

# Notes on using Stanford's computing resources

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## 1 Computer clusters

Stanford provides all of us with access to a cluster of Linux machines. These will behave like the Terminal on your Mac or like the Unix emulator on your Windows machine. Using the command `python` will give you version 2.7.6, and the command `python3` will give you version 3.4.3.

### 1.1 ssh — logging in to your account

In your terminal application, you can log-in with

```
ssh USERNAME@cardinal.stanford.edu
```

Enter your usual Stanford password when prompted. This should trigger a two-factor prompt. Once you're in, it's a Unix environment. Some basic navigation commands:

Command	Meaning
<code>cd foo</code>	change the current directory (your location) to <code>foo</code>
<code>cd ..</code>	change the current directory (your location) to the parent directory
<code>ls</code>	list all of the files and directories here
<code>ls foo</code>	list all of the files and directories in <code>foo</code>
<code>ls -la</code>	list all of the files and directories here with metadata
<code>pwd</code>	present working directory

For much more: [http://linuxcommand.org/lc3\\_learning\\_the\\_shell.php](http://linuxcommand.org/lc3_learning_the_shell.php)

### 1.2 sftp — transferring files to and from your account

In CyberDuck is a free ssh utility:

- i. Click Open Connection
- ii. Toggle to SFTP
- iii. Set Server to `cardinal.stanford.edu`
- iv. Set Port to 22
- v. Fill in your Stanford username and password.
- vi. Click Connect

Alternatively, you can use Stanford's own SFTP program, LelandSSH. For details:

<https://uit.stanford.edu/service/sharedcomputing>

### 1.3 AFS on your Desktop

Stanford's AFS set-up lets you create a remote folder right on your home machine:

```
https://uit.stanford.edu/service/afs/intro/mounting
```

I think the easiest path to getting this working is to install the Stanford Desktop tools and run the Kerberos set-up utility: <https://itservices.stanford.edu/service/ess>.

## 2 Your own website

Your account comes set up with a web folder, WWW. Files you put in there are viewable on the Web. If you want to create a basic website, download the following file, edit it as you see fit, and upload it to WWW:

```
http://www.stanford.edu/class/linguist278/data/samplehome/index.html
```

Get the associated image:

```
http://www.stanford.edu/class/linguist278/data/samplehome/images/Wug.jpg
```

The file is then viewable at <http://www.stanford.edu/~USERNAME/>

## 3 CGI programming

If you requested CGI access, then you have a folder called `cgi-bin` in your home directory. CGI programs you put there are then web accessible. For example, if you add my directory of `cgi_adder` programs there, then you will be able to run them here:

```
http://www.stanford.edu/~USERNAME/cgi-bin/cgi_adder/
```

In many environments, CGI programs have to be set to specific file permissions, but Stanford seems to take care of all of that for us!

## 4 Corpora

Stanford Linguistics is a member of the the Linguistic Data Consortium (LDC), so we have access to lots of amazing corpora:

```
https://linguistics.stanford.edu/resources/resources-corpora
```

To request access, follow the instructions here; people who aren't in Linguistics should cc me on their request message so that I can tell the Corpus TA who you are:

```
https://linguistics.stanford.edu/resources/corpora/accessing-corpora
```

With your SFTP program, you might create a stored log-in that will take you directly to the corpora, which are in `/afs/ir/data/linguistic-data/`. In CyberDuck, this can be set under More Options > Path.