art_root_io - Bug #23294

product_sizes_dumper cannot find a file with its xrootd url

09/18/2019 03:37 PM - Thomas Junk

Status:	Closed	**Start date:**	09/18/2019
Priority:	Normal	**Due date:**	
Assignee:	Kyle Knoepfel	**% Done:**	100%
Category:		**Estimated time:**	2.00 hours
Target version:	1.00.10	**Spent time:**	1.00 hour
Scope:	Internal	**Experiment:**	DUNE

Description

I tried this with art v3_01_02 on a dunegpvm machine running SLF7 just now and got this:

```
<dunegpvm11.fnal.gov> product_sizes_dumper root://fndca1.fnal.gov/pnfs/fnal.gov/usr/dune/tape_back
ed/dunepro/protodune/np04/beam/detector/None/raw/07/51/52/16/np04_raw_run005779_0065_dl2.root
Error in <TFile::TFile>: file pnfs/fnal.gov/usr/dune/tape_backed/dunepro/protodune/np04/beam/detec
tor/None/raw/07/51/52/16/np04_raw_run005779_0065_dl2.root does not exist
terminate called after throwing an instance of 'boost::filesystem::filesystem_error'
  what():  boost::filesystem::file_size: No such file or directory: "root://fndca1.fnal.gov/pnfs/f
nal.gov/usr/dune/tape_backed/dunepro/protodune/np04/beam/detector/None/raw/07/51/52/16/np04_raw_ru
n005779_0065_dl2.root"
Aborted
```

If I replace "product_sizes_dumper" with "count_events" (to eliminate possible typos and cut and
paste errors), I get success:

```
<dunegpvm11.fnal.gov> count_events root://fndca1.fnal.gov/pnfs/fnal.gov/usr/dune/tape_backed/dunep
ro/protodune/np04/beam/detector/None/raw/07/51/52/16/np04_raw_run005779_0065_dl2.root
root://fndca1.fnal.gov/pnfs/fnal.gov/usr/dune/tape_backed/dunepro/protodune/np04/beam/detector/Non
e/raw/07/51/52/16/np04_raw_run005779_0065_dl2.root    1    1    134    0
Counted events successfully for 1 specified files.
```

In the larsoft cvmfs area, v3_01_02 is the latest art version which has product_sizes_dumper installed so I cannot test a newer
version to see if this has been resolved.

History

#1 - 09/23/2019 10:33 AM - Kyle Knoepfel

- Scope deleted (Internal)

- Estimated time set to 2.00 h

- Assignee set to Kyle Knoepfel

- Status changed from New to Assigned

- Description updated

- Project changed from art to art_root_io

- SSI Package deleted (art)

- Occurs In deleted (3.01.00)

Tom, product_sizes_dumper is now provided by *art_root_io* and not *art*. You must either set that package up explicitly, or setup the correct version of
LArSoft, which will do that for you. We will investigate why XRootD-specified files are not working with product_sizes_dumper.

#2 - 09/23/2019 01:51 PM - Thomas Junk

I can reproduce the issue with art_root_io v1_00_07 (setup with larsoft v08_28_01), art_root_io v1_00_08, and
art_root_io v1_00_09.

#3 - 09/23/2019 01:52 PM - Kyle Knoepfel

Thank you, Tom. We will investigate.

#4 - 10/02/2019 02:41 PM - Kyle Knoepfel

- % Done changed from 0 to 100

- Target version set to 1.00.10

- Status changed from Assigned to Resolved

The problem is understood. The product_sizes_dumper was using the Boost filesystem library to determine the size of the file, and Boost does not support XRootD URLs. ROOT, however, can return the size of a file that has already been opened via XRootD URL. The solution was to remove the dependency on the Boost filesystem library and use the ROOT API.

Implemented with commit art_root_io:e2c5c2e.

#5 - 10/02/2019 04:10 PM - Kyle Knoepfel

- Status changed from Resolved to Closed