



SPEC® MPIM2007 Result

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Hewlett-Packard Company HP ProLiant DL160 G5

SPECmpiM_peak2007 = Not Run

SPECmpiM_base2007 = 12.2

MPI2007 license: 1

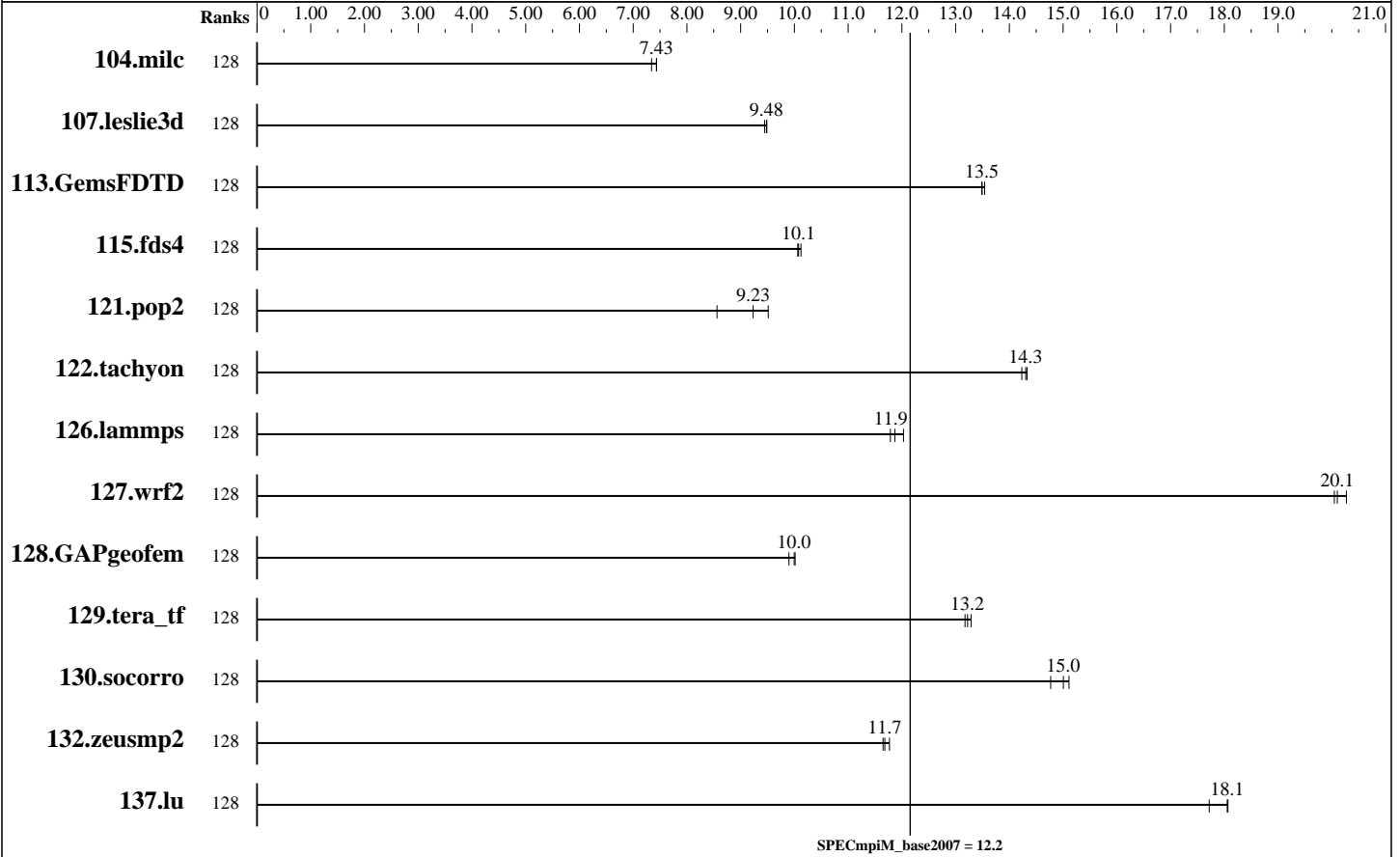
Test sponsor: Hewlett-Packard Company

Tested by: HP Richardson

Test date: Nov-2008

Hardware Availability: Jun-2008

Software Availability: Jan-2009



Results Table

Benchmark	Base								Peak							
	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
104.milc	128	213	7.34	<u>211</u>	<u>7.43</u>	210	7.44									
107.leslie3d	128	553	9.45	<u>551</u>	<u>9.48</u>	550	9.49									
113.GemsFDTD	128	468	13.5	<u>468</u>	<u>13.5</u>	466	13.5									
115.fds4	128	<u>194</u>	<u>10.1</u>	193	10.1	194	10.1									
121.pop2	128	434	9.51	<u>447</u>	<u>9.23</u>	482	8.56									
122.tachyon	128	197	14.2	195	14.3	<u>196</u>	<u>14.3</u>									
126.lammps	128	247	11.8	242	12.0	<u>246</u>	<u>11.9</u>									
127.wrf2	128	385	20.3	<u>388</u>	<u>20.1</u>	389	20.0									
128.GAPgeofem	128	<u>207</u>	<u>10.0</u>	209	9.90	206	10.0									
129.tera_tf	128	208	13.3	<u>209</u>	<u>13.2</u>	210	13.2									

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		
130.socorro	128	258	14.8	<u>254</u>	<u>15.0</u>	253	15.1									
132.zeusmp2	128	<u>266</u>	<u>11.7</u>	266	11.6	264	11.8									
137.lu	128	207	17.7	203	18.1	<u>204</u>	<u>18.1</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 Nodes: DL160 G5 Compute Node
