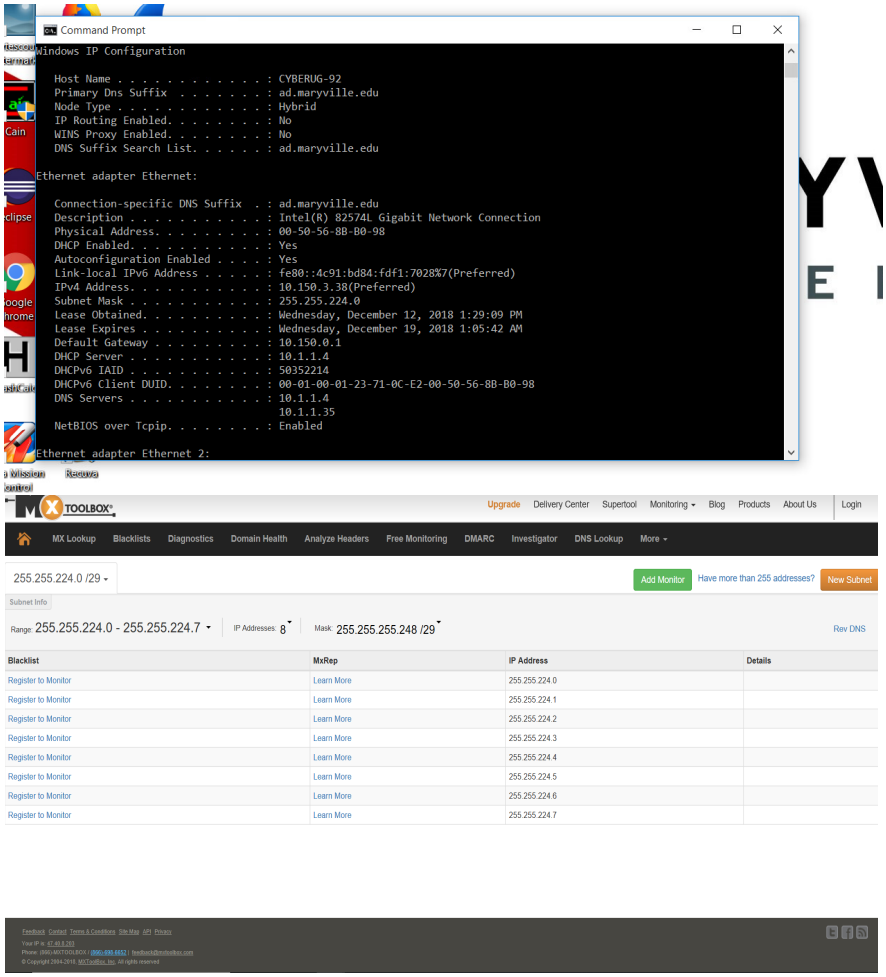


Determine what subnet your Maryville VM is on.
255.255.224.0
How many hosts (IP addresses) are potentially on this same subnet?
8
Do you think this subnet is well designed? Would you make it larger or smaller? Explain your rationale.

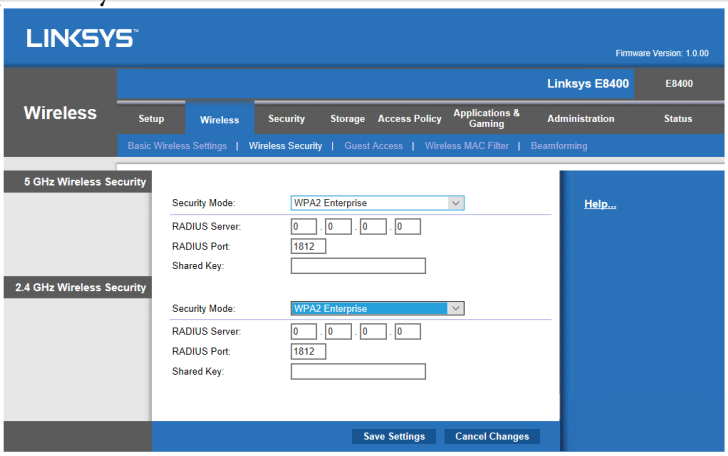
I think the subnet is well designed. If I had to make any changes, I would make it smaller. I would divide the subnet into two subnets. Each subnet would manage 4 hosts. I believe smaller subnets are easier to manage and troubleshoot. I also think that smaller the subnet the better the network performs.

