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Subject: libstt.so error

Posted by [Elisa Fioravanti](#) on Mon, 15 Mar 2010 19:01:24 GMT

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Hello,

I have installed the new package jan10 in a mac computer (10.5.6) and pandaroot.

No error with the installation.

When I open root in the gconfig folder loading rootlogon.C, I have the following error:

```
dlopen error: dlopen(/Users/elisafioravanti/fairsoft/pandaroot/buildPanda/lib/libStt.so, 9):
```

```
Symbol not found: __ZN21PndSttTrackFinderReal2PIE
```

```
  Referenced from: /Users/elisafioravanti/fairsoft/pandaroot/buildPanda/lib/libStt.so
```

```
  Expected in: flat namespace
```

```
Load Error: Failed to load Dynamic link library
```

```
/Users/elisafioravanti/fairsoft/pandaroot/buildPanda/lib/libStt.so
```

```
(int)(-1)
```

```
*** Interpreter error recovered ***
```

Any idea?

Thanks,

Elisa

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Subject: Re: libstt.so error

Posted by [Gianluigi Boca](#) on Tue, 16 Mar 2010 17:21:14 GMT

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I think you should update the fairsoft part of the code because the location of the glpk .so library has changed since some time ago

Gianluigi

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Subject: Re: libstt.so error

Posted by [Stefano Spataro](#) on Tue, 16 Mar 2010 17:23:32 GMT

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Hi Gianluigi,

from a discussion with Elisa yesterday, as far as I have understood this was already done (as explained in a Mohammad message in the forum). Indeed the error is not in glpk but in this PI function/member of TrackFinderReal.

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Subject: Re: libstt.so error

Posted by [Gianluigi Boca](#) on Tue, 16 Mar 2010 20:43:08 GMT

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Stefano Spataro wrote on Tue, 16 March 2010 18:23Hi Gianluigi,  
from a discussion with Elisa yesterday, as far as I have understood this was already done (as explained in a Mohammad message in the forum). Indeed the error is not in glpk but in this PI function/member of TrackFinderReal.

Hi Stefano,  
ok, I agree it is not glpk. The fact is that PI is a  
static const Double\_t equal to 3.14.....etc.etc

defined in PndSttTrackFinderReal.h

I don't see how suddenly it doesn't work anymore : the code itself has worked at least until the last collaboration meeting - thanks God!

It is a fact though that today Radek and tonite myself are experiencing also a new very strange behaviour of the PndSttTrackFinderReal : the macro macro/stt/runreco.C  
(with PndSttTrackFinderReal(iVerbose) in place of the  
PndSttTrackFinderIdeal(iVerbose) )

stops without any crash at the first event, at the point  
where the function PndTrkFinderPartial( ) is called.  
At the moment I don't have the slightest idea why - it looks like  
some memory leak somewhere else.

So could Elisa's problem be related to this ?

Has anybody made changes in some part of the code causing this??

Gianluigi

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Subject: Re: libstt.so error  
Posted by [Elisa Fioravanti](#) on Wed, 17 Mar 2010 08:30:58 GMT  
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Hello,

I can confirm that I have already updated the fairsoft part (following the instruction for the glpk post in the forum).  
The problem seems to be in the PndSttTrackFinderReal.

Thanks,  
Elisa

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Subject: Re: libstt.so error  
Posted by [Gianluigi Boca](#) on Wed, 17 Mar 2010 15:06:38 GMT  
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Elisa Fioravanti wrote on Wed, 17 March 2010 09:30Hello,

I can confirm that I have already updated the fairsoft part (following the instruction for the glpk post in the forum).

The problem seems to be in the PndSttTrackFinderReal.

Thanks,  
Elisa

Now the problem seems to be fixed, at least for the Scientific Linux version 4.8 machine (Radek reports it is still not working on his Mac).

Please update repository the stt directory and test

Gianluigi

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Subject: Re: libstt.so error

Posted by [Elisa Fioravanti](#) on Wed, 17 Mar 2010 16:26:56 GMT

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Hello Gianluigi,

as Radek, I have again the same problem as before.

Elisa

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Subject: Re: libstt.so error

Posted by [Johan Messchendorp](#) on Thu, 18 Mar 2010 14:55:06 GMT

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Hi Gianluigi,

While you trying to fix the problem of Elisa, could you also take a look at the many crashes on various nightly builds machines related to PndSttTrackFinderReal (segfault, time-outs, ...)?

Thanks in advance,

Johan.

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Subject: Re: libstt.so error

Posted by [Stefano Spataro](#) on Thu, 18 Mar 2010 15:06:51 GMT

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Hi,

as far as I have understood the crashes are coming from sds (?) code, not from stt.

