SPEC® MPIM2007 Result

Copyright 2006-2010 Standard Performance Evaluation Corporation

IBM

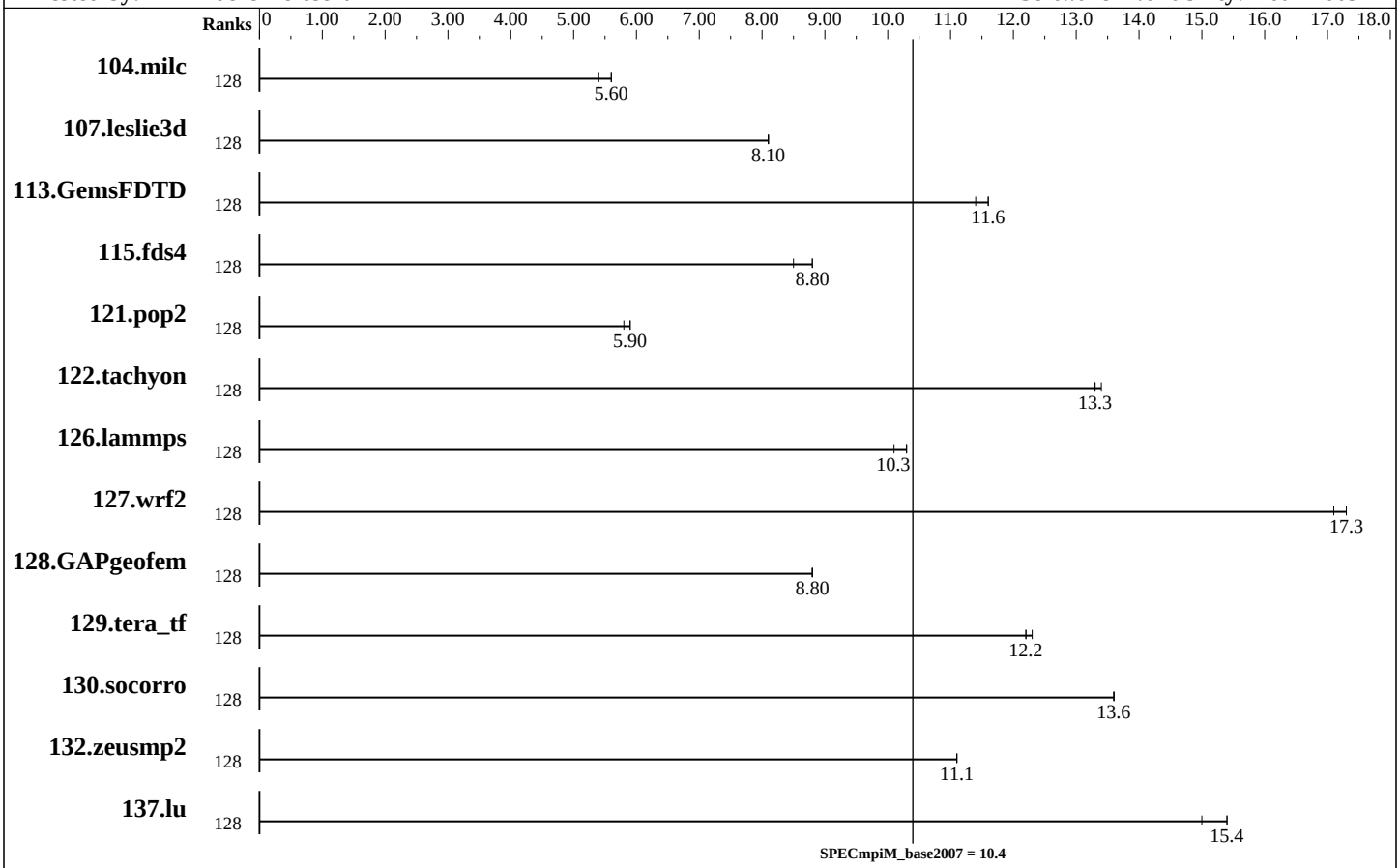
iDP (Intel Xeon L5420, 2.50 GHz)

