Advanced Router Configuration – NetGear

AYRSTONE PRODUCTIVITY

This presentation shows how to do some of the advanced configuration using a NetGear router as an example. These techniques apply to any brand of router, although the screens and techniques may be different

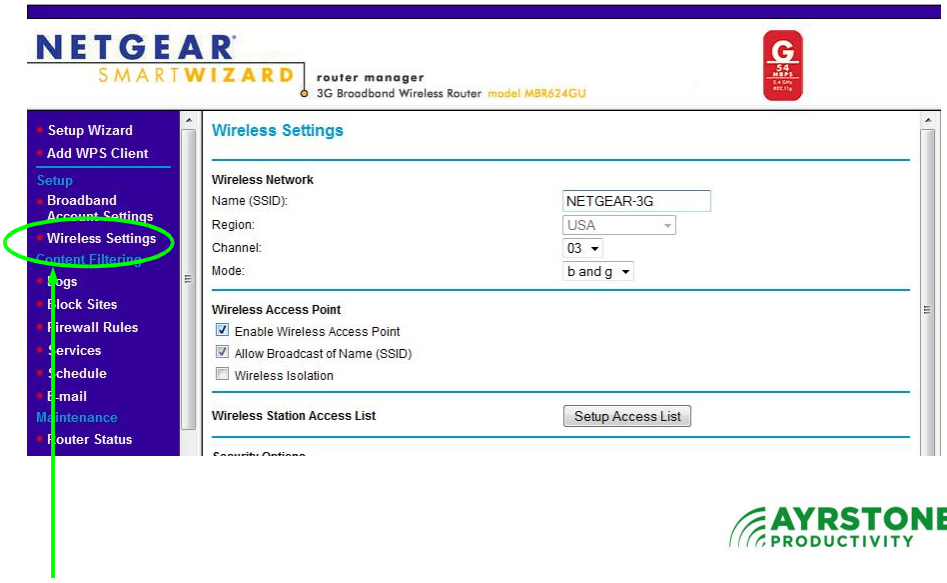
Part 1: Turn off wireless

AYRSTONE PRODUCTIVITY

2

First, we'll turn off the wireless feature in the router. This will turn off the router's wireless access point. You can also choose to just change the channel and leave the wireless access point on.

On the router web interface, click on “Wireless Settings”

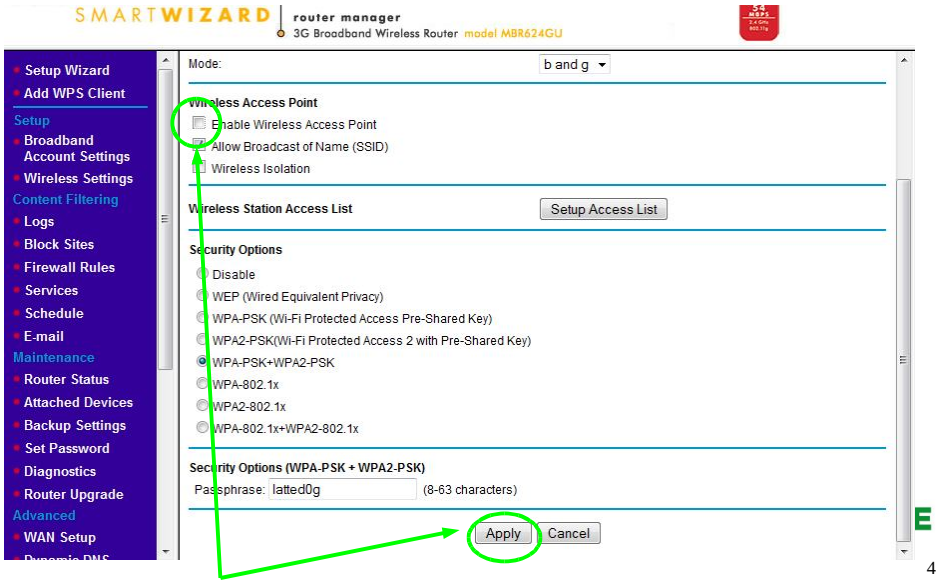


AYRSTONE PRODUCTIVITY

3

First, on a computer that is connected to the router (either via Ethernet or wireless connection), start a browser and go to the router's address (usually at 192.168.0.1 for NetGear and some other routers). Select the “Wireless Setting” option under “Setup”.

