

Synergia2 - Bug #7576

test_space_charge_3d_open_hockney_mpi4 fails intermittently

12/30/2014 04:27 PM - Eric Stern

Status:	Closed	Start date:	12/30/2014
Priority:	Normal	Due date:	
Assignee:		% Done:	0%
Category:		Estimated time:	0.00 hour
Target version:			
Description			
test_space_charge_3d_open_hockney_mpi4 fails intermittently most prominently on the upgraded Wilson cluster, but I find it happening on SLF6.5 panal7 desktop machine too.			
Intermittently from ctest:			
<pre>[egstern@panal7 synergia2]\$ ctest --verbose -R test_space_charge_3d_open_hockney_mpi4 UpdateCTestConfiguration from :/home/egstern/syn2-dev/build/synergia2/DartConfiguration.tcl UpdateCTestConfiguration from :/home/egstern/syn2-dev/build/synergia2/DartConfiguration.tcl Test project /home/egstern/syn2-dev/build/synergia2 Constructing a list of tests Done constructing a list of tests Checking test dependency graph... Checking test dependency graph end test 146 Start 146: test_space_charge_3d_open_hockney_mpi4 146: Test command: /usr/lib64/openmpi/bin/mpixec "-np" "4" "/home/egstern/syn2-dev/build/synergia2/src/synergia/collective/tests/test_space_charge_3d_open_hockney_mpi" 146: Test timeout computed to be: 9.99988e+06 146: Running 17 test cases... 146: Running 17 test cases... 146: Running 17 test cases... 146: Running 17 test cases... 146: 146: * No errors detected 146: 146: No errors detected 146: 146: No errors detected 146: 146: * No errors detected 1/1 Test #146: test_space_charge_3d_open_hockney_mpi4 ... Passed 1.43 sec The following tests passed: test_space_charge_3d_open_hockney_mpi4 100% tests passed, 0 tests failed out of 1 Total Test time (real) = 1.44 sec [egstern@panal7 synergia2]\$ ctest --verbose -R test_space_charge_3d_open_hockney_mpi4 UpdateCTestConfiguration from :/home/egstern/syn2-dev/build/synergia2/DartConfiguration.tcl UpdateCTestConfiguration from :/home/egstern/syn2-dev/build/synergia2/DartConfiguration.tcl Test project /home/egstern/syn2-dev/build/synergia2 Constructing a list of tests Done constructing a list of tests Checking test dependency graph... Checking test dependency graph end test 146 Start 146: test_space_charge_3d_open_hockney_mpi4 146: Test command: /usr/lib64/openmpi/bin/mpixec "-np" "4" "/home/egstern/syn2-dev/build/synergia2/src/synergia/collective/tests/test_space_charge_3d_open_hockney_mpi"</pre>			

```
146: Test timeout computed to be: 9.99988e+06
146: Running 17 test cases...
146: Running 17 test cases...
146: Running 17 test cases...
146: Running 17 test cases...
146: unknown location(0): fatal error in "auto_tune_comm_sptr": memory access violation at address: 0x01b33780: no mapping at fault address
146: /home/egstern/syn2-dev/build/synergia2/src/synergia/collective/tests/test_space_charge_3d_open_hockney_mpi.cc(92): last checkpoint
```

And also if I call the test executable directly:

```
[egstern@panal7 synergia2]$ mpirun -np 4
/home/egstern/syn2-dev/build/synergia2/src/synergia/collective/tests/test_space_charge_3d_open_hockney_mpi
Running 17 test cases...
Running 17 test cases...
Running 17 test cases...
Running 17 test cases...

  • No errors detected

  • No errors detected

  • No errors detected

  • No errors detected
[egstern@panal7 synergia2]$ mpirun -np 4
/home/egstern/syn2-dev/build/synergia2/src/synergia/collective/tests/test_space_charge_3d_open_hockney_mpi
Running 17 test cases...
Running 17 test cases...
Running 17 test cases...
Running 17 test cases...
unknown location(0): fatal error in "auto_tune_comm_sptr": memory access violation at address: 0x021ff8b0: no mapping at fault address
/home/egstern/syn2-dev/build/synergia2/src/synergia/collective/tests/test_space_charge_3d_open_hockney_mpi.cc(92): last checkpoint
```

History

#1 - 12/30/2014 05:15 PM - Eric Stern

The memory access violation is apparently occurring in `get_global_electric_field_component_allgatherv`.

#2 - 01/01/2015 03:40 PM - Eric Stern

- Status changed from *New* to *Resolved*

Removed the `auto_tune_comm` code and its use in the tests per suggestion of J. Amundson in commit [a99f2e6302294a8084d8a382633e5f9a15f29516](#). Fix tested on platforms where the bug was most evident: `panal7`, `tev`, and `amd32` worker node.

#3 - 01/01/2015 03:41 PM - Eric Stern

- Status changed from *Resolved* to *Closed*