Gromacs - Bug #1547
MDRUN tools tests failed on armv7a with SIGBUS
07/02/2014 11:08 AM - Alexey Shvetsov

Status: Closed
Priority: Normal
Assignee: Magnus Lundborg
Category: core library
Target version: 5.1
Affected version: git master

Description
Also backtrace for mdrun-test
WARNING: Using the slow plain C kernels. This should not happen during routine usage on supported platforms.

starting mdrun 'spc-and-methanol'
6 steps, 0.0 ps.

Program received signal SIGBUS, Bus error.
0xb682b6e0 in quantize_float (x=0x24, x@entry=0x9591bb, natoms=natoms@entry=3, nframes=1, nframes@entry=2, precision=0.000999999931, quant=0x2, quant@entry=0x959208)
at /home/alexxy/Develop/gromacs/src/external/tng_io/src/compression/tng_compress.c:91
91 quant[(frame*natoms*3+i*3+j)=(int)floor((x[frame*natoms*3+i*3+j]/precision)+0.5);
(gdb) bt
#0 0xb682b6e0 in quantize_float (x=0x24, x@entry=0x9591bb, natoms=natoms@entry=3, nframes=1, nframes@entry=2, precision=0.000999999931, quant=0x2, quant@entry=0x959208)
at /home/alexxy/Develop/gromacs/src/external/tng_io/src/compression/tng_compress.c:91
#1 0xb682c7c0 in tng_compress_pos_float (pos=pos@entry=0x9591bb, natoms=3, nframes=2, desired_precision=desired_precision@entry=0.00100000005, speed=speed@entry=0, algo=0x2017728, nitems=0xbeffc30c) at /home/alexxy/Develop/gromacs/src/external/tng_io/src/compression/tng_compress.c:1248
#2 0xb682c874 in tng_compress_pos_float_find_algo (pos=pos@entry=0x9591bb, natoms=<optimized out>, nframes=<optimized out>, desired_precision=desired_precision@entry=0.00100000005, speed=speed@entry=0, algo=0x2017728, nitems=0xbeffc30c, nitems@entry=0xbeffc304) at /home/alexxy/Develop/gromacs/src/external/tng_io/src/compression/tng_compress.c:1279
#3 0xb6847cb0 in tng_compress (start_pos=<optimized out>, type=2 "002", n_particles=2, n_frames=31511178625676096, block=0x9590c8, tng_data=0x9590c8) at /home/alexxy/Develop/gromacs/src/external/tng_io/src/lib/tng_io.c:4837
#4 tng_particle_data_block_write (tng_data=0x9590c8, tng_data@entry=0x6ff340, block=0x9590c8, block_index=<optimized out>, mapping=mapping@entry=0x0, hash_mode=hash_mode@entry=1 "001") at /home/alexxy/Develop/gromacs/src/external/tng_io/src/lib/tng_io.c:6311
#5 0xb685661c in tng_frame_set_write (tng_data=0x6ff340, hash_mode=<optimized out>) at /home/alexxy/Develop/gromacs/src/external/tng_io/src/lib/tng_io.c:13107
#6 0xb6b5c610 in mdoutf_write_to_trajectory_files (fplog=0x200a7d0, cr=0x1df1b60, of=0x200ee40, mdo_flags=19, top_global=0x1ffe138, step=6, t=0.006000000000000001, state_local=0x20101f0, state_global=0x1df1328, f_local=0x702e08, f_global=0x702e08) at /home/alexxy/Develop/gromacs/src/gromacs/fileio/trajectory_writing.c:146
#7 0xb6b5c3b8 in do_md_trajectory_writing (fplog=0x1ffe138, cr=0x1df1b60, nfile=7351896, fnm=0x0, step=6, step_rel=6, t=0.006000000000000001, if=0x1df0d20, state=0x20101f0, state_global=0x1df1328, top_global=0x1ffe138, f_local=0x702e08, wcycle=0x0, nchkpt=0x702e58, bCPT=1, bRerunMD=0, bLastStep=1, bDoConflOut=4096, bSumEkinhOld=0) at /home/alexxy/Develop/gromacs/src/gromacs/fileio/trajectory_writing.c:499
#8 0x0004037b in do_md (fplog=0x6, cr=0x1df1b60, nfile=0, fnm=0x0, oenv=0x200bcd8, bVerbose=0, bCompact=1, nstglobalcomm=1, vsite=0, constr=0x200ede0, stepout=100, ir=0x1df0d20, top_global=0x1ffe138, fcd=0x1ffe298, state=0x1df1328, mdatoms=0x200ed38, nrb=0x200db8, wcycle=0x0, ed=0x0, fn=0x200ede8, repl_ex_nsl=0, repl_ex_nex=0, repl_ex_seed=1, membed=0x0, cpt_period=15, max_hours=1, deviceOptions=0x93f98 "", imdport=8888, Flags=1055744, walltime_accounting=0x696e28) at /home/alexxy/Develop/gromacs/src/programs/mdrun/md.cpp:1316
2151            this, &Test::TestBody, "the test body");

