



SPEC® MPIM2007 Result

Copyright 2006-2010 Standard Performance Evaluation Corporation

QLogic, Intel, Supermicro

SPECmpiM_peak2007 = Not Run

SPECmpiM_base2007 = 13.6

QDR Benchmark Cluster (QLogic TrueScale InfiniBand, Intel Xeon X5570, 2.93 GHz)

MPI2007 license: 0018

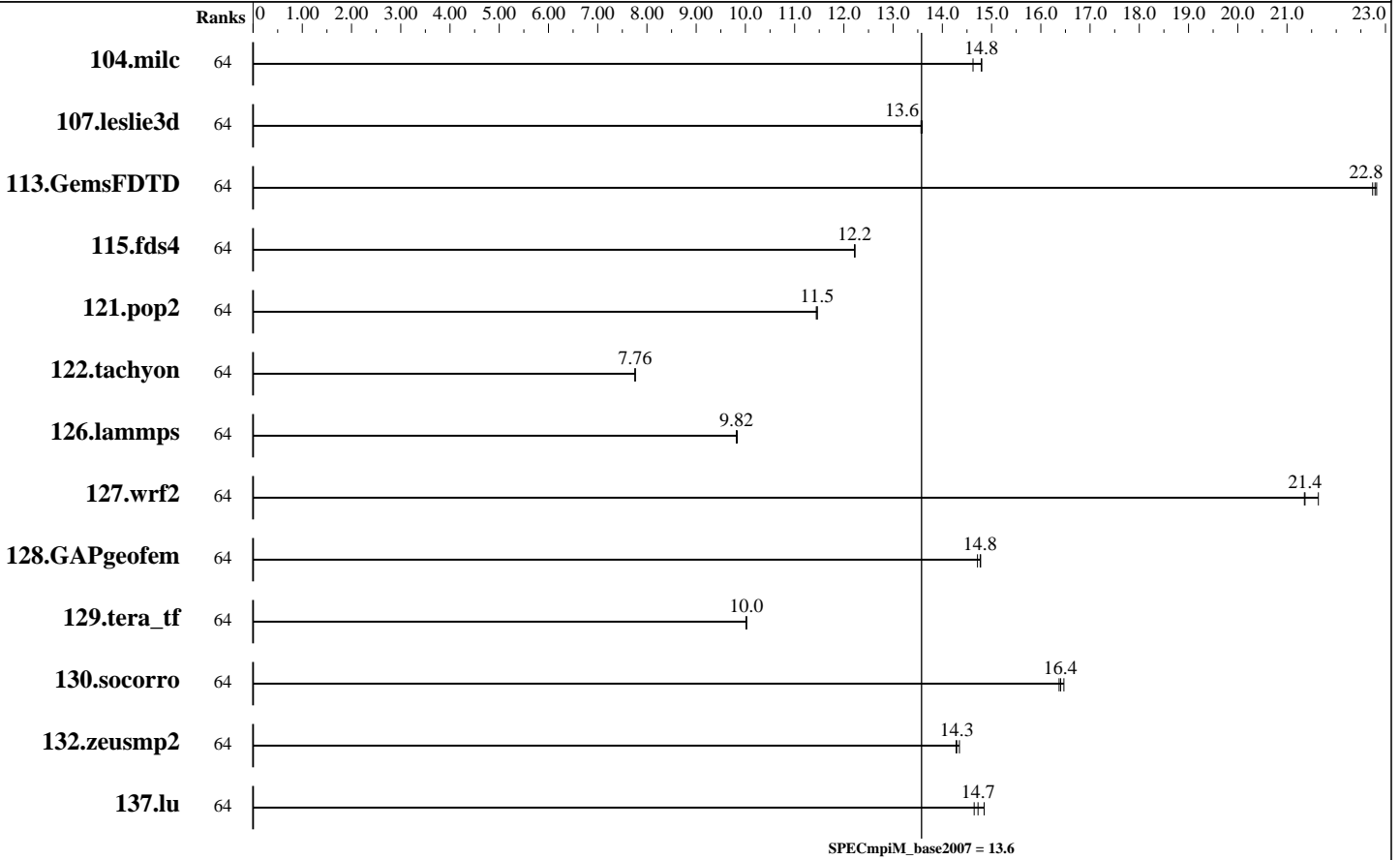
Test sponsor: QLogic Corporation

Tested by: QLogic Corporation

Test date: Jul-2009

Hardware Availability: Sep-2009

Software Availability: Sep-2009



Results Table

Benchmark	Base								Peak					
	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
104.milc	64	107	14.6	106	14.8	106	14.8							
107.leslie3d	64	385	13.6	385	13.6	384	13.6							
113.GemsFDTD	64	277	22.7	276	22.8	277	22.8							
115.fds4	64	160	12.2	160	12.2	160	12.2							
121.pop2	64	360	11.5	361	11.4	360	11.5							
122.tachyon	64	360	7.76	361	7.76	360	7.76							
126.lammps	64	297	9.82	296	9.83	297	9.82							
127.wrf2	64	365	21.4	360	21.6	365	21.4							
128.GAPgeofem	64	140	14.8	140	14.8	140	14.7							
129.tera_tf	64	276	10.0	276	10.0	276	10.0							

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

QLogic, Intel, Supermicro

SPECmpiM_peak2007 = Not Run

QDR Benchmark Cluster (QLogic TrueScale InfiniBand, Intel Xeon X5570, 2.93 GHz)

SPECmpiM_base2007 = 13.6

MPI2007 license: 0018

Test date: Jul-2009

Test sponsor: QLogic Corporation

Hardware Availability: Sep-2009

Tested by: QLogic Corporation

Software Availability: Sep-2009

Results Table (Continued)

Benchmark	Base								Peak							
	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
130.socorro	64	233	16.4	<u>233</u>	<u>16.4</u>	232	16.5									
132.zeusmp2	64	<u>217</u>	<u>14.3</u>	216	14.3	217	14.3									
137.lu	64	248	14.8	<u>250</u>	<u>14.7</u>	251	14.6									

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: Nehalem Compute Node
 Interconnect: TrueScale InfiniBand
