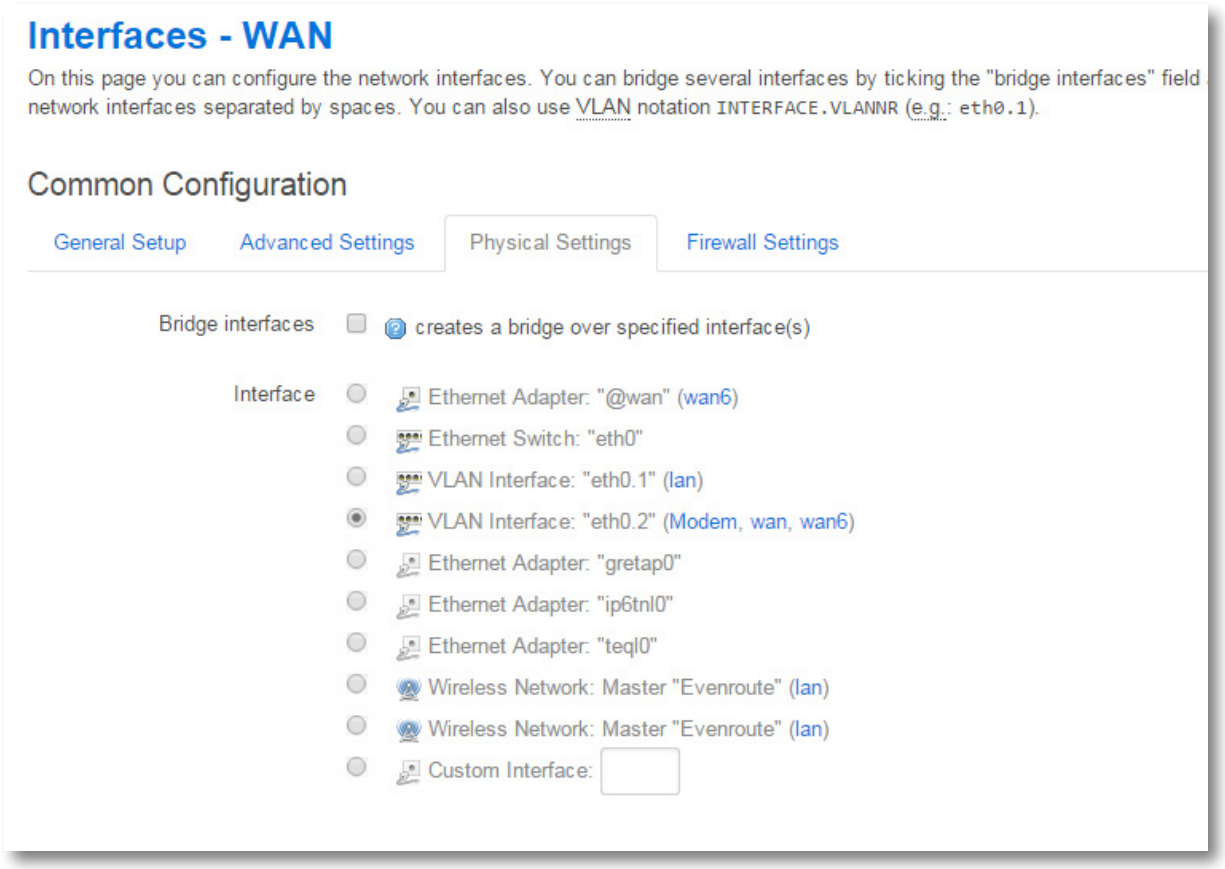
This is what it looks like once you are done:



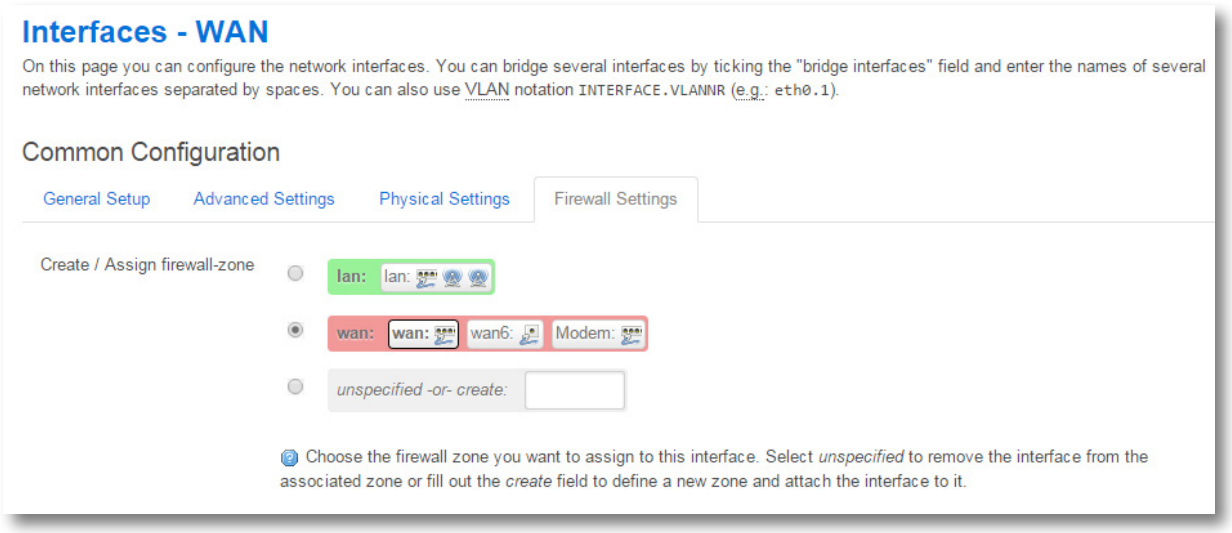
C. Click on Advanced Settings, and it should look like this:



D. Click on Physical settings and ensure that the eth0.2 interface is chosen, it should look like this:



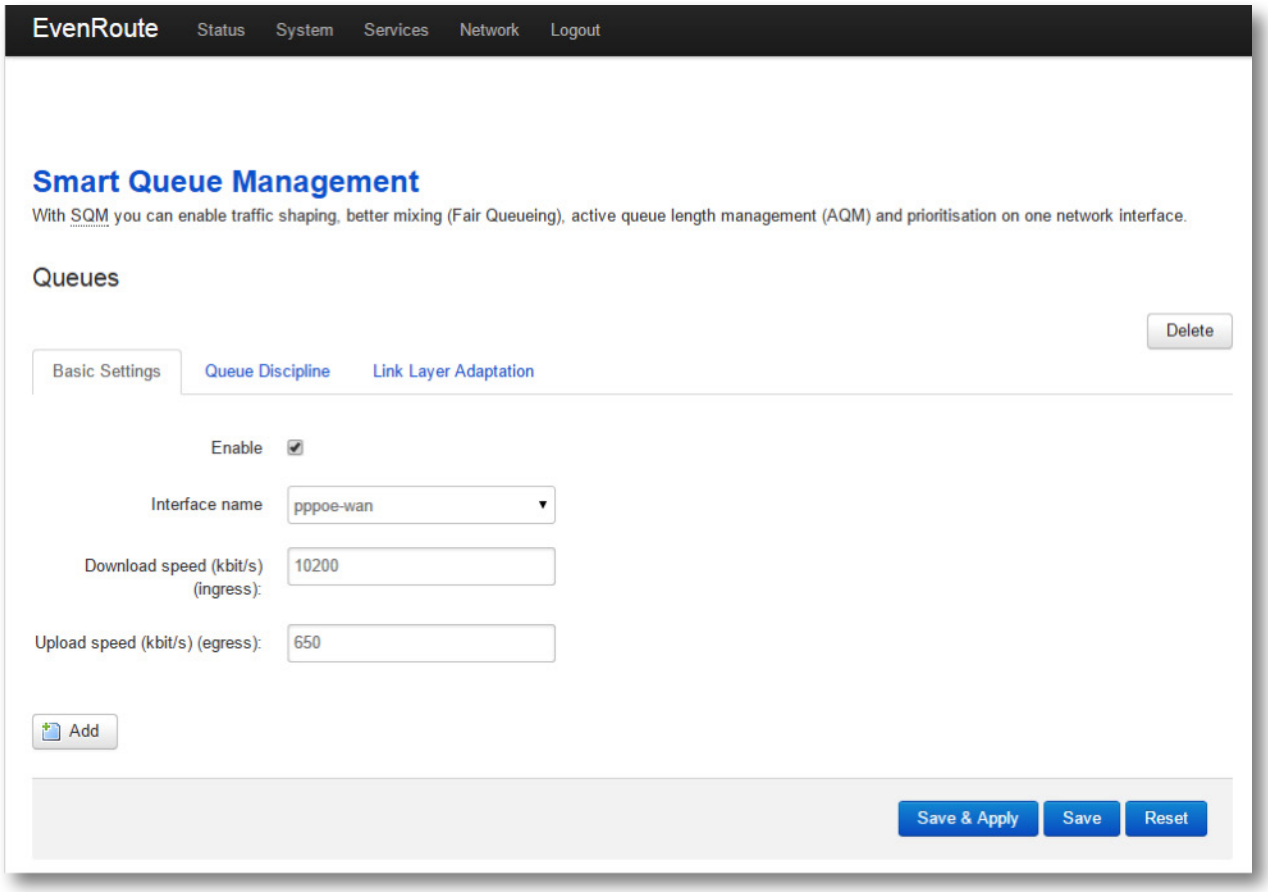
E. Click on the Firewall setting to make sure the Wan zone is assigned to this, it should look like this:



F. Click 'Save & Done'

Continue with step 22 on next page.

22. Now go to Network → SQM / QOS to set your upload and download speeds. This is critical to get right, so don't skip this step
    - For 12Mbps service, start with a value of 10200
    - For 6Mbps DSL service, start with a value of 5200
    - For 3Mbps service, start with a value of 2600
    - Leave the upload speed at 650 for now
23. IF you are a TDS DHCP user, you will need to select the correct interface, please pick eth0.2 from the drop down, **only if you are TDS DHCP.** All Windstream is PPPoE and some TDS accounts as well.
24. Click the 'Save & Apply' button, wait 30 seconds for it to apply



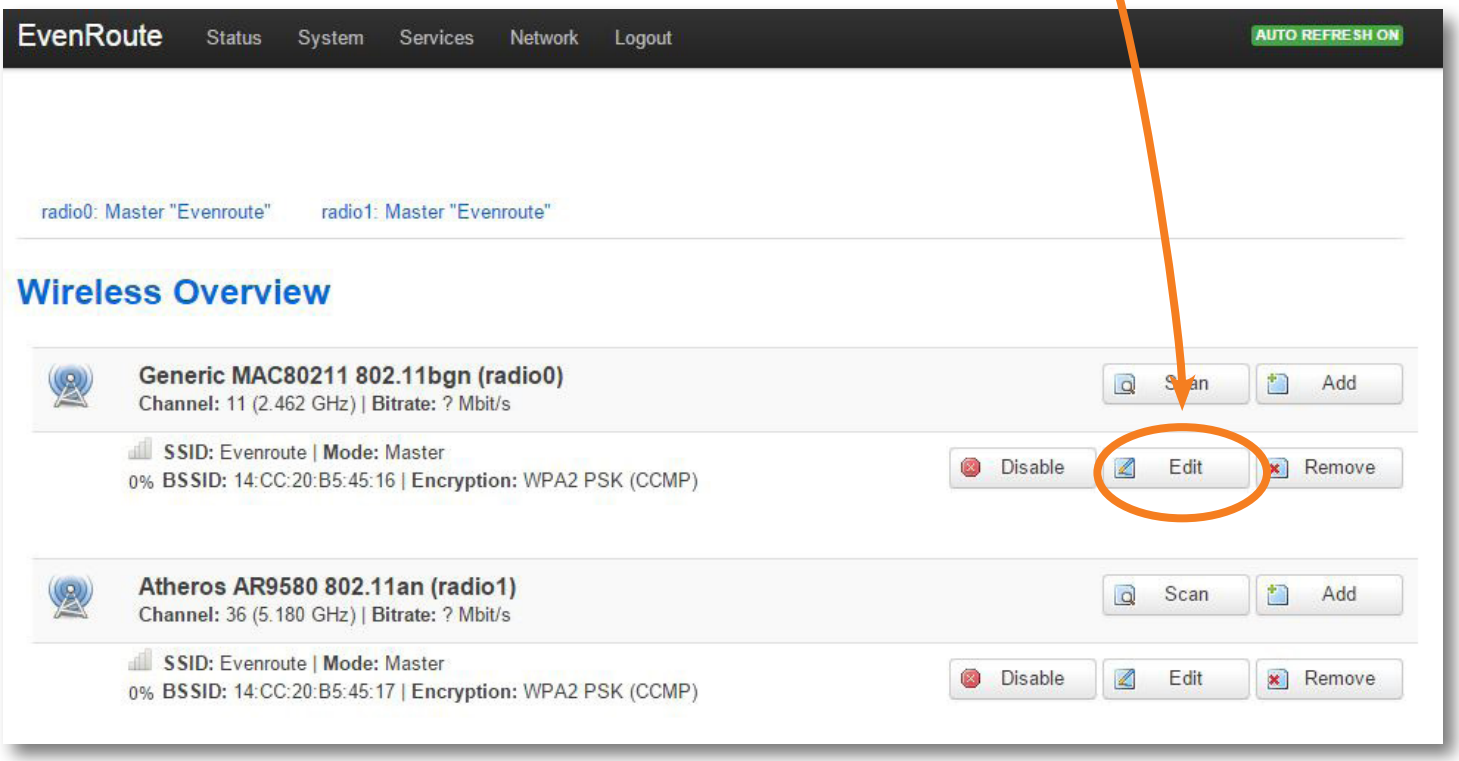
Note:

If you have many WiFi connected devices like WiFi printers or set top boxes that are hard to reconfigure, you can save yourself a lot of time by making the WiFi settings on this new router mimic the ones from your old router. Just enter your existing SSID into the ESSID field shown in the screen shot for step 28. The capitalization matters, so copy it exactly the same.

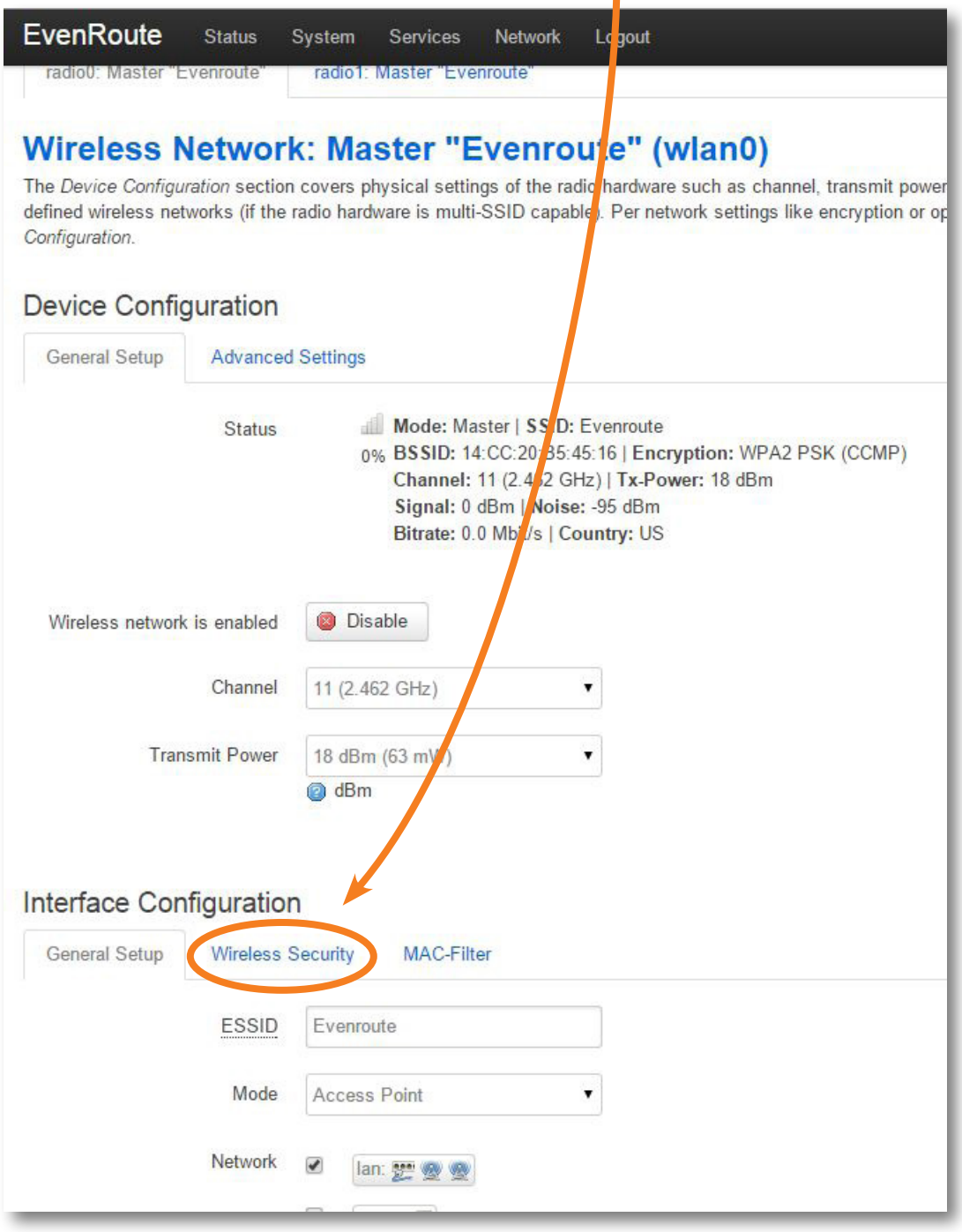
The in step 29, also use the existing WiFi security key from your current router. This way, all the devices will automatically join to this new touter. If they don't, it's because there was a typo in either the SSID or the security key, so come back and re-enter them correctly.