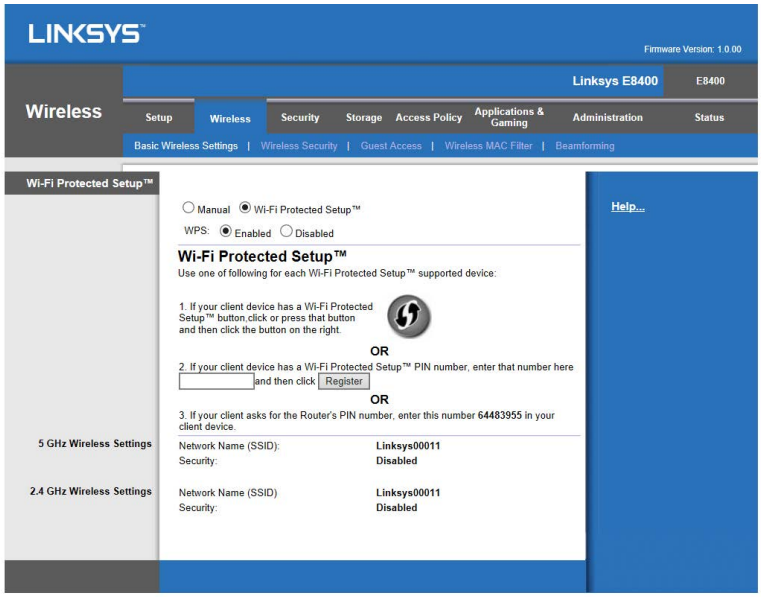
Is there a way for you to determine if you are on a VLAN from your VM? Please explain.
I think you have to be logged into the VM administrator console to determine if you are on a VLAN.

Is IPv6 enabled on the VM? If so, do you think it should be removed?
IPv6 is enabled by default.
Does it serve a purpose in this environment? Does it introduce any vulnerabilities?
I think it should be removed because it compromises privacy by sending MAC addresses to websites users visit.

Chose E8400, then Version: 1.0.00. Log on with username: admin and password admin.
Under Wireless / Wireless Security, select WPA2 Enterprise.
What do you also need to be configured for WPA2 Enterprise to work?

A Radius server connection needs to be established in order for the WPA2 Enterprise to work. I would also need an encryption key.

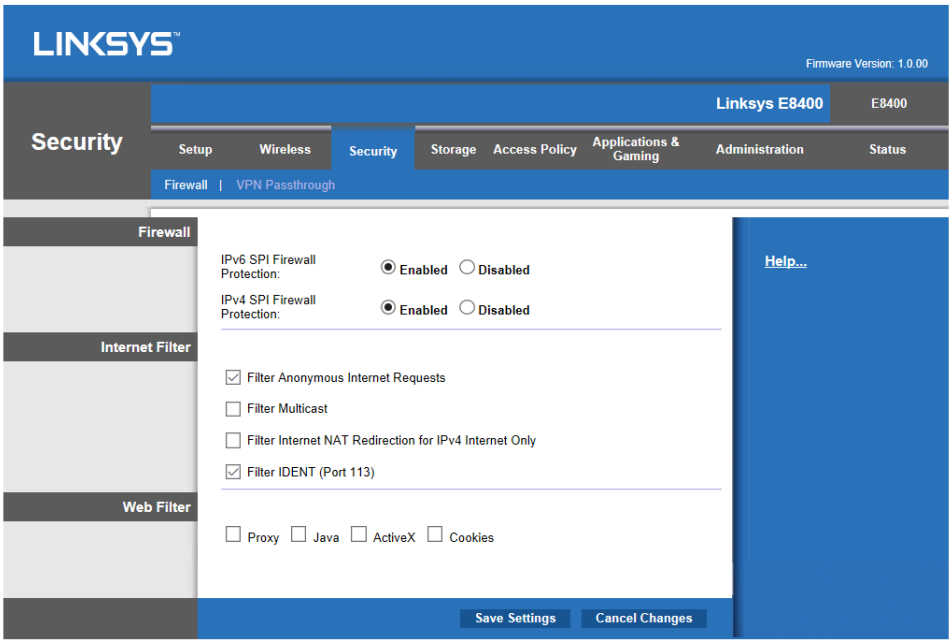




> ***Note:*** *To be clear, WPS is the vulnerable system in this case, not WPA. If a network has WPS disabled (which they should, given the existence of tools such as this), it will be immune to the following attack.*

Under Wireless / Basic Wireless Settings, if you want to maximize security would you enable or disable WPS? (Hint: read this article: https://www.pwnieexpress.com/blog/wps-cracking-with-reaver)

I would disable WPS because, "if a network has WPS disabled, it will be immune to attacks."



