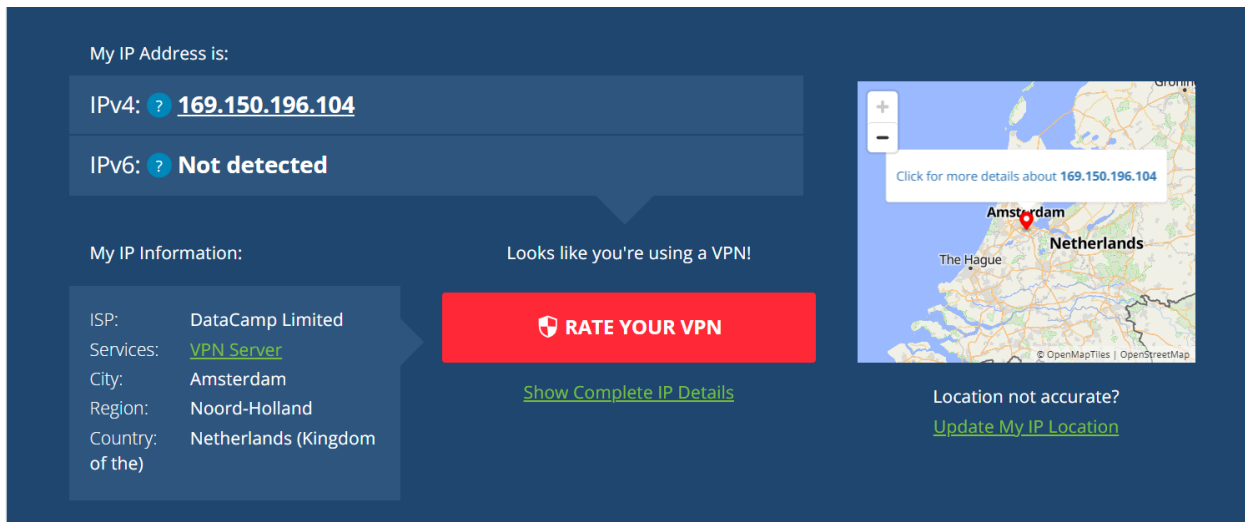


Task 8 : Working and understanding VPN

Steps Taken

I started by registering for a free account on [ProtonVPN](#). After completing the sign-up process, I downloaded and installed the ProtonVPN client on my Windows system. Once the client was installed, I logged in using my credentials.

Next, I connected to a ProtonVPN server located in **Amsterdam, Netherlands**. After the connection was successfully established, I verified my IP address using [whatismyipaddress.com](#). The IP had changed to reflect the VPN server location, confirming that my connection was being routed through the Netherlands.



The screenshot displays the 'whatismyipaddress.com' interface. At the top, it states 'My IP Address is:' followed by 'IPv4: 169.150.196.104' and 'IPv6: Not detected'. Below this, 'My IP Information:' is shown with details: ISP: DataCamp Limited, Services: VPN Server, City: Amsterdam, Region: Noord-Holland, and Country: Netherlands (Kingdom of the). A red button labeled 'RATE YOUR VPN' is prominently displayed. To the right, a map of the Netherlands shows the location near Amsterdam. Text on the page includes 'Looks like you're using a VPN!', 'Click for more details about 169.150.196.104', 'Show Complete IP Details', and 'Location not accurate? Update My IP Location'.

