Data Processing School :: Exercise cr0

Source directory	/data/lofarschool/data/Exercise-CR
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Context

This is "just" the setup for the following CR exercises.

At the same time this should serve as a first exposition to the configuration/build system used by the User Software Group – when expanding upon the existing code base, this will be the environment to work within.

Prerequisite

- Installed USG software (CR-Tools package)
- cmake in your PATH; if you are using tcsh as your shell, then

```
source /app/scripts/doUSG
```

will do the trick.

Description

Use a simple "build environment" with CMake to compile and build the exercise tools.

Files & Directories

```
/data/lofarschool/data/Exercise-CR
|-- build
|-- 2006.02.23.04:02:50.283.event
`-- src
|-- CMakeLists.txt
|-- Exercise-CR1.cc
|-- Exercise-CR2.cc
`-- Exercise-CR3.cc
```

In this CMakeLists.txt is the input file used by cmake to configure the project. The directory src holds the source code of everything we want to compile into an executable binary and will remain untouched. The build itself is performed out-of-source from within the directory build; the main advantage of this is, that the staging area non-identical to the area where all the source code is located – therefore in order to redo everything from scratch a complete removal of everything within build is possible, without affecting the original code.

Step-by-step instructions

1. Copy the src and build directories to your local directory:

```
cp /data/lofarschool/data/Exercise-CR/src .
cp /data/lofarschool/data/Exercise-CR/build .
```

Change into the build directory:

```
cd build
```

3. Run CMake in order to configure your project build:

```
cmake ../src
```

That should end with the lines:

```
-- Configuring done-- Generating done-- Build files have been written to: ...
```

4. Run make to compile the executables:

make

You should see something like this:

```
Scanning dependencies of target exercise_crl
[ 33%] Building CXX object CMakeFiles/exercise crl.dir/Exercise-
CR1.cc.o
Linking CXX executable exercise cr1
[ 33%] Built target exercise_cr1
Scanning dependencies of target exercise cr2
[ 66%] Building CXX object CMakeFiles/exercise cr2.dir/Exercise-
CR2.cc.o
Linking CXX executable exercise cr2
[ 66%] Built target exercise cr2
Scanning dependencies of target exercise_cr3
[100%] Building CXX object CMakeFiles/exercise cr3.dir/Exercise-
CR3.cc.o
Linking CXX executable exercise_cr3
[100%] Built target exercise cr3
Elapsed: 0:25.39 - CPU: 20.197u+2.924s = 91.0%
```

Example outputs

Nothing here

Bug Reports

• If you get the error message, that cmake is not found, then add /usr/local/bin to your PATH. (You are probably using bash...)

export PATH=\$PATH:/usr/local/bin

If you are experiencing trouble getting the exercise to work, this is the place to leave a note about it.

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