



SPEC® MPIM2007 Result

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Intel Corporation
Endeavor

SPECmpiM_peak2007 = Not Run

SPECmpiM_base2007 = NC

MPI2007 license: 13
Test sponsor: Intel Corporation
Tested by: Grigory Zagorodnev

Test date: Jan-2008
Hardware Availability: Dec-2007
Software Availability: Dec-2007

SPEC has determined that this result was not in compliance with the SPEC MPI2007 run and reporting rules. Specifically, the result did not meet the requirement for baseline optimization flags to not use assertion flags (the flag -fno-alias is a violation of this rule). The result was found to be performance neutral compared to runs without -fno-alias. Replacement
be found at <http://www.spec.org/mpi2007/results/res2008q4/mpi2007-20080922->

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

Results Table

Benchmark	Base								Peak							
	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
104.milc	128	NC	NC	NC	NC	NC	NC									
107.leslie3d	128	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	128	NC	NC	NC	NC	NC	NC									
115.fds4	128	NC	NC	NC	NC	NC	NC									
121.pop2	128	NC	NC	NC	NC	NC	NC									
122.tachyon	128	NC	NC	NC	NC	NC	NC									
126.lammps	128	NC	NC	NC	NC	NC	NC									
127.wrf2	128	NC	NC	NC	NC	NC	NC									
128.GAPgeofem	128	NC	NC	NC	NC	NC	NC									
129.tera_tf	128	NC	NC	NC	NC	NC	NC									
130.socorro	128	NC	NC	NC	NC	NC	NC									
132.zeusmp2	128	NC	NC	NC	NC	NC	NC									
137.lu	128	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: Home PCs
 Compute Node: Endeavor Node
 Interconnects: IB Switch
 File Server Node: Panasas Fileserver
 Total Compute Nodes: 16
 Total Smps: 32
 Total Cores: 128
 Total Threads: 128
 Total Memory: 256 GB
 Base Ranks Run: 128
 Minimum Peak Ranks: --
 Maximum Peak Ranks: --

Software Summary

C Compiler: Intel C++ Compiler 10.1 for Linux (10.1.004)
 C++ Compiler: Intel C++ Compiler 10.1 for Linux (10.1.004)
 Fortran Compiler: Intel Fortran Compiler 10.1 for Linux (10.1.004)
 Base Pointers: 64-bit
 Peak Pointers: 64-bit
 MPI Library: Intel MPI Library 3.1 for Linux (3.1.020)
 Other MPI Info: None
 Pre-processors: No
 Other Software: None



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Node Description: Endeavor Node

Hardware		Software	
Number of nodes:	16	Adapter:	Intel (ESB2) 82563EB Dual-Port Gigabit Ethernet Controller
Uses of the node:	compute	Adapter Driver:	e1000
Vendor:	Intel	Adapter Firmware:	N/A
Model:	SR1560SF	Adapter:	Mellanox MHGH28-XTC IB DDR (PCIe x8 Gen1 2.5 GT/s)
CPU Name:	Intel Xeon CPU E5462	Adapter Driver:	OFED 1.2.5
CPU(s) orderable:	1-2 chips	Adapter Firmware:	2.2
Chips enabled:	2	Operating System:	RedHat EL 4 Update 4
Cores enabled:	8	Local File System:	Linux/ext3
Cores per chip:	4	Shared File System:	DirectFlow
Threads per core:	1	System State:	Multi-User
CPU Characteristics:	1600MHz FSB	Other Software:	PBS Pro 8.0
CPU MHz:	2800		
Primary Cache:	32 KB I + 32 KB D on chip per core		
Secondary Cache:	12 MB I+D on chip per chip, 12 MB shared / 2 cores		
L3 Cache:	None		
Other Cache:	None		
Memory:	16 GB (8x 2GB DDR2-667 MHz)		
Disk Subsystem:	Seagate Barracuda ES.7 15 GB ST3250620NS		
Other Hardware:	None		
Adapter:	Intel (ESB2) 82563EB Dual-Port Gigabit Ethernet Controller		
Number of Adapters:	1		
Slot Type:	PCIe x8		
Data Rate:	10 Gbps Ethernet		
Ports Used:	1		
Interconnect Type:	Ethernet		
Adapter:	Mellanox MHGH28-XTC IB DDR (PCIe x8 Gen1 2.5 GT/s)		
Number of Adapters:	1		
Slot Type:	PCIe x16 Gen2		
Data Rate:	InfiniBand 4x DDR		
Ports Used:	1		
Interconnect Type:	InfiniBand		



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Node Description: Panasas File Server

Hardware		Software	
Number of nodes:	1	Adapter:	--
Uses of the node:	fileserver	Adapter Driver:	--
Vendor:	Panasas	Adapter Firmware:	N/A
Model:	ActiveStor 3050	Operating System:	2.3.7.a-195733.1
CPU Name:	--	Local File System:	PanFS
CPU(s) orderable:	1-2 chips	Shared File System:	DirectFlow
Chips enabled:	1	System State:	Multi-User
Cores enabled:	1	Other Software:	None
Cores per chip:	1		
Threads per core:	1		
CPU Characteristics:	--		
CPU MHz:	0		
Primary Cache:	None		
Secondary Cache:	None		
L3 Cache:	None		
Other Cache:	None		
Memory:	1 MB		
Disk Subsystem:	140 disks, 50GB/disk, 3TB total, 7 Shelves		
Other Hardware:	None		
Adapter:			
Number of Adapters:	1		
Slot Type:	--		
Data Rate:	10Gbps Ethernet		
Ports Used:			
Interconnect Type:	Ethernet		

Interconnect Description: IB Switch

Hardware		Software	
Vendor:	SilverStorm Technologies		
Model:	Cisco SFS 7024D		
Switch Model:	Cisco SFS 7024D		
Number of Switches:	1		
Number of Ports:	288		

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Interconnect Description: IB Switch

Data Rate: InfiniBand 4x DDR
Firmware: 4.1.1.1.2
Topology: Star
Primary Use: MPI traffic

Interconnect Description: Gigabit Ethernet

Hardware
Vendor: Cisco
Model: Cisco Catalyst 4510
Switch Model: Cisco Catalyst 4510
Number of Switches: 1
Number of Ports: 332
Data Rate: 1Gbps Ethernet
Firmware: N/A
Topology: Star
Primary Use: file system traffic

Software

Base Compiler Invocation

C benchmarks:

C++ benchmarks:

126.mpiicpc

Fortran benchmarks:

mpiifort

Benchmarks using both Fortran and C:

mpiicc mpiifort



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Base Portability Flags

121.pop2: -DSPEC_MPI_CASE_FLAG
126.lammps: -DMPICH_IGNORE_CXX_SEEK
127.wrf2: -DSPEC_MPI_CASE_FLAG -DSPEC_...
130.socorro: -DSPEC_EIGHT_BYTE_LONG

Base Optimization Flags

C benchmarks:
-O3 -no-prec-div -fno-alias -xT
C++ benchmarks:
126.lammps: -O3 -no-prec-div -fno-alias -xT
Fortran benchmarks:
-O3 -no-prec-div -fno-alias -xT
Benchmarks using both Fortran and C:
-O3 -no-prec-div -fno-alias -xT

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

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