

## 1 Connect to Andrew on Windows

1. Download PuTTY at <http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>.
2. Run **putty.exe** and you should be displayed with a window like in Figure 1. You should fill in the following fields:
  - Host: *yourPantherId@andrew.cs.uwm.edu*
  - Port: *53211*

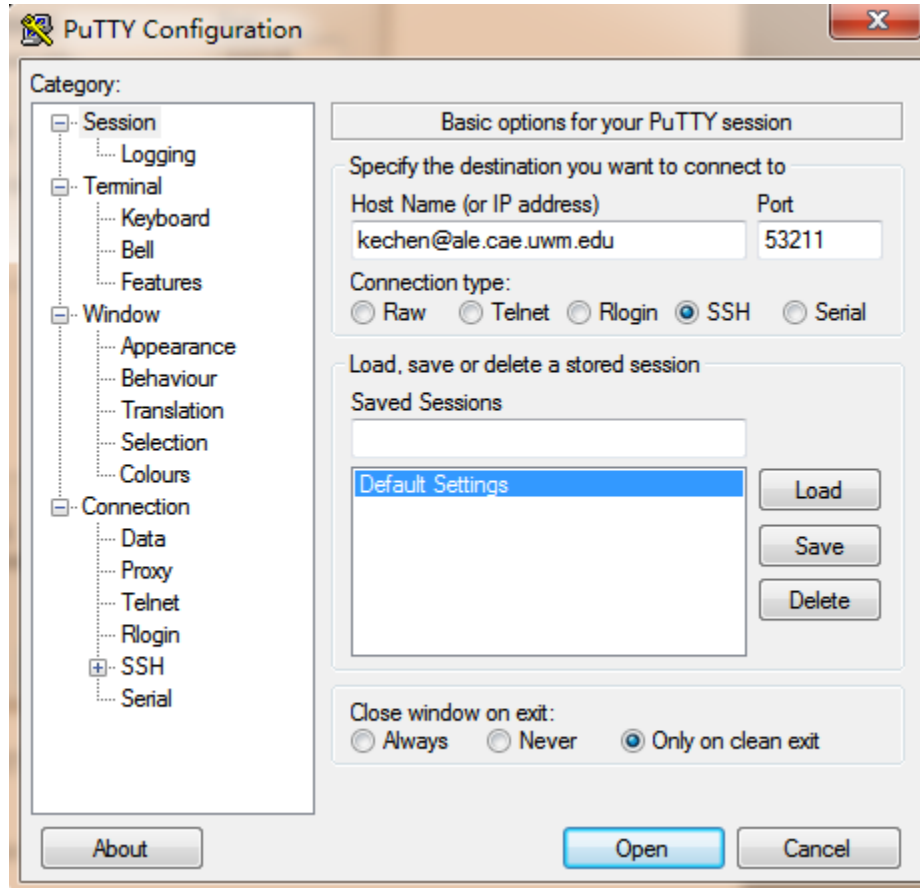
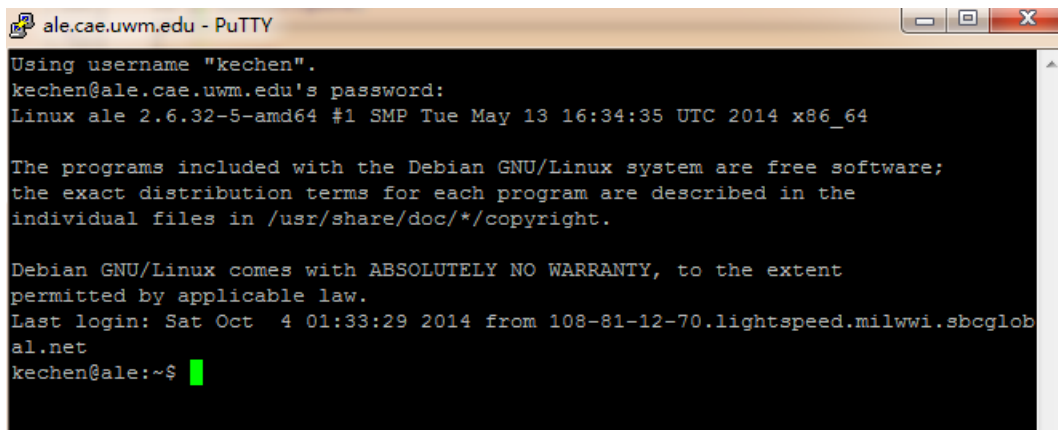


Figure 1: PuTTY.

3. (Optional) If you wish, you can avoid refilling the fields by highlighting **Default Settings** and clicking **Save**.
4. Click **Open** to open the connection to andrew.
5. If this is your first time connecting to andrew, you will be prompted about the security of the RSA key fingerprint. Click **Accept**.
6. You should then be prompted for your password with the line. Enter your panther password (you will not see it while typing). If you entered it incorrectly, it will re-prompt for the password.

7. Once you successfully entered your password, you will receive some text and given a command line as shown in Figure 2.



```
ale.cae.uwm.edu - PuTTY
Using username "kechen".
kechen@ale.cae.uwm.edu's password:
Linux ale 2.6.32-5-amd64 #1 SMP Tue May 13 16:34:35 UTC 2014 x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Sat Oct  4 01:33:29 2014 from 108-81-12-70.lightspeed.milwwi.sbcglob
al.net
kechen@ale:~$
```

Figure 2: Command line.