Click off “Enable Wireless Access Point” and click “Apply”



4

You might also choose to just change the channel – pull down the menu after “Channel” and choose either channel 1 or channel 11 (assuming your AyrMesh Hub is on channel 6). For wi-fi, only use channels 1, 6, and 11 – they are the only channels that do not interfere with one another.

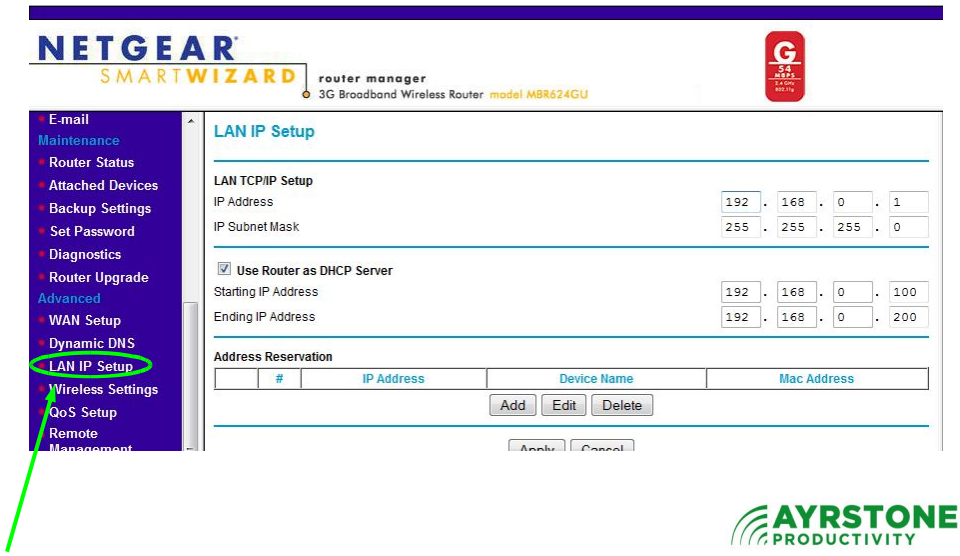
Part 2: Make the IP address of the AyrMesh Hub “Static”

AYRSTONE PRODUCTIVITY

5

This will ensure that your AyrMesh hub gets the same IP address every time the router reboots, so you don't have to check and possibly reset the static route.

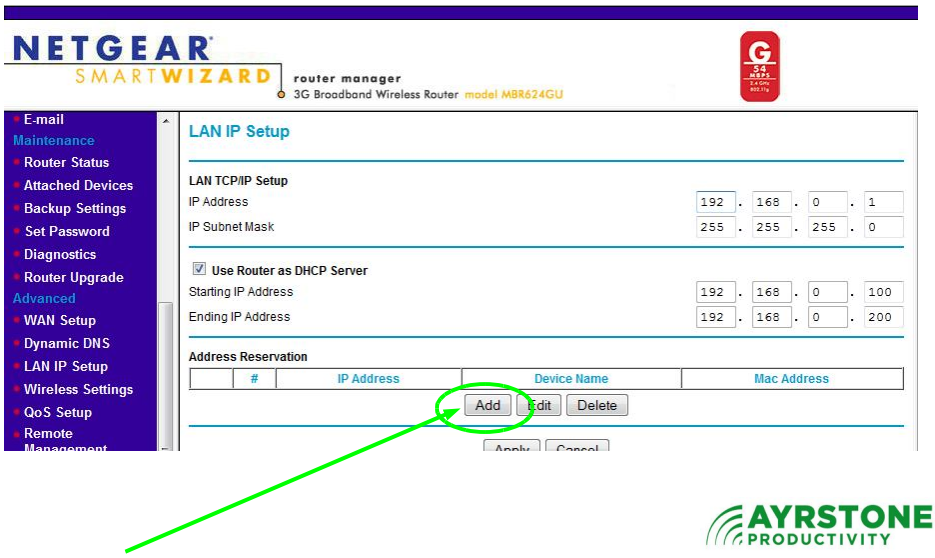
Go to “LAN IP Setup” in the “Advanced” group



AYRSTONE PRODUCTIVITY

First, click on the “LAN IP Setup” under “Advanced” in the router's web interface.

