Homework 1

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1 Introduction

The aim of this homework is to setup and familiarize ourselves with the remote development tools and the NYU HPC platform presented in Bootcamp 2. You can use the google docs template here to fill out your answers.

2 SSH setup

Configure your ~/.ssh/config to enable passwordless login to the NYU HPC Greene cluster, as well as key-based authentication on your github account. To ensure that your setup functions properly, run the following commands:

- 1. ssh greene
- 2. hostname
- 3. ssh -T git@github.com

There should be no authentication prompts which are required, and you should see Github responding with your git username. An example session is displayed in listing 1. Please include a screenshot of your terminal with the relevant command and their output displayed.

3 GCP cloud bursting setup

Request a new instance on the GCP cloud bursting using the c2s16p partition (CPU-only). Modify your .ssh/config to be able to directly connect to your allocated GCP instance.

Run the command below and include a screenshot of the output in your terminal (note: I have included a redirection of stderr to remove some clutter, remove 2>/dev/null and see what it looks like without the redirection).

ssh -T burstinstance 'cat /scratch/wz2247/cds-bootcamp/homework/url.txt' 2>/dev/null

Listing 1: Example login session to Greene

4 VSCode remote

Request a new instance (or re-use the same instance from the previous section) on the GCP cloud bursting platform using the c2s16p partition. Install VSCode and the remote extension for VSCode. Connect VSCode to your GCP instance. Confirm that your VSCode is indeed running on the remote instance by opening the terminal in VSCode (View > Terminal) and querying the current host name (using the 'hostname' command). Include a screenshot of your VScode window.