SPEC® MPIM2007 Result

Copyright 2006-2010 Standard Performance Evaluation Corporation

SGI

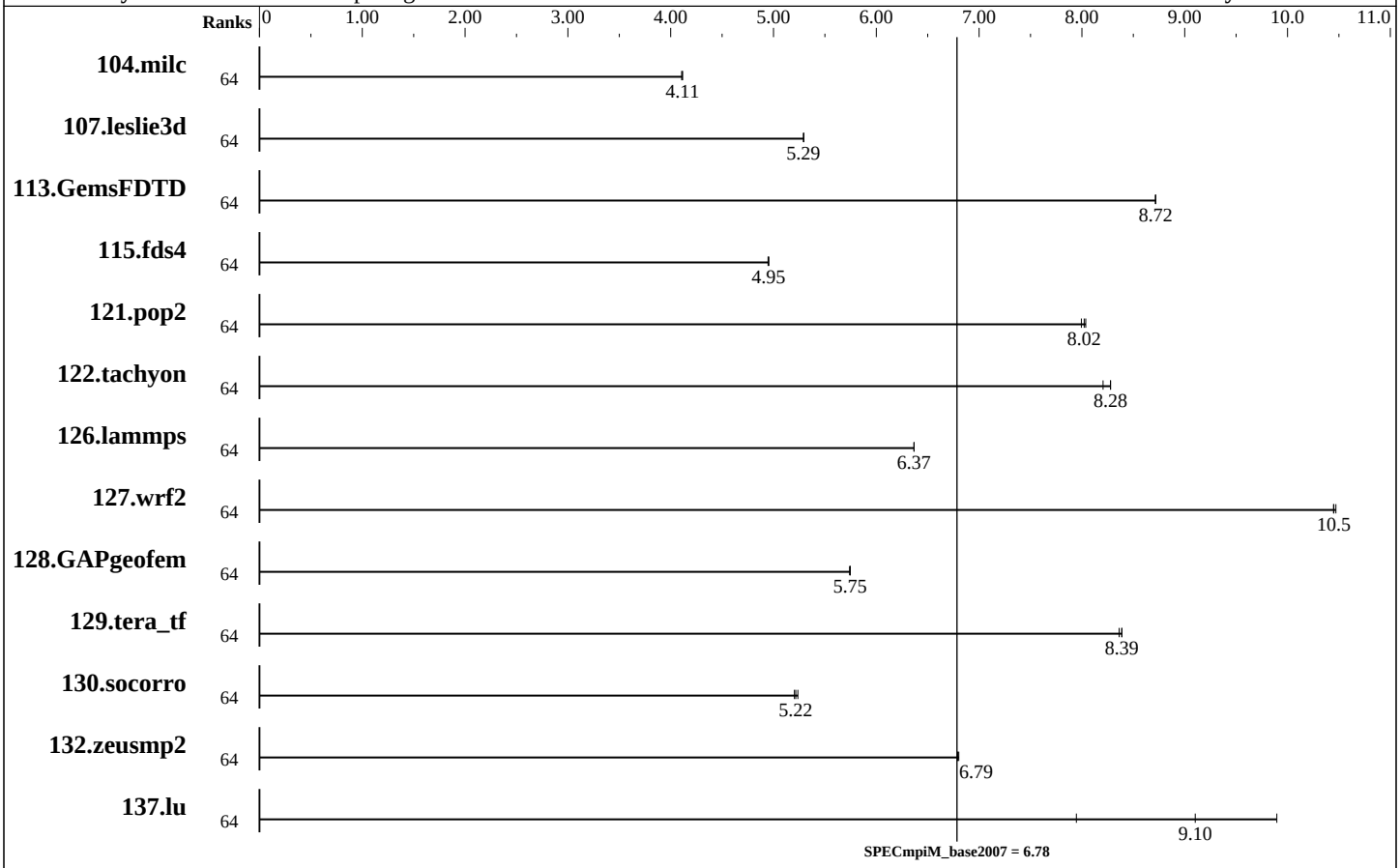
SGI Altix ICE 8200EX
(Intel Xeon E5472, 3.00 GHz)
IB 4x DDR
Platform MPI 5.6.4

SPECmpiM_peak2007 = Not Run

SPECmpiM_base2007 = 6.78

MPI2007 license: 021
Test sponsor: Platform Computing Inc.
Tested by: Platform Computing Inc.

