SPEC® MPIM2007 Result

Copyright 2006-2010 Standard Performance Evaluation Corporation

Intel Corporation

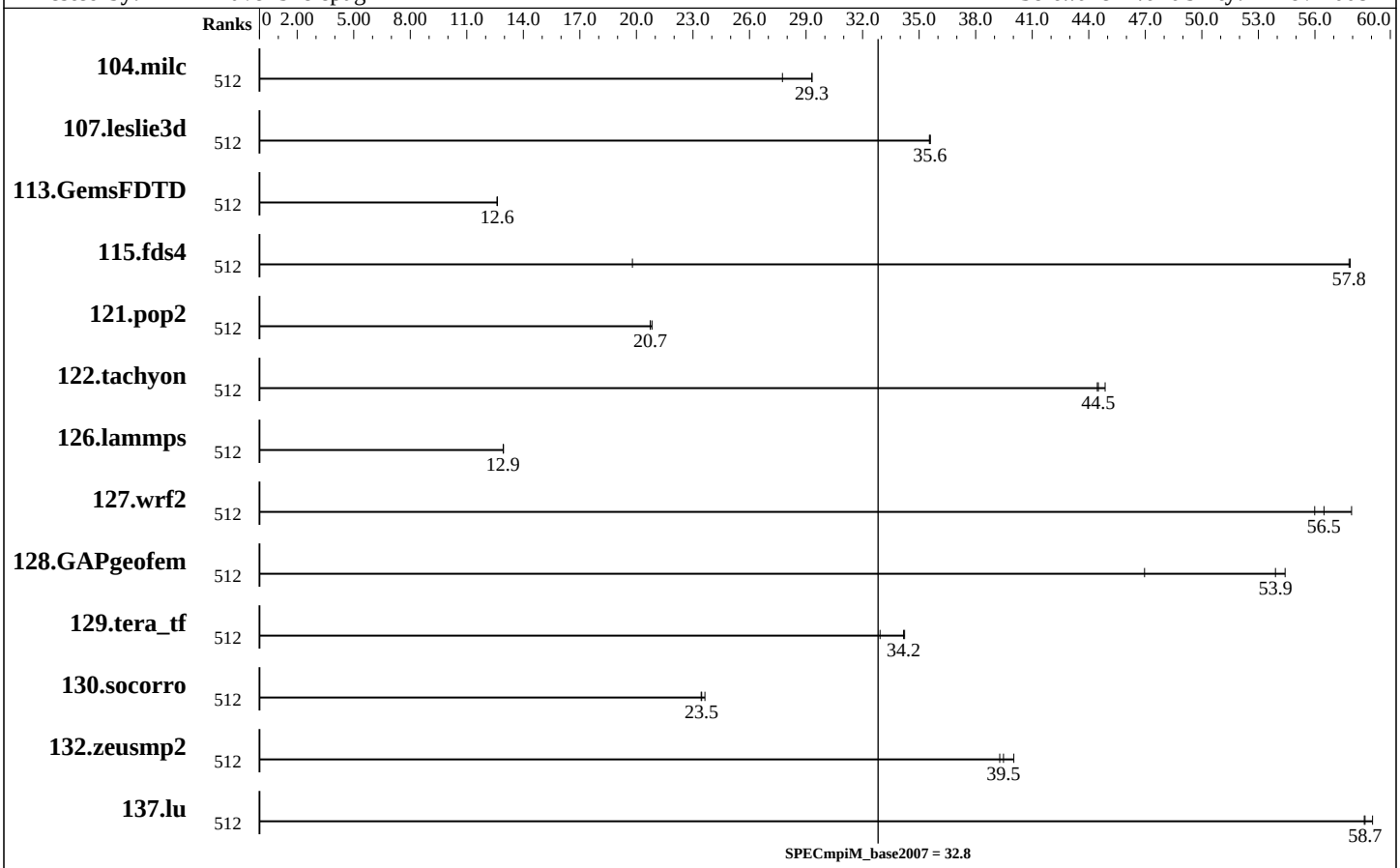
Endeavor (Intel Xeon E5462, 2.80 GHz)

SPECmpiM_peak2007 = Not Run

SPECmpiM_base2007 = 32.8

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

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



Results Table

Benchmark	Base							Peak						
	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
104.milc	512	56.4	27.7	**53.4**	**29.3**	53.4	29.3							
107.leslie3d	512	147	35.6	147	35.5	**147**	**35.6**							
113.GemsFDTD	512	500	12.6	500	12.6	**500**	**12.6**							
115.fds4	512	98.6	19.8	33.7	57.9	**33.7**	**57.8**							
121.pop2	512	199	20.7	**199**	**20.7**	198	20.8							
122.tachyon	512	62.3	44.9	**62.8**	**44.5**	62.9	44.5							
126.lammps	512	225	12.9	225	12.9	**225**	**12.9**							
127.wrf2	512	139	56.0	135	57.9	**138**	**56.5**							
128.GAPgeofem	512	44.0	47.0	37.9	54.4	**38.3**	**53.9**							
129.tera_tf	512	80.9	34.2	**81.0**	**34.2**	84.1	32.9							

