DMT System Log - page 1 of 1

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Date and Author(s)	Notarized Mon Mar 4 22:07:11 2002 (GMT) by N/A

Pressing "reload" will reopen control panel

DMT Installation

Notes from the installation of the DMT software on chablis.

The various packages will be installed in the following directories:

- /opt/dmt/

  DMT binaries and compiled software go here ($DMTHOME).

- /usr/center/chablis/dmt/

  DMT user home directory. Source codes.

- /usr/dmt/

  Utility programs: gcc 2.95.3, ligotools, ROOT (in subdirectory), fftw, etc.

Before dmt can be installed, need to install some utilities:

- gcc-2.95.3 (system is 2.96: be careful!)
- libtool (>=1.4.2: system is 1.4)
- make 3.79.1 (system make!)

We also need ligotools (which includes fftw)

Building GCC-2.95.3

- Src in ~dmt/src/gcc-2.95.3; objects in ~dmt/objdir/gcc-2.95.3
- Configure with

  ~/src/gcc-2.95.3/configure --prefix=/usr/dmt --enable-shared --enable-threads

- Build with

  make bootstrap MAKE="make -j 2" -j 2

- Install with

  make install

Make sure we are using gcc and its libraries. We will need to add to /etc/profile.d/{path,env}.{sh,csh}; for now, add to ~dmt/.cshrc

```
set path = (/usr/dmt/bin $path)
setenv LD_LIBRARY_PATH /usr/dmt/lib
```

Notarized from start of page to here on Mon Mar 4 19:47:29 2002 (GMT)

Addendum   **Patrick Sutton** Date: **Mon Mar 4 20:03:47 2002** (GMT)
Logged-out and logged back in; checked that we see gcc-2.95.3 when we ask for gcc.

LibTool Install

- Configure with

    ./configure --prefix=/usr/dmt

- make with

    make

- install with

    make install

Addendum   **Patrick Sutton** Date: **Mon Mar 4 20:21:58 2002** (GMT)

Installing LIGOTOOLS

- Installed ligotools in parent directory

    /usr/dmt

- Arranged to install binaries, libs, includes, java, matlab, etc., in

    /usr/dmt

    subdirectories.
- Installed tcl from ligotools page (as required); placed in /usr/dmt/bin.
- Installed all but root, lal. Root and lal are marked as "Never" packages so we don't run the risk of accidentally installing them in a later ligotools update.

Will need to add "eval '/usr/dmt/bin/use_ligotools'" to start-up environment (e.g., in /etc/profile.d/env.{sh,csh}). For now, put in ~dmt/.cshrc

---

Addendum   **Patrick Sutton** Date: **Mon Mar 4 20:59:01 2002** (GMT)

ROOT Install

- ROOT needs libXpm - checked that is available on dmt system
- setenv ROOTSYS /usr/dmt/root
- configure with --enable-thread, --enable-shared, --enable-opengl
- make with -j 2
- install with make install

Need to add /usr/dmt/root/bin to path, also /usr/dmt/root/lib to LD_LIBRARY_PATH. These should go in /etc/profile.d/env.{sh,csh}; put in .cshrc for now.

ROOT appears to be working. On to DMT.

Addendum   **Patrick Sutton** Date: **Mon Mar 4 22:00:22 2002** (GMT)

DMT

- Need (or, at least, helps a lot) to have curl installed. We have curl.
- ./configure linux
- make -C External
  - First attempt failed on External/expat/xmlwf/unixfilemap.c with undefined caddr_t. Added recommended typedef (typedef unsigned int caddr_t) and tried to make again.
  - Second make failed to pick-up correctly where first left-off.
  - Tried make clean, reconfigured, and make -C External
  - Compile *appears* successful.
- Next step - "make" - fails:

```
/usr/dmt/root/bin/rootcint -f dict/gdsbase_dict.cc -c  -I../include -D_REENTRANT -I/usr/dmt/root/include wavefft.h tco
Class Interval: Streamer() not declared
Class Interval: ShowMembers() not declared
Class Time: Streamer() not declared
Class Time: ShowMembers() not declared
Class basicplx  : Streamer() not declared
Class basicplx  : ShowMembers() not declared
Class basicplx  : Class_Name() and initialization object not declared
Class basicplx  : Streamer() not declared
Class basicplx  : ShowMembers() not declared
Class basicplx  : Class_Name() and initialization object not declared
g++ -fPIC -Wall  -D_POSIX_C_SOURCE=199506L -D_XOPEN_SOURCE=600  -O3 -I../include -D_REENTRANT -
In file included from /usr/dmt/root/include/TString.h:31,
                 from /usr/dmt/root/include/TCollection.h:34,
                 from /usr/dmt/root/include/TSeqCollection.h:26,
                 from /usr/dmt/root/include/TList.h:26,
                 from /usr/dmt/root/include/TNamed.h:29,
                 from /usr/dmt/root/include/TDirectory.h:25,
                 from /usr/dmt/root/include/TROOT.h:29,
                 from dict/gdsbase_dict.h:27,
                 from dict/gdsbase_dict.cc:5:
/usr/dmt/root/include/TMath.h: In function 'static Int_t TMath::Finite(double)':/usr/dmt/root/include/TMath.h:391: impl
make[1]: *** [dict/gdsbase_dict.o] Error 1
make[1]: Leaving directory '/opt/dmt/cvs/gds/Base'
make: *** [Base] Error 2
```