Test date: Dec-2008
Hardware Availability: Mar-2008
Software Availability: Jan-2009



Results Table

Benchmark	Base							Peak						
	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
104.milc	64	380	4.11	**380**	**4.11**	381	4.11							
107.leslie3d	64	986	5.29	986	5.29	**986**	**5.29**							
113.GemsFDTD	64	**724**	**8.72**	724	8.72	724	8.72							
115.fds4	64	394	4.95	394	4.95	**394**	**4.95**							
121.pop2	64	**515**	**8.02**	516	7.99	514	8.04							
122.tachyon	64	338	8.28	341	8.21	**338**	**8.28**							
126.lammps	64	458	6.37	**458**	**6.37**	458	6.37							
127.wrf2	64	**746**	**10.5**	745	10.5	746	10.4							
128.GAPgeofem	64	359	5.75	**359**	**5.75**	360	5.74							
129.tera_tf	64	330	8.39	331	8.36	**330**	**8.39**							

Table continues on next page. Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

SPEC MPIM2007 Result

Copyright 2006-2010 Standard Performance Evaluation Corporation

SGI

SGI Altix ICE 8200EX
(Intel Xeon E5472, 3.00 GHz)
IB 4x DDR
Platform MPI 5.6.4

SPECmpiM_peak2007 = Not Run

SPECmpiM_base2007 = 6.78

MPI2007 license: 021
Test sponsor: Platform Computing Inc.
Tested by: Platform Computing Inc.

Test date: Dec-2008
Hardware Availability: Mar-2008
Software Availability: Jan-2009

Results Table (Continued)

Benchmark	Base							Peak						
	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
130.socorro	64	**732**	**5.22**	734	5.20	729	5.24							
132.zeusmp2	64	457	6.79	**457**	**6.79**	456	6.80							
137.lu	64	**404**	**9.10**	463	7.95	371	9.90							

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Hardware Summary

Type of System:	Homogeneous
Compute Node:	SGI Altix ICE 8200EX Compute Node
Interconnects:	InfiniBand (MPI) InfiniBand (I/O)
File Server Node:	SGI Storage Node
Total Compute Nodes:	8
Total Chips:	16
Total Cores:	64
Total Threads:	64
Total Memory:	128 GB
Base Ranks Run:	64
Minimum Peak Ranks:	--
Maximum Peak Ranks:	--

Software Summary

C Compiler:	Intel C Compiler 10.1 for Linux (10.1.018)
C++ Compiler:	Intel C++ Compiler 10.1 for Linux (10.1.018)
Fortran Compiler:	Intel Fortran Compiler 10.1 for Linux (10.1.018)
Base Pointers:	64-bit
Peak Pointers:	64-bit
MPI Library:	Platform MPI 5.6.4-59151
Other MPI Info:	OFED 1.3.1 Platform Computing Inc has acquired Scali MPI Connect, hence Platform MPI and Scali MPI Connect are used synonymously.
Pre-processors:	None
Other Software:	None

Node Description: SGI Altix ICE 8200EX Compute Node

Hardware

Number of nodes:	8
Uses of the node:	compute
Vendor:	SGI
Model:	SGI Altix ICE 8200EX (Intel Xeon E5472, 3.00 GHz)
CPU Name:	Intel Xeon E5472
CPU(s) orderable:	1-2 chips
Chips enabled:	2
Cores enabled:	8
Cores per chip:	4
Threads per core:	1
CPU Characteristics:	Quad-Core Xeon E5472 (Harpertown), 1600MHz FSB
CPU MHz:	3000
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	12 MB I+D on chip per chip, 6 MB shared / 2 cores
L3 Cache:	None
Other Cache:	None
Memory:	16 GB (8*2GB PC2-6400 CL5-5-5 FB-DIMMs)
Disk Subsystem:	None
Other Hardware:	IB adapter port #1 was used for MPI traffic and port #2 was used for I/O

Continued on next page

Software

Adapter:	Mellanox MT26418 ConnectX IB DDR (PCIe x8 Gen2 5 GT/s)
Adapter Driver:	OFED-1.3.1
Adapter Firmware:	2.5.0
Operating System:	SUSE Linux Enterprise Server 10 (x86_64) SP2 Kernel 2.6.16.60-0.23.PTF.403865.1-smp
Local File System:	None (diskless)
Shared File System:	NFSv3 IPoIB
System State:	Multi-user, run level 3
Other Software:	SGI ProPack 6 for Linux Service Pack 1

SPEC MPIM2007 Result

Copyright 2006-2010 Standard Performance Evaluation Corporation

SGI

SGI Altix ICE 8200EX
(Intel Xeon E5472, 3.00 GHz)
IB 4x DDR
Platform MPI 5.6.4

SPECmpiM_peak2007 = Not Run

SPECmpiM_base2007 = 6.78

MPI2007 license: 021
Test sponsor: Platform Computing Inc.
Tested by: Platform Computing Inc.