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Subject: Re: libstt.so error

Posted by [Johan Messchendorp](#) on Thu, 18 Mar 2010 15:12:11 GMT

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Hi,

I am talking about the crashes related to the QAmacro\_stt\_4.sh QA macro, which has problems and is identical to QAmacro\_stt\_2.sh, however with the real track finding switched on in stead of the ideal one.... there is no sds in there, or am I wrong?!?

Johan.

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Subject: Re: libstt.so error

Posted by [Stefano Spataro](#) on Thu, 18 Mar 2010 15:15:45 GMT

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In my dashboard ALL the qa macros are crashing because Sds

dlopen error: /home/spataro/jan10/cbuild/lib/libSds.so: undefined symbol:

\_ZN22PndSdsStripHitProducer16SetParContainersEv

Load Error: Failed to load Dynamic link library /home/spataro/jan10/cbuild/lib/libSds.so

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Subject: Re: libstt.so error

Posted by [Johan Messchendorp](#) on Thu, 18 Mar 2010 15:20:50 GMT

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that is a new one .... Ralf... heeellllp

j.

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Subject: Re: libstt.so error

Posted by [Gianluigi Boca](#) on Thu, 18 Mar 2010 15:46:52 GMT

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Johan Messchendorp wrote on Thu, 18 March 2010 15:55Hi Gianluigi,

While you trying to fix the problem of Elisa, could you also take a look at the many crashes on various nightly builds machines related to PndSttTrackFinderReal (segfault, time-outs, ...)?

Thanks in advance,

Johan.

Like Mr. Obama said,

Yes, we can !

Actually I am in the process of making the Real Patt. Rec. working

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on all platform; for instance right now I am working on the problem encountered in running on Mac, I am interacting with Radek for that; also Elisa had a problem - I am not sure on which platform she is working.

I believe the timeouts are related to weird events generated by the MC, but I have not proof for that yet.

Anyways, I will fix that too

Gianluigi

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Subject: Re: libstt.so error

Posted by [Elisa Fioravanti](#) on Thu, 18 Mar 2010 19:57:51 GMT

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Hi Gianluigi,

I'm also working on a MAC computer (10.5.6)

Thanks,

Elisa

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Subject: Re: libstt.so error

Posted by [Gianluigi Boca](#) on Thu, 18 Mar 2010 21:21:11 GMT

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Johan Messchendorp wrote on Thu, 18 March 2010 15:55Hi Gianluigi,

While you trying to fix the problem of Elisa, could you also take a look at the many crashes on various nightly builds machines related to PndSttTrackFinderReal (segfault, time-outs, ...)?

Thanks in advance,

Johan.

Hi,

I took a look to the dashboard messages for PndSttTrackFinderReal.

I think all those errors I have already fixed in the last few days.

Please update PndSttTrackFinderReal.cxx and .h  
and they should disappear hopefully

Tschuess Gianluigi

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Subject: Re: libstt.so error

Posted by [Johan Messchendorp](#) on Thu, 18 Mar 2010 21:26:47 GMT

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Hi,

Well, in principle the dashboard system performs automatic updates and it takes the latest trunk release. Let's wait another day and see what happens. Of course, Ralf has to fix the sds problem first to see the result.... and he did, thx!

Greetings,

Johan.

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Subject: Re: libstt.so error

Posted by [Gianluigi Boca](#) on Fri, 19 Mar 2010 14:14:29 GMT

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Johan Messchendorp wrote on Thu, 18 March 2010 22:26Hi,

Well, in principle the dashboard system performs automatic updates and it takes the latest trunk release. Let's wait another day and see what happens. Of course, Ralf has to fix the sds problem first to see the result.... and he did, thx!

Greetings,

Johan.

Hi Johan,

so, now the situation looks better as far as the STT real pattern recognition code is concerned.

There is still one situation that I don't understand, in  
leonardo.cb.un-bonn.de

1) There, the library libglpk.so is not found. That tells me that on that machine the directory \$VMCWORKDIR/./fairsoft has not been updated for a long time (end of January).

2) There is still an error in PndSttTrackFinderReal.h, line 112, "truncated integer ...." that is clearly obsolete. That tells me that PndSttTrackFinderReal.h hasn't been updated for the last few days.

Could you check if it is up-to-date with the svn please?  
Gianluigi

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Subject: Re: libstt.so error

Posted by [Johan Messchendorp](#) on Sat, 20 Mar 2010 13:14:32 GMT

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Hi,

The pandaroot releases are updated for the nightly builds. I checked this on a few of them, all seem to be up-to-date. Still, I see problems on 64-bit machines (Debian Lenny and Suse Enterprise), with timeouts (300 secs) for the fourth macro in the stt QA directory...

