SPEC® MPIM2007 Result

SGI

SGI Altix 4700 Bandwidth System (Itanium 2 Processor 9040 1.6GHz/18M)

SPECmpiM_peak2007 = Not Run

SPECmpiM_base2007 = NC

MPI2007 license: 4
Test sponsor: SGI
Tested by: SGI

Test date: May-2007
Hardware Availability: Jul-2006
Software Availability: Apr-2007

Results Table

	Base							Peak						
Benchmark	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
104.milc	64	NC	NC	NC	NC									
107.leslie3d	64	NC	NC	NC	NC									
113.GemsFDTD	64	NC	NC	NC	NC									
115.fds4	64	NC	NC	NC	NC									
121.pop2	64	NC	NC	NC	NC									
122.tachyon	64	NC	NC	NC	NC									
126.lammps	64	NC	NC	NC	NC									
127.wrf2	64	NC	NC	NC	NC									
128.GAPgeofem	64	NC	NC	NC	NC									

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

SGI

SGI Altix 4700 Bandwidth System (Itanium 2 Processor 9040 1.6GHz/18M)

SPECmpiM_peak2007 = Not Run

SPECmpiM_base2007 = NC

MPI2007 license: 4
Test sponsor: SGI
Tested by: SGI

Test date: May-2007
Hardware Availability: Jul-2006
Software Availability: Apr-2007

Results Table (Continued)

Benchmark	Base							Peak						
	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Ranks	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
129.tera_tf	64	NC	NC	NC	NC									
130.socorro	64	NC	NC	NC	NC									
132.zeusmp2	64	NC	NC	NC	NC									
137.lu	64	NC	NC	NC	NC									

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

Hardware Summary

Type of System:	SMP
Compute Node:	SMP
File Server Node:	SMP
Total Compute Nodes:	1
Total Chips:	32
Total Cores:	64
Total Threads:	64
Total Memory:	256 GB
Base Ranks Run:	64
Minimum Peak Ranks:	--
Maximum Peak Ranks:	--

Software Summary

C Compiler:	Intel C Itanium Compiler for Itanium-based Applications Version 9.1 (Build 20070320)
C++ Compiler:	Intel C++ Itanium Compiler for Itanium-based Applications Version 9.1 (Build 20070320)
Fortran Compiler:	Intel Fortran Itanium Compiler for Itanium-based Applications Version 9.1 (Build 20070320)
Base Pointers:	64-bit
Peak Pointers:	64-bit
MPI Library:	SGI Message Passing Toolkit (MPT) Version 1.15
Other MPI Info:	None
Pre-processors:	None
Other Software:	None

Node Description: SMP

Hardware

Number of nodes:	1
Uses of the node:	compute, file server
Vendor:	SGI
Model:	SGI Altix 4700 Bandwidth System (Itanium 2 Processor 9040 1.6GHz/18M)
CPU Name:	Dual-Core Intel Itanium 2 9040
CPU(s) orderable:	1-512 chips
Chips enabled:	32
Cores enabled:	64
Cores per chip:	2
Threads per core:	1
CPU Characteristics:	533MHz FSB
CPU MHz:	1600
Primary Cache:	16 KB I + 16 KB D on chip per core
Secondary Cache:	1 MB I + 256 KB D on chip per core
L3 Cache:	9 MB I+D on chip per core
Other Cache:	None
Memory:	256 GB (8*1GB DDR2-400 DIMMS per 2 core module)
Disk Subsystem:	36 x 73 GB FibreChannel (Seagate Cheetah 15k rpm)
Other Hardware:	None
Adapter:	None
Number of Adapters:	0

Software

Adapter:	None
Adapter Driver:	Not applicable
Adapter Firmware:	Not applicable
Operating System:	SUSE Linux Enterprise Server 10 + SGI ProPack 5 Service Pack 1
Local File System:	36 x 73 GB FibreChannel (Seagate Cheetah 15k rpm)
Shared File System:	None
System State:	Multi-user
Other Software:	None

Continued on next page

SPEC MPIM2007 Result

SGI

SGI Altix 4700 Bandwidth System (Itanium 2 Processor 9040 1.6GHz/18M)

SPECmpiM_peak2007 = Not Run

SPECmpiM_base2007 = NC

MPI2007 license: 4
Test sponsor: SGI
Tested by: SGI

Test date: May-2007
Hardware Availability: Jul-2006
Software Availability: Apr-2007

Node Description: SMP

Slot Type:	Not applicable
Data Rate:	Not applicable
Ports Used:	0
Interconnect Type:	None

General Notes

```
setenv MPI_DSM_DISTRIBUTE 1
     Ensures that each MPI process gets a unique CPU and physical
     memory on the node with which that CPU is associated.  The
     CPUs are chosen by simply starting at cpuset relative CPU 0
     and incrementing until all MPI processes have been forked.
setenv MPI_REQUEST_MAX 65536
     Determines the maximum number of nonblocking sends and
     receives that can simultaneously exist for any single MPI
     process.  MPI generates an error message if this limit
     (or the default, if not set) is exceeded.  Default:  16384
limit stacksize unlimited
     Removes limits on the maximum size of the automatically-
     extended stack region of the current process and each
     process it creates.
```

Base Compiler Invocation

C benchmarks:
`icc`

C++ benchmarks:

126.lammps: `icpc`

Fortran benchmarks:
`ifort`

Benchmarks using both Fortran and C:
`icc ifort`

Base Portability Flags

121.pop2: `-DSPEC_MPI_CASE_FLAG`
127.wrf2: `-DSPEC_MPI_LINUX -DSPEC_MPI_CASE_FLAG`

SGI

SGI Altix 4700 Bandwidth System (Itanium 2 Processor 9040 1.6GHz/18M)

SPECmpiM_peak2007 = Not Run

SPECmpiM_base2007 = NC

MPI2007 license: 4
Test sponsor: SGI
Tested by: SGI

Test date: May-2007
Hardware Availability: Jul-2006
Software Availability: Apr-2007

Base Optimization Flags

C benchmarks:
`-O3 -ipo -IPF-fp-relaxed -lmpi`

C++ benchmarks:

126.lammps: `-O3 -ipo -IPF-fp-relaxed -ansi-alias -lmpi`

Fortran benchmarks:
`-O3 -ipo -IPF-fp-relaxed -lmpi`

Benchmarks using both Fortran and C:
`-O3 -ipo -IPF-fp-relaxed -lmpi`

The flags file that was used to format this result can be browsed at
http://www.spec.org/mpi2007/flags/Intel-ic91-ipf.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/mpi2007/flags/Intel-ic91-ipf.xml

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

Tested with SPEC MPI2007 v59.
Report generated on Tue Jul 22 13:32:42 2014 by SPEC MPI2007 PS/PDF formatter v1463.
Originally published on 16 July 2007.