 File Server Node: FusionSA
 Total Compute Nodes: 8
 Total Chips: 16
 Total Cores: 64
 Total Threads: 64
 Total Memory: 192 GB
 Base Ranks Run: 64
 Minimum Peak Ranks: --
 Maximum Peak Ranks: --

Software Summary

C Compiler: Intel C++ Compiler 11.1 for Linux, Build 20090511
 C++ Compiler: Intel C++ Compiler 11.1 for Linux, Build 20090511
 Fortran Compiler: Intel Fortran Compiler 11.1 for Linux, Build 20090511
 Base Pointers: 64-bit
 Peak Pointers: 64-bit
 MPI Library: QLogic MPI 2.5
 Other MPI Info: None
 Pre-processors: No
 Other Software: None

Node Description: Nehalem Compute Node

Hardware

Number of nodes: 8
 Uses of the node: compute
 Vendor: Supermicro
 Model: X8DTi-P motherboard, CSE-815TQ-700CB chassis
 CPU Name: Intel Xeon X5570
 CPU(s) orderable: 1-2 chips
 Chips enabled: 2
 Cores enabled: 8
 Cores per chip: 4
 Threads per core: 1
 CPU Characteristics: Intel Turbo Boost Technology up to 3.33 GHz, 6.4 GT/s QPI, Hyper-Threading disabled
 CPU MHz: 2930
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core
 L3 Cache: 8 MB I+D on chip per chip, 8 MB shared / 4 cores
 Other Cache: None
 Memory: 24 GB (RDIMM 6x4-GB, DDR3-1333 MHz)
 Disk Subsystem: Seagate 500 GB ST3500320NS
 Other Hardware: None
 Adapter: QLogic QLE7342
 Number of Adapters: 1
 Slot Type: PCIe x8 Gen2
 Data Rate: InfiniBand 4x QDR

Software

Adapter: QLogic QLE7342
 Adapter Driver: QLogic OFED 1.4.1
 Adapter Firmware: none
 Operating System: Red Hat EL 5.3, kernel 2.6.18-128
 Local File System: Linux/ext2
 Shared File System: NFSv3 IPoIB
 System State: Multi-User
 Other Software: none

Continued on next page



SPEC MPIM2007 Result

Copyright 2006-2010 Standard Performance Evaluation Corporation

QLogic, Intel, Supermicro

SPECmpiM_peak2007 = Not Run

QDR Benchmark Cluster (QLogic TrueScale InfiniBand, Intel Xeon X5570, 2.93 GHz)

