Subject: Problems with pthread in FairRoot
Posted by benny_heiss on Mon, 11 Jun 2018 08:46:28 GMT
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Hi everybody,

after successfully configuring the current version of FairSoft on CentOS 7, I tried to install FairRoot. Running cmake resulted in the following error:

CMake Error at cmake/modules/FindGo.cmake:49 (message):
  Go build for go-processor failed!
Call Stack (most recent call first):
  examples/advanced/GoTutorial/CMakeLists.txt:6 (build_go_package)

-- Configuring incomplete, errors occurred!

I attached the corresponding CMakeError and CMakeOutput logs. The issue seems to be something related to pthread from what I can gather from the logs. pthread is installed and is also found by cmake:

-- Looking for pthread.h
-- Looking for pthread.h - found
-- Looking for pthread_create
-- Looking for pthread_create - not found
-- Looking for pthread_create in pthreads
-- Looking for pthread_create in pthreads - not found
-- Looking for pthread_create in pthread
-- Looking for pthread_create in pthread - found
-- Found Threads: TRUE

Did anyone already encounter this issue? Or is running the current version of FairRoot on CentOS 7 and knows how I can get it up and running?

Thanks for your help!

Cheers,

Benjamin

File Attachments

1) CMakeOutput.log, downloaded 591 times
2) CMakeError.log, downloaded 631 times

Subject: Re: Problems with pthread in FairRoot

Posted by Mohammad Al-Turany on Mon, 11 Jun 2018 09:20:02 GMT
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Hi Benjamin,

Do you have pthread or pthreads on your system? I have a CentOs 7 system and I see /usr/lib64/libpthread.so and not with (s). In your output it is looking for some reason for pthreads library and not pthread.

Which CMake version you use?

Subject: Re: Problems with pthread in FairRoot
Posted by benny_heiss on Mon, 11 Jun 2018 09:25:30 GMT
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I have /usr/lib64/libpthread-2.17.so installed, I don't know why cmake is looking for pthreads...

My cmake version is cmake3 version 3.11.2, which is what I am using to run. Do you run the current FairRoot version on your CentOS 7 machine?

Subject: Re: Problems with pthread in FairRoot
Posted by Mohammad Al-Turany on Mon, 11 Jun 2018 09:40:19 GMT
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Hi,

Yes, I am only using gcc 6.2 and not the default one. I will try now with gcc 4.8.5 and see.

Quote:

