Exercise: Building NetCDF

1. Open up a web browser.

2. Go to your favorite search engine (e.g., Google).

3. Search for:

    NetCDF

4. Go to the NetCDF website.

5. Click on the link for downloading the source code for the latest stable version for C/Fortran/C++.

6. Look for the link for the most recent stable release of bundled C, C++ and Fortran, and click on it.

7. Look for the link to the NetCDF Distributions page and click on it.

8. Find the gzipped tar file version.

9. Copy the location of that link by right-clicking on the link and selecting "Copy Link Location" or equivalent.

10. On Boomer, go into your `~/PPCC2012/` directory.

11. Create a directory to do this build in:

    `mkdir   NetCDF`

12. Go into that directory:

    `cd   NetCDF`

13. Download the NetCDF source code using this command; for example:

    `wget   http://www.unidata.ucar.edu/downloads/netcdf/ftp/netcdf-whatever.tar.gz`

    (where `whatever` should be replaced by the version number).

14. "Untar" the compressed tar file:

    `tar   zxvf   netcdf-whatever.tar.gz`

    (where `whatever` should be replaced by the version number).

15. Go into the newly created NetCDF directory:

    `cd   netcdf-whatever`

    (where `whatever` should be replaced by the version number).

16. Determine your current working directory:

    `pwd`

17. Read the file named `INSTALL`, which has instructions for how to install NetCDF:

    `more   INSTALL`

    If you're unfamiliar with the `more` command, ask someone for help.

18. Specifically, in the `INSTALL` file, look for "Building NetCDF with Classic Library Only."

19. Again, determine your current working directory:

    `pwd`

20. You're going to install NetCDF into the current working directory, so in the configure step (below), the working directory that you discovered in the previous step is what you should use for the value of:

```
--prefix=
```

(where `whatever` should be replaced by the version number), with **<u>one exception</u>** as described below.

21. Perform the `configure` step, as described in the `INSTALL` file, with **<u>one exception</u>**: at the end of the directory name for -- prefix, append <mark>build</mark>, like so:

```
--prefix= /home/yourusername/PPCC2012/NetCDF/netcdf-whatever/build
```

(where `whatever` should be replaced by the version number).

This will probably take a few minutes, as the configure script examines the computer you're on to see how best to build NetCDF.

22. Perform the `make` step, as described in the `INSTALL` file. This will probably take many minutes, because you'll not only be building the code but also testing it (all automatically):

```
make  install  check
```

23. If you look in the subdirectory `build/lib`, you'll see the NetCDF libraries:

```
ls build/lib
```