



SPEC[®] MPIL2007 Result

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Intel Corporation

SPECmpiL_peak2007 = 1.00

Atlantis (Intel Xeon X5482, 3.20 GHz)

SPECmpiL_base2007 = 1.00

MPI2007 license: 13

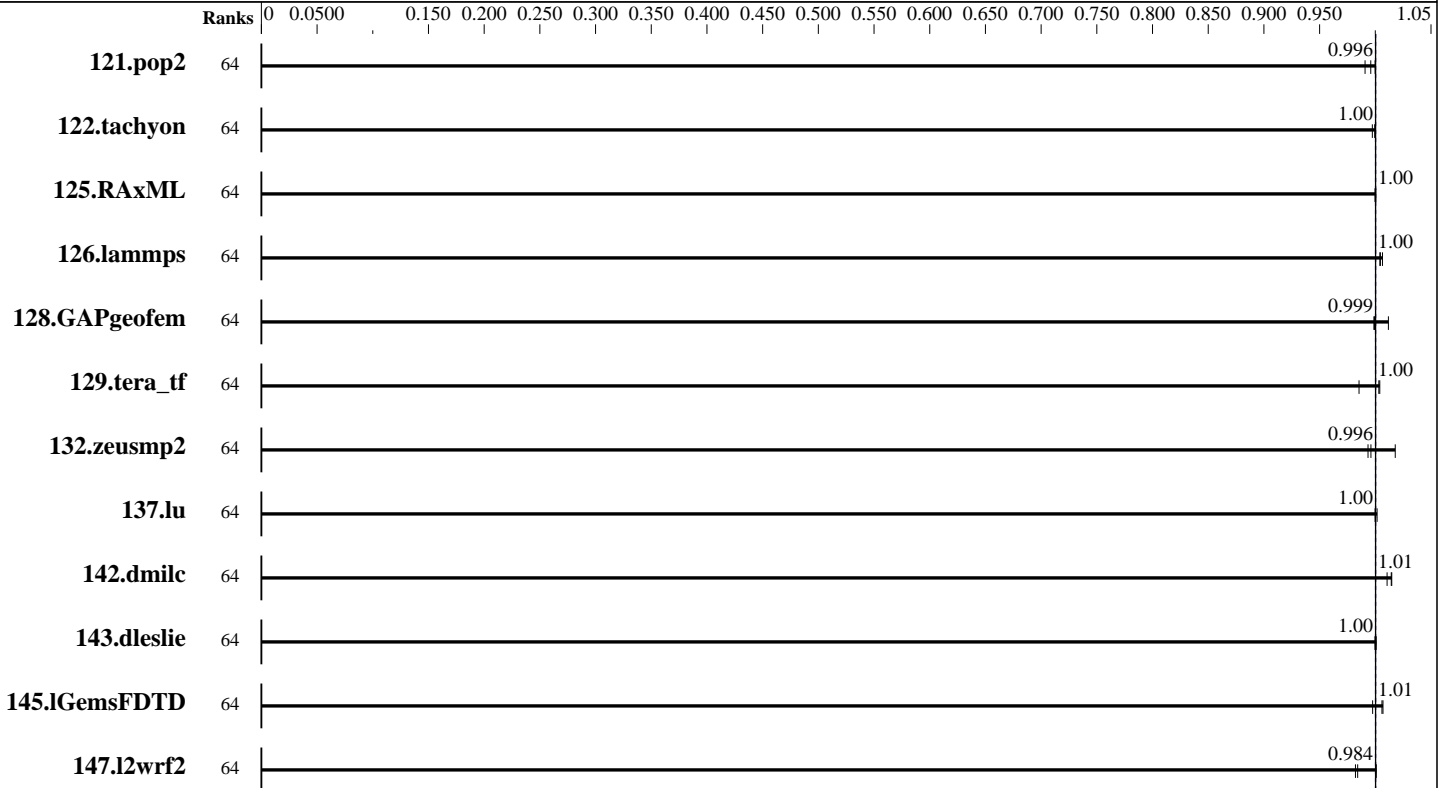
Test sponsor: Intel Corporation

Tested by: Pavel Shelepugin

Test date: Jan-2010

Hardware Availability: Sep-2008

Software Availability: Sep-2009



SPECmpiL_base2007 = 1.00

SPECmpiL_peak2007 = 1.00

Results Table

Benchmark	Base							Peak						
	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
121.pop2	64	3927	0.991	3907	0.996	3892	1.00	64	3927	0.991	3907	0.996	3892	1.00
122.tachyon	64	1944	1.00	1949	0.997	1945	1.00	64	1944	1.00	1949	0.997	1945	1.00
125.RAxML	64	2918	1.00	2920	1.00	2918	1.00	64	2918	1.00	2920	1.00	2918	1.00
126.lammps	64	2443	1.01	2449	1.00	2448	1.00	64	2443	1.01	2449	1.00	2448	1.00
128.GAPgeofem	64	5941	0.999	5938	0.999	5865	1.01	64	5941	0.999	5938	0.999	5865	1.01
129.tera_tf	64	1096	1.00	1115	0.985	1095	1.00	64	1096	1.00	1115	0.985	1095	1.00
132.zeusmp2	64	2134	0.993	2128	0.996	2083	1.02	64	2134	0.993	2128	0.996	2083	1.02
137.lu	64	4195	1.00	4203	1.00	4202	1.00	64	4195	1.00	4203	1.00	4202	1.00
142.dmilc	64	3630	1.01	3632	1.01	3645	1.01	64	3630	1.01	3632	1.01	3645	1.01
143.dleslie	64	3100	1.00	3101	1.00	3097	1.00	64	3100	1.00	3101	1.00	3097	1.00
145.lGemsFDTD	64	4422	0.998	4385	1.01	4381	1.01	64	4422	0.998	4385	1.01	4381	1.01
147.l2wrf2	64	8353	0.982	8196	1.00	8336	0.984	64	8353	0.982	8196	1.00	8336	0.984