-- The C compiler identification is GNU 6.2.0
-- The CXX compiler identification is GNU 6.2.0
-- Check for working C compiler: /afs/cern.ch/sw/lcg/contrib/gcc/6.2.0/x86_64-centos7/bin/gcc
-- Check for working C compiler: /afs/cern.ch/sw/lcg/contrib/gcc/6.2.0/x86_64-centos7/bin/gcc
-- works
-- Detecting C compiler ABI info
-- Detecting C compiler ABI info - done
-- Detecting C compile features
-- Detecting C compile features - done
-- Check for working CXX compiler:
/afs/cern.ch/sw/lcg/contrib/gcc/6.2.0/x86_64-centos7/bin/g++
-- Check for working CXX compiler:
/afs/cern.ch/sw/lcg/contrib/gcc/6.2.0/x86_64-centos7/bin/g++ -- works
-- Detecting CXX compiler ABI info
-- Detecting CXX compiler ABI info - done
-- Detecting CXX compile features
-- Detecting CXX compile features - done

```
-- Performing Test _HAS_CXX11_FLAG
-- Performing Test _HAS_CXX11_FLAG - Success
-- Checking C++11 support for "__func__"
-- Checking C++11 support for "__func__": works
-- Checking C++11 support for "auto"
-- Checking C++11 support for "auto": works
-- Checking C++11 support for "auto_ret_type"
-- Checking C++11 support for "auto_ret_type": works
-- Checking C++11 support for "class_override_final"
-- Checking C++11 support for "class_override_final": works
-- Checking C++11 support for "constexpr"
-- Checking C++11 support for "constexpr": works
-- Checking C++11 support for "constructor-delegation"
-- Checking C++11 support for "constructor-delegation": works
-- Checking C++11 support for "cstdint"
-- Checking C++11 support for "cstdint": works
-- Checking C++11 support for "decltype"
-- Checking C++11 support for "decltype": works
-- Checking C++11 support for "initializer_list"
-- Checking C++11 support for "initializer_list": works
-- Checking C++11 support for "lambda"
-- Checking C++11 support for "lambda": works
-- Checking C++11 support for "long_long"
-- Checking C++11 support for "long_long": works
-- Checking C++11 support for "nullptr"
-- Checking C++11 support for "nullptr": works
-- Checking C++11 support for "regex"
-- Checking C++11 support for "regex": works
-- Checking C++11 support for "rvalue-references"
-- Checking C++11 support for "rvalue-references": works
-- Checking C++11 support for "sizeof_member"
-- Checking C++11 support for "sizeof_member": works
-- Checking C++11 support for "static_assert"
-- Checking C++11 support for "static_assert": works
-- Checking C++11 support for "variadic_templates"
-- Checking C++11 support for "variadic_templates": works
-- Checking C++11 support for "sharedpointer"
-- Checking C++11 support for "sharedpointer": works
-- Checking C++11 support for "funcptr-to-lambda-conversion"
-- Checking C++11 support for "funcptr-to-lambda-conversion": works
-- fairsoft-config found
--- Found a Linux system
--- Found GNU compiler collection
--- Build Type: RelWithDebInfo
--- Compiler Flags:  -std=c++11  -O2 -g -Wshadow
-- Looking for Root...
-- Looking for Root... - Found /afs/cern.ch/work/m/malturan/install/FairSoft/may18/bin/root
-- Looking for Root... - Found version is 6.12/06
-- Looking for Pythia6...
-- Looking for Pythia6... - found /afs/cern.ch/work/m/malturan/install/FairSoft/may18/lib
-- Looking for PYTHIA8 ...
-- Looking for PYTHIA8... - found /afs/cern.ch/work/m/malturan/install/FairSoft/may18/lib
```

```
-- Looking for GEANT3...
-- Looking for GEANT3... - found
/afs/cern.ch/work/m/malturan/install/FairSoft/may18/lib/libgeant321.so
-- Looking for GEANT4...
-- Looking for GEANT4... - found /afs/cern.ch/work/m/malturan/install/FairSoft/may18/lib
-- Looking for GEANT4 DATA files...
-- Found G4EMLOW data
-- Found PhotonEvaporation data
-- Found G4NDL data
-- Found G4NEUTRONXS data
G4PIIDATA:
-- Found G4PII data
-- Found RadioactiveDecay data
-- Found RealSurface data
-- Found G4SAID data
-- Found G4ENSDFSTATE data
-- Looking for GEANT4VMC...
-- Looking for GEANT4VMC... - found  /afs/cern.ch/work/m/malturan/install/FairSoft/may18/lib
-- Looking for VGM...
-- Looking for VGM... - found  /afs/cern.ch/work/m/malturan/install/FairSoft/may18/lib
-- Looking for CLHEP...
-- Looking for CLHEP... - found /afs/cern.ch/work/m/malturan/install/FairSoft/may18/lib
-- Looking for CUDA...
CUDA_TOOLKIT_ROOT_DIR not found or specified
-- Could NOT find CUDA (missing: CUDA_TOOLKIT_ROOT_DIR
CUDA_NVCC_EXECUTABLE CUDA_INCLUDE_DIRS CUDA_CUDART_LIBRARY)
-- Looking for IWYU...
-- Looking for IWYU... - Not found
-- Looking for Go...
-- Looking for Go... found Go 1.9.4
-- Found Go: /usr/bin/go (found suitable version "1.9.4", minimum required is "1.7")
-- Using GSL from /usr
-- Found GSL: /usr/include -lgsl;-lgslcblas;-lm
-- Looking for Boost ...
-- Looking for pthread.h
-- Looking for pthread.h - found
-- Looking for pthread_create
-- Looking for pthread_create - not found
-- Looking for pthread_create in pthreads
-- Looking for pthread_create in pthreads - not found
-- Looking for pthread_create in pthread
-- Looking for pthread_create in pthread - found
-- Found Threads: TRUE
-- Boost version: 1.67.0
-- Found the following Boost libraries:
--   thread
--   system
--   timer
--   program_options
--   random
--   filesystem
--   chrono
```

