SPEC® CINT2006 Result
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SGI

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

$SPECint®_rate2006 = $ 718

$SPECint_rate_base2006 = $ 645

CPU2006 license: 4
Test sponsor: SGI
Tested by: SGI

Test date: Nov-2006
Hardware Availability: Jul-2006
Software Availability: Aug-2006

SPECint_rate_base2006 = 645

SPECint_rate2006 = 718

Hardware

CPU Name:	Dual-Core Intel Itanium 2 9040
CPU Characteristics:	533MHz FSB
CPU MHz:	1600
FPU:	Integrated
CPU(s) enabled:	64 cores, 32 chips, 2 cores/chip
CPU(s) orderable:	2-1024 cores
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:	128 GB (8*1GB DDR2-400 DIMMS per 4 core module)
Disk Subsystem:	1 x 146 GB SCSI (Seagate Cheetah 15k rpm)
Other Hardware:	None

Software

Operating System:	SUSE Linux Enterprise Server 9 Service Pack 3 + SGI ProPack v4.0 Service Pack 3
Compiler:	Intel C++ Compiler for Linux 9.1 (Build 20060818) MicroQuill SmartHeap Library 7.01 (www.microquill.com)
Auto Parallel:	No
File System:	xfs
System State:	Multi-user
Base Pointers:	64-bit
Peak Pointers:	32/64-bit
Other Software:	--

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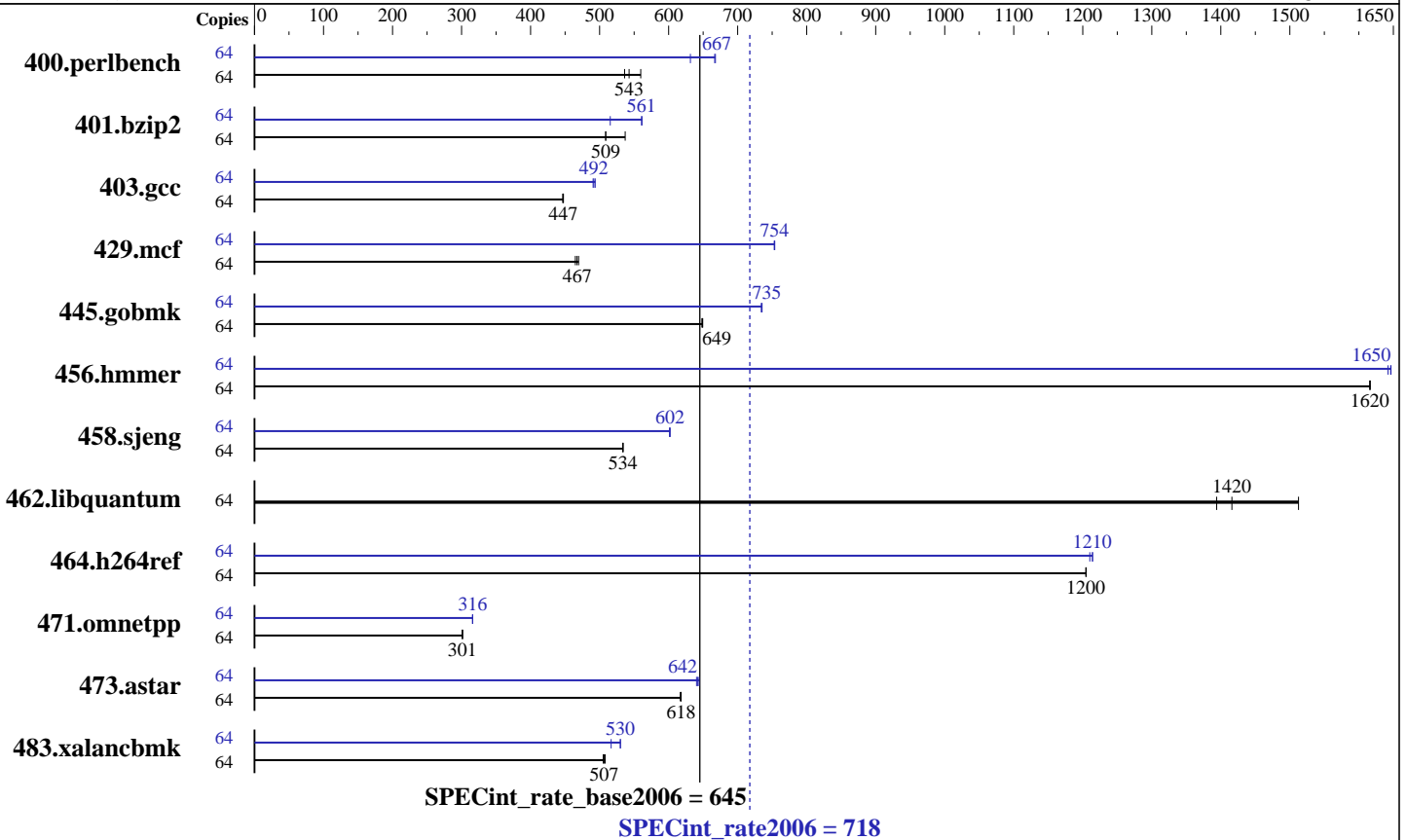SPECint_rate2006 = 718

