SPEC® MPIM2007 Result

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Intel Corporation

SPECmpiM_peak2007 = Not Run

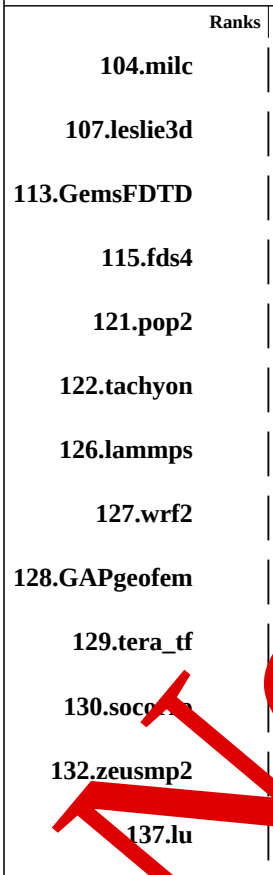
Atlantis (Intel Xeon X5482, 3.20 GHz)

SPECmpiM_base200[illegible] = NC

MPI2007 license: 13
Test sponsor: Intel Corporation
Tested by: Pavel Shelepugin

Test date: Mar-2009
Hardware Availability: Sep-2008
Software Availability: Jun-2009

Non-Compliant



Results Table

Benchmark	Base							Peak						
	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
104.milc	64	NC	NC	NC	NC									
107.leslie3d	64	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	64	NC	NC	NC	NC									
115.fds4	64	NC	NC	NC	NC									
121.pop2	64	NC	NC	NC	NC									
122.tachyon	64	NC	NC	NC	NC									
126.lammps	64	NC	NC	NC	NC									
127.wrf2	64	NC	NC	NC	NC									
128.GAPgeofem	64	NC	NC	NC	NC									
129.tera_tf	64	NC	NC	NC	NC									
130.socorro	64	NC	NC	NC	NC									
132.zeusmp2	64	NC	NC	NC	NC									
137.lu	64	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: 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 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:	8
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 (16 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
Data Rate:	1 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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Non-Compliant

Node Description: HOMI

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, 2GB/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:	Gbps 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
Number of Switches:	1
Number of Ports:	120

Software

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Interconnect Description: IB 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 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
```

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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.

Tested with SPEC MPI2007 v1.1.
Report generated on Tue Jul 22 13:36:44 2014 by SPEC MPI2007 PS/PDF formatter v1463.
Originally published on 15 April 2009.