 DL160 G5 Head Node
 Interconnects: Gigabit Ethernet Switch
 InfiniBand Switch
 File Server Node: DL160 G5 Head Node
 Head Node: DL160 G5 Head Node
 Total Compute Nodes: 16
 Total Chips: 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 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: HP-MPI v2.3
 Other MPI Info: --
 Pre-processors: No
 Other Software: --

Node Description: DL160 G5 Compute Node

Hardware

Number of nodes: 15
 Uses of the node: compute
 Vendor: Hewlett-Packard Company
 Model: DL160 G5
 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 8x2-GB 667 Mtf/s)
 Disk Subsystem: 2x146GB 15k RPM SAS (RAID 0 mode)
 Other Hardware: HP Smart Array E200 Raid Controller
 Adapter: NetXtreme BCM5722 Gigabit Ethernet
 Number of Adapters: 1

Software

Adapter: NetXtreme BCM5722 Gigabit Ethernet
 Adapter Driver: tg3 version 3.86b
 Adapter Firmware: 5722-v3.07, ASFIPMI v6.02
 Adapter: HP 448397-B21 (4x DDR)
 Adapter Driver: OFED 1.3
 Adapter Firmware: 2.5.0
 Operating System: SLES 10 update 1
 Local File System: Linux/ext3
 Shared File System: NFS
 System State: Multi-User
 Other Software: none

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Node Description: DL160 G5 Compute Node

Slot Type:	Builtin PCI-Express
Data Rate:	1 Gb/s Ethernet
Ports Used:	1
Interconnect Type:	Ethernet
Adapter:	HP 448397-B21 (4x DDR)
Number of Adapters:	1
Slot Type:	PCIe x16 Gen2
Data Rate:	InfiniBand 4x DDR
Ports Used:	1
Interconnect Type:	InfiniBand

