Updated Guide for Using FEKO on the W&M High Performance Computing Cluster

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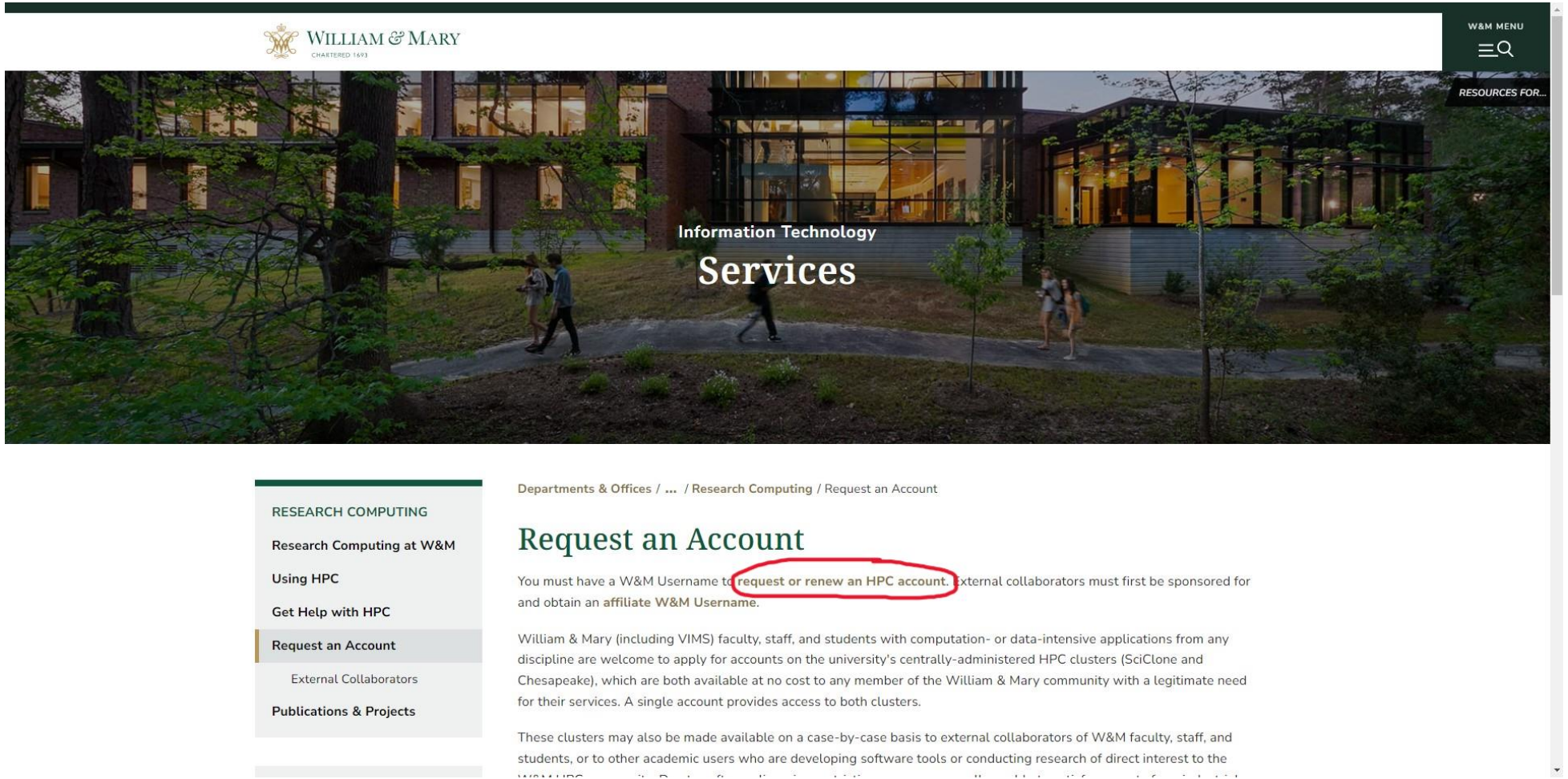
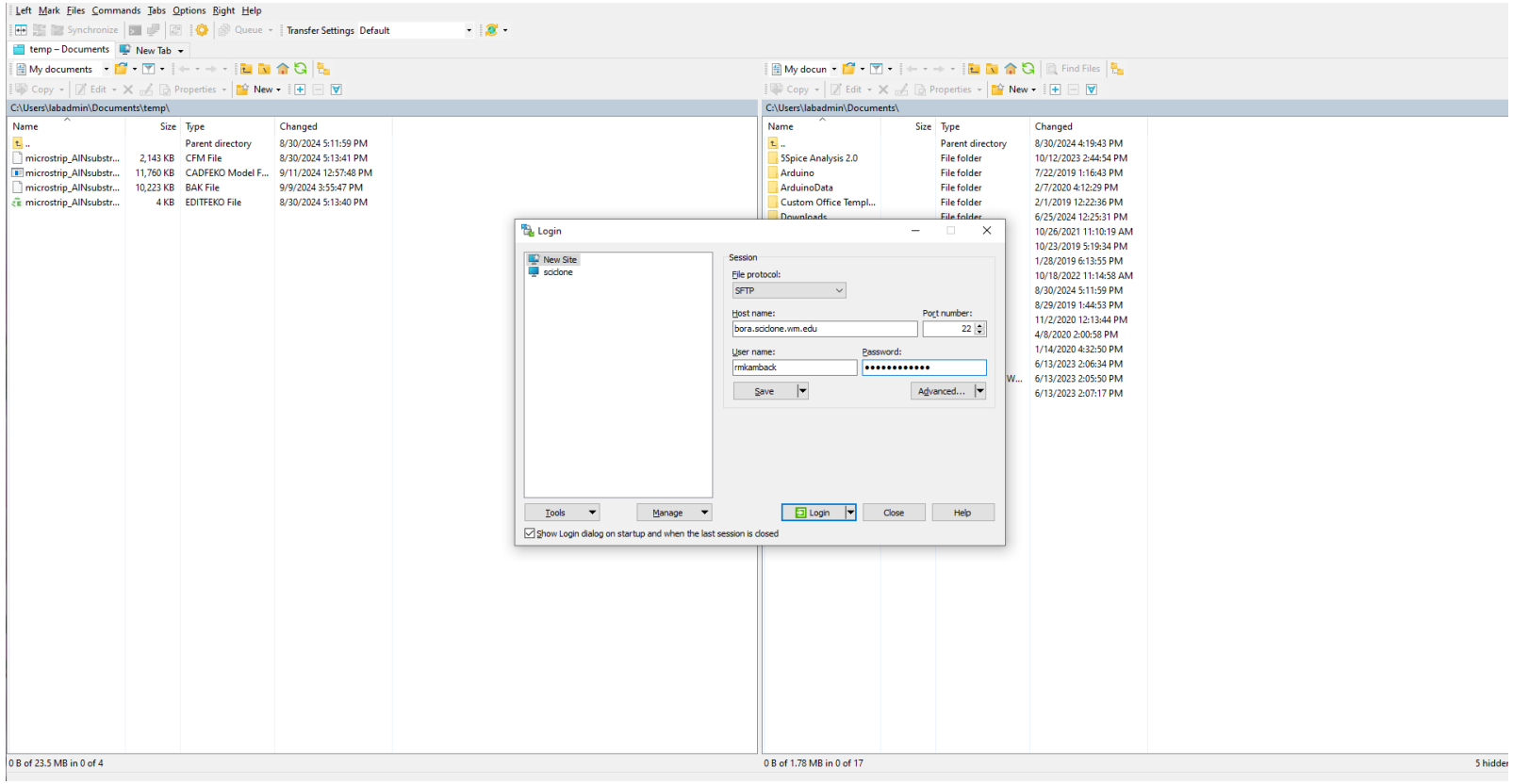
Step 1: Create a W&M HPC Account