The SSID and key phrase are typically printed on the side or bottom of the Routers the ISPs provide.

25. Now, let's change the default WiFi security key, the default is 'FastRouter', and we recommend you change it to something you select
26. Go to Network → WiFi
27. Click on the 'Edit' button for Radio0 to get to the details of this WiFi interface

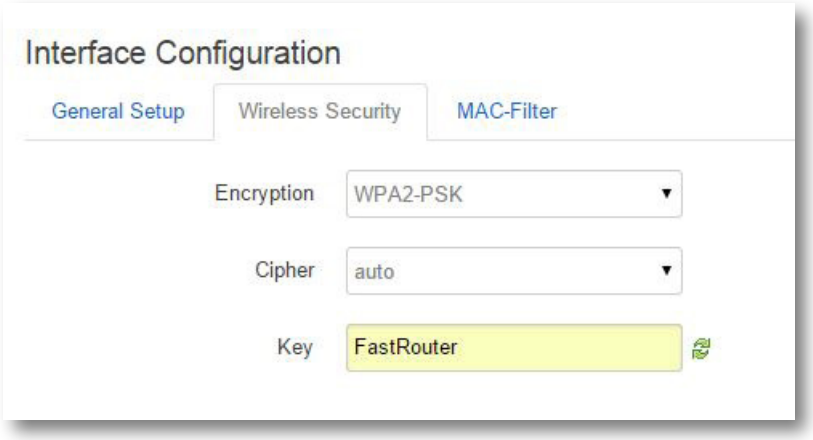