SPECmpiM_base2007 = 13.6

MPI2007 license: 0018

Test date: Jul-2009

Test sponsor: QLogic Corporation

Hardware Availability: Sep-2009

Tested by: QLogic Corporation

Software Availability: Sep-2009

Node Description: Nehalem Compute Node

Ports Used: 1
Interconnect Type: InfiniBand

Node Description: FusionSA

Hardware

Number of nodes: 1
Uses of the node: fileserver
Vendor: Western Scientific
Model: FusionSA (storage appliance) with Tyan Thunder n6650W (S2915) motherboard and LSI Logic MegaRAID SAS 8408E RAID controller
CPU Name: Opteron 2218
CPU(s) orderable: 1-2 chips
Chips enabled: 2
Cores enabled: 4
Cores per chip: 2
Threads per core: 1
CPU Characteristics:
CPU MHz: 2600
Primary Cache: 64 KB I + 64 KB D on chip per core
Secondary Cache: 1 MB I+D on chip per chip
L3 Cache: None
Other Cache: None
Memory: 16 GB (8 x 2 GB PC2-5300 ECC)
Disk Subsystem: 8 x 73 GB SAS 3Gb/s 15K RPM
Other Hardware: None
Adapter: Mellanox MHGH28-XTC
Number of Adapters: 1
Slot Type: PCIe x8 Gen1
Data Rate: InfiniBand 4x DDR
Ports Used: 1
Interconnect Type: InfiniBand

Software

Adapter: Mellanox MHGH28-XTC
Adapter Driver: OFED 1.3
Adapter Firmware: 2.3.0
Operating System: Red Hat EL 4.5, 2.6.9-55.ELsmp
Local File System: None
Shared File System: NFSv3 IPoIB
System State: Multi-User
Other Software: None

Interconnect Description: TrueScale InfiniBand

Hardware

Vendor: QLogic
Model: QLogic 12000 Series
Switch Model: QLogic 12800-40
Number of Switches: 1
Number of Ports: 72
Data Rate: InfiniBand 4x QDR
Firmware: 5.0.3.0.3
Topology: Single switch
Primary Use: MPI traffic, File System traffic

Software



SPEC MPIM2007 Result

Copyright 2006-2010 Standard Performance Evaluation Corporation

QLogic, Intel, Supermicro

SPECmpiM_peak2007 = Not Run

QDR Benchmark Cluster (QLogic TrueScale InfiniBand, Intel Xeon X5570, 2.93 GHz)

SPECmpiM_base2007 = 13.6

MPI2007 license: 0018

Test sponsor: QLogic Corporation

Tested by: QLogic Corporation

Test date: Jul-2009

Hardware Availability: Sep-2009

Software Availability: Sep-2009

Submit Notes

The config file option 'submit' was used.

General Notes

BIOS settings notes:

Intel Hyper-Threading Technology (SMT): Disabled (default is Enabled)

Intel Turbo Boost Technology (Turbo) : Enabled (default is Enabled)

Switch notes: Enabled 4K IB MTUs and 2 Virtual Lanes with QLogic 12800-40 switch CLI parameter setting "ismChassisSetMtu 5 3"

Base Compiler Invocation

C benchmarks:

mpicc -cc=icc

C++ benchmarks:

126.lammps: mpicxx -CC=icpc

Fortran benchmarks:

mpif90 -f90=ifort

Benchmarks using both Fortran and C:

mpicc -cc=icc mpif90 -f90=ifort

Base Portability Flags

121.pop2: -DSPEC_MPI_CASE_FLAG

127.wrf2: -DSPEC_MPI_LINUX -DSPEC_MPI_CASE_FLAG

Base Optimization Flags

C benchmarks:

-O3 -xSSE4.2 -no-prec-div

C++ benchmarks:

126.lammps: -O3 -xSSE4.2 -no-prec-div

Fortran benchmarks:

-O3 -xSSE4.2 -no-prec-div

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org/

Page 4



SPEC MPIM2007 Result

Copyright 2006-2010 Standard Performance Evaluation Corporation

QLogic, Intel, Supermicro

SPECmpiM_peak2007 = Not Run

QDR Benchmark Cluster (QLogic TrueScale InfiniBand, Intel Xeon X5570, 2.93 GHz)

SPECmpiM_base2007 = 13.6

MPI2007 license: 0018

Test date: Jul-2009

Test sponsor: QLogic Corporation

Hardware Availability: Sep-2009

Tested by: QLogic Corporation

Software Availability: Sep-2009

Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:
-O3 -xSSE4.2 -no-prec-div

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

http://www.spec.org/mpi2007/flags/QLogic_Core_Intel1111_flags.html

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

http://www.spec.org/mpi2007/flags/QLogic_Core_Intel1111_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.

Tested with SPEC MPI2007 v1.1.
Report generated on Tue Jul 22 13:38:02 2014 by SPEC MPI2007 PS/PDF formatter v1463.
Originally published on 29 July 2009.