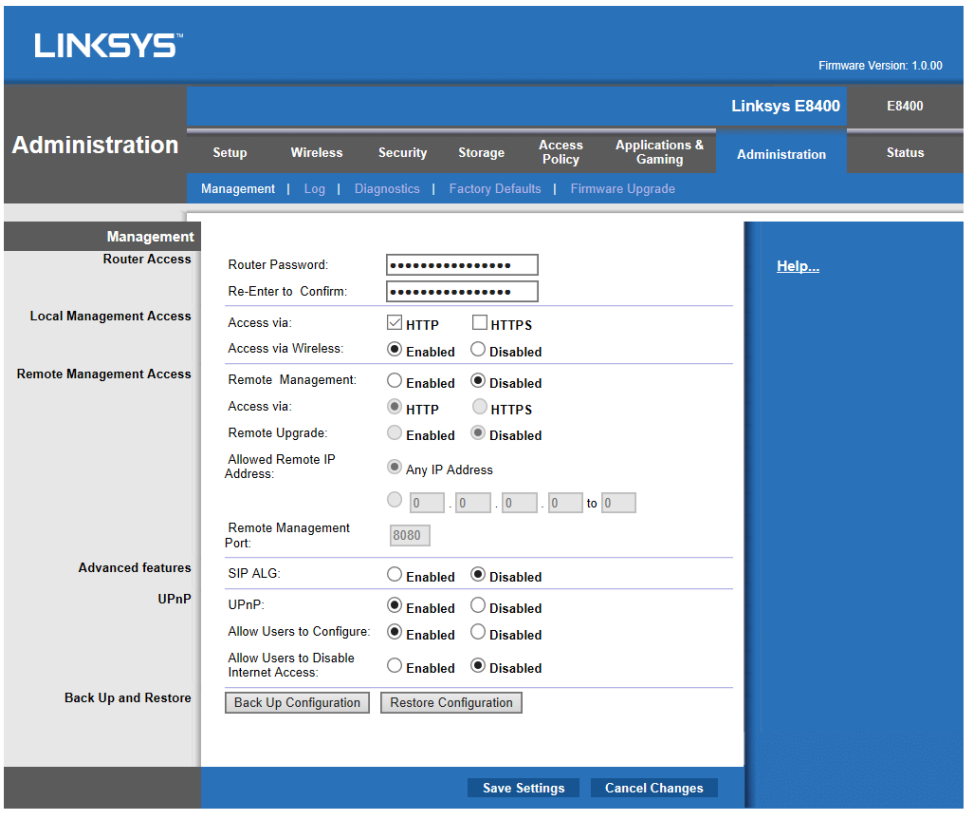
Under Security / Firewall:

What does the IPv4 SPI Firewall Protection do?

It keeps track of the state of network connections traveling across it. The firewall also provides protection against connection threats and Denial of Service threats.
Source: https://www.linksys.com/us/support-article?articleNum=140652

What does Filter IDENT (Port 113) do? Should you leave this enabled?

Its an Internet filter that keeps port 113 from being attacked by outside intruders. It should be enabled to prevent attacks.
Source: https://www.linksys.com/in/support-article?articleNum=139913



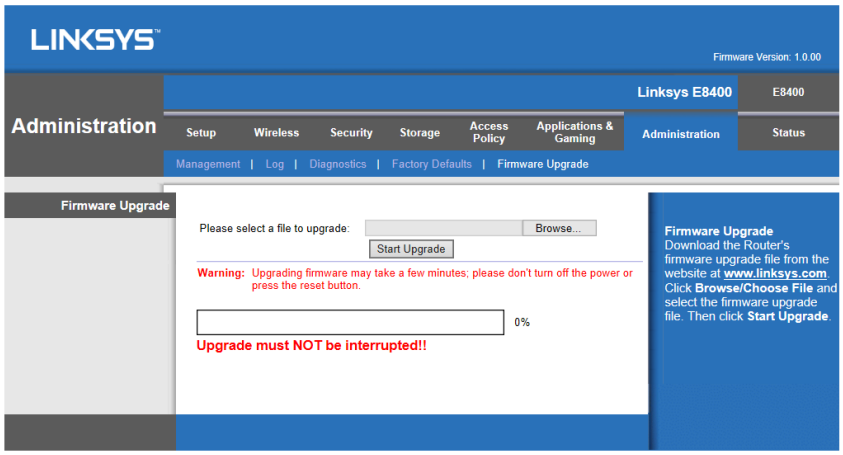
Should UPnP be enabled or disabled for maximum security?