28. Click on the 'Wireless Security' link to go to the setting for the security key

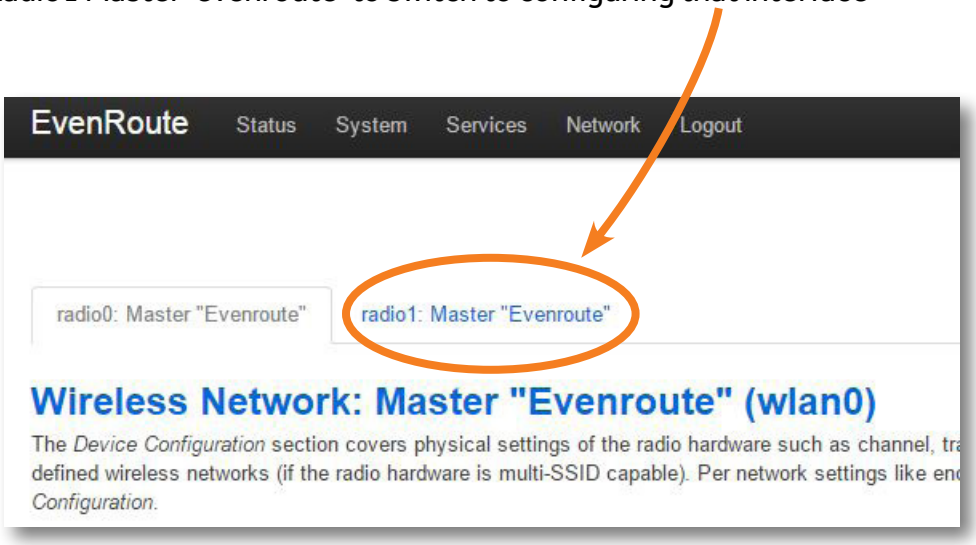


29. In the ‘key’ field, type a key phrase you’d like to use (rember people will be typing this in on mobiles and such)

30. Click ‘Save and Apply’



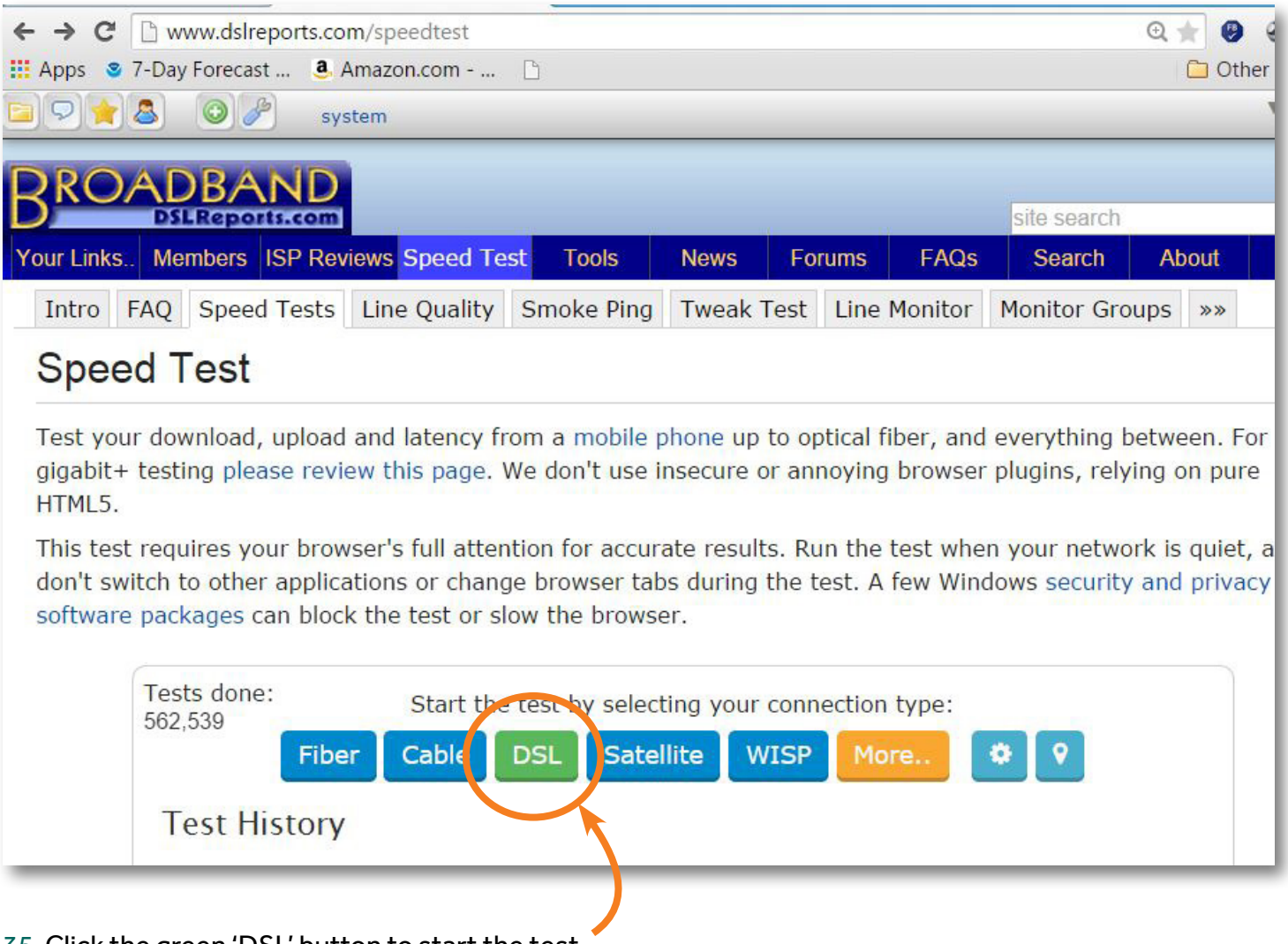
31. Click on the ‘Radio1 Master ‘evenroute’ to switch to configuring that interface