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

Endeavor (Intel Xeon E5462, 2.80 GHz)

SPECmpiM_peak2007 = Not Run

SPECmpiM_base2007 = 32.8

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

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

Results Table (Continued)

Benchmark	Base							Peak						
	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
130.socorro	512	161	23.6	**163**	**23.5**	163	23.4							
132.zeusmp2	512	77.5	40.0	79.0	39.3	**78.6**	**39.5**							
137.lu	512	**62.7**	**58.7**	62.7	58.6	62.2	59.1							

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:	Endeavor Node
Interconnects:	IB Switch Gigabit Ethernet
File Server Node:	HOME
Total Compute Nodes:	64
Total Chips:	128
Total Cores:	512
Total Threads:	512
Total Memory:	1 TB
Base Ranks Run:	512
Minimum Peak Ranks:	--
Maximum Peak Ranks:	--

Software Summary

C Compiler:	Intel C++ Compiler 10.1 for Linux (10.1.018)
C++ Compiler:	Intel C++ Compiler 10.1 for Linux (10.1.018)
Fortran Compiler:	Intel Fortran Compiler 10.1 for Linux (10.1.018)
Base Pointers:	64-bit
Peak Pointers:	64-bit
MPI Library:	Intel MPI Library 3.2 for Linux (3.2.011)
Other MPI Info:	None
Pre-processors:	No
Other Software:	Intel MPI Library 3.2 for Linux Multi-Purpose Daemon (MPD)

Node Description: Endeavor Node

Hardware

Number of nodes:	64
Uses of the node:	compute
Vendor:	Intel
Model:	SR1560SF
CPU Name:	Intel Xeon CPU E5462
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:	2800
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 16x1-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

Continued on next page

Software

Adapter:	Intel (ESB2) 82563EB Dual-Port Gigabit Ethernet Controller
Adapter Driver:	e1000
Adapter Firmware:	None
Adapter:	Mellanox MHGH28-XTC
Adapter Driver:	OFED 1.3.1
Adapter Firmware:	2.5.0
Operating System:	Red Hat EL 4 Update 4, kernel 2.6.9-67
Local File System:	Linux/ext2
Shared File System:	DirectFlow
System State:	Multi-User
Other Software:	PBS Pro 8.0

SPEC MPIM2007 Result

Copyright 2006-2010 Standard Performance Evaluation Corporation

Intel Corporation

Endeavor (Intel Xeon E5462, 2.80 GHz)

SPECmpiM_peak2007 = Not Run

SPECmpiM_base2007 = 32.8

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

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

Node Description: Endeavor Node

Data Rate:	1Gbps Ethernet
Ports Used:	1
Interconnect Type:	Ethernet
Adapter:	Mellanox MHGH28-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
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:	6 GB
Disk Subsystem:	10 disks, 300GB/disk, 3TB total
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:	None
Shared File System:	NFS
System State:	Multi-User
Other Software:	None

Interconnect Description: IB Switch

Hardware

Vendor:	Cisco
Model:	Cisco SFS 7024D
Switch Model:	Cisco SFS 7024D

Continued on next page

Copyright 2006-2010 Standard Performance Evaluation Corporation

Intel Corporation

Endeavor (Intel Xeon E5462, 2.80 GHz)

SPECmpiM_peak2007 = Not Run

SPECmpiM_base2007 = 32.8

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

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

Interconnect Description: IB Switch

Number of Switches:	1
Number of Ports:	288
Data Rate:	InfiniBand 4x DDR
Firmware:	4.1.1.1.11
Topology:	Single switch
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:	--
Topology:	Star
Primary Use:	Cluster File System

Software

Submit Notes

```
The config file option 'submit' was used.
```

General Notes

```
Environment:
  -genv DAPL_CM_ROUTE_TIMEOUT_MS 20000
    Determines the uDAPL path resolution timeouts,
    measured in milliseconds. Default: 4000ms
```

Base Compiler Invocation

C benchmarks:
`mpiicc`

C++ benchmarks:

126.lammps: `mpiicpc`

Fortran benchmarks:
`mpiifort`

Continued on next page

Base Compiler Invocation (Continued)

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 -ipo -no-prec-div`

C++ benchmarks:

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

Fortran benchmarks:
`-O3 -xT -ipo -no-prec-div`

Benchmarks using both Fortran and C:
`-O3 -xT -ipo -no-prec-div`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/mpi2007/flags/EM64T_Intel101_flags.20080618.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/mpi2007/flags/EM64T_Intel101_flags.20080618.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.

Tested with SPEC MPI2007 v1.1.
Report generated on Tue Jul 22 13:35:50 2014 by SPEC MPI2007 PS/PDF formatter v1463.
Originally published on 14 January 2009.