Universial Plug N Play was created to open ports for devices that connect to the newtork and need access to ports. This should be disabled because it gives hackers easy access to open ports.

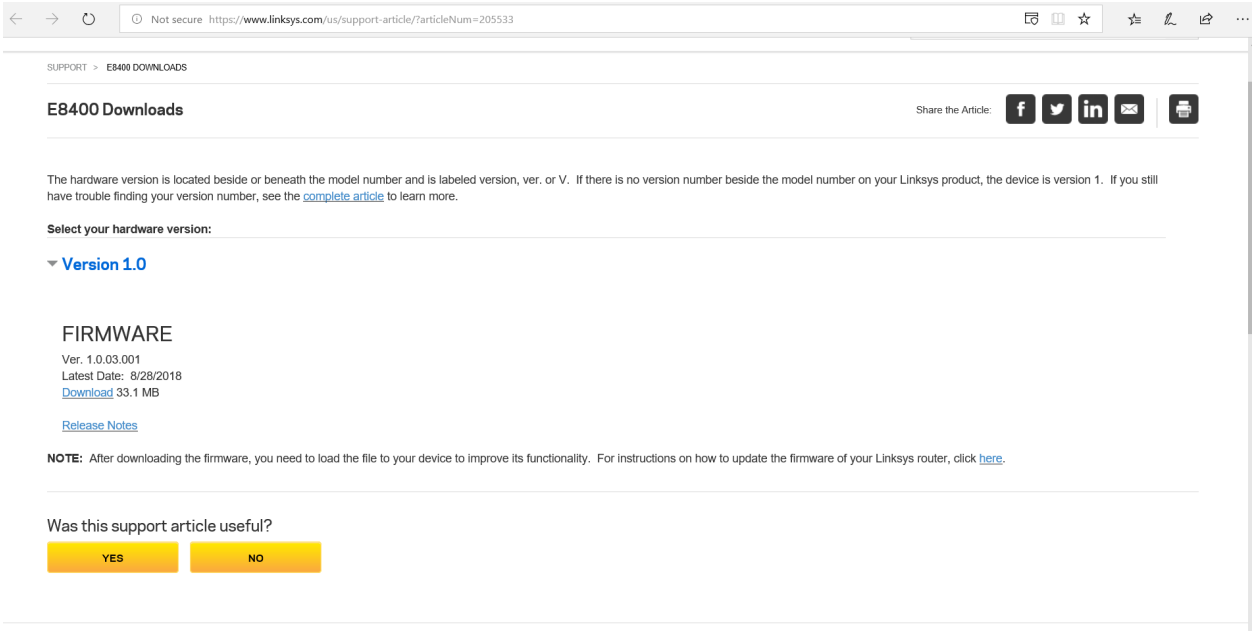
Where do you configure this?
Go to Administration and its located under the management tab.

If the firmware is outdated for the router and needs updating, where would you do this?

