



# SPEC® MPIM2007 Result

Copyright 2006-2010 Standard Performance Evaluation Corporation

Intel Corporation

SPECmpiM\_peak2007 = Not Run

Atlantis (Intel Xeon X5482, 3.20 GHz)

SPECmpiM\_base2007 = NC

MPI2007 license: 13

Test sponsor: Intel Corporation

Tested by: Pavel Shelepugin

Test date: Mar-2009

Hardware Availability: Sep-2008

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	256	NC	NC	NC	NC									
107.leslie3d	256	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.



# SPEC MPIM2007 Result

Copyright 2006-2010 Standard Performance Evaluation Corporation

Intel Corporation

SPECmpiM\_peak2007 = Not Run

Atlantis (Intel Xeon X5482, 3.20 GHz)

SPECmpiM\_base2007 = NC

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 (Continued)

Benchmark	Base						Peak						
	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
113.GemsFDTD	256	NC	NC	NC	NC								
115.fds4	256	NC	NC	NC	NC								
121.pop2	256	NC	NC	NC	NC								
122.tachyon	256	NC	NC	NC	NC								
126.lammps	256	NC	NC	NC	NC								
127.wrf2	256	NC	NC	NC	NC								
128.GAPgeofem	256	NC	NC	NC	NC								
129.tera_tf	256	NC	NC	NC	NC								
130.socorro	256	NC	NC	NC	NC								
132.zeusmp2	256	NC	NC	NC	NC								
137.lu	256	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 Servers  
 Compute Node: Atlantis Node  
 Interconnect: IB Switch  
 Gigabit Ethernet  
 File Server Node: HOME  
 Total Compute Nodes: 32  
 Total Cores: 64  
 Total Cores: 256  
 Total Threads: 256  
 Total Memory: 512 GB  
 Base Ranks Run: 256  
 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)



# SPEC MPIM2007 Result

Copyright 2006-2010 Standard Performance Evaluation Corporation

## Intel Corporation

SPECmpiM\_peak2007 = Not Available

## Atlantis (Intel Xeon X5482, 3.20 GHz)

SPECmpiM\_base2007 = Not Available

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

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

### Node Description: Atlantis Node

#### Hardware

Number of nodes: 32  
 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



# SPEC MPIM2007 Result

Copyright 2006-2010 Standard Performance Evaluation Corporation

Intel Corporation

SPECmpiM\_peak2007 = Not Sure

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

## 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, 1 GB/disk, 1 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		

Continued on next page



# SPEC MPIM2007 Result

Copyright 2006-2010 Standard Performance Evaluation Corporation

Intel Corporation

SPECmpiM\_peak2007 = Not Run

Atlantis (Intel Xeon X5482, 3.20 GHz)

SPECmpiM\_base2007 = NC

MPI2007 license: 13

Test sponsor: Intel Corporation

Tested by: Pavel Shelepugin

Test date: Mar-2009

Hardware Availability: Sep-2008

Software Availability: Jun-2009

## 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 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

Continued on next page



# SPEC MPIM2007 Result

Copyright 2006-2010 Standard Performance Evaluation Corporation

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

## 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



# SPEC MPIM2007 Result

Copyright 2006-2010 Standard Performance Evaluation Corporation

Intel Corporation

SPECmpiM\_peak2007 = Not Sur

Atlantis (Intel Xeon X5482, 3.20 GHz)

SPECmpiM\_base2007 = NC

MPI2007 license: 13

Test sponsor: Intel Corporation

Tested by: Pavel Shelepugin

Test date: Mar-2009

Hardware Availability: Sep-2008

Software Availability: Jun-2009

The flags file that was used to format this result can be browsed at  
[http://www.spec.org/mpi2007/flags/EM64T\\_Intel111\\_flags.html](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](http://www.spec.org/mpi2007/flags/EM64T_Intel111_flags.xml)

SPEC and SPEC MPI are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC MPI2007 v1.1.  
Report generated on Tue Jul 22 13:36:41 2014 by SPEC MPI2007 PS/PDF formatter v1463.  
Originally published on 15 April 2009.