Thank you for your post, you provided some insightful information. The fifteen hops to the destination match the results of several others (Microsoft, 2021). However, the other results of the traceroute were quite different. The overall latency of the three packets was at a much higher latency and varied quite a lot. The dropped packets in hops two and four indicate an exceeded TTL (Parziale et al, 2006). However, the rest of the packets were successful, albeit with high latency. Which could just be the result of where the user is located. Generally, unless the packets drop right at the end or there is a constant increase in latency then it is okay.

The nslookup provided the expected results of four different name servers. Alternatively, Dig could have been used instead. Dig is a more robust tool that also provides a bit more functionality. Instead of having to use other subcommands, a “Dig Any”, will provide name servers, mail servers, and their IP addresses, in an all in one command. Similarly, another Linux command that could be used is the “Whois”. It provides the registered contact through a basic command. As you stated it is also good to use external websites sometimes instead. Commands have a learning curve and don’t always provide what you want to see. Instead, it is better to use something with an easier interface, that way you get the correct results.

References:

Microsoft. (2021) How to Use TRACERT to Troubleshoot TCP/IP Problems in Windows. Available from: <https://support.microsoft.com/en-us/topic/how-to-use-tracert-to-troubleshoot-tcp-ip-problems-in-windows-e643d72b-2f4f-cdd6-09a0-fd2989c7ca8e> [Accessed 10 December 2021].  
Parziale et al.(2006) *TCP/IP Tutorial and Technical Overview.* 8th ed. New York: IBM Redbooks. Available from: <https://www.redbooks.ibm.com/redbooks/pdfs/gg243376.pdf> [Accessed 11 December 2021].