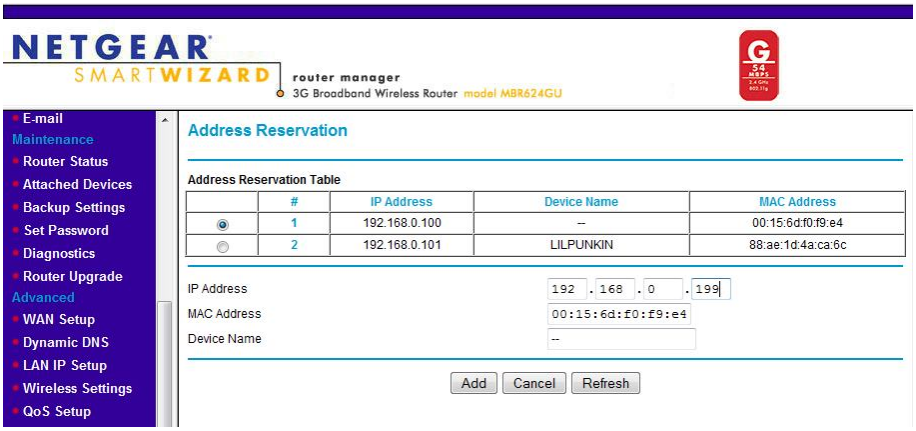
Under “Address Reservation,” click “Add”



AYRSTONE PRODUCTIVITY

One of the sections is called “Address Reservation” - click on the “Add” button below it.

Click on the AyrMesh Hub entry and click “Add”



AYRSTONE PRODUCTIVITY

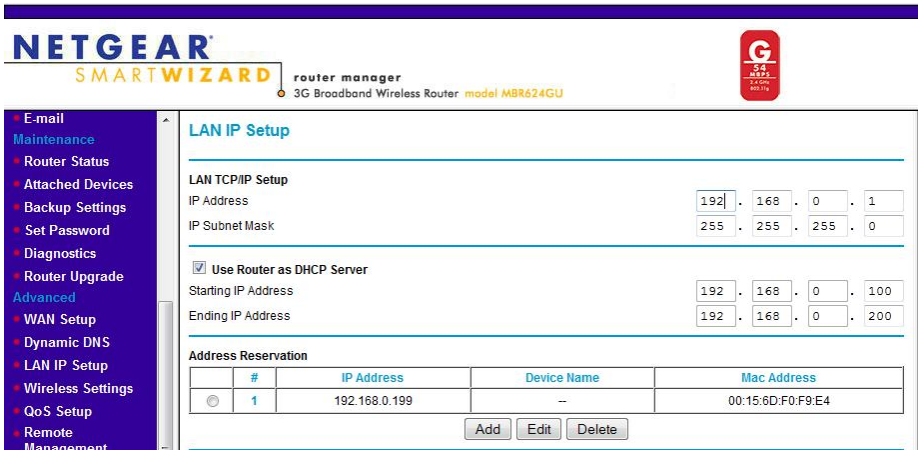
8

This brings up a list of devices getting DHCP addresses from the router. Click on the bubble to the left of the one that corresponds to your AyrMesh Hub and click the “Add” button.

Note: As a practice, I fill in a different IP address for my Hubs – in this case, I am changing “192.168.0.100” to “192.168.0.199” - this is a personal preference; you can assign any IP address within your router's DHCP range.

(side note: Yes, I really call my netbook “Lilpunkin.” Is that wrong?)

And that's it – the reservation is here



NOTE: If you change the Hub's address, you will need to cycle power to the Hub to get it to reboot and “pick up” its new address

AYRSTONE PRODUCTIVITY

9

After you click the “Add” button, the router shows you that the reservation has been entered. Remember the address you have given it (192.168.0.199 in this case).