Visit https://www.wm.edu/offices/it/services/researchcomputing/acctreq/

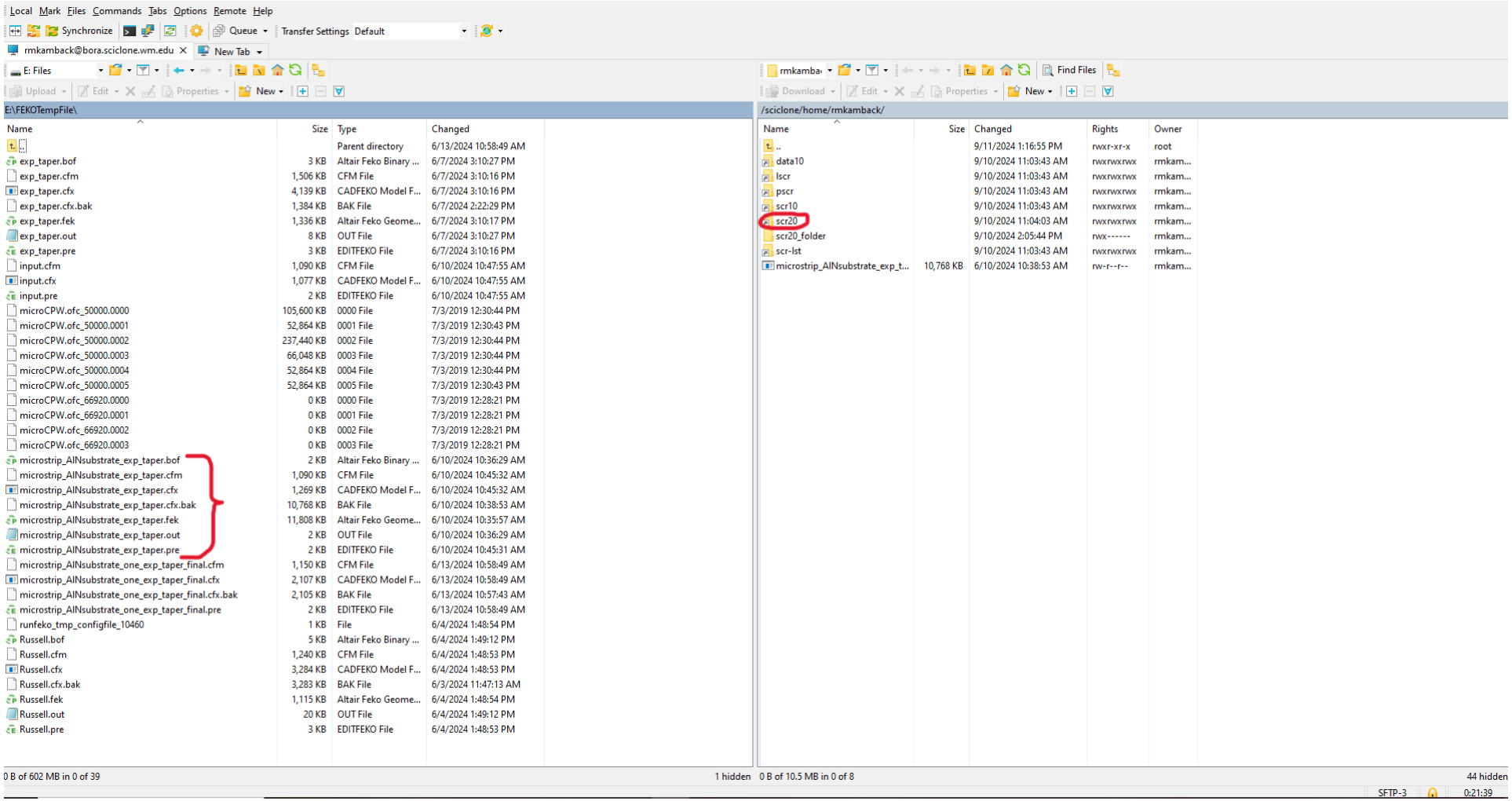


Step 2: Open the SSH Secure File Transfer (called WinSCP on Magnolia) and log into bora.sciclone.wm.edu