SPECmpiM_peak2007 = Not Run

SPECmpiM_base2007 = 10.4

MPI2007 license: 37
Test sponsor: Indiana University
Tested by: Jens Doleschal

Test date: Dec-2009
Hardware Availability: Sep-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	278	5.60	**278**	**5.60**	288	5.40							
107.leslie3d	128	648	8.10	**646**	**8.10**	645	8.10							
113.GemsFDTD	128	544	11.6	552	11.4	**545**	**11.6**							
115.fds4	128	229	8.50	**221**	**8.80**	221	8.80							
121.pop2	128	714	5.80	696	5.90	**697**	**5.90**							
122.tachyon	128	210	13.4	210	13.3	**210**	**13.3**							
126.lammps	128	287	10.1	**284**	**10.3**	284	10.3							
127.wrf2	128	455	17.1	451	17.3	**452**	**17.3**							
128.GAPgeofem	128	234	8.80	236	8.80	**235**	**8.80**							
129.tera_tf	128	228	12.2	**227**	**12.2**	226	12.3							

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

IBM

iDP (Intel Xeon L5420, 2.50 GHz)

SPECmpiM_peak2007 = Not Run

SPECmpiM_base2007 = 10.4

MPI2007 license: 37
Test sponsor: Indiana University
Tested by: Jens Doleschal

Test date: Dec-2009
Hardware Availability: Sep-2008
Software Availability: Jan-2009

Results Table (Continued)

Benchmark	Base							Peak						
	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
130.socorro	128	280	13.6	**280**	**13.6**	281	13.6							
132.zeusmp2	128	279	11.1	280	11.1	**279**	**11.1**							
137.lu	128	239	15.4	245	15.0	**239**	**15.4**							

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:	iDP node
Interconnects:	Gigabit Ethernet IB Switch
Total Compute Nodes:	16
Total Chips:	32
Total Cores:	128
Total Threads:	128
Total Memory:	512 GB
Base Ranks Run:	128
Minimum Peak Ranks:	--
Maximum Peak Ranks:	--

Software Summary

C Compiler:	Intel C++ Compiler 11.1 for Windows (11.1.038)
C++ Compiler:	Intel C++ Compiler 11.1 for Windows (11.1.038)
Fortran Compiler:	Intel Fortran Compiler 11.1 for Windows (11.1.038)
Base Pointers:	64-bit
Peak Pointers:	64-bit
MPI Library:	MS MPI 1.0.6
Other MPI Info:	None
Pre-processors:	No
Other Software:	None

Node Description: iDP node

Hardware

Number of nodes:	16
Uses of the node:	compute
Vendor:	IBM
Model:	System x iDataPlex dx340
CPU Name:	Intel Xeon L5420
CPU(s) orderable:	1-2 chips
Chips enabled:	2
Cores enabled:	8
Cores per chip:	4
Threads per core:	1
CPU Characteristics:	1333 MHz FSB
CPU MHz:	2500
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:	32 GB (FBDIMM 8x4-GB 667 MHz)
Disk Subsystem:	Western Digital 160 GB SATA WD160YS-23SHBO
Other Hardware:	None
Adapter:	Intel Corporation 80003ES2LAN Gigabit Ethernet Controller (Copper) (rev 01)
Number of Adapters:	2
Slot Type:	--
Data Rate:	Gigabit Ethernet

Continued on next page

Software

Adapter:	Intel Corporation 80003ES2LAN Gigabit Ethernet Controller (Copper) (rev 01)
Adapter Driver:	OS default (v.9.11.5.7)
Adapter Firmware:	2.4-0
Adapter:	Mellanox Technologies MT26418 [ConnectX IB DDR, PCIe 2.0 5GT/s] (rev a0)
Adapter Driver:	Mellanox WinOF (v. 2.0.0)
Adapter Firmware:	2.5.0
Operating System:	Windows HPC Server 2008 Service Pack 2
Local File System:	Windows/NTFS
Shared File System:	Network shared NTFS directory
System State:	Multi-User
Other Software:	--

SPEC MPIM2007 Result

Copyright 2006-2010 Standard Performance Evaluation Corporation

IBM

iDP (Intel Xeon L5420, 2.50 GHz)

