

## **Commonly Asked Questions**

### **1. Can I use my own laptop/ PC to do these experiments ?**

**Ans.** Yes! You can use any device you want. Do note that using different networks (for ex – your WiFi for one host and a wired LAN connection for another) will affect your results slightly and you will be expected to discuss this in the questions inquiring about your networking conditions and reflection.

### **2. The server listed in the spec sheet is down, what do I do now ?**

**Ans.** The servers presented in the spec sheet are public servers – not managed by the University of Melbourne. These are liable to go down at any given time, hence it is recommended you try and get your tests in as soon as possible. If you are still unable to connect to the servers then you might want to look at alternate servers available on the internet (any public iperf server will do). For ex - <https://iperf.fr/iperf-servers.php>

You might also want to look at whether the server is responding to iperf2 if not to iperf3 just to be sure as some servers respond to only one of these. Some instances of these servers which are down may be accessible via a different port (like port 80, etc) as well, so try running a port scan to test which ports are available.

In general, be aware that this is a hands-on project with real networking involved, with a real expectation that debugging your scripts will happen on your end which takes time, failure in connectivity will happen to various servers over the world, etc etc and are all normal part of real-life networking and measurements. The solution for this is to start your project early on to be able to try different servers, commands, etc and post questions to the discussion forum in time as well.

### **3. I cannot calculate std dev because there is no difference in result for ping ?**

**Ans.** If you are using windows – you can try using HRping. If you are using the Digitalis servers, Mac's, Linux then use  $\sqrt{((mdev1)^2 + (mdev2)^2 + (mdev3)^2) / 3}$  if you are getting mdev only.

### **4. If both iperf2 and iperf3 provide me an output then which one should I use?**

**Ans.** Use iperf2 where possible because it is more stable, well tested, and highly used. Iperf3 is still a work in progress in some contexts and has a different thread modelling system to run tests, hence the results may be a bit different. You can set some of iperf3's params to behave like iperf2 but overall, for this part of the assessment – either results would be usable, even if you use the output of some servers as iperf2 and the rest as iperf3. The main aim here is to derive networking based insights from the trends observed in the charts (can be line charts, bar graphs, etc – ones that allow you to explain what is happening in the network clearly).

### **5. What to do when I get a broken pipe error with iperf2/3?**

**Ans.** If you get a broken pipe error when running your iperf tests, you can directly use the bandwidth represented before the connection was cut off. We wouldn't expect you to figure out the exact issue or discuss about the issue per se, but as a hint (if you're interested in diagnosing it yourself as well for fun - paste the same url on your browser search and see if this renders a website (possibly static one) and try running the same client side iperf command against this url for port 80 while tracing on Wireshark. See whether the broken pipe comes up again or not and what are the packets returned using Wireshark. This should act as an indicator of what the issue may be precisely, especially if you are able to view the website.

**6. My command line utilities return results in a language other than English, is this acceptable?**

**Ans.** Unfortunately no. You will be required to download an English language pack and run the tests such that the results are represented in English and numerical formats.

**7. My iperf results return two bandwidths – sender and receiver. Which one do I use?**

**Ans.** Please use the sender bandwidth.

**8. How can I use MTR on Windows to get Stddev?**

**Ans.** Some students have reported and asked that WSL2 (Windows Subsystem for Linux) can be used to install and use MTR locally to get stddev. This is fine.

To install WSL2, please visit here: <https://docs.microsoft.com/en-us/windows/wsl/install-win10>

To install MTR, use the following command in WSL2: `sudo apt-get install mtr`

Alternatively, you can use some of the online MTR tools available but you will need to discuss about the possible differences in the results captured from the place the online MTR tools are executing their commands and the physical location of where you are executing traceroute and ping.