-- exception
-- regex
-- serialization
-- log
-- log_setup
-- atomic
-- date_time
-- signals
-- C++11 support found.
-- Build CbmModule with Gdml support
-- Looking for CLOCK_REALTIME
-- Looking for CLOCK_REALTIME - found
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/simulation/Tutorial
1/macros/run_tutorial1.sh 2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/simulation/Tutorial
1/macros/run_tutorial1_pythia6.sh 2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/simulation/Tutorial
1/macros/run_tutorial1_pythia8.sh 2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/simulation/Tutorial
1/macros/run_tutorial1_mesh.sh 2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/simulation/Tutorial
1/macros/run_tutorial1_urqmd.sh 2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/simulation/Tutorial
1/macros/load_all_libs.sh 2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/simulation/Tutorial
2/macros/run_tutorial2.sh 2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/simulation/Tutorial
2/macros/create_digis.sh 2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/simulation/Tutorial
2/macros/read_digis.sh 2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/simulation/Tutorial 2/macros/run_bg.sh
2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/simulation/Tutorial 2/macros/run_sg.sh
2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/simulation/Tutorial 2/macros/run_sg1.sh
2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/simulation/Tutorial
2/macros/create_digis_mixed.sh 2>&1
running /bin/chmod u+x

/afs/cern.ch/work/m/malturan/FairRoot/build/examples/simulation/Tutorial
4/macros/run_tutorial4.sh 2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/simulation/Tutorial
4/macros/run_reco.sh 2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/MQ/pixelDetector/ma cros/run_sim.sh
2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/MQ/pixelDetector/ma cros/run_digi.sh
2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/MQ/pixelDetector/ma
cros/run_digiToBin.sh 2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/MQ/pixelDetector/ru
n/startFairMQPixelSimulation.sh 2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/MQ/pixelDetector/ru
n/startFairMQPixel.sh 2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/MQ/pixelAlternative
/run/startFairMQPixAlt.sh 2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/advanced/Tutorial3/ macro/run_sim.sh
2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/advanced/Tutorial3/ macro/run_digi.sh
2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/advanced/Tutorial3/ macro/run_reco.sh
2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/advanced/Tutorial3/
macro/run_digi_timebased.sh 2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/advanced/Tutorial3/
macro/run_reco_timebased.sh 2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/simulation/rutherfo
rd/macros/run_rutherford.sh 2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/simulation/rutherfo
rd/macros/run_rad.sh 2>&1
running /bin/chmod u+x
/afs/cern.ch/work/m/malturan/FairRoot/build/examples/advanced/MbsTutoria
l/macros/unpack_mbs.sh 2>&1
Test_Model: RelWithDebInfo
-- Found Git: /usr/bin/git (found version "1.8.3.1")
-- Configuring done
-- Generating done
-- Build files have been written to: /afs/cern.ch/work/m/malturan/FairRoot/build

Subject: Re: Problems with pthread in FairRoot
Posted by benny_heiss on Tue, 12 Jun 2018 04:51:05 GMT
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Hi,

I "fixed" the issue I had with the Go example and pthreads by commenting it out in the file examples/advanced/GoTutorial/CMakeLists.txt in the FairRoot source folder. Apparently configuring this is the only part where the issue appears, so this "dirty hack" solved my problem. It still does not explain why or how it happens however, so some investigation is still needed I think. Hopefully you can come up with a more satisfying solution in case my problem reappears in the future for other users.

Subject: Re: Problems with pthread in FairRoot
Posted by Mohammad Al-Turany on Tue, 12 Jun 2018 10:49:09 GMT
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Hallo Benjamin,

Using the default compiler (gcc 4.8.5) I could reproduce the error. I am not sure it is really related to the pthread, it seems to me more a "GO" problem but we need to consult the "GO" experts. For now we will put the "GO" example to OFF by default.

As soon as we find a solution I will post it here.

best,

Mohammad

Subject: Re: Problems with pthread in FairRoot
Posted by Mohammad Al-Turany on Tue, 12 Jun 2018 11:05:15 GMT
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It seems to be a problem with the gcc 4.8.x I could also reproduce it with ubuntu 14.04

Subject: Re: Problems with pthread in FairRoot
Posted by Mohammad Al-Turany on Wed, 13 Jun 2018 09:37:58 GMT
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Hallo Benjamin,

It would be better to continue this discussion on GitHub. I created the same issue there so that

the go experts can help us.

https://github.com/FairRootGroup/FairRoot/issues/793

best,

Mohammad

Subject: Re: Problems with pthread in FairRoot [Solved, it was found that it has nothing do with pthread]
Posted by Mohammad Al-Turany on Thu, 14 Jun 2018 10:13:47 GMT
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Hi,

Problem is solved, thanks to Sebastien Binet, see discussion on GitHub

best

Mohammad
