



SPEC® MPIM2007 Result

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Intel Corporation

SPECmpiM_peak2007 = Not Run

Atlantis (Intel Xeon X5482, 3.20 GHz)

SPECmpiM_base2007 = NC

MPI2007 license: 13

Test date: Mar-2009

Test sponsor: Intel Corporation

Hardware Availability: Sep-2008

Tested by: Pavel Shelepugin

Software Availability: Jun-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	128	NC	NC	NC	NC									
107.leslie3d	128	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	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
113.GemsFDTD	128	NC	NC	NC	NC								
115.fds4	128	NC	NC	NC	NC								
121.pop2	128	NC	NC	NC	NC								
122.tachyon	128	NC	NC	NC	NC								
126.lammps	128	NC	NC	NC	NC								
127.wrf2	128	NC	NC	NC	NC								
128.GAPgeofem	128	NC	NC	NC	NC								
129.tera_tf	128	NC	NC	NC	NC								
130.socorro	128	NC	NC	NC	NC								
132.zeusmp2	128	NC	NC	NC	NC								
137.lu	128	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: Atlantis Node
 Interconnect: IB Switch
 Gigabit Ethernet
 File Server Node: HOME
 Total Compute Nodes: 16
 Total Cores: 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 11.1 for Linux
 C++ Compiler: Intel C++ Compiler 11.1 for Linux
 Fortran Compiler: Intel Fortran Compiler 11.1 for Linux
 Base Pointers: 64-bit
 Peak Pointers: 64-bit
 MPI Library: Intel MPI Library 3.2 for Linux
 Other MPI Info: None
 Pre-processors: No
 Other Software: Intel MPI Library 3.2 for Linux Multi-Purpose Daemon (MPD)



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Node Description: Atlantis Node

Hardware

Number of nodes: 16
 Uses of the node: compute
 Vendor: Intel
 Model: SR1560SF
 CPU Name: Intel Xeon X5482
 CPU(s) orderable: 1-2 chips
 Chips enabled: 2
 Cores enabled: 8
 Cores per chip: 4
 Threads per core: 1
 CPU Characteristics: 1600 MHz FSB
 CPU MHz: 3200
 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: 16 GB (E8BD1M) 8x2-GB 667 MHz)
 Disk Subsystem: Seagate Ultracuda ES.900 GB ST3250620NS
 Other Hardware: None
 Adapter: Intel (ESB2) 82563EB Dual-Port Gigabit Ethernet Controller

Number of Adapters: 1
 Slot Type: PCI-Express x8
 Data Rate: 10 Gbps Ethernet
 Ports Used: 1
 Interconnect Type: Ethernet
 Adapter: Mellanox MHGH29-XTC

Number of Adapters: 1
 Slot Type: PCIe x16 Gen2
 Data Rate: InfiniBand 4x DDR
 Ports Used: 1
 Interconnect Type: InfiniBand

Software

Adapter: Intel (ESB2) 82563EB Dual-Port Gigabit Ethernet Controller
 Adapter Driver: e1000
 Adapter Firmware: None
 Adapter: Mellanox MHGH29-XTC
 Adapter Driver: OFED 1.3.1
 Adapter Firmware: 2.5.0
 Operating System: RedHat EL 5 Update 2, kernel 2.6.18-92
 Local File System: Linux/ext2
 Shared File System: NFS
 System State: Multi-User
 Other Software: PBS Pro 8.0



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Software Availability: Jun-2009

Node Description: HOME

Hardware		Software	
Number of nodes:	1	Adapter:	Intel 82546GB Dual-Port Gigabit Ethernet Controller
Uses of the node:	fileserver	Adapter driver:	e1000
Vendor:	Intel	Adapter firmware:	N/A
Model:	SSR212CC	Operating System:	RedHat EL 4 Update 4
CPU Name:	Intel Xeon	Local File System:	Linux/ext2
CPU(s) orderable:	2 chips	Shared File System:	NFS
Chips enabled:	2	System State:	Multi-User
Cores enabled:	2	Other Software:	None
Cores per chip:	1		
Threads per core:	1		
CPU Characteristics:	--		
CPU MHz:	2800		
Primary Cache:	12 KB I + 16 KB D on chip per chip		
Secondary Cache:	1 MB I+D on chip per chip		
L3 Cache:	None		
Other Cache:	None		
Memory:	2 GB		
Disk Subsystem:	3 disks, 100 GB/disk, 100 GB total, 1TB available		
Other Hardware:	None		
Adapter:	Intel 82546GB Dual-Port Gigabit Ethernet Controller		
Number of Adapters:	1		
Slot Type:	PCI-Express x8		
Data Rate:	10 Gbps Ethernet		
Ports Used:	1		
Interconnect Type:	Ethernet		

Interconnect Description: IB Switch

Hardware		Software	
Vendor:	Cisco		
Model:	Cisco SFS 9120		
Switch Model:	Cisco SFS 9120		
Number of Switches:	1		
Number of Ports:	120		

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Software Availability: Jun-2009

Interconnect Description: InfiniBand switch

Data Rate:	InfiniBand 4x DDR
Firmware:	4.1.1.1.11
Topology:	Single switch
Primary Use:	MPI traffic

Interconnect Description: Gigabit Ethernet

	Hardware	Software
Vendor:	Cisco	
Model:	Cisco Catalyst 4506	
Switch Model:	Cisco Catalyst 4506	
Number of Switches:	1	
Number of Ports:	144	
Data Rate:	1Gbps Ethernet	
Firmware:	--	
Topology:	Star	
Primary Use:	Cluster File System	

Submit Notes

The config file option 'submit' was used.

General Notes

PBS PLS was used for job submission. It has no impact on performance.
Can be found at: <http://www.altair.com>

Base Compiler Invocation

C benchmarks:
mpicc

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Base Compiler Invocation (Continued)

C++ benchmarks:

126.lammps: mpiicpc

Fortran benchmarks:

mpiifort

Benchmarks using both Fortran and C:

mpiicc mpiifort

Base Portability Flags

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

Base Optimization Flags

C benchmarks:

-O3 -xT -no-prec-div

C++ benchmarks:

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

Fortran benchmarks:

-O3 -xT -no-prec-div

Benchmarks using both Fortran and C:

-O3 -xT -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_Intel111_flags.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/mpi2007/flags/EM64T_Intel111_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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