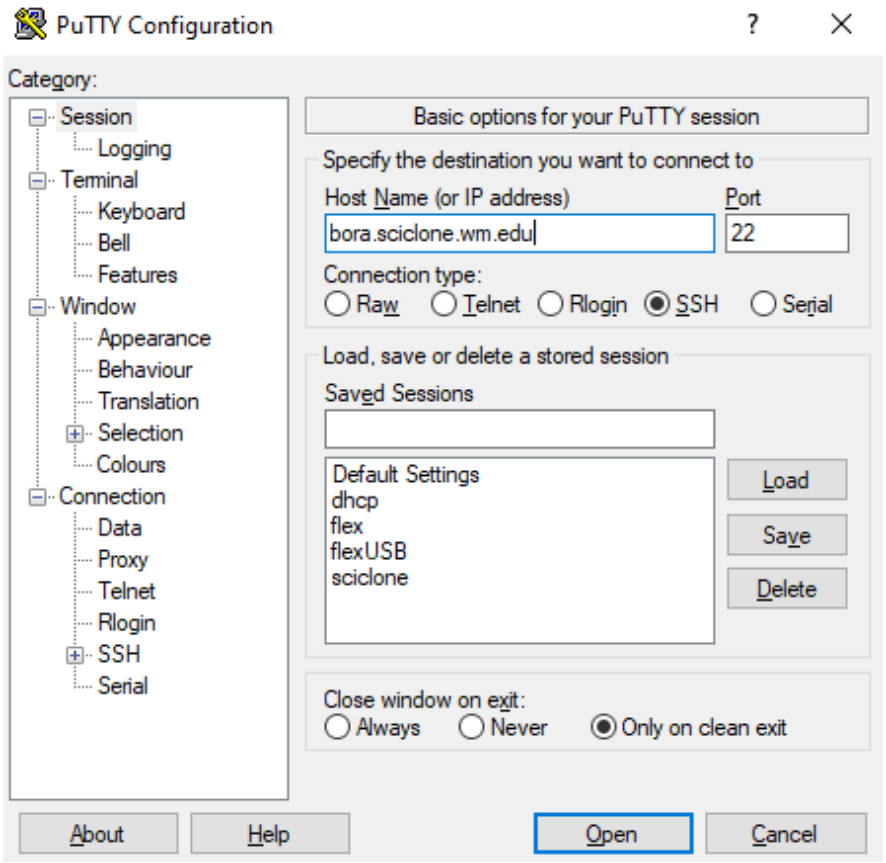


Note: the above image is taken from WinSCP, but most computers in this lab as of now have SSH Secure File Transfer. Both serve the same purpose of transferring local files to and from the HPC cluster, and the way to do that is basically the same between the two applications.

Step 3: Find the model you want to process on the left side, then drag over the .cfx and the .bak files to the 'scr20' folder on the right side