SPECmpiM_peak2007 = Not Run

SPECmpiM_base2007 = 10.4

MPI2007 license: 37
Test sponsor: Indiana University
Tested by: Jens Doleschal

Test date: Dec-2009
Hardware Availability: Sep-2008
Software Availability: Jan-2009

Node Description: iDP node

Ports Used:	1
Interconnect Type:	Ethernet
Adapter:	Mellanox Technologies MT26418 [ConnectX IB DDR, PCIe 2.0 5GT/s] (rev a0)
Number of Adapters:	1
Slot Type:	PCIe x8 Gen2
Data Rate:	InfiniBand 4x DDR
Ports Used:	1
Interconnect Type:	InfiniBand

Interconnect Description: Gigabit Ethernet

Hardware	
Vendor:	ProCurve Networking
Model:	HP ProCurve Switch 5406zl Intelligent Edge J8697A
Switch Model:	HP ProCurve Switch 5406zl Intelligent Edge J8697A
Number of Switches:	1
Number of Ports:	144
Data Rate:	1Gbps Ethernet
Firmware:	--
Topology:	Single switch
Primary Use:	Cluster File System

Software

Interconnect Description: IB Switch

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

Software

Submit Notes

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

Base Compiler Invocation

C benchmarks:
icl

C++ benchmarks:

126.lammps: icl

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl ifort

Base Portability Flags

115.fds4: /DSPEC_MPI_UC_NO_TRAILING_UNDERSCORE /fpscomp:general
121.pop2: /DSPEC_MPI_WINDOWS_ICL
127.wrf2: /DSPEC_MPI_CASE_FLAG /DSPEC_MPI_WINDOWS_ICL
/DSPEC_MPI_COMM_F2C /us /Qlowercase
129.tera_tf: /fpscomp:general
130.socorro: /DSPEC_NO_UNDERSCORE /DSPEC_MPI_COMM_F2C /Qlowercase
132.zeusmp2: /DSPEC_MPI_WINDOWS_ICL /fpscomp:general

Base Optimization Flags

C benchmarks:
/O3 /QxSSE3 /Qipo /Qprec-div- /F3950000000

C++ benchmarks:

126.lammps: /O3 /QxSSE3 /Qipo /Qprec-div- /F3950000000

Fortran benchmarks:
/O3 /QxSSE3 /Qipo /Qprec-div- /F3950000000

Benchmarks using both Fortran and C:
/O3 /QxSSE3 /Qipo /Qprec-div- /F3950000000

Base Other Flags

C benchmarks:
/c /Fooptions /I:C:\Program Files\Microsoft HPC Pack 2008 SDK\Include
/link
/libpath:C:\Program Files\Microsoft HPC Pack 2008 SDK\Lib\amd64 msmpifec.lib msmpifmc.lib msmpi.lib
/Feoptions

Continued on next page

Base Other Flags (Continued)

C++ benchmarks:

126.lammps: `/c /Fooptions /I:C:\Program Files\Microsoft HPC Pack 2008 SDK\Include /link /libpath:C:\Program Files\Microsoft HPC Pack 2008 SDK\Lib\amd64 msmpifec.lib msmpifmc.lib msm /Feoptions`

Fortran benchmarks:

`/c /Fooptions /I:C:\Program Files\Microsoft HPC Pack 2008 SDK\Include /link /libpath:C:\Program Files\Microsoft HPC Pack 2008 SDK\Lib\amd64 msmpifec.lib msmpifmc.lib msmpi.lib /Feoptions`

Benchmarks using both Fortran and C:

`/c /Fooptions /I:C:\Program Files\Microsoft HPC Pack 2008 SDK\Include /link /libpath:C:\Program Files\Microsoft HPC Pack 2008 SDK\Lib\amd64 msmpifec.lib msmpifmc.lib msmpi.lib /Feoptions`

The flags file that was used to format this result can be browsed at
http://www.spec.org/mpi2007/flags/dell.ic10.windows.flags.20100128.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/mpi2007/flags/dell.ic10.windows.flags.20100128.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 13:39:54 2014 by SPEC MPI2007 PS/PDF formatter v1463.
Originally published on 27 January 2010.