(gdb) up
#18 0x00086e60 in testing::TestInfo::Run (this=0xb6a60) at
/home/alexxy/Develop/gromacs/src/external/gmock-1.7.0/gtest/src/gtest.cc:2326
2326            test->Run();
(gdb) up
#19 0x00086fa0 in Run (this=<optimized out>) at /home/alexxy/Develop/gromacs/src/external/gmock-1.7.0/gtest/src/gtest.cc:2301
2301            if (!should_run_) return;
(gdb) up
#20 testing::TestCase::Run (this=<optimized out>) at /home/alexxy/Develop/gromacs/src/external/gmock-1.7.0/gtest/src/gtest.cc:2444
2444            GetMutableTestInfo(i)->Run();
(gdb) up
#21 0x00087470 in Run (this=<optimized out>) at /home/alexxy/Develop/gromacs/src/external/gmock-1.7.0/gtest/src/gtest.cc:2430
2430            if (!should_run_) return;
(gdb) up
#22 testing::internal::UnitTestImpl::RunAllTests (this=<optimized out>) at
/home/alexxy/Develop/gromacs/src/external/gmock-1.7.0/gtest/src/gtest.cc:4315
4315            GetMutableTestCase(test_index)->Run();
(gdb) up
#23 0x000876bc in HandleSehExceptionsInMethodIfSupported<testing::internal::UnitTestImpl, bool> (location=<optimized out>,
method=<optimized out>, object=<optimized out>) at /home/alexxy/Develop/gromacs/src/external/gmock-1.7.0/gtest/src/gtest.cc:2078
2078            return (object->*method)();
(gdb) up
#24 HandleExceptionsInMethodIfSupported<testing::internal::UnitTestImpl, bool> (location=0xa26e4 "auxiliary test code
(environments or event listeners)",
method=bool (testing::internal::UnitTestImpl::*)(testing::internal::UnitTestImpl * const) 0x8707c
<testing::internal::UnitTestImpl::RunAllTests()>, object=0xb4ca8)
at /home/alexxy/Develop/gromacs/src/external/gmock-1.7.0/gtest/src/gtest.cc:2114
2114            return HandleSehExceptionsInMethodIfSupported(object, method, location);
(gdb) up
#25 testing::UnitTest::Run (this=<optimized out>) at /home/alexxy/Develop/gromacs/src/external/gmock-1.7.0/gtest/src/gtest.cc:3929
3929            "auxiliary test code (environments or event listeners)") ? 0 : 1;
(gdb) up
#26 0x0002f558 in RUN_ALL_TESTS () at /home/alexxy/Develop/gromacs/src/external/gmock-1.7.0/gtest/include/gtest/gtest.h:2288
2288            return ::testing::UnitTest::GetInstance()->Run();
(gdb) up
#27 main (argc=193880, argv=0xbeffef14) at /home/alexxy/Develop/gromacs/src/testutils/unittest_main.cpp:63
63            int errcode = RUN_ALL_TESTS();
(gdb) up
Initial frame selected; you cannot go up.
(gdb)

Related issues:
Related to Gromacs - Bug #1559: Writing TNG files fails on Xeon Phi  Closed  07/10/2014
Duplicates Gromacs - Bug #1542: two unit tests fail on 32-bit ARM  Closed  06/30/2014

Associated revisions
Revision 898166c3 - 08/21/2014 05:33 PM - Magnus Lundborg
Fixed TNG memory alignment problem and reset pointers.

This is a temporary fix to the memory alignment problems on some
platforms. In the main TNG repository the whole I/O system is
rewritten to address this problem. This fix is to avoid the
problems without making too large changes.

There are also some pointers that were not reset after memory
was freed. This is also fixed in here.

This commit does not correspond to any commit in the TNG
repository.

Fixes #1542, #1546, #1547 and #1559.

Change-Id: I90a6406ccbc43fd57d4423c2b661019c7f763e8

11/19/2015
History

#1 - 07/02/2014 12:00 PM - Teemu Murtola
- Duplicates Bug #1542: two unit tests fail on 32-bit ARM added

#2 - 07/02/2014 01:01 PM - Magnus Lundborg
- Assignee set to Magnus Lundborg

#3 - 07/02/2014 01:02 PM - Magnus Lundborg
- Status changed from New to In Progress

#4 - 07/03/2014 02:35 PM - Mark Abraham
- Description updated

#5 - 07/11/2014 10:32 AM - Magnus Lundborg
- Related to Bug #1559: Writing TNG files fails on Xeon Phi added

#6 - 07/11/2014 11:53 AM - Gerrit Code Review Bot
Gerrit received a related patchset '1' for Issue #1547.
Uploader: Magnus Lundborg (magnus.lundborg@scilifelab.se)
Change-id: I96e0704d3858264ca918603bf1d7e3b27b4db7ea
Gerrit URL: https://gerrit.gromacs.org/3799

#7 - 07/11/2014 12:38 PM - Magnus Lundborg
- Status changed from In Progress to Fix uploaded

#8 - 07/15/2014 09:11 AM - Teemu Murtola
- Category changed from testing to core library
- Target version changed from 5.x to 5.1

#9 - 08/25/2014 06:15 AM - Roland Schulz
- Status changed from Fix uploaded to Closed