

# *EECS Tutorial: Grader access to cslab Linux Environment*

## **FAQ for grader access to cslab Linux environment**

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### How do I initially log into the cslab Linux environment?

- To access the cslab Linux environment, [cslab-gateway.cs.wichita.edu](http://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, ensure you have changed your myWSU password within the last three months and can access the myWSU main website [mywsu.wichita.edu](http://mywsu.wichita.edu). If you cannot access the myWSU website, then you will need to change your password before gaining access into the cslab environment.
- If you can access myWSU but cannot access the cslab environment, please contact the EECS systems administrator, [ben.roose@wichita.edu](mailto: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 accounts.**

6. Download your SSH public key file to your local computer by typing  
`guacget ~/.ssh/id_rsa.pub`
7. If the `id_rsa.pub` file does not download to your local computer via the web-browser, then you may need to disconnect from the terminal session by pressing CTRL+D and clicking the “reconnect” button.
8. 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](mailto: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
```

9. If you are a grader for more than one programming class, you will only need to generate one SSH key but you will need to append additional `Instructor` and `Grader Account` lines for each class you will be grading.
10. Once your SSH public key has been added to the `authorized_keys` for the grader account by the EECS systems administrator, you will then have access into it.

### 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 account, i.e. `cs211a`).
4. Type in your recently created “passphrase” when prompted.  
 If you are prompted for a “password” not a “passphrase”, then there is something wrong with your SSH key. Double-check you generated an SSH key and contact the EECS systems administrator if you are not able to log into the grader account.
5. Once logged into the grader account, you can use standard Linux command-line tools to access, view, and compile student assignments.  
 For example: `ls`, `cd`, `less`, `vi`, `emacs`, `gcc`, `g++`.
6. You will find each submitted student assignment in the directory  
`~/handin/assign/assignment_#/student_myWSU_ID/`

7. If a student submitted an assignment late, you will find it in the directory  
`~/handin/assign/assignment_#.late/student_myWSU_ID/`
8. 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`
9. To use a graphical application type the application's name followed by an ampersand (&) in the terminal emulator. For example: `geany &`

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