Node Description: DL160 G5 Head Node

Hardware	
Number of nodes:	1
Uses of the node:	head, fileserver, compute
Vendor:	Hewlett-Packard Company
Model:	DL160 G5
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 8x2-GB 667 Mtf/s)
Disk Subsystem:	2x146GB 15k RPM SAS (RAID 0 mode)
Other Hardware:	HP Smart Array E200 Raid Controller
Adapter:	NetXtreme BCM5722 Gigabit Ethernet
Number of Adapters:	1
Slot Type:	Builtin PCI-Express
Data Rate:	1 Gb/s Ethernet
Ports Used:	1
Interconnect Type:	Ethernet
Adapter:	HP 448397-B21 (4x DDR)
Number of Adapters:	1
Slot Type:	PCIe x16 Gen2
Data Rate:	InfiniBand 4x DDR
Ports Used:	1
Interconnect Type:	InfiniBand

Software	
Adapter:	NetXtreme BCM5722 Gigabit Ethernet
Adapter Driver:	tg3 version 3.86b
Adapter Firmware:	5722-v3.07, ASFIPMI v6.02
Adapter:	HP 448397-B21 (4x DDR)
Adapter Driver:	OFED 1.3
Adapter Firmware:	2.5.0
Operating System:	SLES 10 update 1
Local File System:	Linux/ext3
Shared File System:	NFS
System State:	Multi-User
Other Software:	none



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Interconnect Description: Gigabit Ethernet Switch

Hardware		Software
Vendor:	Hewlett-Packard Company	
Model:	ProCurve J8693A Switch 3500yl-48G	
Switch Model:	ProCurve J8693A Switch 3500yl-48G	
Number of Switches:	1	
Number of Ports:	48	
Data Rate:	1Gbps Ethernet	
Firmware:	K.12.16	
Topology:	single switch	
Primary Use:	Cluster File System	

Interconnect Description: InfiniBand Switch

Hardware		Software
Vendor:	Hewlett-Packard Company	
Model:	HP 445825-B21 (4x DDR)	
Switch Model:	HP 445825-B21	
Number of Switches:	1	
Number of Ports:	144	
Data Rate:	InfiniBand 4x DDR	
Firmware:	4.1.1.1.11	
Topology:	single switch	
Primary Use:	MPI traffic	

General Notes

Required alternate sources:

129.tera_tf: fixbuffer

Optional alternate sources:

104.milc: calloc

113.GemsFDTD: maxprocandstop

```
% cat submit.sh
#!/bin/bash
ulimit -s 326780
exec $*
%
```

BASE PORTABILITY FLAG NOTICE:

130.socorro: Discontinue use of -DSPEC_EIGHT_BYTE_LONG because it doesn't appear in the source code.



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Base Compiler Invocation

C benchmarks:

/lv01_nfs/brent/mpi2007_v1.0/hpmpi23_20081105/bin/mpicc

C++ benchmarks:

126.lammps: /lv01_nfs/brent/mpi2007_v1.0/hpmpi23_20081105/bin/mpicc

Fortran benchmarks:

/lv01_nfs/brent/mpi2007_v1.0/hpmpi23_20081105/bin/mpif90

Benchmarks using both Fortran and C:

/lv01_nfs/brent/mpi2007_v1.0/hpmpi23_20081105/bin/mpicc

/lv01_nfs/brent/mpi2007_v1.0/hpmpi23_20081105/bin/mpif90

Base Portability Flags

121.pop2: -DSPEC_MPI_CASE_FLAG

127.wrf2: -DSPEC_MPI_LINUX -DSPEC_MPI_CASE_FLAG

130.socorro: -DSPEC_EIGHT_BYTE_LONG

Base Optimization Flags

C benchmarks:

-O3 -no-prec-div -xT

C++ benchmarks:

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

Fortran benchmarks:

-O3 -no-prec-div -xT

Benchmarks using both Fortran and C:

-O3 -no-prec-div -xT

The flags file that was used to format this result can be browsed at

http://www.spec.org/mpi2007/flags/EM64T_Intel101_flags.20090108.html

You can also download the XML flags source by saving the following link:

http://www.spec.org/mpi2007/flags/EM64T_Intel101_flags.20090108.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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