Notarized from start of page to here on Mon Mar 4 22:07:11 2002 (GMT)

Addendum **LSFinn** Date: **Mon Mar 4 22:13:29 2002** (GMT)
J. Zweizig reports that gds has its own version of fftw, which comes when you do the cvs export of gds to build dmt. So, we don't actually use the ligotools fftw: we get (yet another) one.

Addendum **LSFinn** Date: **Tue Mar 5 15:06:11 2002** (GMT)
J. Zweizig reports:

The problem seems to be that finite() is evidently not defined within the Posix spec! This causes the linux header to remove it unceremoniously when the _POSIX_C_SOURCE and _XOPEN_SOURCE compilation flags are used.

Looking at the sources on my laptop I see that I have modified $ROOTSYS/include/TMath.h to use isfinite(x) instead of finite(x). I could have defined

extern "C" {int finite(double);}

in TMath.h instead. Neither solution is particularly elegant, but they should work.

Addendum **Patrick Sutton** Date: **Tue Mar 5 16:29:07 2002** (GMT)
Attempted fix: modified $ROOTSYS/include/TMath.h to use isfinite(x) instead of finite(x).

Add ROOTSYS to .cshrc and source it.

```
make clean; make distclean; ./configure linux
make -C External
```

Interestingly, this loses the correction to unixfilemap made yesterday.

Correct unixfilemap (again!): see log discussion above, but note that need a ";" to terminate the typedef. Repeat

```
make clean; make distclean; ./configure linux
make -C External
```

Check that TMath.h is (still) ok: it is.

```
make
```

This make fails because framecpp not found:

```
dacc/Channel.cc:9: framecpp/frame.hh: No such file or directory
```

```
In file included from dacc/Dacc.hh:4,
          from dacc/Dacc.cc:4:
dacc/DaccIn.hh:19: framecpp/rawdata.hh: No such file or directory
dacc/Dacc.cc:5: framecpp/errors.hh: No such file or directory
dacc/Dacc.cc:6: framecpp/frame.hh: No such file or directory
dacc/Dacc.cc:7: framecpp/framereader.hh: No such file or directory
In file included from dacc/DaccIn.cc:9:
dacc/DaccIn.hh:19: framecpp/rawdata.hh: No such file or directory
dacc/DaccIn.cc:10: framecpp/errors.hh: No such file or directory
dacc/DaccIn.cc:11: framecpp/frame.hh: No such file or directory
dacc/DaccIn.cc:12: framecpp/time.hh: No such file or directory
dacc/DaccIn.cc:13: framecpp/framereader.hh: No such file or directory
dacc/DaccIn.cc:14: framecpp/tocreader.hh: No such file or directory
frwriter/FrWriter.cc:4: framecpp/frame.hh: No such file or directory
frwriter/FrWriter.cc:5: framecpp/rawdata.hh: No such file or directory
frwriter/FrWriter.cc:6: framecpp/framewriter.hh: No such file or directory
frwriter/FrWriter.cc:7: framecpp/framewritertoc.hh: No such file or directory
Generate dictionary rules...
make[1]: Leaving directory '/opt/dmt/cvs/gds/Services'
cd Services; make
make[1]: Entering directory '/opt/dmt/cvs/gds/Services'
g++ -fPIC -Wall -D_POSIX_C_SOURCE=199506L -D_XOPEN_SOURCE=600 -O3 -g -I../include -D_REENTRANT -I/usr
dacc/Channel.cc:9: framecpp/frame.hh: No such file or directory
make[1]: *** [dacc/Channel.o] Error 1
make[1]: Leaving directory '/opt/dmt/cvs/gds/Services'
make: *** [Services] Error 2
```

