How To: Download CloudSat

→ List of data products can be found here

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1. Register an account here
2. On this page, scroll down to **Creating an SSH Key**. I've copied instructions and added notes below in **red**

Mac/Linux Instructions

1. Open a terminal

   →Login to server where you want to download data

2. Run the command `ssh-keygen -b 2048 -t rsa` (we recommend the default location; use of a passphrase is up to you)
3. Once you're done, run the commands `cd ~/.ssh` and then `cat id_rsa.pub` and copy the output starting with "ssh-rsa" and ending with "USERNAME@MACHINENAME"
4. Login to our website and then in the user menu click "Add SFTP Key"

   →It also requests your IP address. To get this for your server, it's easiest to "ping" the server while logged out. E.g., `ping superior.ssec.wisc.edu` or whatever you use to login. Whatever IP address is spat out, use that on the "Add SFTP Key" webpage. Address should look something like ###.###.###.###. For me, what pops up is `PING superior.ssec.wisc.edu (128.104.110.219)`

   → If this does not work, login to the server and type in `ifconfig -a`. One of the top lines should look like the following, with your IP address listed immediately after `inet` (number of digits may be different):

   ```
   inet ###.###.#.##  netmask ###.###.###.###  broadcast ###.###.###.###
   ```

5. Paste what you copied in Step 3 into the box, and then click "Add" - you should receive a success message
6. Now you should be able to run the command `sftp AT_EMAIL@www.cloudsat.cira.colostate.edu`, where AT_EMAIL is your email with "@" replaced with "AT" (Example: cloudsat_userATcolostate.edu).

   → Here, you'll enter your username ("mateling") exactly like this:

```
sftp matelingATwisc.edu@www.cloudsat.cira.colostate.edu
```

7. Since this is your first connection, you'll receive a message prompting you to trust the server. Type "yes" (it may not appear as you type - that's OK!) and then you'll be connected!

   → **This might open an sftp "session", which you can just `exit` out of**

   (Back to my instructions)

3. Navigate to the location you want to download data. Make sure there is plenty of free space using: **`df -h`**
4. Download data! It downloads as folders per julian date (001/, 002/, etc.) so you'll want to make sure you keep years separate. To download all of 2006, for example, type in exactly this (no new line or "return" here, it just won't all fit on one line) :

   ```
   sftp -r matelingATwisc.edu@www.cloudsat.cira.colostate.edu:Data/2C-SNOW-PROFILE.P1_R05/2006/ .
   ```

   (Don't forget the period at the end of this line to indicate to download "here")