VSCode

- CS121 VSCode Setup Tutorial
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Troubleshooting

Techstaff are not experts on VS Code or its proprietary SSH extension, but there are a couple of common problems that we find people encounter when trying to connect.

One thing that can prevent your ability to access the servers is if you've used VS Code and logged into more than one of our login servers simultaneously. `linux.cs.uchicago.edu` is actually a collection of several servers, so when you access that address your computer will pick a login server to use.

Using `nslookup`, `dig`, `host`, or another DNS lookup tool, you can see that `linux.cs.uchicago.edu` expands to `linux1.cs.uchicago.edu`, `linux2.cs.uchicago.edu`, and other servers up to `linux7`.

If VS Code has started its server process for you on more than one of our login servers concurrently, this can cause problems, including a situation in which it just repeatedly prompts for a password, preventing you from connecting. Additionally, this can often result in the directory `~/.vscode-server` in your home directory on the server becoming corrupted in some way. Since VS Code will automatically recreate that directory when you reconnect, it's safe to delete it.

To try to clear this up you can try to run the script `cleanup-vscode` after sshing into one of the linux servers using Terminal.app, the WSL command line, or a linux terminal.

```
ssh cnetid@linuxN.cs.uchicago.edu
```

To fix this on your own (without using the script mentioned above), you could simply log into each of the `linux.cs` servers (using SSH), then the command `pkill -u <CNETID> node`, which will stop any running vscode-server processes. After you've stopped the processes on all the login servers, it is also recommend to remove the `~/.vscode-server` directory to ensure that it's recreated when you connect next. (Otherwise, the contents of this directory can cause problems for later reconnect attempts.) To do this, just run `rm -r ~/.vscode-server` on any of the `linux.cs` servers. (Since your home directory is shared, you only need to do this once.)

To help ensure that this doesn't happen again, you will want to configure VS Code to connect to one login server in particular instead of the group. That will ensure that you always reconnect to the same system you used previously. This means it'll be less likely that you'll accidentally end up trying to run this on two or more servers at the same time. We also recommend ensuring that VS Code is completely closed and no longer running on one computer before attempting to start it on a second computer.
Step by Step

1. Open a terminal emulator. On Windows we suggest installing the Windows Subsystem for Linux. On MacOS open Terminal.app.
2. You need to ssh into one of our linux servers.
   
   ```bash
   ssh cnetid@linux.cs.uchicago.edu
   ```

3. Ensure you are below your quota. Check your quota by running csquota.
   
   1. If you are using all of your quota we usually see that results.log is the culprit. You can find the file or set of files using up your quota by using the command `du -csh * .??*`. 
   2. Assuming it is results.log you probably don't want to delete it just yet as there is probably a process that still has it open and is still writing to it. Proceed and delete this file at the very end.

4. Kill all the VS Code server processes on all linux.cs servers. Remember these were caused by using the round robin DNS name of linux.cs.uchicago.edu.
   
   1. If you haven't changed the entry in your VS Code client you should do so now such that you specify a specific server. e.g. `linuxN.cs.uchicago.edu` where N is a number 1-5.
   2. The general idea is to ssh into every linux.cs server and kill any VS Code server process you have running. This command will `pkill -u <CNETID> node` VS Code server.
   3. The techstaff script `cleanup-vscode` will walk you through sshing to all nodes and killing the right processes. Feel free to look at the script to see what it is doing.

5. Now you'll want to remove the `~/.vscode-server` directory.
6. IFF you found that results.log was using all of your quota you'll want to delete this now.
7. You should be able to reconnect with VS Code client now.

https://code.visualstudio.com/docs/remote/troubleshooting#_improving-security-on-multi-user-servers
https://code.visualstudio.com/docs/remote/ssh