<u>Addendum</u>   Patrick Sutton Date: **Tue Mar 5 18:42:26 2002** (GMT)
J. Zweizig reports:

Oops, I forgot one thing in the procedure. You need to define

setenv GDSBUILD framecpp

before (re-)running

   make -C External

the make file will try to download a distribution copy of framecpp from the ldas server with curl. If you don't have curl, this won't work, but you can short-circuit that step by using netscape or whatever to download the tarball by hand. The framecpp compilation takes a while and gives very little information unless you dig down into subdirectories of subdirectories. I think that the version number that is hard-coded into the Makefile is sort of old. I you are really enterprising you might move it up to at least 0.0.23 (I'd actually recommend this... I think a byte swapping bug was fixed in 0.0.23 that might cause problems on linux).

<u>Addendum</u>   Patrick Sutton Date: **Tue Mar 5 19:05:48 2002** (GMT)
Change /opt/dmt/cvs/gds/External/Makefile so that it asks for framecpp from 0.0.23 (was 0.0.22) as recommended (see last annotation).

make distclean
setenv GDSBUILD framecpp
./configure linux
make -C External

Opps, forgot that "make distclean" removes correction to unixfilemap (see log entry Mar 04 22:00 2002). Do "make clean", "make distclean", replace typedef correction in unixfilemap.c, reconfigure, "make -C External". Now halt with error message

```
make[1]: Entering directory '/opt/dmt/cvs/gds/External/expat'
cp -fp xmlparse/xmlparse.h ../include
cp -fp lib/libxml.a ../lib
make[1]: Leaving directory '/opt/dmt/cvs/gds/External/expat'
make[1]: Entering directory '/opt/dmt/cvs/gds/External/framecpp-0.0.23'
make[1]: *** No rule to make target 'clean'.  Stop.
make[1]: Leaving directory '/opt/dmt/cvs/gds/External/framecpp-0.0.23'
make: [include/general] Error 2 (ignored)
```

Addendum   LSFinn Date: **Tue Mar 5 20:31:16 2002** (GMT)

- External/expat/xmlwf/unixfilemap.c only becomes available during the "make -C External" step. Thus, it can't be fixed before the step that leads to an error in the make.
- the framecpp build makefile does not have a "make clean" target, but one is needed for the build to sucessfully complete.

Try the following build procedure:

```
cd /opt/dmt/cvs ; rm -rf gds
setenv CVSROOT
:pserver:readonly@ldas-sw.ligo.caltech.edu:/ldcg_server/common/repository_gds
cvs get -r gds_2_0_0 gds
```

Correct gds/External/Makefile to get framecpp 0.0.23

```
cd gds
setenv GDSBUILD framecpp
./configure linux
make -C External
```

This make will fail; however, it is the only (reasonably safe) way to get the file that it fails on available to be fixed.

Fix External/expat/xmlwf/unixfilemap.c by adding

```
typedef unsigned int caddr_t;
```

immediately above the include of the header filemap.h.

```
unsetenv GDSBUILD
make clean
setenv GDSBUILD framecpp
make -C External
```

Expat will finish making. An error message will then arise, immediately following the download of framecpp. The error message reports the failure of a "make clean" on the framecpp directory, which can't handle that target at this juncture. *Apparently*, however, this error condition is guarded and the make in framecpp continues. No output is generated for quite some time.

Fix TMath.h by substituting

isfinite

for

finite

at line 391.

make

Failed while compiling the Tid monitor:

```
make -C tid DMT=/opt/dmt/cvs/gds tidd
make[2]: Entering directory '/opt/dmt/cvs/gds/Monitors/tid'
g++ -fPIC -Wall  -D_POSIX_C_SOURCE=199506L -D_XOPEN_SOURCE=600  -I. -I/opt/dmt/cvs/gds/include  -c -o TidIO.o
TidIO.cc: In method 'TidIO::TidIO(const char *, int)':
TidIO.cc:140: 'fd_set' undeclared (first use this function)
TidIO.cc:140: (Each undeclared identifier is reported only once
TidIO.cc:140: for each function it appears in.)
TidIO.cc:140: parse error before ','
TidIO.cc:141: aggregate 'struct timeval tval' has incomplete type and cannot be initialized
TidIO.cc:143: 'rset' undeclared (first use this function)
TidIO.cc:143: implicit declaration of function 'int FD_ZERO(...)'
TidIO.cc:144: implicit declaration of function 'int FD_SET(...)'
TidIO.cc:147: 'wset' undeclared (first use this function)
TidIO.cc:152: implicit declaration of function 'int select(...)'
make[2]: *** [TidIO.o] Error 1
make[2]: Leaving directory '/opt/dmt/cvs/gds/Monitors/tid'
make[1]: *** [../bin/tidd] Error 2
make[1]: Leaving directory '/opt/dmt/cvs/gds/Monitors'
make: *** [Monitors] Error 2
```

Back to Big John.