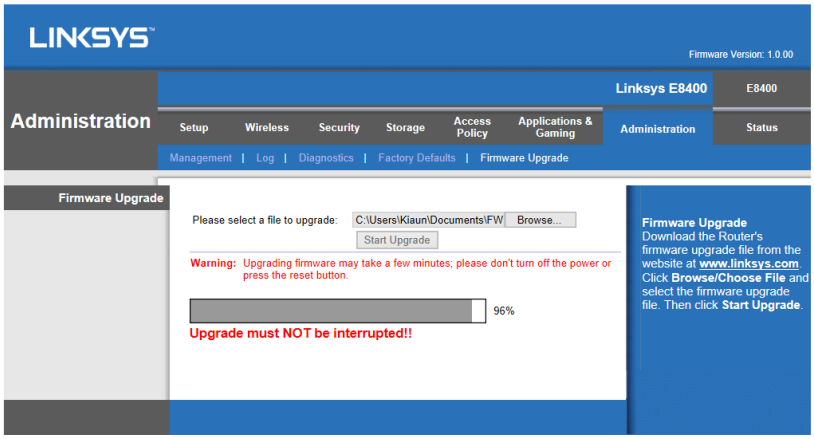
Administration > Firmware Upgrade

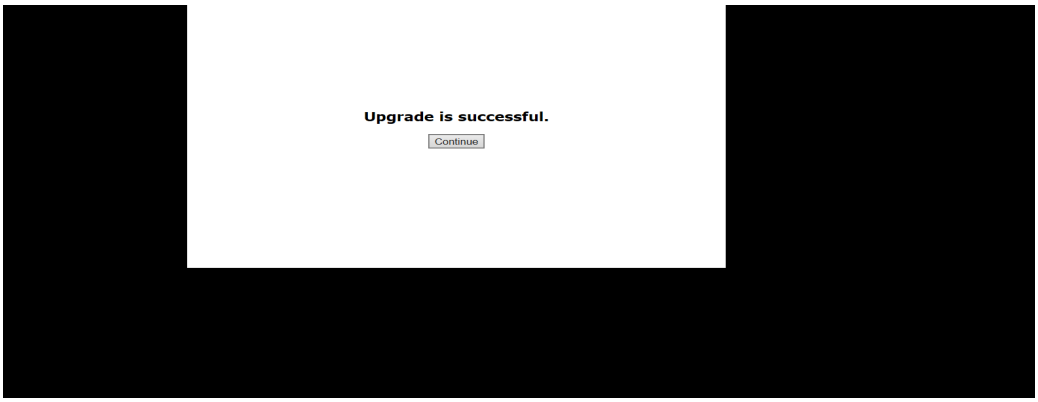


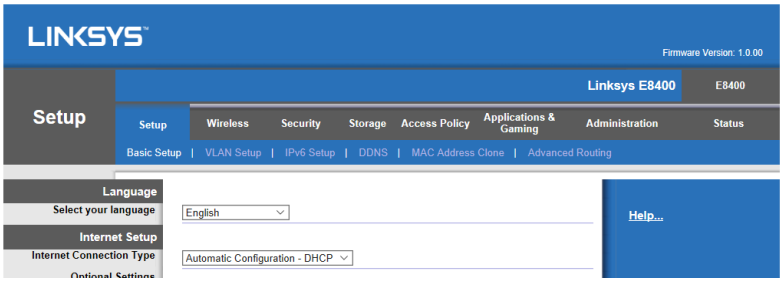
Find the latest firmware version for the E8400 model - what is the latest version?



Update the router







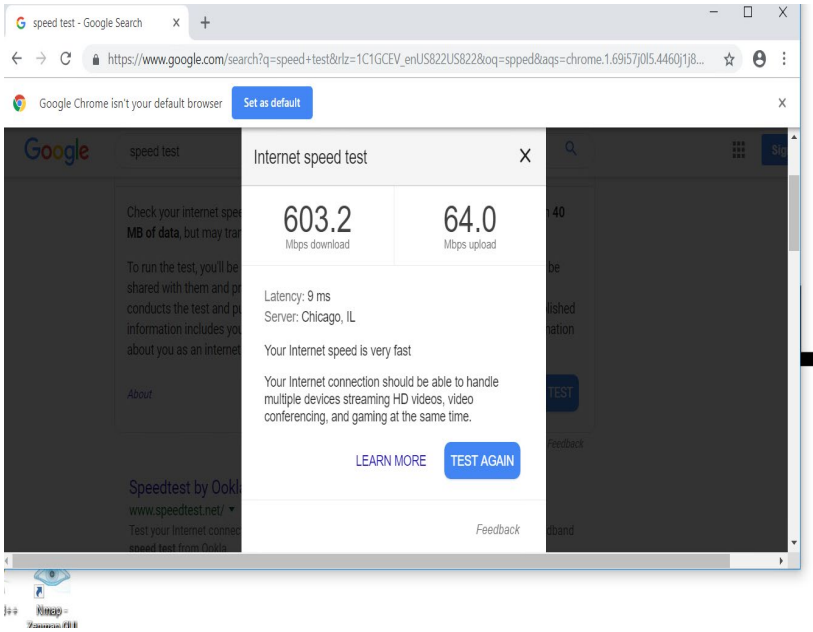
See if the version number changes in the upper right. Does it?