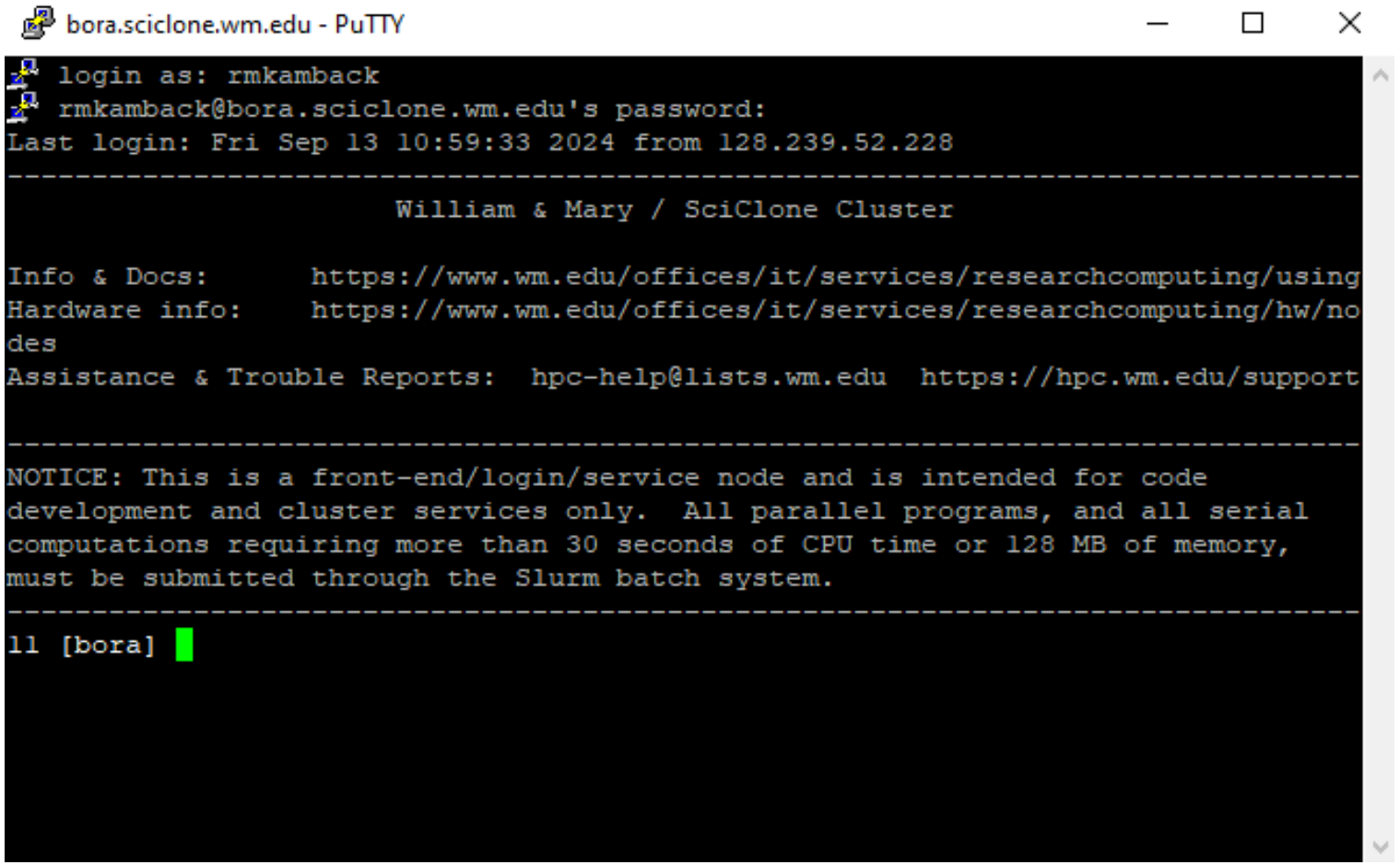


Step 4: Open PuTTY, type 'bora.sciclone.wm.edu' in the Host Name, and click Open

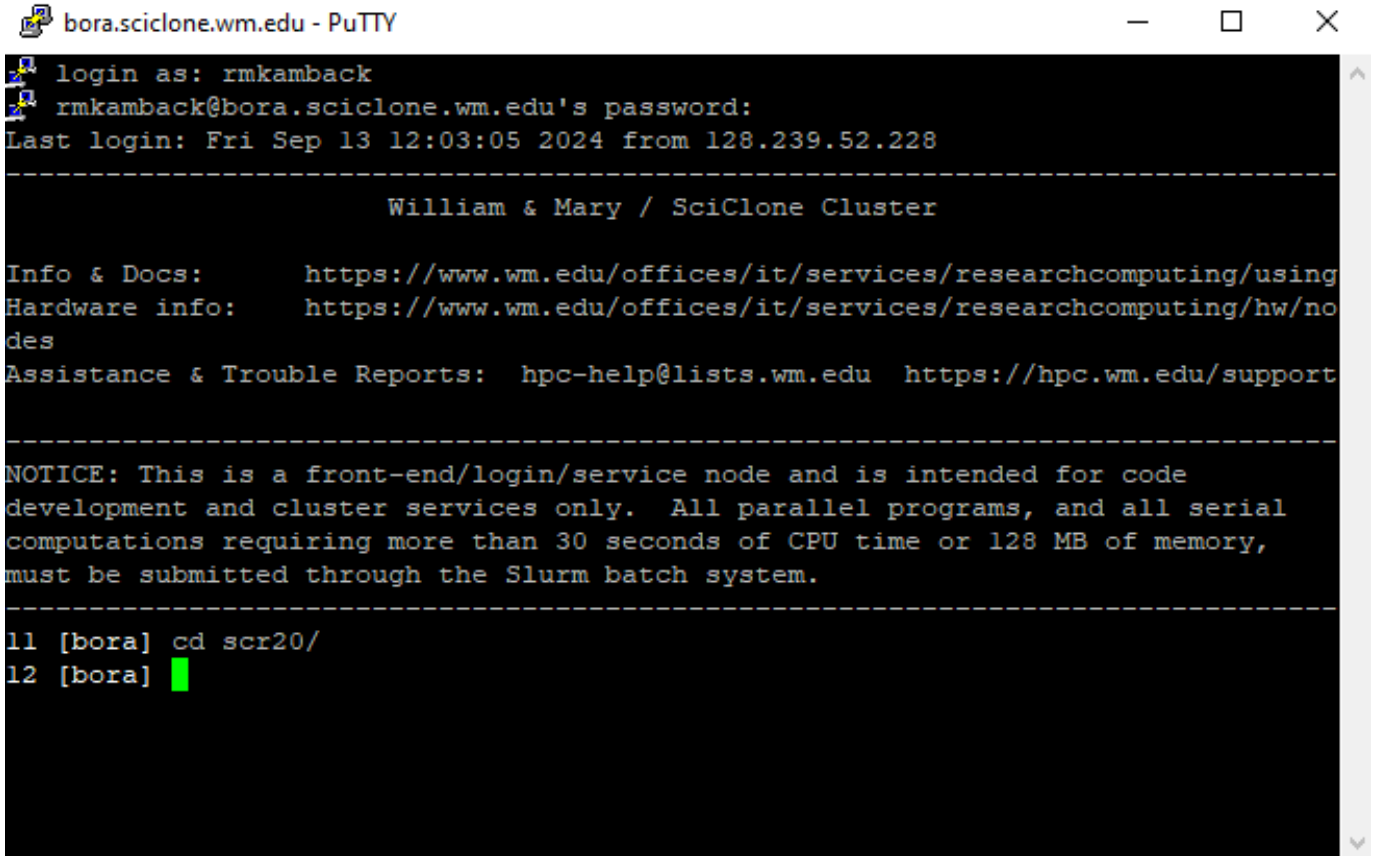


Note: do not worry about the "Saved Sessions" box below the host name entry, there is no need to select any of those options