Addendum **LSFinn** Date: **Tue Mar 5 21:05:26 2002** (GMT)

hile waiting for John to reply, removing from Makefile symbol PGNAMES both tidd and tidclass and re-making from where things stand. Make completes. Go to

make prefix=/opt/dmt/rev_2.0.0 install

Completes. (Note: John has set-up scripts done in such a way that can't use stow: so, don't try.)

Now must make some changes. In /opt/dmt/stow_pkgs/rev_2.0.0/bin/setup change variables to reflect local installation (mostly DMTHOME and ROOTSYS, but also LIGOTOOLS if adventuresome).

Ok, almost there:

source /opt/dmt/rev_2.0.0/bin/setup
source /opt/dmt/rev_2.0.0/bin/root-setup

Ok, now try to run root:

FAILURE

```
[dmt@chablis ~]$ source /opt/dmt/rev_2.0.0/bin/setup
[dmt@chablis ~]$ source /opt/dmt/rev_2.0.0/bin/root-setup
Your ROOT system directory is:  /usr/dmt/root
Your sandbox directory path is: /opt/dmt/rev_2.0.0
You are using root version:    3.02/07

Linking /usr/center/chablis/dmt/.rootrc to /opt/dmt/rev_2.0.0/root/.rootrc
[dmt@chablis ~]$ root
  *****************************************
  *                     *
  *      W E L C O M E  to  R O O T     *
  *                     *
  *   Version   3.02/07     4 March 2002   *
  *                     *
  *  You are welcome to visit our Web site  *
  *         http://root.cern.ch          *
  *                     *
  *****************************************

Compiled for linux with thread support.

CINT/ROOT C/C++ Interpreter version 5.15.25, Jan 6 2002
Type ? for help. Commands must be C++ statements.
Enclose multiple statements between { }.
LIGO Root initialization starting
Loading libraries from $DMTHOME/rev_2.0.0/lib
dlopen error: libframecpp.so.0: cannot open shared object file: No such file or directory
Load Error: Failed to load Dynamic link library /opt/dmt/rev_2.0.0/lib/libframeio.so
*** Interpreter error recovered ***
root [0] .q
sandbox termination in progress...
Error: Symbol In is not defined in current scope  FILE:/opt/dmt/rev_2.0.0/macros/sboxlogoff.C LINE:3
Error: Failed to evaluate In.close()Possible candidates are...
filename      line:size busy function type and name
*** Interpreter error recovered ***
```

Back to Big John.

<u>Addendum</u>   **Patrick Sutton** Date: **Wed Mar 6 16:29:18 2002** (GMT)

In reply to: make failure on TidIO.cc (see 5 Mar 2002 above)

J. Zweizig writes:

The solution to this is to add

  #include

to tid/TidIO.cc. The reason it isn't in cvs is that I haven't checked this
change on solaris yet.
Ciao,
John

Made change; reran "make"; reran "make prefix=/opt/dmt/rev_2.0.0 install". Completed ok.

In reply to: missing libframecpp.so error (see 5 March 2002 above)

J. Zweizig writes:

I think that you have to copy it by hand, i.e. (from gds)

```
cp -a include/framecpp include/general /opt/dmt/rev_2.0.0/include
cp -a lib/libframecpp* lib/libgeneral* /opt/dmt/rev_2.0.0/lib
```

or something like that. I thought that there was something like this in
make install install, but alas...

Did the copy. Files in-place. Try to run root ...

Success!

Notes and comments:

- We could (and should) re-do with install in /usr/dmt/rev_2.0.0. Can probably just do the "make prefix=... install" from what we've already compiled.
  - Done; also, cleaned-up /opt/dmt (removed rev_2.0.0, moved source tree to ~dmt/src/dmt)
- Need to set system-wide start-up scripts so that DMTHOME, ROOTSYS, paths are set appropriately for users.
  - Created dmt.{csh,sh} for addition to /etc/profile.d. Note that the set-up scripts provided with dmt (setup, root-setup) are *csh scripts, and not sh or ksh scripts; so, if you are a sh, ksh or bash kind of guy, you need to set your environment manually.

