NeighborLB segfaults during startup in SMP/multicore builds

08/07/2017 07:17 PM - Sam White

Status: New
Priority: Normal
Assignee: Kavitha Chandrasekar
Category: Load Balancing
Target version: 6.9.0

Description
Running with NeighborLB causes a failure during initialization on multicore builds. I haven't tried SMP builds, but non-SMP is fine.

```
$ gdb --args ./stencil3d +p4 64 32 +balancer NeighborLB
(gdb) r
Starting program: /dcsdata/home/swhite/tmp/charm5/multicore-linux-x86_64/examples/charm++/load_balancing/stencil3d/stencil3d +p4 64 32 +balancer NeighborLB
[Thread debugging using libthread_db enabled]
Using host libthread_db library "/lib/x86_64-linux-gnu/libthread_db.so.1".
Charm++: standalone mode (not using charmrun)
Charm++> Running in Multicore mode: 4 threads
[New Thread 0x7ffff6fd2700 (LWP 14080)]
[New Thread 0x7ffff67d1700 (LWP 14081)]
[New Thread 0x7ffff5fd0700 (LWP 14082)]
Converse/Charm++ Commit ID: v6.8.0-beta1-313-gc9c2334bd
CharmLB> Load balancer assumes all CPUs are same.
Charm++> Running on 1 unique compute nodes (8-way SMP).
Charm++> cpu topology info is gathered in 0.000 seconds.
```

Program received signal SIGSEGV, Segmentation fault.
__GI___pthread_mutex_lock (mutex=0x0) at ../nptl/pthread_mutex_lock.c:66
66 ../nptl/pthread_mutex_lock.c: No such file or directory.
(gdb) bt
#0 __GI___pthread_mutex_lock (mutex=0x0) at ../nptl/pthread_mutex_lock.c:66
#1 0x000000000061715a in LBTopoLookup (name=0x649c18 "torus_nd_5") at topology.C:1331
#2 0x00000000005cb971 in NborBaseLB::NborBaseLB (this=0xa29a40, __vtt_parm=0x62d6f0 <VTT for NeighborLB+16>, opt=..., __in_chrg=<optimized out>) at NborBaseLB.C:44
#3 0x00000000004e9e44 in CBaseT1<CKLBOptions> (args[0]=..., __vtt_parm=0x62d6e8 <VTT for NeighborLB+8>, this=0x29a40, __in_chrg=<optimized out>) at nborBaseLB.C:44
#4 NeighborLB::NeighborLB (this=0x29a40, opt=..., __in_chrg=<optimized out>, __vtt_parm=<optimized out>) at NeighborLB.C:12
#5 0x00000000004eeba2 in CKIndex_NeighborLB::call_NeighborLB_marshall1 (impl_msg=<optimized out>, impl_obj Void=0xa29a40) at NeighborLB.def.h:104
#6 0x0000000000523a0 in CKDeliverMessageFree (epIdx=241, msg=0xa29860, obj=<optimized out>) at ck.C:593
#7 0x0000000000523f1e in _invokeEntryNoTrace (obj=0xa29a40, env=0xa29860, epIdx=241) at ck.C:637
#8 CKCreateLocalGroup (groupId=..., groupId@entry=..., epIdx=epIdx@entry=241, env=0xa29860) at ck.C:733
#9 0x0000000000525ac7 in _createGroup (groupId=groupId@entry=..., env=env@entry=0xa29860) at ck.C:808
#10 0x0000000000525b28 in _groupCreate (env=0xa29860) at ck.C:844
#11 CKCreateGroup (cid=<optimized out>, elx=<optimized out>, msg=0xa29860) at ck.C:890
#12 0x00000000004eef5b in CProxy_NeighborLB::ckNew (impl_noname=..., impl_e_opt_impl_e_opt@entry=0x0) at NeighborLB.def.h:56
#13 0x00000000004ef046 in CreateNeighborLB () at NeighborLB.C:10
#14 0x000000000056ace in LBDBInit::LBDBInit (this=0x948770, m=0x947ec0) at LBDatabase.C:131
#15 0x00000000004d39d in _initCharm (unused_argc=<optimized out>, argv=argv@entry=0x7fffffff998) at init.C:1489
#16 0x00000000005e760e in ConverseRunPE (everReturn=everReturn@entry=0) at machine-common-core.c:1296
#17 0x00000000005e788a in ConverseInit (argc=6, argv=0x7fffffff998, fn=<optimized out>, usched=<optimized out>,...
ptimized out>, initret=0)
at machine-common-core.c:1198
#18 0x000000000004bba37 in main (argc=<optimized out>, argv=<optimized out>) at main.C:18

History
#1 - 08/07/2017 07:59 PM - Sam White
- Subject changed from NeighborLB failure during startup in multicore builds to NeighborLB segfaults during startup in SMP/multicore builds

The same failure is seen in SMP mode.