Step 5: Log in with your HPC account

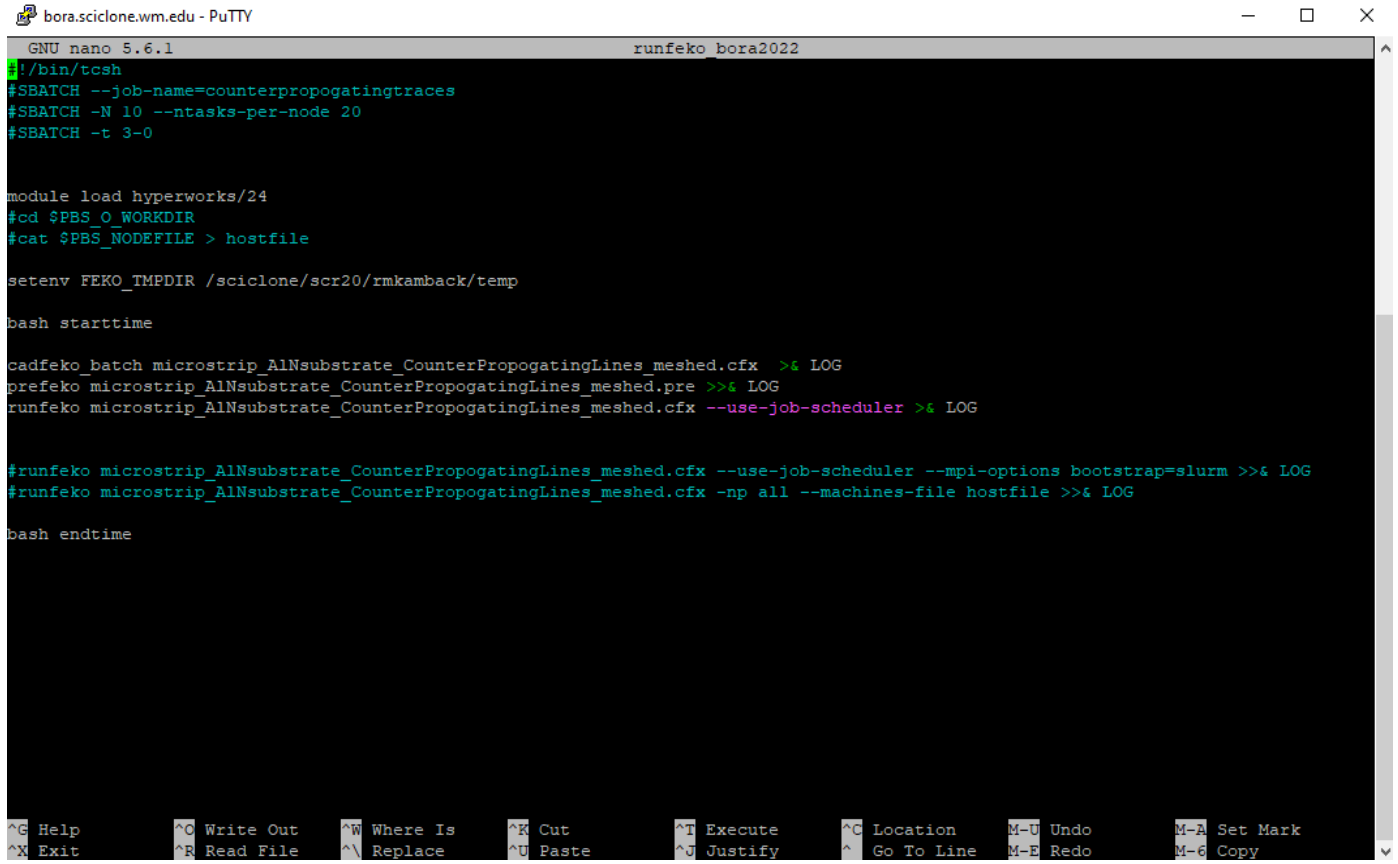


Step 6: Change your directory to your scr20 folder



Note: The 'cd' command changes your directory to whatever you type immediately after it (in this case, scr20). If you type the 'ls' command, it will list items in your directory.