Addendum **Patrick Sutton** Date: **Wed Mar 6 16:56:24 2002** (GMT)

Correspondence with J. Zweizig

Below is a complete copy of John Zweizig's instructions for installing the DMT.

```
From jzweizig@ligo.caltech.edu Wed Mar  6 11:42:47 2002
Date: Mon, 25 Feb 2002 15:03:43 -0800 (PST)
From: John Zweizig
To: Patrick Sutton
Subject: Re: DMT archive

Hi Patrick,

RedHat 7.2 should be relatively easy, but you should make sure that you
have gcc 2.95.3 installed. You may also need to install the most recent
versions of gnu libtool (1.4.2) and make (3.79.1) if they didn't
come with your system. Install the following:
  A) root. You may have to recompile it with gcc 2.95.3 if there isn't
     already a binary version at http://root.cern.ch. I have compiled
     everything with root version 3.02-06 so I know this version
     works. More recent versions are probably OK also.
  B) You will probably also need ligotools. I think that the only packages
     needed by the DMT are dataflow and Fr, but if you have the space, you
     might as well install everything.
  C) You may also need curl although you can download the framecpp tarball
     from ldas-sw if necessary (using e.g. netscape).

There is a read-only account on the GDS repository called readonly with
pwd m0n1t0r. The following should work:

  setenv CVSROOT :pserver:readonly@ldas-sw.ligo.caltech.edu:/ldcg_server/common/repository_gds
  cvs login
```

```
mkdir -p /opt/dmt/cvs/
cd /opt/dmt/cvs
cvs get -r gds_2_0_0 gds
cd gds
setenv ROOTSYS
setenv LD_LIBRARY_PATH ${ROOTSYS}/lib:${LD_LIBRARY_PATH}
setenv LIGOTOOLS
./configure linux
make -C External
make
make prefix=/opt/dmt/rev_2.0.0 install
```

Notes:
  1) My current favorite location is "/opt/dmt/". You can of course change
     any occurrences of "/opt/dmt" to any valid directory name. to which
     you have write access.
  2) 'gds_2_0_0' is a tagged preliminary version that is supposed to work.
     If you are more adventurous you can eliminate the '-r gds_2_0_0' and
     get the development version of everything. I don't think that there
     are any significant changes.
  3) There is sometime a problem in the compilation of expat where it
     complains that caddr_t is not defined. I usually add
        typedef unsigned int caddr_t;
     to whatever file(s) don't compile.
  4) Compiling framecpp is sloooooow. Have patience, it usually works.
  5) Compiling gds_dict is very very slow. I think that it works though.

The probability of the above script working is probably a few percent.
Most problems you may run into have obvious solutions and the dependencies
are set up pretty well so you should be able to rerun make and pick up
where you left off. Please let me know how this works and feel free to
contact me if/when it doesn't.
Best regards,

John

On Mon, 25 Feb 2002, Patrick Sutton wrote:

>
> John,
>
> We just got a new machine here at Penn State which is to be devoted
> to DMT work. My first task is to install the DMT software. Where
> is the up-to-date distribution kept? I recall that there is a CVS
> archive somewhere. Do I need special permissions to access it?
> Also, are there updated instructions for installation with Red Hat 7.2?
> The history files from when you installed the DMT on my laptop will
> give me some guidance, but I remember that there were a few tricks
> involved in getting everything to compile.
>
> Thanks,
>
> -- Patrick
>
> ##
>
> Patrick J. Sutton   off: 814-863-9599
> Center for Gravitational Wave Physics and   fax: 814-863-9608
> Center for Gravitational Physics and Geometry
> Department of Physics
> The Pennsylvania State University
> State College PA 16802-6300   psutton@gravity.phys.psu.edu
>
> ##

From LSFinn@PSU.Edu Wed Mar 6 11:43:03 2002
Date: 04 Mar 2002 18:39:54 -0500
From: Lee Samuel Finn
To: Patrick Sutton

Subject: [Fwd: Re: dmt]