My IP Address is:	
IPv4:	169.150.196.104
IPv6:	Not detected

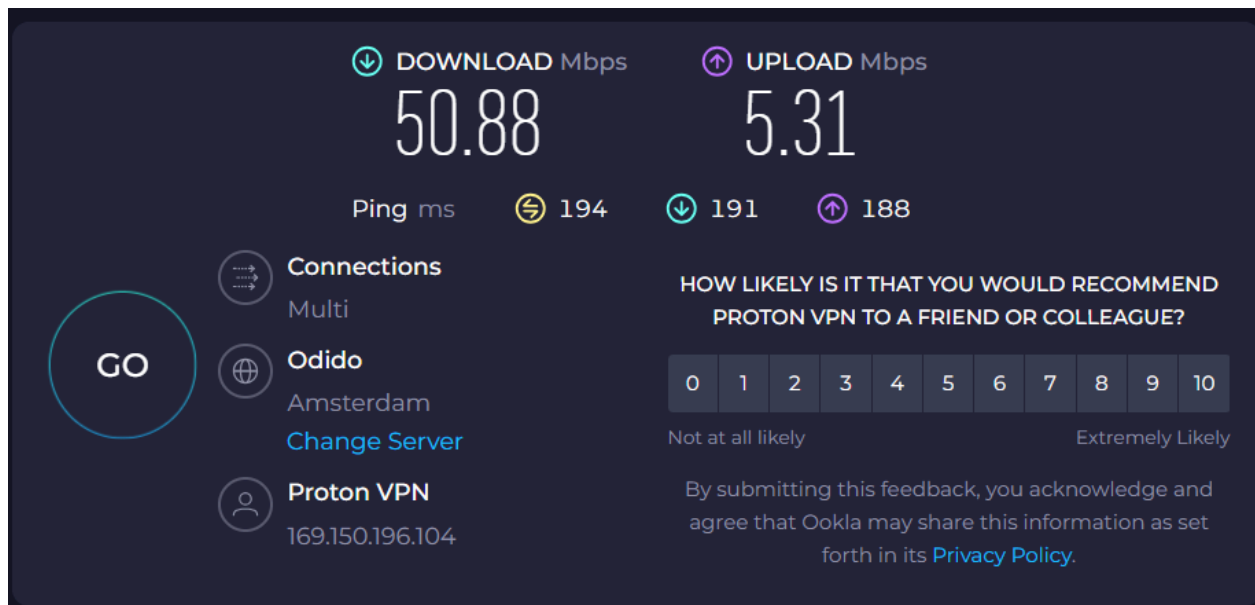
My IP Information:	
ISP:	DataCamp Limited
Services:	VPN Server
City:	Amsterdam
Region:	Noord-Holland
Country:	Netherlands (Kingdom of the)

Looks like you're using a VPN!

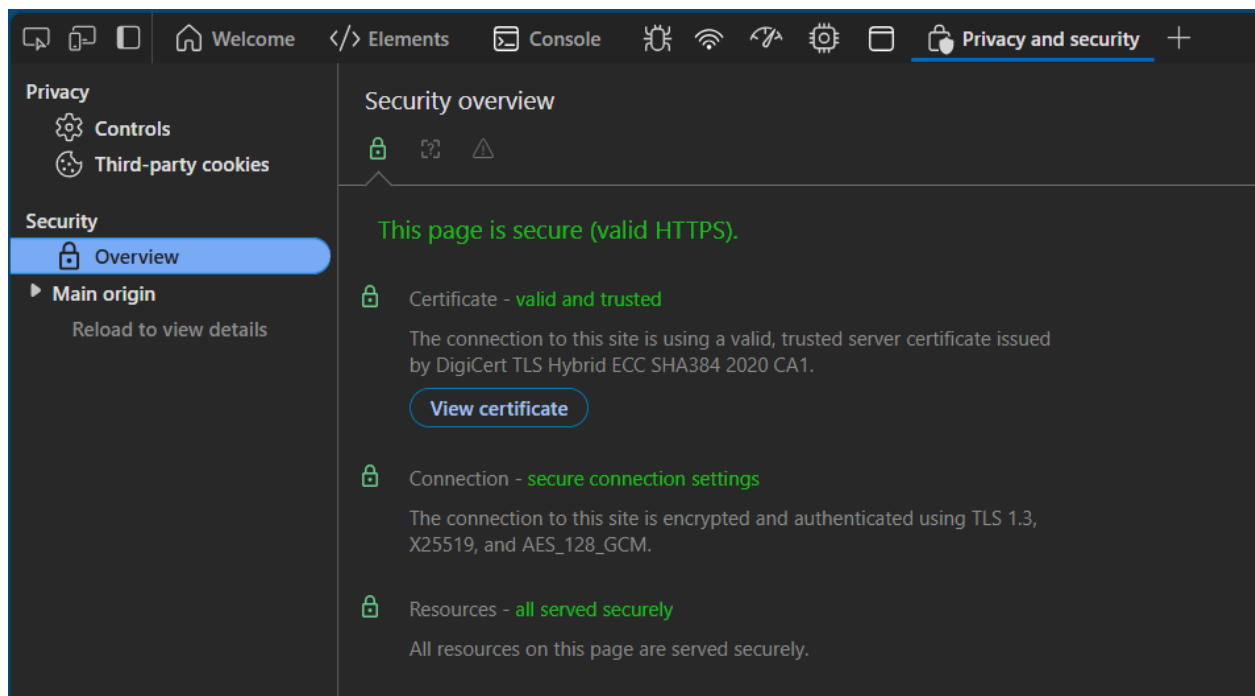
[Show Complete IP Details](#)

Location not accurate? [Update My IP Location](#)

I then ran a speed test while connected to the VPN. The results showed a download speed of **50.88 Mbps** and an upload speed of **5.31 Mbps**, with the new IP address being **169.150.196.104**. This demonstrated that the VPN connection was active and functional.