Test date: Dec-2008
Hardware Availability: Mar-2008
Software Availability: Jan-2009

Node Description: SGI Altix ICE 8200EX Compute Node

Adapter:	Mellanox MT26418 ConnectX IB DDR (PCIe x8 Gen2 5 GT/s)
Number of Adapters:	1
Slot Type:	PCIe x8 Gen2
Data Rate:	InfiniBand 4x DDR
Ports Used:	2
Interconnect Type:	InfiniBand

Node Description: SGI Storage Node

Hardware

Number of nodes:	1
Uses of the node:	fileserver
Vendor:	SGI
Model:	SGI Altix XE 250
CPU Name:	Intel Xeon E5420
CPU(s) orderable:	1-2 chips
Chips enabled:	2
Cores enabled:	8
Cores per chip:	4
Threads per core:	1
CPU Characteristics:	Quad-Core Xeon E5420 (Harpertown), 1333MHz FSB
CPU MHz:	2500
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	12 MB I+D on chip per chip, 6 MB shared / 2 cores
L3 Cache:	None
Other Cache:	None
Memory:	24 GB (12*2GB PC2-5300 FB-DIMMs)
Disk Subsystem:	6 TB RAID 5 8 x 750 GB SATA (Seagate Barracuda 7200 RPM)
Other Hardware:	None
Adapter:	Mellanox MT25208 InfiniHost III Ex (PCIe x8 Gen1 2.5 GT/s)
Number of Adapters:	1
Slot Type:	PCIe x8 Gen1
Data Rate:	InfiniBand 4x DDR
Ports Used:	1
Interconnect Type:	InfiniBand

Software

Adapter:	Mellanox MT25208 InfiniHost III Ex (PCIe x8 Gen1 2.5 GT/s)
Adapter Driver:	OFED-1.3.1
Adapter Firmware:	5.3.0
Operating System:	SUSE Linux Enterprise Server 10 (x86_64) SP2 Kernel 2.6.16.60-0.23.PTF.403865.1-smp
Local File System:	XFS
Shared File System:	NFSv3 IPoIB
System State:	Multi-user, run level 3
Other Software:	SGI ProPack 6 for Linux Service Pack 1

Interconnect Description: InfiniBand (MPI)

Hardware

Vendor:	Mellanox Technologies
Model:	MT26418 ConnectX
Switch Model:	Mellanox MT47396 InfiniScale III

Software

Continued on next page

Copyright 2006-2010 Standard Performance Evaluation Corporation

SGI

SGI Altix ICE 8200EX
(Intel Xeon E5472, 3.00 GHz)
IB 4x DDR
Platform MPI 5.6.4

SPECmpiM_peak2007 = Not Run

SPECmpiM_base2007 = 6.78

MPI2007 license: 021
Test sponsor: Platform Computing Inc.
Tested by: Platform Computing Inc.

Test date: Dec-2008
Hardware Availability: Mar-2008
Software Availability: Jan-2009

Interconnect Description: InfiniBand (MPI)

Number of Switches:	2
Number of Ports:	24
Data Rate:	InfiniBand 4x DDR
Firmware:	2020001
Topology:	HyperCube (dim=1) of two 24-port switches connected by eight IB links
Primary Use:	MPI traffic

Interconnect Description: InfiniBand (I/O)

Hardware	
Vendor:	Mellanox Technologies
Model:	MT26418 ConnectX
Switch Model:	Mellanox MT47396 InfiniScale-III
Number of Switches:	2
Number of Ports:	24
Data Rate:	InfiniBand 4x DDR
Firmware:	2020001
Topology:	HyperCube (dim=1) of two 24-port switches connected by eight IB links
Primary Use:	I/O traffic

Software

Submit Notes

```
The config file option 'submit' was used.
```

Base Compiler Invocation

C benchmarks:

```
mpicc  -ccl icc
```

C++ benchmarks:

126.lammps: `mpicc  -ccl icpc`

Fortran benchmarks:

```
mpif77 -ccl ifort
```

Benchmarks using both Fortran and C:

```
mpicc  -ccl icc mpif77 -ccl ifort
```

Base Portability Flags

121.pop2: `-DSPEC_MPI_CASE_FLAG`
127.wrf2: `-DSPEC_MPI_CASE_FLAG -DSPEC_MPI_LINUX`

Base Optimization Flags

C benchmarks:
`-O3 -ipo -xT -no-prec-div`

C++ benchmarks:

126.lammps: `-O3 -ipo -xT -no-prec-div`

Fortran benchmarks:
`-O3 -ipo -xT -no-prec-div`

Benchmarks using both Fortran and C:
`-O3 -ipo -xT -no-prec-div`

The flags files that were used to format this result can be browsed at
http://www.spec.org/mpi2007/flags/MPI2007_flags.20081204.html
http://www.spec.org/mpi2007/flags/EM64T_Intel101_flags.20080618.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/mpi2007/flags/MPI2007_flags.20081204.xml
http://www.spec.org/mpi2007/flags/EM64T_Intel101_flags.20080618.xml

SPEC and SPEC MPI are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC MPI2007 v1.1.
Report generated on Tue Jul 22 13:35:45 2014 by SPEC MPI2007 PS/PDF formatter v1463.
Originally published on 13 January 2009.