Progress Update

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UofT Neutrino/DM Meeting
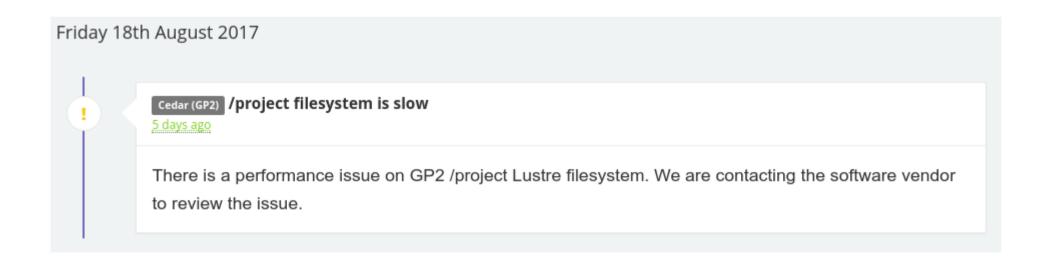August 23, 2017

Current Status of Aluminum Sourcing

Asked representative at Foshan Kaiya Aluminum Co., Ltd. for more details regarding extrusion issues:

We have discussed with the technical department, they said that if the round pipe used as a cylinder, then the welding maybe impossible to reach the requirement.

Cause when the profiles is extruded, it need to be welded.

1.The thickness is 25.4mm, weight is 104kg/m, when produce the profiles at a extruding machine with 10000ton, the ratio of extrusion is just 5.5，

The maximum extrusion length L=9m, but according to experience, the length of finished product at most up to about 3.6m.

2. Cause the ratio of extrusion is small, so that is difficult to ensure the mechanical properties and the surface quality of the finished products.

3. They suggest change the thickness to 20mm, weight 83.094kg/m.

Some notes on Cedar

- /project file system is experiencing issues
    - moved to /scratch for now – will move everything over once issue is resolved

Friday 18th August 2017

> **Cedar (GP2)** **/project filesystem is slow**
> 5 days ago
>
> There is a performance issue on GP2 /project Lustre filesystem. We are contacting the software vendor to review the issue.

ROOT 5.34.23 Installation on Cedar

- ROOT configure error:

```
Checking for X11/xpm.h ... no
configure: xpm headers MUST be installed
```

  - root/configure looks in /usr/include, but on Cedar it should be looking in $NIXUSER_PROFILE/include

    - changed each instance of /usr/ to $NIXUSER_PROFILE/ and it seems to have fixed issue

- ROOT build error:

```
core/utils/src/rootcint_tmp -cint -f graf3d/gl/src/G__GL.cxx -c ... (really long line)
#error "You need a ISO C conforming compiler to use the glibc headers"
```

  - solved by going into root/config/Makefile.config and changing /usr/ to $NIXUSER_PROFILE/

- I was able to successfully build and run ROOT!

CERNLIB 2005 Installation on Cedar

- CERNLIB installation error:

```
/tmp/imake7XNiJl: relocation error: /tmp/../lib64/libc.so.6: symbol _dl_starting_up, version GLIBC_PRIVATE not defined in file ld-linux-x86-64.so.2 with link time reference
/home/towstego/scratch/cernlib/2005/src/config/imake_boot: line 17: 93395 Aborted                 imake -DUseInstalled -I$CVSCOSRC/config -DTOPDIR=`/bin/pwd` -DCURDIR= -f$CVSCOSRC/Imakefile
```

- ld-linux-x86-64.so.2 doesn't match version of glibc that installation is trying to use
  - seems to be using libc.so.6 in /lib64/
  - libc.so.6 is also available in $NIXUSER_PROFILE/lib64/
    - Will try to make installation use this version instead