



## How to SSH tunnel a connection using MacOS

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### Overview

Tunneling over SSH provides a means where a local computer can open one or more connections over a secure encrypted channel to a remote computer system located somewhere else and from the remote computer a connection can be opened to another location. This process can be used to secure network traffic, bypass restrictions placed on a local network firewall, or establish a secure path into a private network that sits behind a firewall.

These instructions are specific to MacOS. In this knowledge base article, the remote server is a Linux system running Ubuntu Linux, however the same steps should work for a variety of \*nix based systems.

An SSH tunnel must be specified at the localhost based on a particular protocol. In general, the best solution is to identify the application you want to tunnel, and use corresponding ports that exist above the privileged ports range (<https://www.w3.org/Daemon/User/Installation/PrivilegedPorts.html>).

The example below is specific to the Chrome and Safari web browser. Additional settings and clients can be requested by submitting a new ticket or positing comments to this article.

### WARNING

- SSH tunnelling is not a solution that provides a fast connection. Network congestion and the process of encrypting and decrypting the connection (usually in software), will slow down the access speed.
- Some instructions, such as those specific to Safari, will remain in effect until disabled, i.e., the SSH tunnel will remain in effect until you **undo** the settings for the SSH tunnel.

### Launch an SSH tunnel

To begin, you must initiate an SSH tunnel. Open the MacOS Terminal and connect to your remote server via SSH with the following flags:

```
ssh -D 8080 -N username@remotecomputer.eoas.ubc.ca
```

This will open port 8080 on your local system so any traffic to 8080 will be securely tunneled through to server remote computer at **remotecomputer.eoas.ubc.ca**.

Configure the Chrome web browser

The Chrome web browser from Google can leverage the local proxy as a socks5 proxy. To open a secure web browser, use the following command:

**chrome --proxy-server="socks5://127.0.0.1:8080" --host-resolver-rules="MAP \* 0.0.0.0 , EXCLUDE localhost"**

The new Chrome browser will direct browsing traffic through the encrypted tunnel to the remote computer system where it will access the Internet.

Configure the Safari web browser

Go to **System Preferences » Network » Advanced » Proxies**, and update your settings to reflect the settings in the screenshot below.

