



SPEC® MPIM2007 Result

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IBM

SPECmpiM_peak2007 = Not Run

iDP (Intel Xeon L5420, 2.50 GHz)

SPECmpiM_base2007 = NC

MPI2007 license: 45

Test sponsor: Indiana University

Tested by: Scott Teige

Test date: Apr-2009

Hardware Availability: Sep-2008

Software Availability: Jan-2009

- Ranks
- 104.milc
- 107.leslie3d
- 113.GemsFDTD
- 115.fds4
- 121.pop2
- 122.tachyon
- 126.lammps
- 127.wrf2
- 128.GAPgeofem
- 129.tera_tf
- 130.soc
- 132.zeusmp2
- 137.lu

Non-Compliant

Results Table

Benchmark	Base							Peak						
	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
104.milc	32	NC	NC	NC	NC	NC	NC							
107.leslie3d	32	NC	NC	NC	NC	NC	NC							

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



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Results Table (Continued)

Benchmark	Base								Peak							
	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
113.GemsFDTD	32	NC	NC	NC	NC	NC	NC									
115.fds4	32	NC	NC	NC	NC	NC	NC									
121.pop2	32	NC	NC	NC	NC	NC	NC									
122.tachyon	32	NC	NC	NC	NC	NC	NC									
126.lammps	32	NC	NC	NC	NC	NC	NC									
127.wrf2	32	NC	NC	NC	NC	NC	NC									
128.GAPgeofem	32	NC	NC	NC	NC	NC	NC									
129.tera_tf	32	NC	NC	NC	NC	NC	NC									
130.socorro	32	NC	NC	NC	NC	NC	NC									
132.zeusmp2	32	NC	NC	NC	NC	NC	NC									
137.lu	32	NC	NC	NC	NC	NC	NC									

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: iDP node
Interconnect: Gigabit Ethernet
Switch: Ethernet Switch
Total Compute Nodes: 4
Total Chips: 8
Total Ranks: 32
Total Threads: 32
Total Memory: 128 GB
Base Ranks per Node: 32
Minimum Peak Ranks: --
Maximum Peak Ranks: --

Software Summary

C Compiler: Intel C++ Compiler 10.1 for Linux (10.1.013)
C++ Compiler: Intel C++ Compiler 10.1 for Linux (10.1.013)
Fortran Compiler: Intel Fortran Compiler 10.1 for Linux (10.1.013)
Base Pointers: 64-bit
Peak Pointers: 64-bit
MPI Library: OpenMPI 1.3.1
Other MPI Info: None
Pre-processors: No
Other Software: None



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Node Description: iDP node

Hardware		Software	
Number of nodes:	4	Adapter:	Intel Corporation 80003ES2LAN Gigabit Ethernet Controller (Copper) (rev 01)
Uses of the node:	compute	Adapter Driver:	OS default (e1000, v7.3.20-k2-NAPI)
Vendor:	IBM	Adapter Firmware:	2.4-0
Model:	System x iDataPlex dx340	Adapter:	Mellanox Technologies MT26418 [ConnectX IB DDR, PCIe 2.0 5GT/s] (rev a0)
CPU Name:	Intel Xeon L5420	Adapter Driver:	OFED 1.3.1
CPU(s) orderable:	1-2 chips	Adapter Firmware:	2.5.0
Chips enabled:	2	Operating System:	RedHat EL v4.7
Cores enabled:	8	Local File System:	Linux/ext3
Cores per chip:	4	Shared File System:	IBM N5500 NAS via NFSv3
Threads per core:	1	System State:	Multi-User
CPU Characteristics:	1333 MHz FSB	Other Software:	lustre 1.6.7 kernel patches
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, 4 MB shared / 2 cores		
L3 Cache:	None		
Other Cache:	None		
Memory:	32 GB (FBDIMM 8x4-GB 667 MHz)		
Disk Subsystem:	Western Digital 160 GB SATA WD160YS-23SHBO		
Other Hardware:	None		
Adapter:	Intel Corporation 80003ES2LAN Gigabit Ethernet Controller (Copper) (rev 01)		
Number of Adapters:	2		
Slot Type:	--		
Data Rate:	Gigabit Ethernet		
Ports Used:	1		
Interconnect Type:	Ethernet		
Adapter:	Mellanox Technologies MT26418 [ConnectX IB DDR, PCIe 2.0 5GT/s] (rev a0)		
Number of Adapters:	1		
Slot Type:	PCIe x8 Gen2		
Data Rate:	InfiniBand 4x DDR		
Ports Used:	1		
Interconnect Type:	InfiniBand		



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Interconnect Description: Gigabit Ethernet

Hardware	Software
Vendor: ProCurve Networking	
Model: HP ProCurve Switch 5406zl Intelligent Edge J8697A	
Switch Model: HP ProCurve Switch 5406zl Intelligent Edge J8697A	
Number of Switches: 1	
Number of Ports: 144	
Data Rate: 1Gbps Ethernet	
Firmware: --	
Topology: Single switch	
Primary Use: Cluster File System	

Hardware	Software

Interconnect Description: IB Switch

Hardware	Software
Vendor: Cisco	
Model: Cisco SFS 7024	
Switch Model: Cisco SFS 7024D	
Number of Switches: 1	
Number of Ports: 200	
Data Rate: InfiniBand 4x DDR	
Firmware: 4.1.1.1.1	
Topology: Single switch	
Primary Use: MPI traffic	

Hardware	Software

Submit Notes

The config file option 'submit' was used.

Base Compiler Invocation

C benchmarks:
mpicc

Continued on next page



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Base Compiler Invocation (Continued)

C++ benchmarks:

126.lammps: mpicxx

Fortran benchmarks:

mpif90

Benchmarks using both Fortran and C:

mpicc mpif90

Base Portability Flags

121.pop2: -DSPEC_MPI_CASE_FLAG
126.lammps: -DMPICH_IGNORE_CXX_SEEK
127.wrf2: -DSPEC_MPI_LINUX -DSPEC_MPI_CASE_FLAG

Base Optimization Flags

C benchmarks:

-O3 -xT -ipo -no-prec-div

C++ benchmarks:

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

Fortran benchmarks:

-O3 -xT -ipo -no-prec-div

Benchmarks using both Fortran and C:

-O3 -xT -ipo -no-prec-div



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The flags file that was used to format this result can be browsed at
http://www.spec.org/mpi2007/flags/EM64T_Intel101_flags.20090520.00.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/mpi2007/flags/EM64T_Intel101_flags.20090520.00.xml

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

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