<http://fairroot.gsi.de/CDash/testDetails.php?test=47602&build=17222>

<http://fairroot.gsi.de/CDash/testDetails.php?test=47632&build=17229>

Also on an older 32-bit machine running Fedora, I see a timeout (actually, I manually increased the limit to 600 seconds for this machine)

<http://fairroot.gsi.de/CDash/testDetails.php?test=47619&build=17226>

The good news... I don't see any crashes anymore. Nevertheless, I wonder about the timeouts, whether the code is not hanging in some infinite loop or whatever. It might be good to build in an internal timeout in the track finding code, not too waste CPU time on hopelessly long taking events. What do you think?

Greetings,

Johan.

---

**Subject: Re: libstt.so error**

Posted by [Stefano Spataro](#) on Sat, 20 Mar 2010 13:18:30 GMT

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Hi,

as far as I have seen running the qa macros outside dashboards, the simulation is stucked at a well defined EvtGen event (sim\_complete\_XXX), where it stays for several seconds. Maybe one should fix at that event, and to check if it is a problem of montecarlo (i.e. a huge shower creating thousands of points?) or related to our code.

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**Subject: Re: libstt.so error**

Posted by [Gianluigi Boca](#) on Sat, 20 Mar 2010 20:24:23 GMT

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Johan Messchendorp wrote on Sat, 20 March 2010 14:14Hi,

The pandaroot releases are updated for the nightly builds. I checked this on a few of them, all seem to be up-to-date. Still, I see problems on 64-bit machines (Debian Lenny and Suse Enterprise), with timeouts (300 secs) for the fourth macro in the stt QA directory...

<http://fairroot.gsi.de/CDash/testDetails.php?test=47602&build=17222>

<http://fairroot.gsi.de/CDash/testDetails.php?test=47632&build=17229>

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The good news... I don't see any crashes anymore. Nevertheless, I wonder about the timeouts, whether the code is not hanging in some infinite loop or whatever. It might be good to build in an internal timeout in the track finding code, not too waste CPU time on hopelessly long taking events. What do you think?

Greetings,

Johan.

Yes, I will investigate the 'timeouts' problem from now on.

In my experience they are usually caused by very 'messy' events with a lot of hits typically produced by delta rays or so, not originating from the primary vertex.

In this case the real pattern recognition algorithm fails or finds many little tracks and so on. In such cases before finishing, it may try a lot of combinatoric combinations of hits before exhausting all possible combinations, and that may take a lot of CPU time.

Not an infinite loop then, but only a many seconds of CPU consumption.

Gianluigi

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Subject: Re: libstt.so error

Posted by [Johan Messchendorp](#) on Sat, 20 Mar 2010 20:57:02 GMT

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Hi,

Shall I try to "isolate" a messy event with cause a timeout and give you the root files?

Johan.

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Subject: Re: libstt.so error

Posted by [Johan Messchendorp](#) on Sun, 21 Mar 2010 17:07:47 GMT

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Hi,

Just to let you know, I did some simple investigations running the real track finding QA macro based on the macros in the qa/stt directory. I run on 40 jobs on 40 machines, 10 events (particle gun, each event: 3 mu+ and 3 mu-, 1 GeV/c) each using a different random seed. Only 18 jobs finished within a few minutes successfully, whereas the other 22 are still running (meanwhile more than 350 minutes)... are you sure its not hanging, but still crunching tracks?

Greetings,



Johan.

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Subject: Re: libstt.so error

Posted by [Stefano Spataro](#) on Sun, 21 Mar 2010 20:00:20 GMT

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I think we are speaking about two different things. I have seen that for some particular evtgen the simulation stays for a long time, regardless of tpc/stt. I have not checked the reco part, even because when the sim fails (timeout) also the other macros are failing.

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Subject: Re: libstt.so error

Posted by [Johan Messchendorp](#) on Sun, 21 Mar 2010 21:05:51 GMT

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we indeed are talking about two different things.... the problem I encounter is done with the particle gun and really points to the real track finding algorithm of the STT. The ideal track finding works ok on the same events.

Johan

---

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Subject: Re: libstt.so error

Posted by [Gianluigi Boca](#) on Sun, 21 Mar 2010 21:29:22 GMT

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Johan Messchendorp wrote on Sat, 20 March 2010 21:57Hi,

Shall I try to "isolate" a messy event with cause a timeout and give you the root files?

Johan.

hi,

tomorrow I will run the DA STT macros and see if they give me the same problem on a SL4.8 Linux machine in Pavia.

Let's see if I can isolate myself the problem and understand if it is a problem of the real p.r. or a problem of in the generation of the events

bis Morgen

Gianluigi

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