# Running Fluent on a Remote Server

If your simulation requires more processing power, you may need to remotely run the calculations on a larger server. This tutorial is for those who have log-in access to the SimCafe1 server on Cornell University's Ithaca campus. The procedure for running FLUENT on other servers will be similar.

Method 1: Remote Desktop Connection

1. If you are connecting to the server outside of the campus, first establish a VPN connection to the Cornell network. For guidelines for setting up the VPN network, refer to THIS LINK and follow the given steps.

2. In the Start menu, type "Remote Desktop Connection" and hit enter. Input the information below:
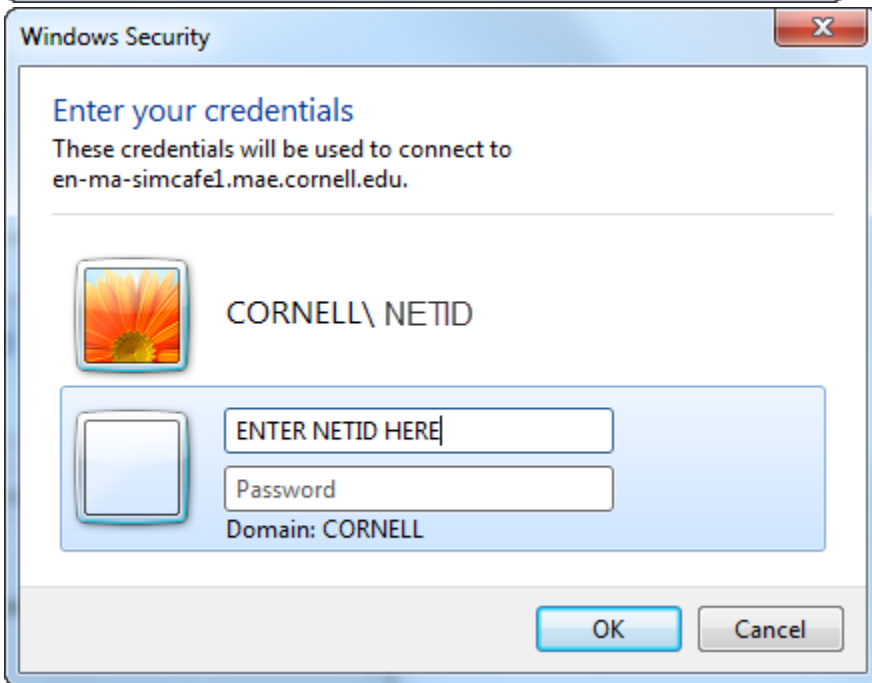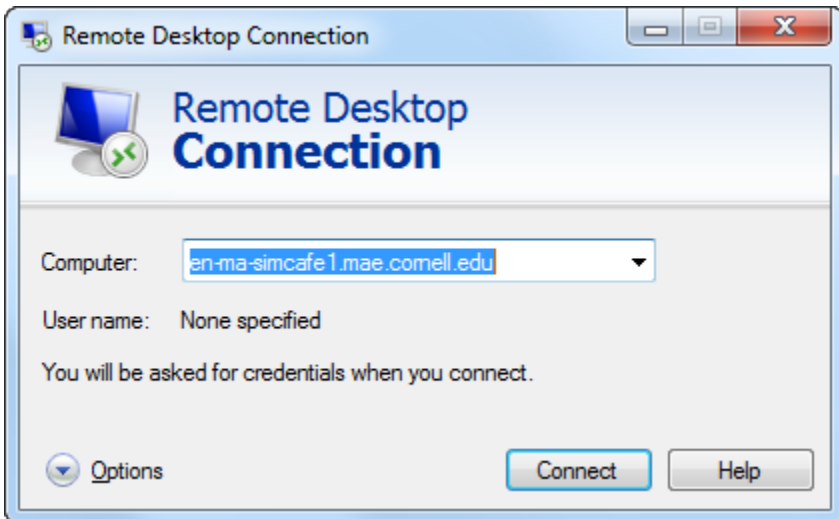
3. Hit OK and you should be able to access the server smoothly.
4. You can transfer files between the remote server and your local machine through drag-and-drop by mapping a network drive. See the instructions below for mapping a network drive.

Note: Some users may find that the default Remote Desktop app in Windows does not work properly. If this happens to you, try using this alternative with the same procedure.

Method 2: Using server as a network drive

Instructions are provided in the following video and summarized below:

Summary of the video above:

1. Append DNS suffix
   a. Go to Control Panel >> Network and Sharing Center >> Local Area Connection (or Wi-Fi if you don't have a hard connection)
   b. Click Properties in the "Status" window
   c. Select Internet Protocol Version 4 (TCP/IPv4)
   d. Click Properties >> Advanced
   e. Go to the "DNS" tab and under the window "Append these DNS suffixes", click Add
   f. In the "TCP/IP Domain Suffix" window, type in: mae.cornell.edu
   g. Hit "OK" and "Close" until you return to your desktop

2. Map Network drive
   a. Go to "My Computer" and select "Map network drive" on the top bar
   b. For "Folder", type in: \\en-ma-simcafe1\workspace
   c. Click "Finish" and make note of the drive letter used (e.g., 'Z:')
   d. If it prompts you for login information, use your netID@cornell.edu and password.

3. Set up FLUENT
   a. Select "Parallel"
   b. Select "Use Job Scheduler"
   c. Choose # of processes. (Note that the academic version of FLUENT is limited to 2 processes.)
   d. Under "More Options" in the "General Options" tab
      i. For working directory, type in the name of mapped drive (e.g., 'Z:\')
         1. If this is grayed out and does not have the correct drive, follow these instructions:
            a. Find the Workbench shortcut (or the Fluent shortcut if you run Fluent directly instead of through Workbench)
            b. Right-click and select "Properties"
            c. Change "Start In" to the location of the mapped drive
      ii. For "Fluent Root Path", enter: \\en-ma-simcafe1\fluent
   e. Under the "Scheduler" tab
      i. For Computer Cluster Head Node Name, enter: en-ma-simcafe1.mae.cornell.edu
   f. If you are using a UDF, check "Setup Compilation Environment for UDF" under the "Environment" tab
   g. Click OK to run FLUENT
   h. In the print-out console, make sure all licenses are available and simulation is running

4. Check progress of Fluent solver
   a. Check that HPC Cluster Manager is installed on the computer
   b. Run HPC Job Manager
   c. Select "active" on the left tab to view active jobs