-----Forwarded Message-----

> From: John Zweizig
> To: Lee Samuel Finn
> Subject: Re: dmt
> Date: 04 Mar 2002 15:36:58 -0800
>
> Hi Sam and Patrick,
>
> Uh Yeah. The problem seems to be that finite() is evidently not defined
> within the Posix spec! This causes the linux header to remove it
> unceremoniously when the _POSIX_C_SOURCE and _XOPEN_SOURCE compilation
> flags are used.
>
> Looking at the sources on my laptop I see that I have modified
> $ROOTSYS/include/TMath.h to use isfinite(x) instead of finite(x).
> I could have defined
>
>   extern "C" {int finite(double);}
>
> in TMath.h instead. Neither solution is particularly elegant, but they
> should work.
> Best regards,
>
> John
>
> On Mon, 4 Mar 2002, Lee Samuel Finn wrote:
>
> > Hi John,
> >
> > Patrick and I are installing dmt and have run into some problems.
> >
> > First, we are following your note to Patrick of 25 Feb. We are using the
> > same directories that you describe as your current favorites (i.e., /opt/dmt).
> > We are also working with the gds_2_0_0 tagged version. Our root is 3.02/07
> > (CERN was apparently unhappy with 3.02/06 and pulled it for 3.02/07).
> >
> > In the "make -C External" step, we hit the caddr_t problem in
> > External/expat/xmlwf/unixfilemap.c. We added the typdef and tried to
> > carry-on from where we left off, but couldn't get the "make -C External" to
> > pick-up from that directory again. Correspodingly, we did a "make clean"
> > and then tried the "make -C External" again. That appeared to run to
> > completion ok.
> >
> > Next we went for the "make" step. Here we've hit another problem. I've included
> > the error(s) that terminate the make below:
> >
> > /usr/dmt/root/bin/rootcint -f dict/gdsbase_dict.cc -c -I../include -D_REENTRANT -I/usr/dmt/root/include wavefft.h tconv.h
> > Class Interval: Streamer() not declared
> > Class Interval: ShowMembers() not declared
> > Class Time: Streamer() not declared
> > Class Time: ShowMembers() not declared
> > Class basicplx   : Streamer() not declared
> > Class basicplx   : ShowMembers() not declared
> > Class basicplx   : Class_Name() and initialization object not declared
> > Class basicplx   : Streamer() not declared
> > Class basicplx   : ShowMembers() not declared
> > Class basicplx   : Class_Name() and initialization object not declared
> > g++ -fPIC -Wall -D_POSIX_C_SOURCE=199506L -D_XOPEN_SOURCE=600 -O3 -I../include -D_REENTRANT -I/usr
> > In file included from /usr/dmt/root/include/TString.h:31,
> >   from /usr/dmt/root/include/TCollection.h:34,
> >   from /usr/dmt/root/include/TSeqCollection.h:26,
> >   from /usr/dmt/root/include/TList.h:26,
> >   from /usr/dmt/root/include/TNamed.h:29,
> >   from /usr/dmt/root/include/TDirectory.h:25,
> >   from /usr/dmt/root/include/TROOT.h:29,
> >   from dict/gdsbase_dict.h:27,
> >   from dict/gdsbase_dict.cc:5:
> > /usr/dmt/root/include/TMath.h: In function 'static Int_t TMath::Finite(double)':/usr/dmt/root/include/TMath.h:391: implicit
> > make[1]: *** [dict/gdsbase_dict.o] Error 1

> > make[1]: Leaving directory '/opt/dmt/cvs/gds/Base'
> > make: *** [Base] Error 2
> >
> > Getting around this one is not obvious. A perusal of TMath.h and evidence from
> > the symptoms suggests that the symbol R__USESTHROW is defined. In this case,
> > we are evidently supposed to get the definition of "finite" from   ;
> > however, this include apparently does not define "finite".
> >
> > Suggestions?
> >
> > Thanks,
> >
> > Patrick and Sam

From jzweizig@ligo.caltech.edu Wed Mar 6 11:43:11 2002
Date: Tue, 5 Mar 2002 10:09:14 -0800 (PST)
From: John Zweizig
To: Patrick Sutton
Cc: Lee Samuel Finn
Subject: Re: framecpp

Hi Patrick and Sam,

Oops, I forgot one thing in the procedure. You need to define

  setenv GDSBUILD framecpp

before (re-)running

  make -C External

the make file will try to download a distribution copy of framecpp from
the ldas server with curl. If you don't have curl, this won't work, but
you can short-circuit that step by using netscape or whatever to download
the tarball by hand. The framecpp compilation takes a while and gives very
little information unless you dig down into subdirectories of
subdirectories. I think that the version number that is hard-coded into
the Makefile is sort of old. I you are really enterprising you might move
it up to at least 0.0.23 (I'd actually recommend this... I think a byte
swapping bug was fixed in 0.0.23 that might cause problems on linux).
Best regards,

John

On Tue, 5 Mar 2002, Patrick Sutton wrote:

>
> John,
>
> Thanks for your help with the POSIX/finite problem; your
> suggestion of substituting "isfinite(x)" for "finite(x)" worked,
> and we're continuing merrily on. Unfortunately, we've run into
> another problem: the script you sent apparently doesn't get us
> framecpp. When we execute the "make" statement (the second-last
> of your script, below), we get the following:
>
> dacc/Channel.cc:9: framecpp/frame.hh: No such file or directory
> In file included from dacc/Dacc.hh:4,
>   from dacc/Dacc.cc:4:
> dacc/DaccIn.hh:19: framecpp/rawdata.hh: No such file or directory
> dacc/Dacc.cc:5: framecpp/errors.hh: No such file or directory
> dacc/Dacc.cc:6: framecpp/frame.hh: No such file or directory
> dacc/Dacc.cc:7: framecpp/framereader.hh: No such file or directory
> In file included from dacc/DaccIn.cc:9:
> dacc/DaccIn.hh:19: framecpp/rawdata.hh: No such file or directory
> dacc/DaccIn.cc:10: framecpp/errors.hh: No such file or directory
> dacc/DaccIn.cc:11: framecpp/frame.hh: No such file or directory
> dacc/DaccIn.cc:12: framecpp/time.hh: No such file or directory
> dacc/DaccIn.cc:13: framecpp/framereader.hh: No such file or directory

> dacc/DaccIn.cc:14: framecpp/tocreader.hh: No such file or directory
> frwriter/FrWriter.cc:4: framecpp/frame.hh: No such file or directory
> frwriter/FrWriter.cc:5: framecpp/rawdata.hh: No such file or directory
> frwriter/FrWriter.cc:6: framecpp/framewriter.hh: No such file or directory
> frwriter/FrWriter.cc:7: framecpp/framewritertoc.hh: No such file or directory
> Generate dictionary rules...
> make[1]: Leaving directory '/opt/dmt/cvs/gds/Services'
> cd Services; make
> make[1]: Entering directory '/opt/dmt/cvs/gds/Services'
> g++ -fPIC -Wall -D_POSIX_C_SOURCE=199506L -D_XOPEN_SOURCE=600 -O3 -g -I../include -D_REENTRANT -I/u
> dacc/Channel.cc:9: framecpp/frame.hh: No such file or directory
> make[1]: *** [dacc/Channel.o] Error 1
> make[1]: Leaving directory '/opt/dmt/cvs/gds/Services'
> make: *** [Services] Error 2
> [dmt@chablis gds]$
>
> A find command doesn't see any framecpp files. How do we retrieve
> framecpp, where do we put it, and how do we install it?
>
> Thanks,
>
> Sam and Patrick
>

From jzweizig@ligo.caltech.edu Wed Mar 6 11:43:32 2002
Date: Tue, 5 Mar 2002 15:51:41 -0800 (PST)
From: John Zweizig
To: Lee Samuel Finn
Cc: psutton@gravity.psu.edu
Subject: Re: make fail on TidIO.cc

Hi Sam and Patrick,

The solution to this is to add

  #include

to tid/TidIO.cc. The reason it isn't in cvs is that I haven't checked this
change on solaris yet.
Ciao,
John

On Tue, 5 Mar 2002, Lee Samuel Finn wrote:

> Hi John,
>
> Ok, we're now in the "make" phase and have run into a problem while
> compiling the Tid monitor:
>
> make -C tid DMT=/opt/dmt/cvs/gds tidd
> make[2]: Entering directory '/opt/dmt/cvs/gds/Monitors/tid'
> g++ -fPIC -Wall -D_POSIX_C_SOURCE=199506L -D_XOPEN_SOURCE=600 -I. -I/opt/dmt/cvs/gds/include -c -o TidIO.
> TidIO.cc: In method 'TidIO::TidIO(const char *, int)':
> TidIO.cc:140: 'fd_set' undeclared (first use this function)
> TidIO.cc:140: (Each undeclared identifier is reported only once
> TidIO.cc:140: for each function it appears in.)
> TidIO.cc:140: parse error before ','
> TidIO.cc:141: aggregate 'struct timeval tval' has incomplete type and cannot be initialized
> TidIO.cc:143: 'rset' undeclared (first use this function)
> TidIO.cc:143: implicit declaration of function 'int FD_ZERO(...)'
> TidIO.cc:144: implicit declaration of function 'int FD_SET(...)'
> TidIO.cc:147: 'wset' undeclared (first use this function)
> TidIO.cc:152: implicit declaration of function 'int select(...)'
> make[2]: *** [TidIO.o] Error 1
> make[2]: Leaving directory '/opt/dmt/cvs/gds/Monitors/tid'
> make[1]: *** [../bin/tidd] Error 2
> make[1]: Leaving directory '/opt/dmt/cvs/gds/Monitors'
> make: *** [Monitors] Error 2
>

