**Lab tips and troubleshooting steps**

Throughout this certificate you will use Qwiklabs and Jupyter Notebooks to complete hands-on activities that  include Linux command line, packet capture, and Python programming tasks. In this reading, we will cover some tips and troubleshooting steps for using Qwiklabs and Jupyter Notebooks on your computer.

**Browser compatibility**

Make sure your internet browser is updated regularly. Qwiklabs and Jupyter Notebooks require the latest version of Google Chrome, Firefox, Safari, or Microsoft Edge. If your browser is outdated or you are using a browser that is not supported by Qwiklabs or Jupyter Notebooks, you may encounter a problem. If your browser is up to date and you are using one of the browsers listed above and still encountering problems try restarting your browser or clearing your browser’s cache and cookies. You can also use incognito mode which prevents your browser from storing cookies and other temporary data.

**Note:** The Qwiklabs user interface works best with Google Chrome.

**Internet connection**

Qwiklabs and Jupyter Notebooks require a stable internet connection. If you are experiencing problems starting or completing Qwiklabs or Jupyter Notebooks, your internet connection may be slow or unreliable. Some signs of an unstable internet connection may be freezing labs, difficulty connecting to virtual machines, or the inability to type or enter commands within the lab environment.

**Pro Tip:** If you are unable to complete a Qwiklab or Jupyter Notebooks lab on one device, try using another device.

**Troubleshooting steps**

To summarize, here are the troubleshooting steps to try if you encounter a problem with Qwiklabs or Jupyter Notebooks.

1. Make sure you are using the latest version of a supported browser: Google Chrome, Firefox, Safari, or Microsoft Edge.
2. Restart your browser and clear your browser’s cache and cookies. You can also use incognito mode.
3. Check your internet connection and make sure it is stable. You can try restarting your router and modem to regain a stable connection.
4. Try restarting Qwiklabs or Jupyter Notebooks again.
5. **For Qwiklabs only:** If problems persist or you receive a message stating that you have exceeded the quota for a Qwiklab, submit this [form](https://qwiklab.zendesk.com/hc/en-us/requests/new) to Qwiklabs support for assistance.