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Results Table

Benchmark	Base						Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	64	1117	560	1166	536	**1152**	**543**	64	990	632	936	668	**938**	**667**
401.bzip2	64	1150	537	**1213**	**509**	1214	509	64	1198	515	**1102**	**561**	1100	561
403.gcc	64	1154	447	**1152**	**447**	1151	448	64	1044	494	1050	491	**1048**	**492**
429.mcf	64	1256	465	**1249**	**467**	1243	470	64	775	753	**774**	**754**	774	754
445.gobmk	64	1036	648	**1034**	**649**	1034	649	64	914	734	**914**	**735**	913	735
456.hmmer	64	**370**	**1620**	370	1620	369	1620	64	364	1640	**363**	**1650**	363	1650
458.sjeng	64	1451	534	**1451**	**534**	1450	534	64	1286	602	1288	601	**1286**	**602**
462.libquantum	64	877	1510	951	1390	**936**	**1420**	64	877	1510	951	1390	**936**	**1420**
464.h264ref	64	1176	1200	1175	1210	**1176**	**1200**	64	1170	1210	1166	1210	**1167**	**1210**
471.omnetpp	64	1327	301	**1328**	**301**	1328	301	64	**1266**	**316**	1265	316	1266	316
473.astar	64	**727**	**618**	728	617	727	618	64	702	640	**700**	**642**	698	644
483.xalancbmk	64	869	508	874	505	**871**	**507**	64	855	517	**833**	**530**	833	530

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

General Notes

```
Processes were bound to CPUs using dplace.
limit stacksize unlimited
```

Base Compiler Invocation

C benchmarks:
```
icc
```

C++ benchmarks:
```
icpc
```

Base Portability Flags

```
400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_IA64
   401.bzip2: -DSPEC_CPU_LP64
     403.gcc: -DSPEC_CPU_LP64
     429.mcf: -DSPEC_CPU_LP64
  445.gobmk: -DSPEC_CPU_LP64
  456.hmmer: -DSPEC_CPU_LP64
   458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
 464.h264ref: -DSPEC_CPU_LP64
 471.omnetpp: -DSPEC_CPU_LP64
```

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SPECint_rate2006 =   718

SPECint_rate_base2006 =   645

CPU2006 license: 4

Test sponsor: SGI

Tested by: SGI

Test date: Nov-2006

Hardware Availability: Jul-2006

Software Availability: Aug-2006

Base Portability Flags (Continued)

```
    473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
```

Base Optimization Flags

C benchmarks:

```
-fast -IPF_fp_relaxed -ansi_alias
```

C++ benchmarks:

```
-fast -IPF_fp_relaxed -ansi_alias -Wl,-z,muldefs libsmartheapC64.a
libsmartheap64.a
```

Base Other Flags

C benchmarks:

```
-w
```

C++ benchmarks:

```
-w
```

Peak Compiler Invocation

C benchmarks:

```
icc
```

C++ benchmarks:

```
icpc
```

Peak Portability Flags

```
Same as Base Portability Flags
```

Peak Optimization Flags

C benchmarks:

```
400.perlbench: -prof_gen(pass 1) -prof_use(pass 2) -fast -IPF_fp_relaxed
               -ansi_alias
```

SGI

SGI Altix 4700 Density System (Itanium 2
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SPECint_rate2006 =   718

SPECint_rate_base2006 = 645

CPU2006 license: 4		**Test date:**	Nov-2006
Test sponsor: SGI		**Hardware Availability:**	Jul-2006
Tested by: SGI		**Software Availability:**	Aug-2006

Peak Optimization Flags (Continued)

401.bzip2: `-prof_gen`(pass 1) `-prof_use`(pass 2) `-fast` `-IPF_fp_relaxed`
`-auto_ilp32` `-ansi_alias`

403.gcc: Same as 400.perlbench

429.mcf: `-fast` `-IPF_fp_relaxed` `-auto_ilp32` `-ansi_alias`

445.gobmk: Same as 401.bzip2

456.hmmer: Same as 429.mcf

458.sjeng: Same as 401.bzip2

462.libquantum: basepeak = yes

464.h264ref: Same as 429.mcf

C++ benchmarks:

471.omnetpp: `-prof_gen`(pass 1) `-prof_use`(pass 2) `-fast` `-IPF_fp_relaxed`
`-ansi_alias` `-Wl,-z,muldefs` libsmartheapC64.a
libsmartheap64.a

473.astar: `-prof_gen`(pass 1) `-prof_use`(pass 2) `-fast` `-IPF_fp_relaxed`
`-auto_ilp32` `-inline-factor=150` `-ansi_alias` `-Wl,-z,muldefs`
libsmartheapC64.a libsmartheap64.a

483.xalancbmk: Same as 471.omnetpp

Peak Other Flags

C benchmarks:
`-w`

C++ benchmarks:
`-w`

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic91-ipf.20090715.00.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic91-ipf.20090715.00.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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