> We're working with the tagged version gds_2_0_0 of gds. Thoughts and comments?
> We're going to try commenting out the make of Tid, but I'm surprised if it's
> only a Tid bug we're seeing.
>
> Thanks,
>
> Sam

From jzweizig@ligo.caltech.edu Wed Mar 6 11:43:38 2002
Date: Tue, 5 Mar 2002 15:56:45 -0800 (PST)
From: John Zweizig
To: Lee Samuel Finn
Cc: psutton@gravity.psu.edu
Subject: Re: dmt, cont'd

I think that you have to copy it by hand, i.e. (from gds)

  cp -a include/framecpp include/general /opt/dmt/rev_2.0.0/include
  cp -a lib/libframecpp* lib/libgeneral* /opt/dmt/rev_2.0.0/lib

or something like that. I thought that there was something like this in
make install install, but alas...
Best regards,

John

On Tue, 5 Mar 2002, Lee Samuel Finn wrote:

> Hi John
>
> Just for fun, we removed from Monitors/Makefile the compilation of tidd and tidclass and let the make run to completion. We
> make prefix=/opt/dmt/rev_2.0.0 install
> So far, all ok. Modified /opt/dmt/rev_2.0.0/bin/setup for our environment,
> sourced it and root-setup, and tried to run root. At this point, we found that
> not all (any?) of framecpp actually installed:
>
> [dmt@chablis ~]$ source /opt/dmt/rev_2.0.0/bin/setup
> [dmt@chablis ~]$ source /opt/dmt/rev_2.0.0/bin/root-setup
> Your ROOT system directory is: /usr/dmt/root
> Your sandbox directory path is: /opt/dmt/rev_2.0.0
> You are using root version: 3.02/07
>
> Linking /usr/center/chablis/dmt/.rootrc to /opt/dmt/rev_2.0.0/root/.rootrc
> [dmt@chablis ~]$ root
> ***
> *   *
> *   W E L C O M E to R O O T   *
> *   *
> *   Version   3.02/07   4 March 2002   *
> *   *
> * You are welcome to visit our Web site *
> *   http://root.cern.ch   *
> *   *
> ***
>
> Compiled for linux with thread support.
>
> CINT/ROOT C/C++ Interpreter version 5.15.25, Jan 6 2002
> Type ? for help. Commands must be C++ statements.
> Enclose multiple statements between { }.
> LIGO Root initialization starting
> Loading libraries from $DMTHOME/rev_2.0.0/lib
> dlopen error: libframecpp.so.0: cannot open shared object file: No such file or directory
> Load Error: Failed to load Dynamic link library /opt/dmt/rev_2.0.0/lib/libframeio.so
> *** Interpreter error recovered ***
> root [0] .q
> sandbox termination in progress...
> Error: Symbol In is not defined in current scope FILE:/opt/dmt/rev_2.0.0/macros/sboxlogoff.C LINE:3
> Error: Failed to evaluate In.close()Possible candidates are...

```
> filename      line:size busy function type and name
> *** Interpreter error recovered ***
> [dmt@chablis ~]$ ls /opt/dmt/rev_2.0.0/lib/
> libaudio.so*     libgdsevent.so*  libsdmtenv.a     libslsmp.a
> libclient.so*    libgdsplot.so*   libsdmtifc.a     libsmonitor.a
> libdaqs.so*      libgdstrig.so*   libsdmtsigp.a    libsockutil.so*
> libdfmgui.so*    libhtml.so*      libserver.so*    libsosc.a
> libdfm.so*       liblidax.so*     libsfantom.a     libsparsl.a
> libdmtsigp.so*   libligogui.so*   libsframefast.a  libsserver.a
> libdmtview.so*   liblmsg.so*      libsframeio.a    libssockutil.a
> libdttview.so*   liblsmp.so*      libsframeutil.a  libstclient.a
> libfantom.so*    libmonitor.so*   libsframexmit.a  libsweb.a
> libframefast.so* libosc.so*       libsgdsalgo.a    libsxsil.a
> libframeio.so*   libpanel.so*     libsgdsbase.a    libtclient.so*
> libframeutil.so* libparsl.so*     libsgdscntr.a    libxsil.so*
> libframexmit.so* libsaudio.a      libsgdsevent.a   Makefile.default
> libgdsalgo.so*   libsclient.a     libsgdstrig.a    root-version
> libgdsbase.so*   libsdaqs.a       libshtml.a
> libgdscntr.so*   libsdfm.a        libslmsg.a
> [dmt@chablis ~]$
>
> Thoughts and comments?
>
> Thanks,
>
> Sam & Patrick
```