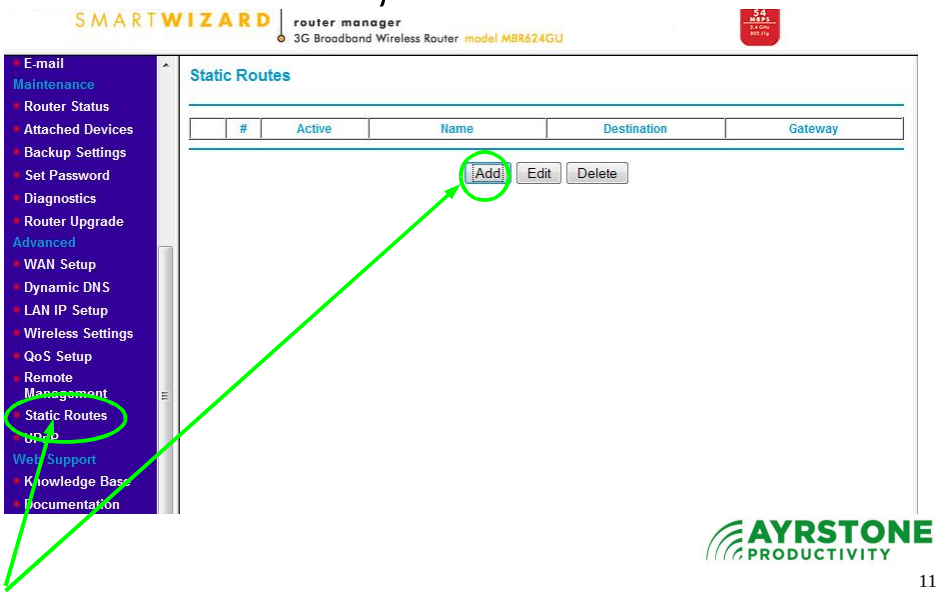
NOTE: you'll need to reboot the Hub if you change its IP address (it's not a bad idea to reboot it anyway).

Part 3: Set the static route

Setting a static route will allow computers on your router's network (via Ethernet or wireless) to access computers or devices on your AyrMesh network. This is necessary because the AyrMesh network is its own network with IP addresses in the 101.x.y.z range, while your router probably has addresses in the 192.168.0.y range.

Normally, the router would “route” traffic to 101.x.y.z out the WAN port on the assumption it is going to the Internet. This Static Route will tell it instead to route that traffic to the AyrMesh Gateway Hub, which will route it in the AyrMesh network

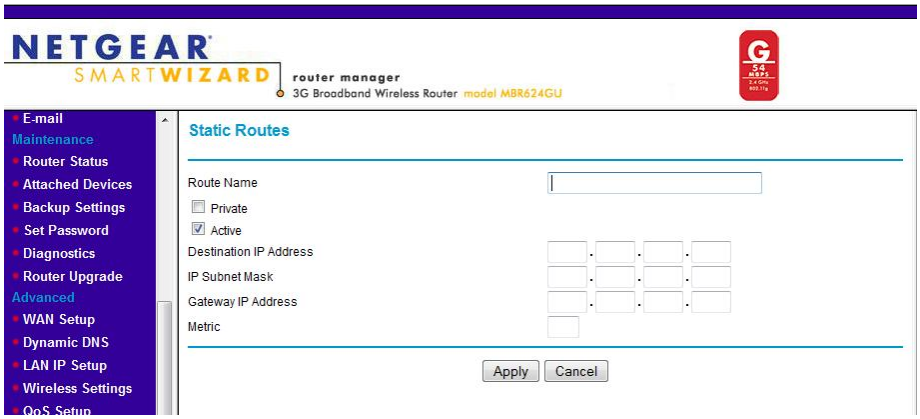
Click on “Static Routes” under “Advanced,” then click “Add”



AYRSTONE PRODUCTIVITY

Click on the “Static Routes” option under “Advanced.” Then click on the “Add” button

Static route interface



AYRSTONE PRODUCTIVITY

This is what the interface looks like for the static routes. On the next slide, I'll go over what to put in here.

