

## I'm experiencing slow speeds, what can I do?

Kaneesha D. - 2019-05-21 - in General

If you're using the PIA app, we have some recommendations for speeding up your connection [in this article](#). We also have some recommendations for gamers [here](#).

Your ISP rated connection speed is based on connections to the ISP network under ideal conditions. However, VPN connections incur additional overhead due to the encryption process; using higher levels encryption would slow the connection even more. This can certainly be further reduced by connecting to gateways that have additional routing latency or have a lot of traffic on them at the time. Additionally, some ISPs do restrict certain ports, which is why we recommend using the connection issues article as stated above.

You can expect to see at least a 20-40%\* speed drop in the speeds you get to our servers while connected to the VPN on our network page [here](#).

\*Again, this is only under **IDEAL** conditions. Typically the difference could be more like between 30-60% for computers and 40-80% drop for routers.

By its very nature, internet technology has many factors that can impact the speed of an internet connection, and as such, the speeds you see can be affected in many ways. Windows in particular will not see more than 150 Mbps at most due to the [TAP adapter bottleneck](#). This isn't specific to our application but to the OpenVPN protocol on Windows in general. If you're seeing less than the expected value (as outlined above), our support team is more than happy to work with you to troubleshoot the reduction in speeds you're seeing. To assist our team in identifying the cause of these issues, we'll need the following information from you:

- Where are you seeing the slow speeds exactly (torrents, etc)?
- What speeds are you actually seeing, via the methods outlined above (with and without the VPN active)?
- What gateway are you using?
- What country/state are you connecting from?
- What operating system are you running on your device(Windows 10, MacOS, etc.)?
- Are you running any firewalls or other security software on your device (i.e. Windows Defender)?
- How are you connecting to the internet on that device (public wifi, you own router, an ISP's modem, etc)?

- How are you connecting to VPN (our PIA application, a manual setup, another application, etc)?
- Are you on a public (i.e. hotel, workplace, university) or private network (home)?

To get baseline raw speeds between your computer and our servers, use the instructions below:

1. Disconnect from the VPN now
2. Go to <https://www.privateinternetaccess.com/pages/network/>
3. Click on and run some of the "Speed Test" links to the right of the servers
4. Record name of the server and the results you tested as follows:

For example...

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"US East" = 12 Mbps (No VPN)
"US West" = 16 Mbps (No VPN)
"CA Toronto" = 14 Mbps (No VPN)
"CA Montreal" = 10 Mbps (No VPN)
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Etc.

Please test as many of the servers as you can, including the ones that are physically the closest to you.

Once we have the above data, we can move forward with understanding what to expect. If necessary we can then adjust some settings to get the best speeds possible or troubleshoot further if necessary.