Step 7: Open a nano-window for runfeko by typing "nano runfeko_bora2022"; something like this should pop up:

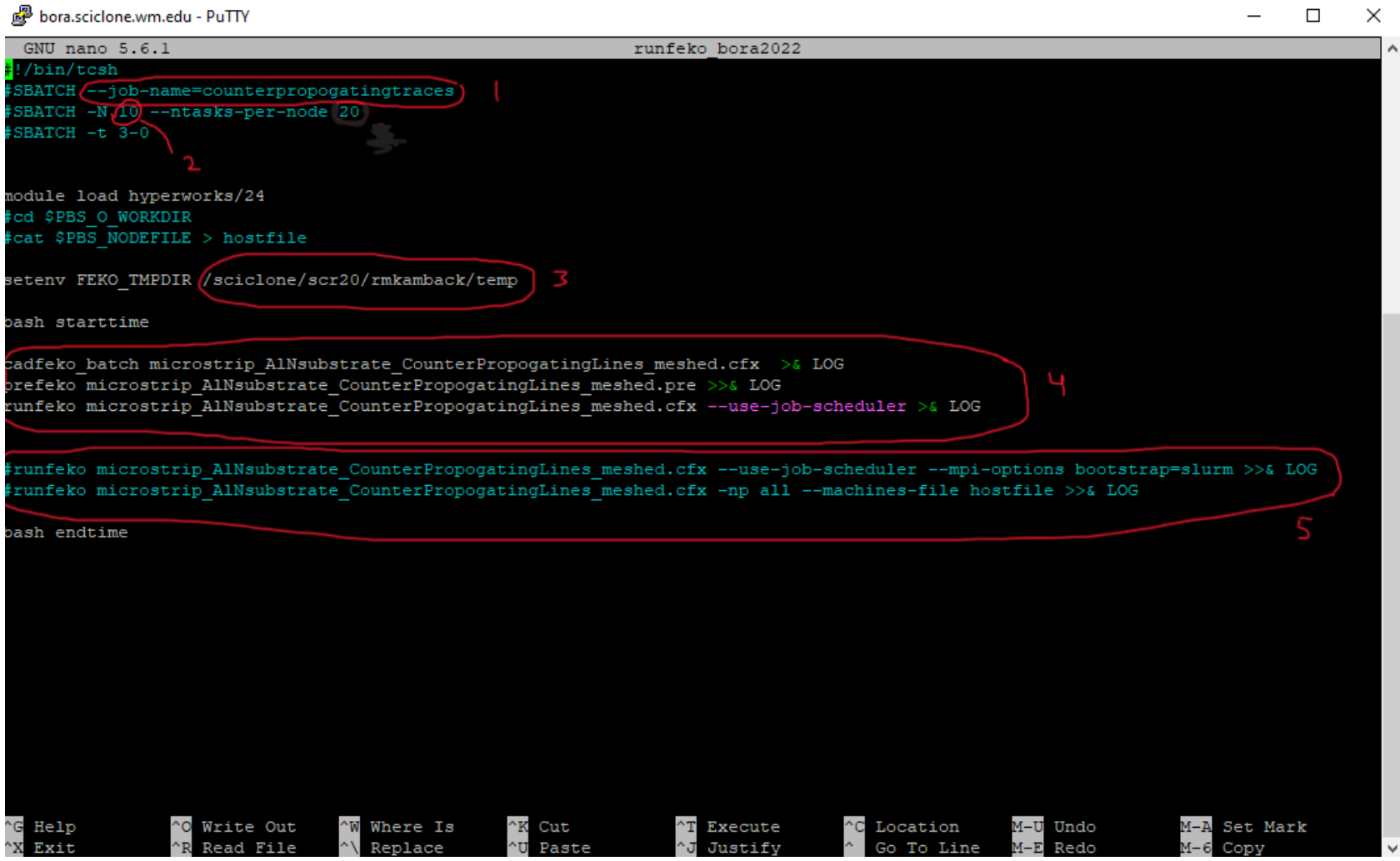


Note: you will likely need to change some things as explained on the following slide