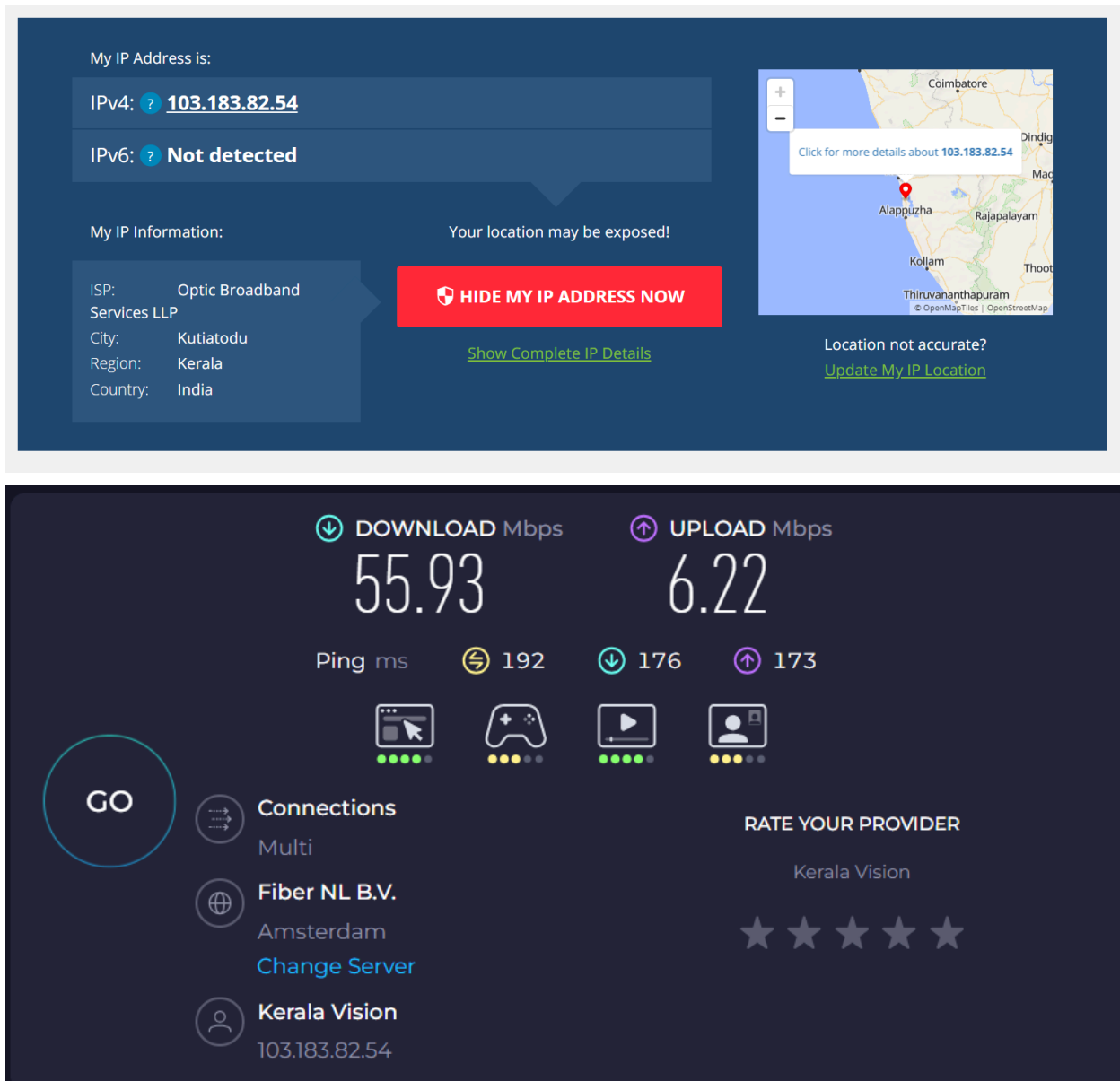


To ensure that my browsing traffic was encrypted, I opened a secure website and inspected the connection using browser tools. The security overview confirmed that the page was secure (valid HTTPS), with a valid certificate issued by DigiCert. The site was encrypted using **TLS 1.3** with **AES_128_GCM** and **X25519**, confirming a secure and trusted connection.



After this, I disconnected from the VPN and repeated the same steps. My IP address reverted to my original ISP, **Kerala Vision**, with an IP of **103.183.82.54**. The internet speed slightly improved, showing a download speed of **55.93 Mbps** and an upload speed of **6.22 Mbps**. I again checked the connection security of the same website, which still used HTTPS with the

same encryption settings, indicating that the website's own security remained consistent regardless of VPN usage.



Observations

When connected to ProtonVPN, my IP address changed, my location appeared as Amsterdam, and all traffic was securely encrypted. The speed was slightly lower than the non-VPN connection, but still sufficient for regular browsing. Without the VPN, my actual location and IP were visible, though the HTTPS encryption from the website remained in place.