

Class 11: Great Lakes and parallel statistical computing in R

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1 Introduction

Objectives for this class

- To log in to Great Lakes and run a batch R script.
- To adapt `doParallel` and `foreach` for the cluster.

1.1 Logging in

Requirements

We follow [Section 1.2](#) of the [Great Lakes user guide](#). As preliminaries, you need:

- A Slurm account. You should already have a primary account, `stats_dept1`, and a smaller backup account for if you exhaust your resources, `stats_dept2`.
- A Great Lakes cluster login account. If you have not yet filled in the form at <https://arc-ts.umich.edu/greatlakes/user-guide/> then do so.
- A umich internet address. Use the umich VPN if you are not on campus.

Connecting to Great Lakes with macOS or Linux

1. Open a Terminal window. On a Mac, this can be done using Control-Spacebar and typing Terminal.
2. Type

```
ssh username@greatlakes.arc-ts.umich.edu
```

where `username` is your username.

3. Login with your Kerberos level-1 password, and Duo two-factor authentication.

This creates a remote command shell on Great Lakes.

Connecting to Great Lakes with Windows

This is essentially the same as for macOS.

1. Follow instructions to install PuTTY at <https://documentation.its.umich.edu/node/350>
2. Launch PuTTY and enter `greatlakes.arc-ts.umich.edu` as the host name, then click open. If you receive a “PuTTY Security Alert” pop-up, this is completely normal, click the “Yes” option. This will tell PuTTY to trust the host the next time you want to connect to it. From there, a terminal window will open; you will be required to enter your UMICH username and then your Kerberos level-1 password in order to log in. Please note that as you type your password, nothing you type will appear on the screen; this is completely normal. Press “Enter/Return” key once you are done typing your password.
3. Complete the request for Duo two-factor authentication.

This creates a remote command shell on Great Lakes.