



SPEC[®] MPIM2007 Result

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Intel Corporation

SPECmpiM_peak2007 = Not Run

Atlantis (Intel Xeon X5482, 3.20 GHz)

SPECmpiM_base2007 = 3.13

MPI2007 license: 13

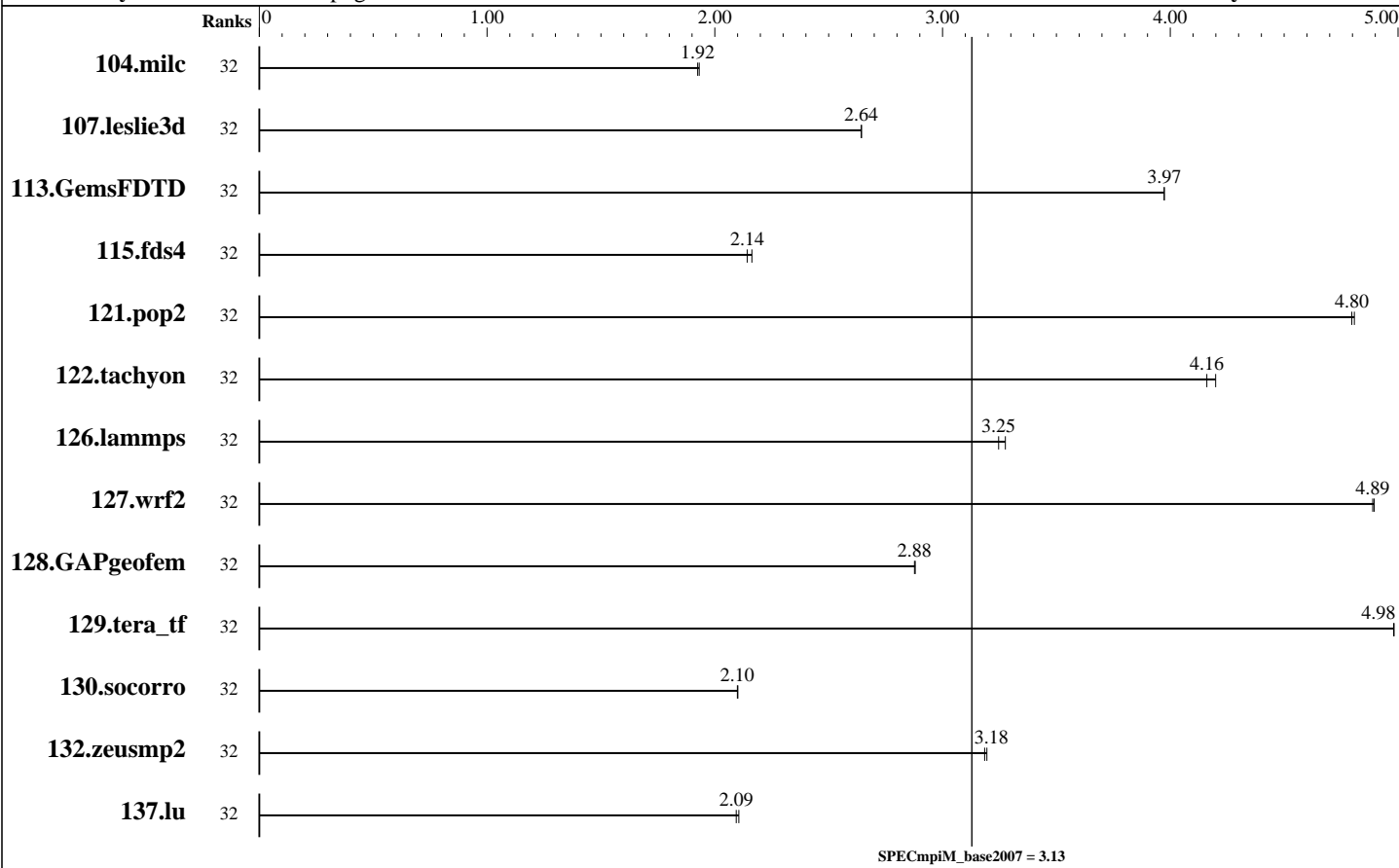
Test sponsor: Intel Corporation

Tested by: Pavel Shelepugin

Test date: Mar-2009

Hardware Availability: Sep-2008

Software Availability: Jun-2009



Results Table

Benchmark	Base								Peak					
	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
104.milc	32	813	1.92	810	1.93									
107.leslie3d	32	1974	2.64	1975	2.64									
113.GemsFDTD	32	1588	3.97	1588	3.97									
115.fds4	32	902	2.16	911	2.14									
121.pop2	32	861	4.80	859	4.81									
122.tachyon	32	666	4.20	672	4.16									
126.lammps	32	898	3.25	890	3.28									
127.wrf2	32	1595	4.89	1593	4.90									
128.GAPgeofem	32	717	2.88	718	2.88									
129.tera_tf	32	556	4.98	556	4.98									

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
130.socorro	32	1817	2.10	<u>1818</u>	<u>2.10</u>								
132.zeusmp2	32	971	3.19	<u>974</u>	<u>3.18</u>								
137.lu	32	1746	2.11	<u>1755</u>	<u>2.09</u>								

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
 Interconnects: IB Switch
 Gigabit Ethernet
 File Server Node: HOME
 Total Compute Nodes: 4
 Total Chips: 8
 Total Cores: 32
 Total Threads: 32
 Total Memory: 64 GB
 Base Ranks Run: 32
 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)

Node Description: Atlantis Node

Hardware

Number of nodes: 4
 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, 6 MB shared / 2 cores
 L3 Cache: None
 Other Cache: None
 Memory: 16 GB (FBDIMM 8x2-GB 667 MHz)
 Disk Subsystem: Seagate Barracuda ES 250 GB ST3250620NS
 Other Hardware: None
 Adapter: Intel (ESB2) 82563EB Dual-Port Gigabit Ethernet Controller
 Number of Adapters: 1
 Slot Type: PCI-Express x8

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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Node Description: Atlantis Node

Data Rate: 1Gbps 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

Node Description: HOME

Hardware

Number of nodes: 1
 Uses of the node: fileserver
 Vendor: Intel
 Model: SSR212CC
 CPU Name: Intel Xeon
 CPU(s) orderable: 2 chips
 Chips enabled: 2
 Cores enabled: 2
 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, 500GB/disk, 1.5TB 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: 1Gbps Ethernet
 Ports Used: 1
 Interconnect Type: Ethernet

Software

Adapter: Intel 82546GB Dual-Port Gigabit Ethernet Controller
 Adapter Driver: e1000
 Adapter Firmware: N/A
 Operating System: RedHat EL 4 Update 4
 Local File System: Linux/ext2
 Shared File System: NFS
 System State: Multi-User
 Other Software: None

Interconnect Description: IB Switch

Hardware

Vendor: Cisco
 Model: Cisco SFS 9120
 Switch Model: Cisco SFS 9120

Software

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Interconnect Description: IB Switch

Number of Switches:	1
Number of Ports:	120
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 Pro was used for job submission. It has no impact on performance.
Can be found at: <http://www.altair.com>

Base Compiler Invocation

C benchmarks:
mpiicc

C++ benchmarks:

126.lammps: 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_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

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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