32. Repeat steps 28 through 30 for radio1 (use the same key phrase)

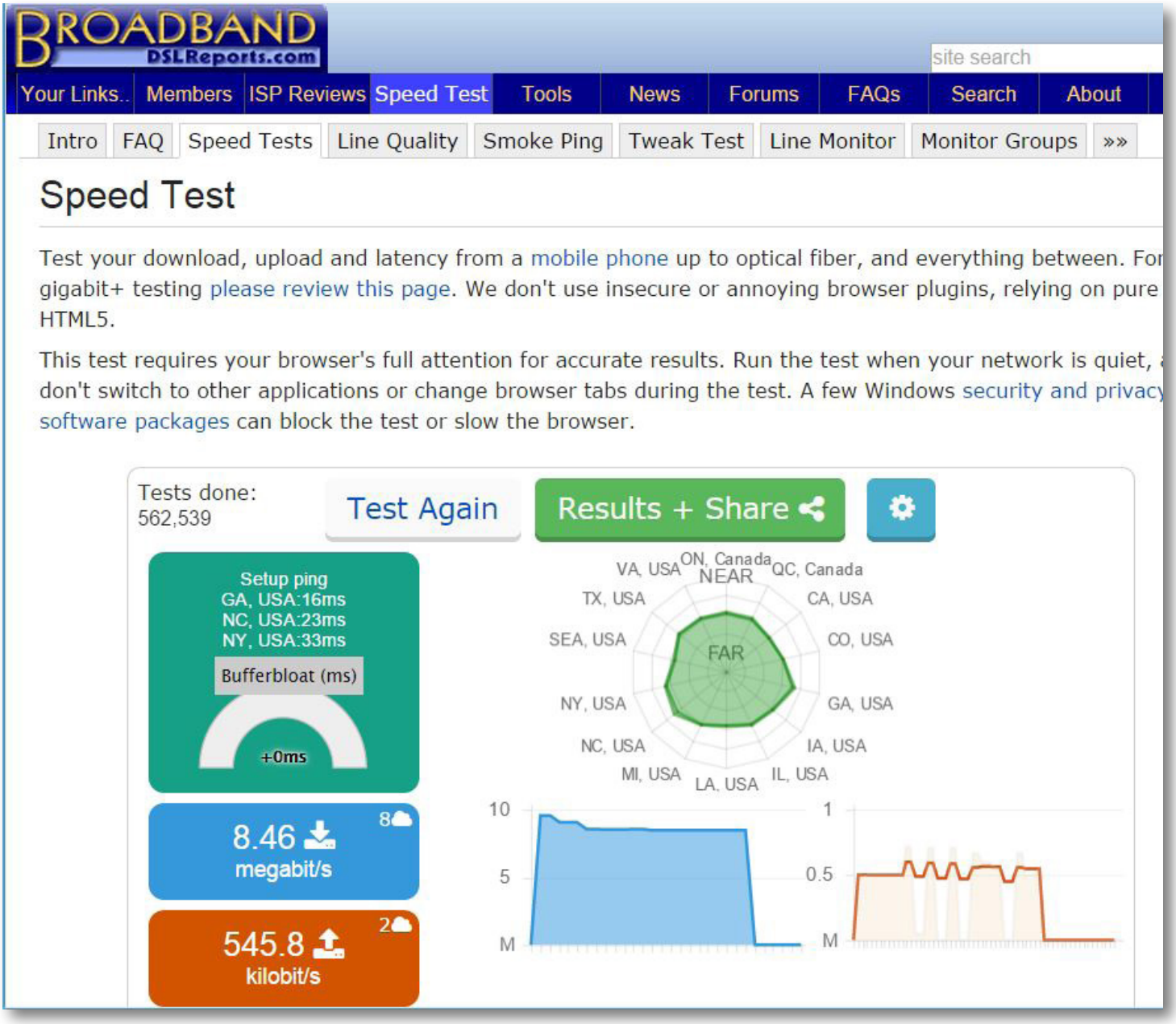
33. OK, we are done with configuration! Time to test and see how we are doing

