CAIDA CoralReef Exercises

How To Install CoralReef

Before you can use CoralReef it must be installed on your Unix system.

CoralReef is known to work under FreeBSD (2.7, 2.8, 3.0, and 3.1), Linux (2.0.36 and 2.2 pre*) and Solaris 2.5. It should work on other POSIX systems as well.

Before installing CoralReef you need to know what command name to type to use the GNU version of make. On FreeBSD and Solaris this is normally `gmake`. On Linux it is normally `make`. Try the following command on your system:

```
gmake -v
```

if that fails try:

```
make -v
```

And look for the name GNU Make in the output (it's normally in the first line).

If neither of these succeed you need to have GNU make installed on your your system before you continue. Consult your system administrator.

The commands that follow are written as if `gmake` is the correct command. Replace `gmake` with `make` if appropriate.

You must also decide where you are going to install CoralReef. This differs depending on whether you want to install it system wide or in your own private file space. Wherever you choose the install process will create a subdirectory `Coral` with further subdirectories for the libraries (`lib`), header files (`include`), executable user programs (`bin`) and system administration commands (`etc`).

The standard, system wide, location is `/usr/local/`. If you are installing CoralReef in your own directory space we recommend you use the same top level directory as you download the file to in step 1 below.

1. Begin by creating an empty directory where you are going to compile CoralReef.

2. Start a web browser and go to the page:
   `https://www.caida.org/Tools/CoralReef/`
   or follow the links from the
   `https://www.caida.org/`
   page. Download the current version[1] of CoralReef and save it in the directory you created.

3. In the directory unpack the tar.gz archive with the command:

   ```
   gunzip < downloadedfile.tar.gz | tar -xf -
   ```

   A directory for the current version of CoralReef will be create. Go to that directory.

4. If the version is 3.1.4 and you are using Debian GNU/Linux stable set you may need to st an environment variable to ensure the correct compiler is used. Set the variable CXX to g++. I.E. `CXX=g++ ; export CXX` if you use a Bourne shell (sh, bash etc) or `setenv CXX g++` if you use a csh shell (csh, tcsh etc.)

5. The file `README` (in the package root directory which was created when you unpacked CoralReef) contains instructions for compiling the package. In most cases you just need to execute the following commands:

   ```
   ./configure --prefix=your_install_directory
   gmake depend
   gmake
   ```

6. Install CoralReef with the command:

   ```
   gmake install
   ```

   Note: If you choose to install CoralReef system wide this command must be executed as root.

[1] The current version was 3.1.4 at the time these exercises were developed

7. If the version is 3.1.4 you need to patch the installed version of `crl_hist`. Go to the direcotry of installed binaries (`/usr/local/Coral/bin` by default and add the line:
   ```
   use lib "/usr/local/Coral/lib";
   ```
   before
   ```
   use lib "../../lib"; #coral local libdir#
   ```
   at line 53.

To use CoralReef commands you will need to include the bin directory in your path. If you use sh or bash as your shell use a command like:

```
PATH=${PATH}:coral_install_dir/bin ; export PATH
```

If you use csh or tcsh use a command like:

```
setenv PATH ${PATH}:coral_install_dir/bin+
```

If you're not sure try the csh version and if that give you an error message use the sh version.

Test out the installation by downloading a traces file (e.g.): http://www.caida.org/ tonym/traces/ODU-926843183.crl.enc and running the command: `crl_timestamps ODU-926843183.crl.enc` from the bin subdirectory of the directory where you *installed* (not downloaded) CoralReef.

If everything checks out you can tidy up by typing:

```
gmake clean
```

in the root directory and by removing the download file.