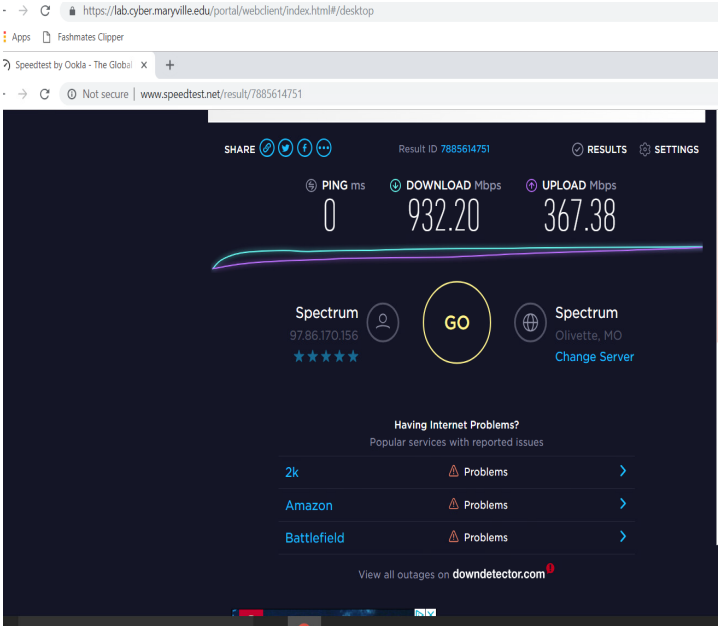
No it doesn't change.

Google - just type "speed test" and click the "Run Speed Test" button.

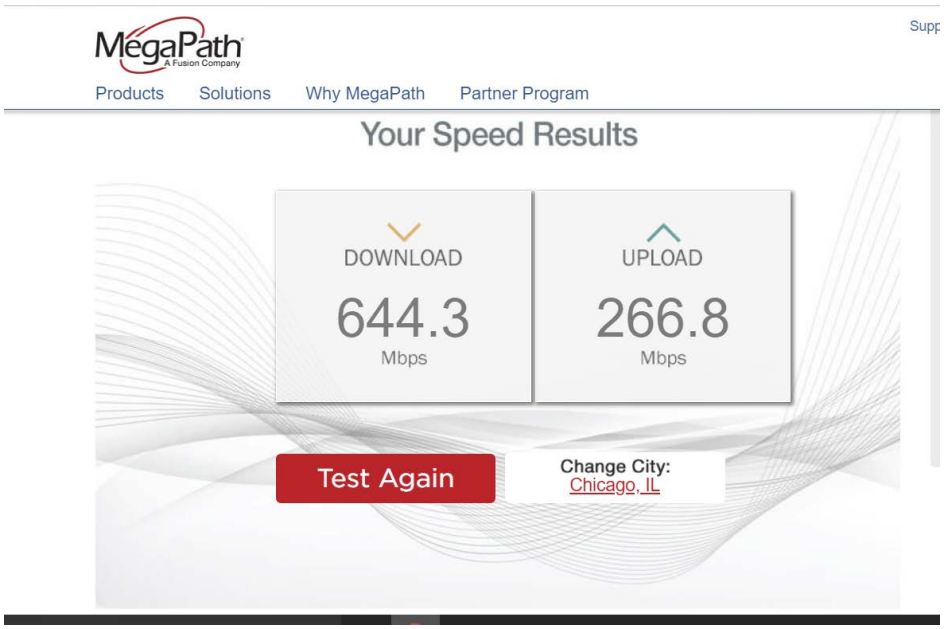
What speeds download and upload does Google show?
603.2 Mbps download and 64.0 Mbps upload.

speedtest.net. What speeds download and upload does Speedtest show?
932.20 Mbps download and 367.38 Mbps Upload