34. Open a new window (or tab) in your browser and go to **http://www.dslreports.com/speedtest**



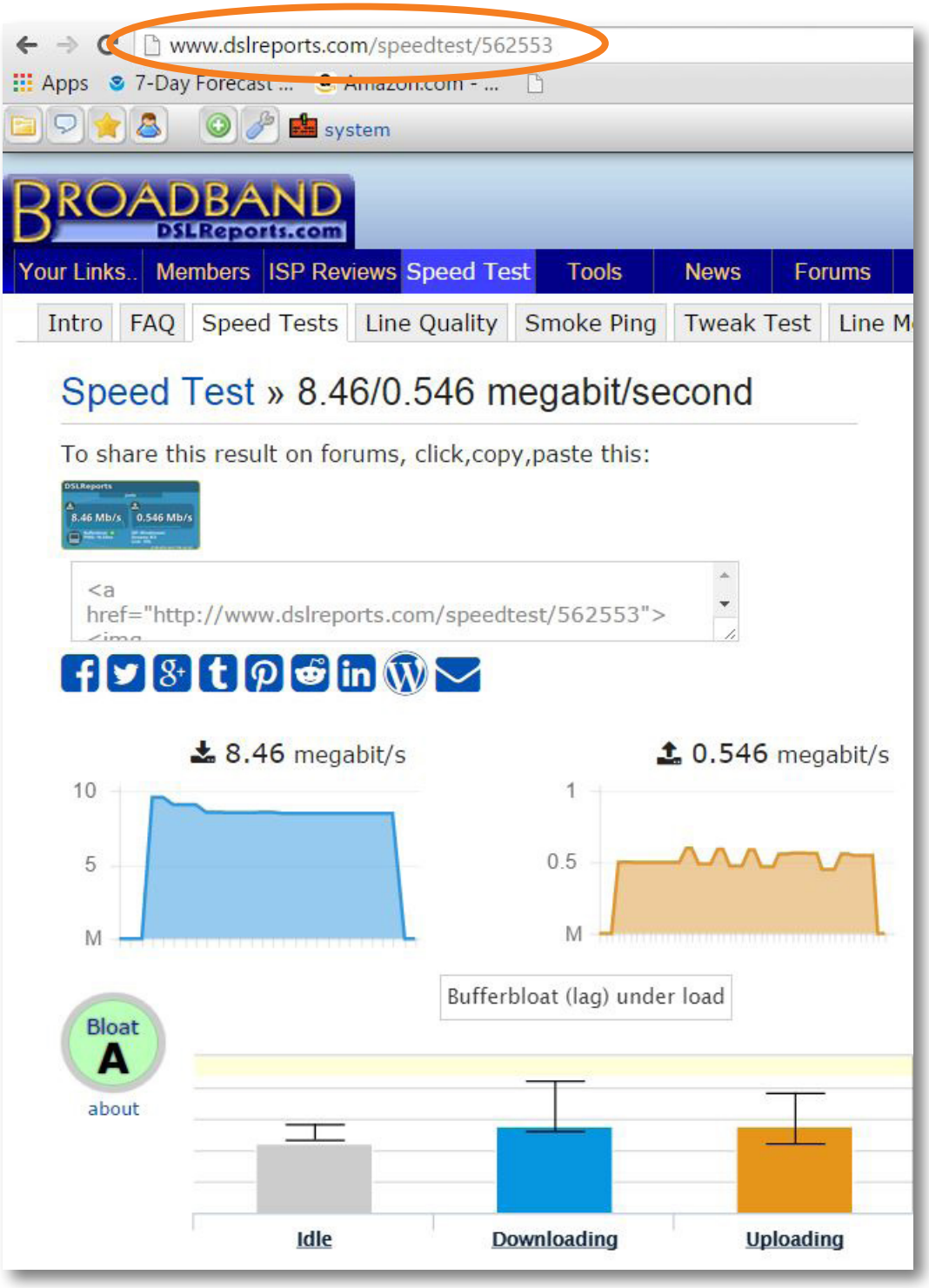
35. Click the green 'DSL' button to start the test

36. Once the test completes, click the pulsing green '**Results + Share**' button



37. Note your score, ideally you got an 'A' rating for bloat. If you go anything less, we will need to fine-tune the DSL rate set in step 22

38. Copy paste the URL of this result and send to jf@jonathanfoulkes.com



39. We are done configuring and testing!

40. For hardwired devices that might be connected (tower PC, AV gear, etc.) please reboot them.

41. WiFi connected devices can now connect to the 'evenroute' access point and will need to enter the security key you typed in at step 29 of these instructions (default is 'FastRouter')