

dunetpc - Bug #22668

Crash when ChannelsStatusService is loaded in Root

05/31/2019 12:11 PM - David Adams

Status:	Closed	Start date:	05/31/2019
Priority:	Normal	Due date:	
Assignee:	Kyle Knoepfel	% Done:	0%
Category:		Estimated time:	0.00 hour
Target version:			
Description			
I get a crash when I try to load the ChannelStatusService in Root:			
<pre>terminate called after throwing an instance of 'cet::coded_exception<art::errors::ErrorCodes, &art::ExceptionDetail::translate[abi:cxx11]>' what(): ---- OtherArt BEGIN ServiceCreation ---- Type mismatch BEGIN Unsuccessful attempt to convert FHiCL parameter 'BadChannels' to type 'std::vector<unsigned int, std::allocator<unsigned int> >'. [Specific error:] bad any_cast ---- Type mismatch END cet::exception caught during construction of service type lariov::SimpleChannelStatusService: ---- OtherArt END</pre>			
The problem first appears in dunetpc v08_17_00, i.e. does not occur in v08_15_01. This is the first dunetpc release that uses art v3_02_04.			
If I @erase the service, the crash goes away but so does the service and I need it. I tried explicitly setting the field to "[]" or "[1, 2]" at the end of the top fcl but the problem remains.			
Kyle, can you have a look at this?			

History

#1 - 05/31/2019 12:16 PM - David Adams

The problem can be reproduced as follows:

```
# setup dune: v08_127_00 or later
source ~dladams/bin/setup_dune.sh v08_20_00

cd somedir
git clone https://github.com/dladams/protodune-adc-calib.git
mkdir test
cd test
source ../protodune-adc-calib/setup.sh
root.exe
.
.
.
root> q
root.exe
```

Error occurs on second and subsequent attempts to start root.

#2 - 05/31/2019 12:26 PM - David Adams

If I dump the same to fcl file, I do not see an error (in any release):

```

> fclldump load_dataprep.fcl 6
.
.
.
services: {
  ChannelStatusService: {
    BadChannels: [4411, 4412, 9990, 11842, 1, 400, 401, 800, 801, 876, 1200, 2961, 5321, 5363, 6132, 7058, 729
5, 7681, 8080, 8328, 8480, 9282, 9283, 9736, 9854, 10800, 11024, 11457, 11459, 11463, 11469, 11517, 11669, 116
79, 12756, 12801, 13001, 13081, 4410, 1719, 5125, 7551, 7190, 7194, 7918, 2, 7680, 5361, 4, 1632, 2169, 3541,
3543, 3661, 3663, 4061, 4063, 4141, 4143, 4377, 4379, 4381, 4383, 4385, 4387, 4521, 4523, 4525, 4527, 4529, 45
31, 4652, 4654, 4656, 4658, 4660, 4658, 4748, 4750, 4752, 4754, 4756, 4758, 8501, 8503, 8821, 8823, 9261, 9263
, 9305, 9307, 9309, 9311, 9313, 9315, 9689, 9691, 9693, 9695, 9697, 9699, 9772, 9774, 9776, 9778, 9780, 9782,
10102, 10189, 10697, 10907, 11203, 11270, 11902, 12324, 12333, 12744, 13363, 200, 202, 204, 206, 208, 991, 993
, 995, 997, 999, 1829, 1831, 1833, 1835, 1837, 1839]
    NoisyChannels: [9569, 2318, 4, 94, 442, 447, 453, 455, 456, 472, 477, 571, 573, 1534, 1539, 1546, 1864, 21
35, 2146, 2158, 2161, 2674, 2833, 4377, 4654, 4658, 4662, 4752, 5271, 5377, 5400, 5423, 7220, 7334, 7347, 7396
, 8341]
    service_provider: "SimpleChannelStatusService"
  }
.
.
.