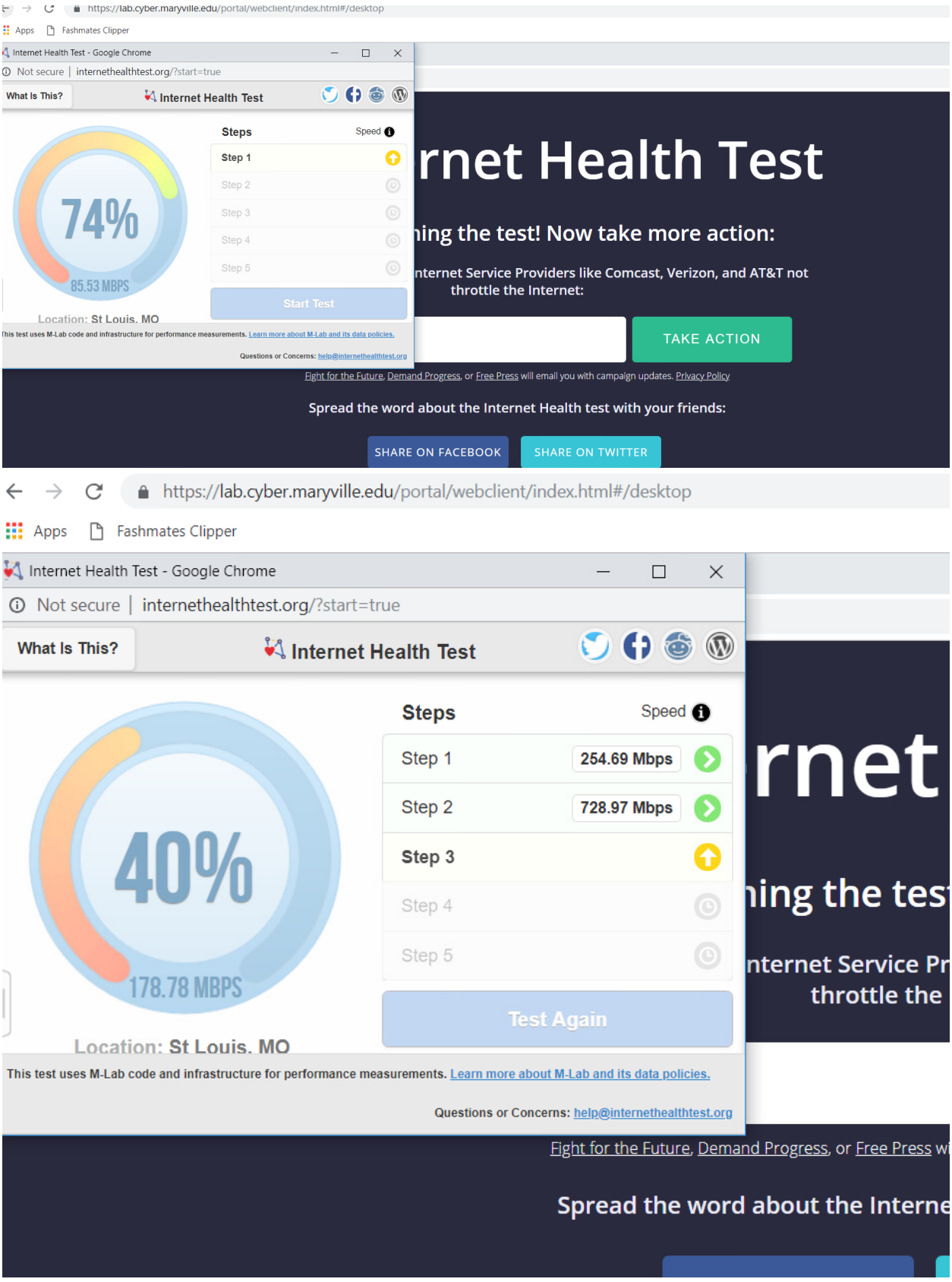


speakeasy.net/speedtest What speeds download and upload does Speakeasy show?
644.3 Mbps Download and 266.8 Mbps Upload.



Why does each of these sites show different results? Or, do you think they are close enough to be considered the same? Explain.

I think the results are different because each site uses a different method of testing.


