SPEC® CINT2006 Result

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SGI

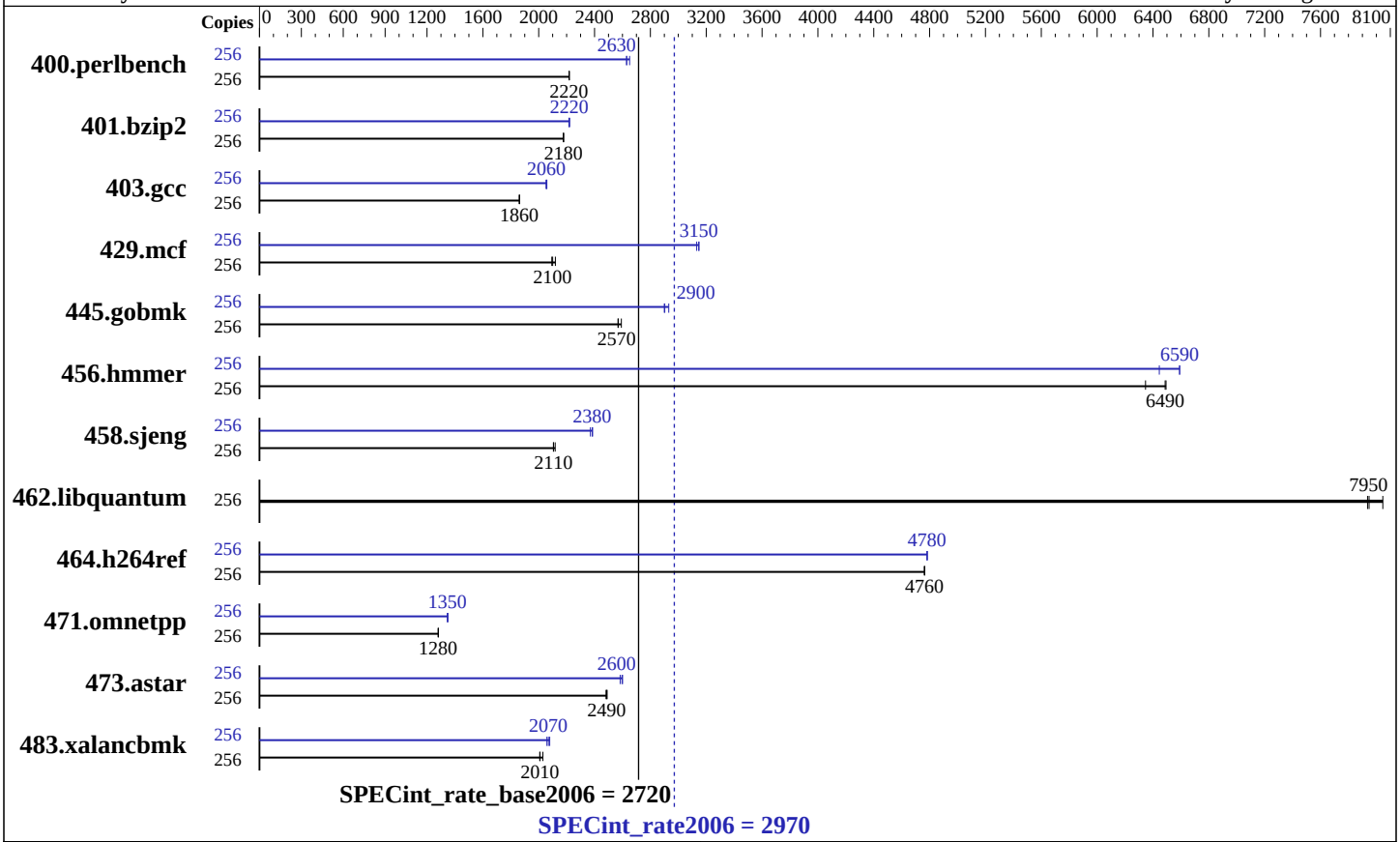
SGI Altix 4700 Bandwidth System (Itanium 2 Processor 9040 1.6GHz/18M)

SPECint®_rate2006 = 2970

SPECint_rate_base2006 = 2720

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

Test date: Jan-2007
Hardware Availability: Jul-2006
Software Availability: Aug-2006



Hardware

CPU Name:	Dual-Core Intel Itanium 2 9040
CPU Characteristics:	533MHz FSB
CPU MHz:	1600
FPU:	Integrated
CPU(s) enabled:	256 cores, 128 chips, 2 cores/chip
CPU(s) orderable:	1-512 chips
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:	4 TB (8*4GB DDR2-400 DIMMS per 2 core module)
Disk Subsystem:	16 x 37 GB FibreChannel (Seagate Cheetah 15k rpm)
Other Hardware:	None

Software

Operating System:	SUSE Linux Enterprise Server 9 Service Pack 3 + SGI ProPack 4 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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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	256	1128	2220	1127	2220	**1128**	**2220**	256	**951**	**2630**	951	2630	943	2650
401.bzip2	256	**1135**	**2180**	1135	2180	1134	2180	256	**1113**	**2220**	1115	2220	1112	2220
403.gcc	256	1107	1860	**1107**	**1860**	1107	1860	256	**1002**	**2060**	1001	2060	1004	2050
429.mcf	256	**1112**	**2100**	1115	2090	1102	2120	256	742	3150	746	3130	**742**	**3150**
445.gobmk	256	1036	2590	1046	2570	**1045**	**2570**	256	926	2900	**925**	**2900**	916	2930
456.hmmer	256	**368**	**6490**	376	6350	368	6490	256	362	6590	**362**	**6590**	371	6450
458.sjeng	256	**1470**	**2110**	1462	2120	1471	2110	256	1307	2370	**1300**	**2380**	1298	2390
462.libquantum	256	**667**	**7950**	659	8050	668	7940	256	**667**	**7950**	659	8050	668	7940
464.h264ref	256	1189	4760	1189	4760	**1189**	**4760**	256	1185	4780	**1185**	**4780**	1185	4780
471.omnetpp	256	1248	1280	**1249**	**1280**	1250	1280	256	1186	1350	**1188**	**1350**	1188	1350
473.astar	256	**723**	**2490**	724	2480	722	2490	256	691	2600	**692**	**2600**	696	2580
483.xalancbmk	256	870	2030	**879**	**2010**	880	2010	256	850	2080	858	2060	**854**	**2070**

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.
```

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

Continued on next page

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`

Continued on next page

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 other inquiries, please contact webmaster@spec.org.

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