Set the route

- Set a route name (I have chosen “AyrMesh”)
- Enter the “Destination IP Address”
  - Always “101.0.0.0”
- Enter the “IP Subnet Mask”
  - Always “255.0.0.0”
- Enter the “Gateway IP Address”
  - The IP address for your Hub, which you just saved
  - Mine is “192.168.1.199”
- Enter “2” for the Metric

AYRSTONE PRODUCTIVITY

Just fill in the routing table as shown.

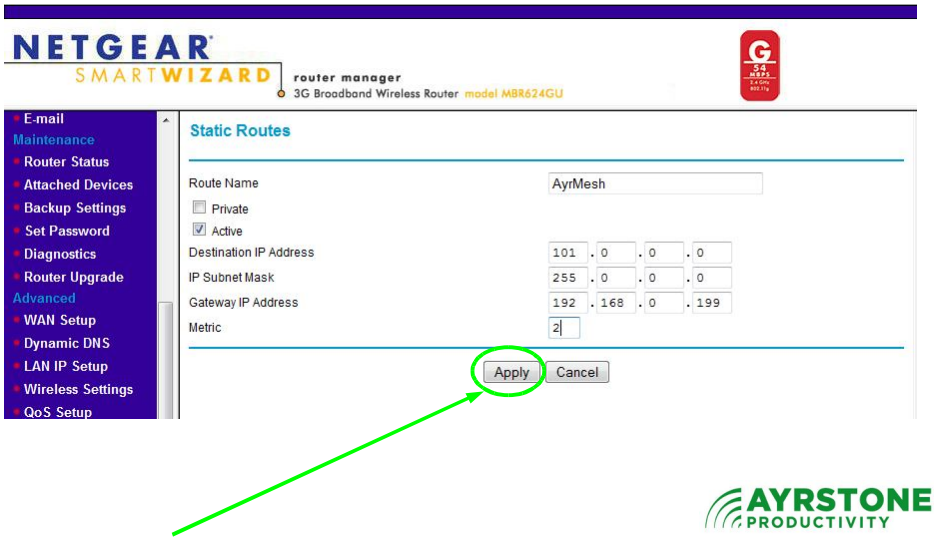
The “Destination LAN IP” is the LAN that we are routing to, in this case, the AyrMesh LAN. It is always 101.0.0.0.

The “Subnet Mask” indicates how big that LAN can be. Theoretically, the AyrMesh LAN can be very large, so the subnet mask has three zeros; it is always 255.0.0.0

The “Default Gateway” is the IP address the router knows (one on its network) to which the traffic bound for the AyrMesh network should be routed. It is always the IP address of the AyrMesh Hub.

The “Metric” is simply a number used by the routing algorithms.

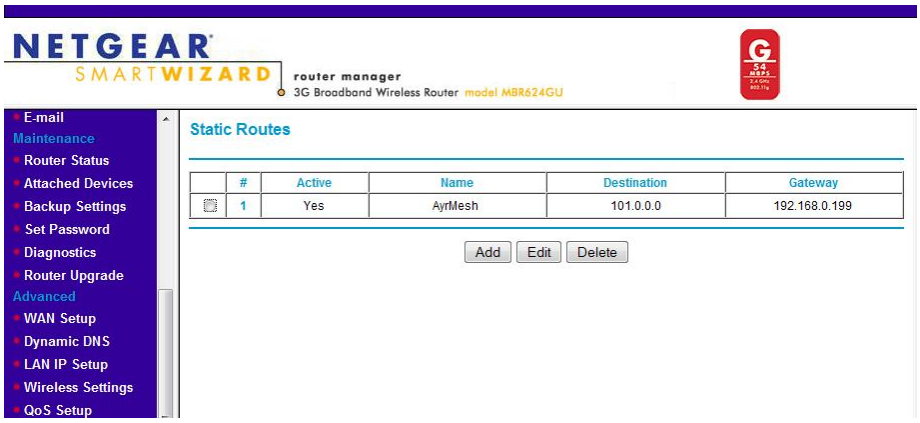
How mine looks – now click “Apply”



AYRSTONE PRODUCTIVITY

Once you have filled in the right values, click “Apply”

Success – you are done!



AYRSTONE PRODUCTIVITY

This screen shows that the static route has been saved.

You're Done!
Congratulations!

AYRSTONE PRODUCTIVITY

That's all!