## 2 Connect to Andrew on Mac or Linux

1. Open the terminal. This varies from Mac and Linux distributions so it is best if you search on how to open the terminal for your particular operating system if you do not know already.
2. In the terminal type the following  
`ssh -p 53211 yourPantherId@andrew.cs.uwm.edu.`
3. If this is your first time connecting to andrew, you will be prompted to continue connecting if though the RSA key fingerprint cannot be verified. Enter yes.
4. You should then be prompted for your password. Enter your panther password (you will not see it while typing). If you entered it incorrectly, it will re-prompt for the password.
5. Once you successfully entered your password, you will receive some text and given a command line as shown in Figure 2.

## 3 Check Solutions

Solutions are provided in the solution directory:

`/afs/cs.uwm.edu/users/classes/cs351/solution`

They are not git repositories so you cannot import in Eclipse. Note that you will not necessarily have permission to see all solutions. You may use Unix commands, such as `ls`, `more`, or `less` to view the source files on andrew but it is more convenient to download them to your computer.

**NB:** If you have OpenAFS set up, use it to get access to solution files.

1. (For Windows ONLY, Mac and Linux users jump to step 2) Download PSCP at <http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>.
2.
  - Windows: In the directory that contains `pscp.exe`, press and hold the *Shift* key and *right click* on any empty space in that folder. In the drop down menu, click *Open Command Window Here*.

- Mac or Linux: Open the terminal.
3. In the command window/terminal, type in the following command (take homework4 for example, you may use *ls* on andrew to see the available solution folders):

- Windows:

```
pscp -P 53211 -r yourPantherId@andrew.cs.wvm.edu:/afs/cs.wvm.edu/users/classes/cs351/solution/homework4 hw4
```

- Mac or Linux:

```
scp -P 53211 -r yourPantherId@andrew.cs.wvm.edu:/afs/cs.wvm.edu/users/classes/cs351/solution/homework4 hw4
```

The *hw4* is the new name for the folder copying to your computer. This command is illustrated in Figure 3.

```
pscp -P 53211 -r kechen@ale.cae.uwm.edu:/afs/cs.wvm.edu/users/classes/cs351/solu
tion/homework4 hw4
kechen@ale.cae.uwm.edu's password:
.classpath           | 0 kB | 0.4 kB/s | ETA: 00:00:00 | 100%
.gitignore           | 0 kB | 0.0 kB/s | ETA: 00:00:00 | 100%
.project             | 0 kB | 0.5 kB/s | ETA: 00:00:00 | 100%
homework4.jar        | 0 kB | 0.6 kB/s | ETA: 00:00:00 | 100%
Main.java            | 6 kB | 6.2 kB/s | ETA: 00:00:00 | 100%
TestHexFileSeq.java | 23 kB | 23.1 kB/s | ETA: 00:00:00 | 100%
HexFileSeq.java      | 14 kB | 14.6 kB/s | ETA: 00:00:00 | 100%
Main$1$1.class       | 0 kB | 1.0 kB/s | ETA: 00:00:00 | 100%
Main$1.class         | 0 kB | 0.7 kB/s | ETA: 00:00:00 | 100%
Main$2.class         | 1 kB | 1.8 kB/s | ETA: 00:00:00 | 100%
Main$HexPanel.class  | 1 kB | 1.2 kB/s | ETA: 00:00:00 | 100%
Main$TerrainButton.class | 1 kB | 1.0 kB/s | ETA: 00:00:00 | 100%
Main$TerrainIndicator.cla | 0 kB | 0.9 kB/s | ETA: 00:00:00 | 100%
Main.class           | 3 kB | 3.6 kB/s | ETA: 00:00:00 | 100%
HexFileSeq$Node.class | 0 kB | 0.5 kB/s | ETA: 00:00:00 | 100%
HexFileSeq.class     | 6 kB | 6.4 kB/s | ETA: 00:00:00 | 100%
TestHexFileSeq.class | 16 kB | 16.5 kB/s | ETA: 00:00:00 | 100%
```

Figure 3: PSCP.

4. You should then be prompted for your password with the line. Enter your panther password (you will not see it while typing).

## 4 Create a Soft Link to CS351

This is a shortcut so you do not need to type `/afs/cs.wvm.edu/users/classes/cs351/` everytime you access andrew.

1. Log into andrew as described in Section 1 or 2.
2. *cd* into the directory in which you want to have the soft link. You should be at your “home” directory (`~`) by default when logging into andrew.
3. Type the command as follows:
 

```
ln -s /afs/cs.wvm.edu/users/classes/cs351/ cs351
```

 The latter *cs351* is the name of your link.

```
kechen@ale:~$ ln -s /afs/cs.uwm.edu/users/classes/cs351 cs351
```

Figure 4: Soft link.

Now try to use the link to *cd* into the solution folder:

```
cd ~/cs351/solution
```

it should lead you to the same directory as this command does:

```
cd /afs/cs.uwm.edu/users/classes/cs351/solution
```

This shortcut also works in *pscp/scp* and Eclipse. For example, you can do:

```
pscp -P 53211 -r kechen@ale.cae.uwm.edu:~/cs351/solution/homework4 hw4
```