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Standard Performance Evaluation Corporation

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http://www.spec.org/



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Hardware Summary

Type of System: Homogeneous
 Compute Node: Atlantis Node
 Interconnect: Gigabit Ethernet
 File Server Node: Panasas Fileserver
 Total Compute Nodes: 8
 Total Chips: 16
 Total Cores: 64
 Total Threads: 64
 Total Memory: 128 GB
 Base Ranks Run: 64
 Minimum Peak Ranks: 64
 Maximum Peak Ranks: 64

Software Summary

C Compiler: Intel C++ Compiler 11.1.035 for Linux
 C++ Compiler: Intel C++ Compiler 11.1.035 for Linux
 Fortran Compiler: Intel Fortran Compiler 11.1.035 for Linux
 Base Pointers: 64-bit
 Peak Pointers: 64-bit
 MPI Library: Intel MPI Library 3.2.2 for Linux
 Other MPI Info: None
 Pre-processors: No
 Other Software: None

Node Description: Atlantis Node

Hardware

Number of nodes: 8
 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, 6 MB shared / 2 cores
 L3 Cache: None
 Other Cache: None
 Memory: 16 GB (FBDIMM 8x2-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
 Data Rate: 1Gbps Ethernet
 Ports Used: 1
 Interconnect Type: Ethernet

Software

Adapter: Intel (ESB2) 82563EB Dual-Port Gigabit Ethernet Controller
 Adapter Driver: e1000
 Adapter Firmware: None
 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

Node Description: Panasas Fileserver

Hardware

Number of nodes: 1
 Uses of the node: fileserver

Software

Adapter: --
 Adapter Driver: --

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Tested by: Pavel Shelepugin

Software Availability: Sep-2009

Node Description: Panasas Fileserver

Vendor: Panasas
 Model: ActiveStor 3050
 CPU Name: --
 CPU(s) orderable: 1-2 chips
 Chips enabled: 1
 Cores enabled: 1
 Cores per chip: 1
 Threads per core: 1
 CPU Characteristics: --
 CPU MHz: 0
 Primary Cache: None
 Secondary Cache: None
 L3 Cache: None
 Other Cache: None
 Memory: 1 MB
 Disk Subsystem: 64 disks, 250GB/disk, 16TB total, 4 Shelves
 Other Hardware: None
 Adapter: --
 Number of Adapters: 1
 Slot Type: --
 Data Rate: 1Gbps Ethernet
 Ports Used: 16
 Interconnect Type: Ethernet

Adapter Firmware: N/A
 Operating System: 3.0.7.c-241513.8
 Local File System: PanFS
 Shared File System: DirectFlow
 System State: Multi-User
 Other Software: None

Interconnect Description: Gigabit Ethernet

Hardware

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: MPI traffic, FS traffic

Software

Submit Notes

The config file option 'submit' was used.

General Notes

MPI startup command:

mpirun command was used to start MPI jobs. This command starts an independent ring of mpd daemons, launches an MPI job, and shuts

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General Notes (Continued)

down the mpd ring upon the job termination.
The mpirun command automatically detects if an MPI job is submitted in a session allocated using a job scheduler (like PBS Pro). In this case, the mpirun command extracts the host list from the respective environment and uses these nodes automatically.

PBS Pro was used for job submission. It has no impact on performance.
Can be found at: <http://www.altair.com>

Base Compiler Invocation

C benchmarks:

mpiicc

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

Base Optimization Flags

C benchmarks:

-O2

C++ benchmarks:

126.lammps: -O2

Fortran benchmarks:

-O2

Benchmarks using both Fortran and C:

-O2



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Peak Optimization Flags

C benchmarks:

122.tachyon: basepeak = yes

125.RAxML: basepeak = yes

142.dmilc: basepeak = yes

C++ benchmarks:

126.lammps: basepeak = yes

Fortran benchmarks:

129.tera_tf: basepeak = yes

137.lu: basepeak = yes

143.dleslie: basepeak = yes

145.lGemsFDTD: basepeak = yes

Benchmarks using both Fortran and C:

121.pop2: basepeak = yes

128.GAPgeofem: basepeak = yes

132.zeusmp2: basepeak = yes

147.l2wrf2: basepeak = yes

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

http://www.spec.org/mpi2007/results/flags/EM64T_Intel111_flags.html

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

http://www.spec.org/mpi2007/results/flags/EM64T_Intel111_flags.xml

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC MPI2007 v85.

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