EECS Tutorial: Grader access to cslab Linux Environment

FAQ for grader access to cslab Linux environment

How do I initially log into the cslab Linux environment?

- To access the cslab Linux environment, cslab-gateway.cs.wichita.edu, follow the steps as found in the separate *EECS Tutorial: cslab Linux Environment* document using your myWSU ID (with lowercase letters for username) and your myWSU password.

- If you cannot access the cslab environment using your myWSU ID, please contact the EECS systems administrator, ben.roose@wichita.edu.

How do I set up an SSH private/public key for accessing a grader account?

1. Once logged into the cslab environment, open an SSH terminal session.

2. Before you generate an SSH key, you can check to see if you have any existing SSH keys in your user account by typing
   `ls ~/.ssh`

3. Check the directory listing to see if you already have a public SSH key. By default, the filenames of the public keys are one of the following:

   ```
   id_rsa.pub
   id_dsa.pub
   id_ecdsa.pub
   id_ed25519.pub
   ```

4. If you do not have an SSH key or you wish to generate a new one, type
   `ssh-keygen -t rsa -b 4096 -C "your_mywsu_id - your_last_name"`

5. Follow the prompts in the command-line as your new SSH key is generated:
   ```
   Generating public/private rsa key pair.
   Enter file in which to save the key (../id_rsa): Press Enter
   Enter passphrase: Enter a passphrase you will remember!
   Your identification has been saved in .../.ssh/id_rsa.
   Your public key has been saved in .../.ssh/id_rsa.pub.
   The key fingerprint is:
   SHA256:  [fingerprint and randomart image]
   ```
   NOTE: Unless you know how to use custom SSH key files, always use the default filename and path for saving your SSH key.
   You are required to use a passphrase for your SSH key to access grader account.

6. Download your SSH public key file to your local computer by typing
   `guacget ~/.ssh/id_rsa.pub`

7. Attach the downloaded `id_rsa.pub` file to an email and send it both to the instructor of the class and to the EECS systems administrator (ben.roose@wichita.edu) with the following additional details in the email body:

```
myWSU_ID: your_myWSU_ID, i.e. a123b456
Instructor: instructor_of_the_class i.e. Adam Sweeney
Grader Account: grader_account_as_assigned_to_you, i.e. cs211a
```

8. If you are a grader for more than one programming class, append additional `Instructor` and `Grader Account` lines for each class you will be grading.

9. Once your SSH public key has been added to the grader account `authorized_keys` file by the EECS systems adminstrator, you will then have access into the grader account.

How do I access a grader account for grading assignments?

1. Once logged into the cslab environment, open either an RDP desktop session or an SSH terminal session.

2. If you are connected to an RDP desktop session, open a terminal emulator, i.e. *LXTerminal* or *Terminator*.

3. To access your assigned grader account type
   `ssh grader_account@localhost`
   (where `grader_account` is the class grader account, i.e, `cs211a`).

4. Use standard Linux command-line tools to access, view, and compile student assignments, i.e. `ls, cd, less, vi, emacs, gcc, g++`.

5. You will find each student assignment in the directory
   `~/handin/assign/assignment_#/student_myWSU_ID/`

6. If a student submitted an assignment late, you will find it in the directory
   `~/handin/assign/assignment_#.late/student_myWSU_ID/`

7. To allow for graphical (GUI) applications, such as *geany* or *atom* to be used, add the `-X` option flag to the `ssh` command, i.e.
   `ssh -X cs211a@localhost`

8. To use a graphical application type the application's name followed by an ampersand (&) in the terminal emulator, i.e. `geany &`

   NOTE: The -X option for graphical applications can ONLY be used within an RDP desktop session.