Step 8: Adjust project parameters

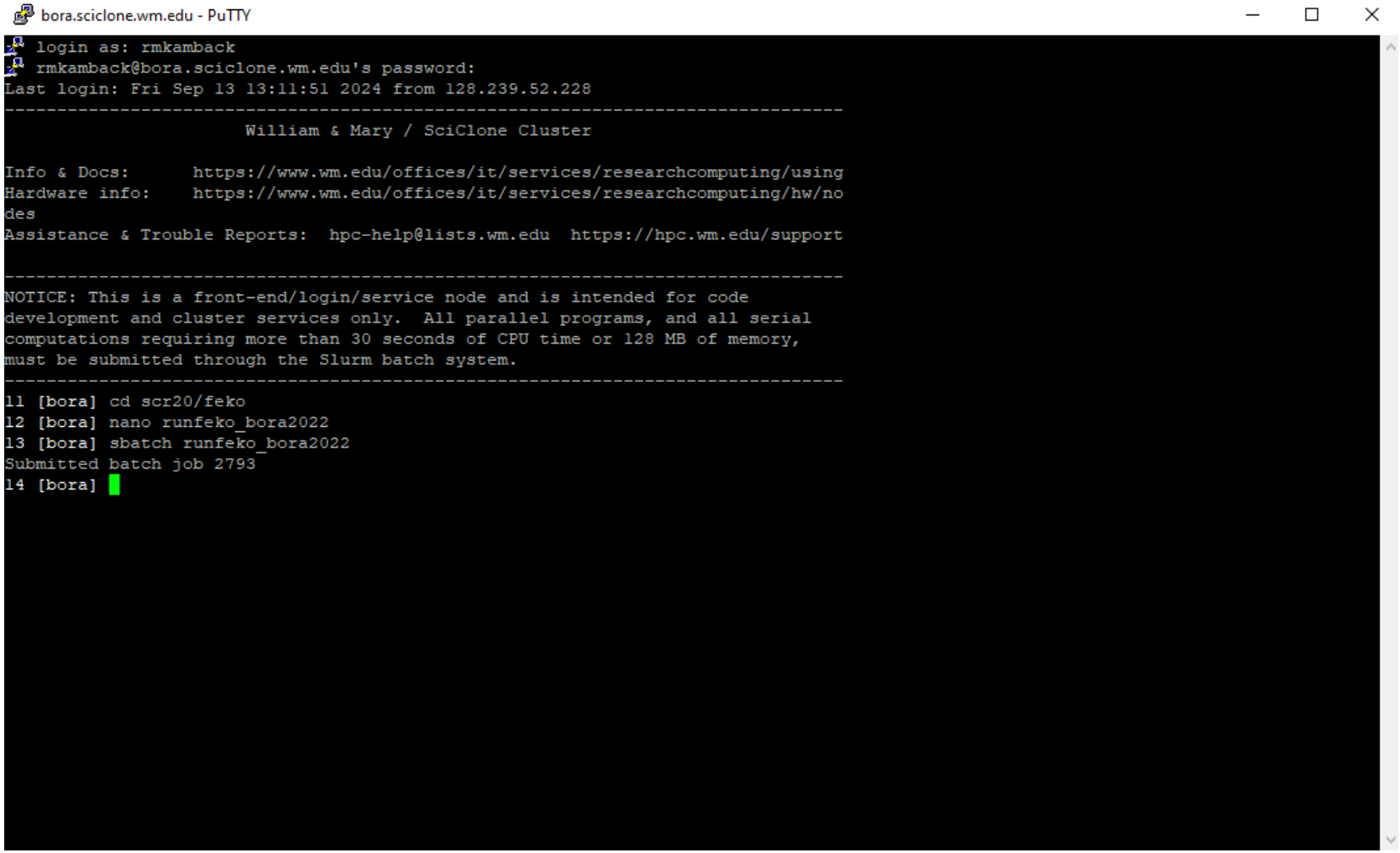
Firstly, if necessary, change your nano window so that it is identical to the picture on the right, with exception to things circled in red detailed below:

1) Type "--job-name=<YOUR JOB NAME>"
2) Insert the number of nodes to run your projects on. The bigger the project, the more nodes. Usually, 10-15 is good enough.
3) Here goes your folder, so type "/sciclone/scr20/<YOUR FOLDER>"
4) This should look exactly like the picture except with the name of *your file* instead of mine
5) You don't need to type any of this (the # means it's commented out)



Step 9: Type Ctrl+O then Enter to write out your code, then type Ctrl+X to exit the window

Step 10: Submit your job for processing using the 'sbatch' command as seen below in line 13



Additional notes

- To check the status of your job, type 'squeue' in the PuTTY command window.
- To cancel your job, type 'scancel'
- When your job is finished, you can go into your scr20 folder in the SSH Secure File Transfer (or WinSCP) program and check the LOG file. If there was an error in running your job, it will also appear there. The output files will appear in the scr20 folder as well. You'll likely care about the PostFEKO file (.fek file).