https://lab.cyber.maryville.edu/portal/webclient/index.html#/desktop
Apps
Fashmates Clipper
Internet Health Test - Google Chrome
Not secure | internethealthtest.org/?start=true
What Is This?
Internet Health Test
Steps
Speed
Step 1
Step 2
Step 3
Step 4
Step 5
74%
85.53 MBPS
Start Test
Location: St Louis, MO
This test uses M-Lab code and infrastructure for performance measurements. Learn more about M-Lab and its data policies.
Questions or Concerns: help@internethealthtest.org
rnet Health Test
ning the test! Now take more action:
nternet Service Providers like Comcast, Verizon, and AT&T not throttle the Internet:
TAKE ACTION
Fight for the Future, Demand Progress, or Free Press will email you with campaign updates. Privacy Policy
Spread the word about the Internet Health test with your friends:
SHARE ON FACEBOOK
SHARE ON TWITTER
https://lab.cyber.maryville.edu/portal/webclient/index.html#/desktop
Apps
Fashmates Clipper
Internet Health Test - Google Chrome
Not secure | internethealthtest.org/?start=true
What Is This?
Internet Health Test
Steps
Speed
Step 1
254.69 Mbps
Step 2
728.97 Mbps
Step 3
Step 4
Step 5
40%
178.78 MBPS
Test Again
Location: St Louis, MO
This test uses M-Lab code and infrastructure for performance measurements. Learn more about M-Lab and its data policies.
Questions or Concerns: help@internethealthtest.org
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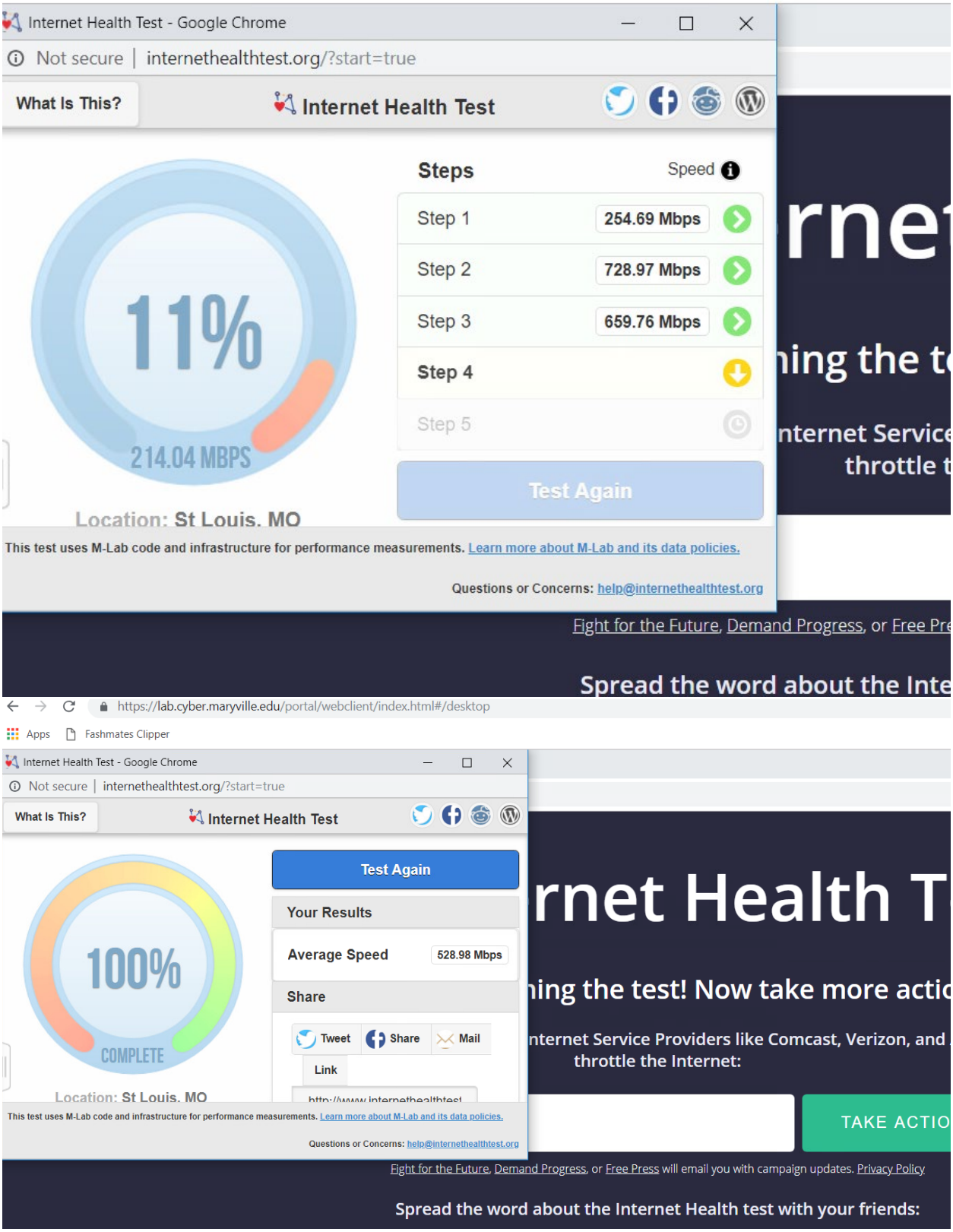

Based on the results, does it appear you are being throttled? (Hint: you need to read "About the Test" to answer)

No, I don't think I'm being throttled because it says average speed. I would have concerns if the results came back as low or below average.

Do you think this will change in the future with the removal of net neutrality?

Yes, I think it will change because I believe telecommunications companies are going to utilize their control over what we view on the Internet.