```

#3 - 06/03/2019 11:46 AM - Kyle Knoepfel

- Status changed from New to Feedback

David, if I use dunetpc v08_21_00, I don't have any problems (modulo the TFileService which is giving me a weird error). Taking your GitHub repository:

```

$ setup dunetpc v08_21_00 -q e17:debug
$ source setup_protodune-adc-calib.sh

# Make local file to remove TFileService, which is causing me problems
$ fhicl-dump load_dataprep.fcl > full.fcl

# After removing TFileService from full.fcl
$ rm rootLogon.C
$ root.exe
root [0] .x pkginit.C
Welcome to the protoDUNE ADC calibration package.
ACLiC build dir: /dune/app/users/knoepfel/issue-22668/test/.aclic/v08_21_00
Util library dir: /dune/app/users/knoepfel/issue-22668/test/.aclic/v08_21_00/lib
Tool library dir: /dune/app/users/knoepfel/issue-22668/test/.aclic/v08_21_00/lib
Dunetpc include dir: /cvmfs/dune.opensciencegrid.org/products/dune/dunetpc/v08_21_00/include
Dune_raw data include dir: /cvmfs/dune.opensciencegrid.org/products/dune/dune_raw_data/v1_17_33/include
AddLinkedLibs: /cvmfs/larsoft.opensciencegrid.org/products/fhiclcpp/v4_09_03/slf6.x86_64.e17.debug/lib/libfhic
lcpp.so
AddLinkedLibs: /cvmfs/dune.opensciencegrid.org/products/dune/dunetpc/v08_21_00/slf6.x86_64.e17.debug/lib/libdu
ne_ArtSupport.so
AddLinkedLibs: /cvmfs/dune.opensciencegrid.org/products/dune/dunetpc/v08_21_00/slf6.x86_64.e17.debug/lib/libdu
ne_DuneServiceAccess.so
AddLinkedLibs: /cvmfs/dune.opensciencegrid.org/products/dune/dunetpc/v08_21_00/slf6.x86_64.e17.debug/lib/libdu
ne_DuneCommon.so
AddLinkedLibs: /cvmfs/dune.opensciencegrid.org/products/dune/dunetpc/v08_21_00/slf6.x86_64.e17.debug/lib/libdu
ne_Geometry.so
AddLinkedLibs: /cvmfs/dune.opensciencegrid.org/products/dune/dunetpc/v08_21_00/slf6.x86_64.e17.debug/lib/libdu
ne_DataPrep_Utility.so
Loading dunetpc classes.
Loading local libraries.
Building utilities.
Building tools.
Local startup file not found: startup.C
Finished loading.
(int) 0

root [1] ArtServiceHelper::load("full.fcl");
Info in <TGeoManager::Import>: Reading geometry from file: /cvmfs/dune.opensciencegrid.org/products/dune/dunet
pc/v08_21_00/gdml/protodune_v5.gdml
Info in <TGeoManager::TGeoManager>: Geometry GDMLImport, Geometry imported from GDML created
...
%MSG-i SignalShapingServiceDUNE:
Getting Filter from .fcl file
%MSG
%MSG-i SignalShapingServiceDUNE:

```

```
using the field response provided from a .root file
%MSG
Warning in <TFile::Append>: Replacing existing TH1: FieldResponse_U (Potential memory leak).
Warning in <TFile::Append>: Replacing existing TH1: FieldResponse_V (Potential memory leak).
Warning in <TFile::Append>: Replacing existing TH1: FieldResponse_Y (Potential memory leak).
root [2] DuneToolManager::instance("full.fcl");
DuneToolManager::instance: Configuration file: full.fcl
root [3] .q
```

And I get the same behavior when trying on subsequent attempts. Hmmmm....

#4 - 06/03/2019 12:09 PM - David Adams

Kyle:

I suspect there is a fcl path problem and you have circumvented it by constructing a new fcl file with fhicl-dump. Could you instead include load_dataprep in you top-level fcl and @erase the file service.

In the meantime, I will see if I reproduce your result.

Thanks.

da

#5 - 06/03/2019 12:27 PM - David Adams

I tried to reproduce what you did: create a new top-level fcl with fhicl-dump, execute pkginit and then load the lervices at the command line. Both with and without commenting the file service from the new fcl file, I get the conversion error I reported above.

da

#6 - 06/03/2019 12:56 PM - David Adams

I tried again in a fresh build area following your prescription. The first time I enter root and do pkginit and load, all is fine. But on any subsequent attempt, I get my same crash.

If I delete the root build area (.aclic), I see the same: all is fine the first entry but the BadChannel crash on subsequent entries to root.

My root are is /nashome/dladams/data2/svctest/run. Maybe if you copy it, you can reproduce the problem.

Thanks again.

da

#7 - 10/21/2019 09:07 AM - David Adams

This remains a problem for me.

#8 - 02/22/2021 08:15 AM - David Adams

- Status changed from Feedback to Closed

I have not run into this problem for a while.