SPEC® CINT2006 Result

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Intel Corporation

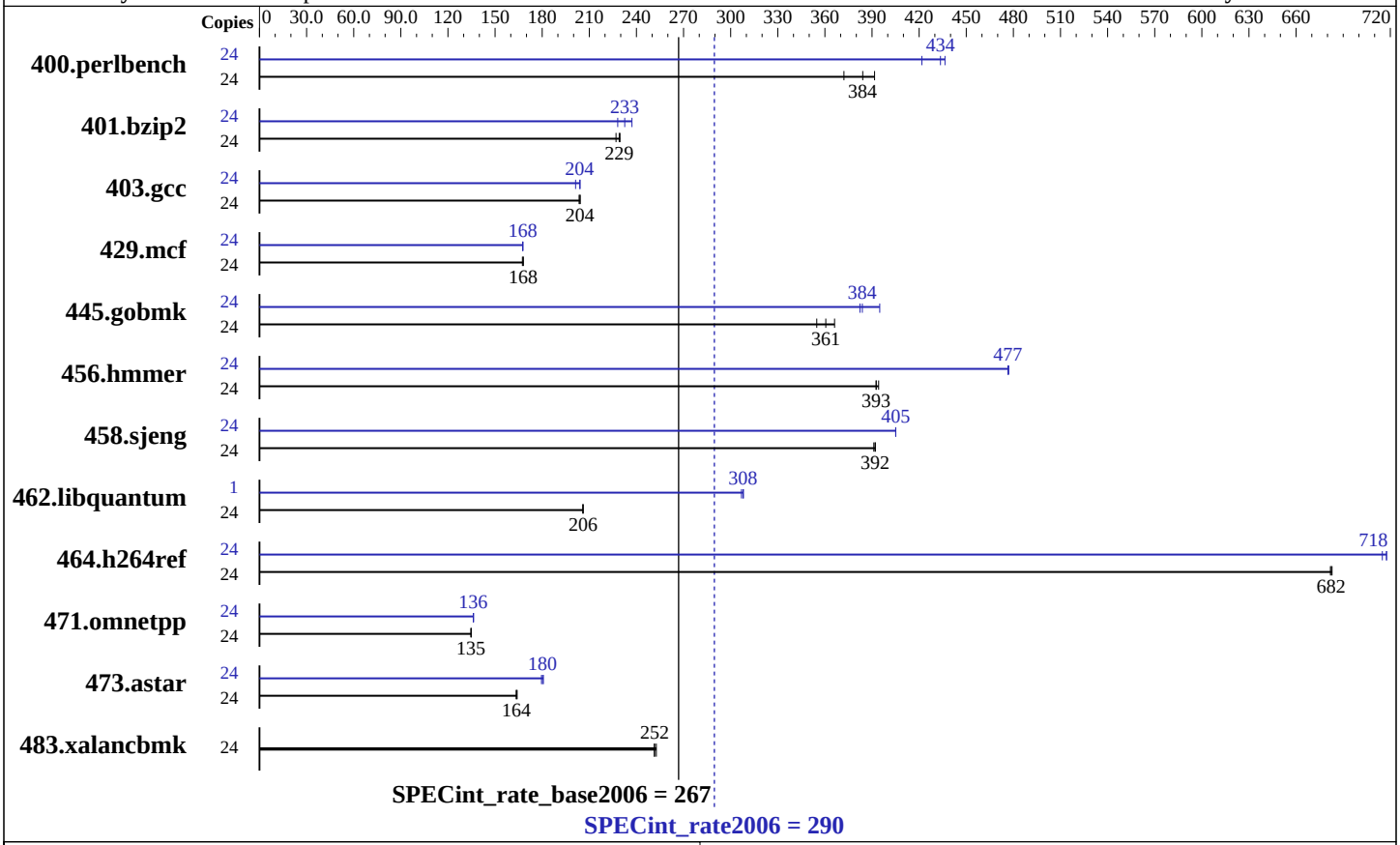
Intel Server System S7000FC4UR (Intel Xeon X7460)

SPECint®_rate2006 = 290

SPECint_rate_base2006 = 267

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Test date: Aug-2008
Hardware Availability: Sep-2008
Software Availability: Nov-2008



Hardware

CPU Name:	Intel Xeon X7460
CPU Characteristics:	
CPU MHz:	2666
FPU:	Integrated
CPU(s) enabled:	24 cores, 4 chips, 6 cores/chip
CPU(s) orderable:	1,2,4 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	9 MB I+D on chip per chip, 3 MB shared / 2 cores
L3 Cache:	16 MB I+D on chip per chip
Other Cache:	None
Memory:	32 GB(16x2GB Micron DDR2 5300F, CL5-5-5,ECC)
Disk Subsystem:	Seagate 73 GB SAS, 10K RPM
Other Hardware:	None

Software

Operating System:	SuSe Linux SLES10 SP2
Compiler:	Intel C++ Compiler 11.0 for Linux Build 20080730 Package ID: l_cproc_b_11.0.042
Auto Parallel:	Yes
File System:	ReiserFS
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V8.1 Binutils 2.18.50.0.7.20080502

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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	24	**610**	**384**	630	372	599	392	24	556	422	**541**	**434**	537	436
401.bzip2	24	1020	227	**1011**	**229**	1009	230	24	1015	228	**996**	**233**	977	237
403.gcc	24	**947**	**204**	949	203	946	204	24	946	204	**947**	**204**	960	201
429.mcf	24	1308	167	1303	168	**1303**	**168**	24	1305	168	1306	168	**1306**	**168**
445.gobmk	24	688	366	**698**	**361**	710	355	24	638	395	**656**	**384**	659	382
456.hmmer	24	**570**	**393**	568	394	570	393	24	469	477	**470**	**477**	470	477
458.sjeng	24	741	392	742	391	**741**	**392**	24	717	405	**717**	**405**	717	405
462.libquantum	24	2415	206	**2414**	**206**	2413	206	1	67.5	307	67.2	308	**67.3**	**308**
464.h264ref	24	779	682	**778**	**682**	778	683	24	743	715	740	718	**740**	**718**
471.omnetpp	24	**1114**	**135**	1113	135	1114	135	24	1102	136	1101	136	**1102**	**136**
473.astar	24	1027	164	1031	163	**1029**	**164**	24	**935**	**180**	932	181	938	180
483.xalancbmk	24	655	253	659	251	**658**	**252**	24	655	253	659	251	**658**	**252**

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

Submit Notes

```
The config file option 'submit' was used.
```

General Notes

```
All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmer,
for peak, are compiled in 64-bit mode
taskset was used to bind processes to cores except
for 462.libquantum peak
OMP_NUM_THREADS set to number of processors
KMP_AFFINITY set to "physical,0"
KMP_STACKSIZE set to 64M
Hardware Prefetcher: Disabled
Adjacent Cache Line Prefetcher: Disabled
High Bandwidth Option: Disabled
```

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-xSSE4.1 -ipo -O3 -no-prec-div -static -inline-calloc
-opt-malloc-options=3 -opt-prefetch

C++ benchmarks:
-xSSE4.1 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/spec/cpu2006.1.1/lib -lsmartheap

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc

401.bzip2: /opt/intel/Compiler/11.0/042/bin/intel64/icc
-L/opt/intel/Compiler/11.0/042/ipp/em64t/lib
-I/opt/intel/Compiler/11.0/042/ipp/em64t/include

456.hmmer: /opt/intel/Compiler/11.0/042/bin/intel64/icc
-L/opt/intel/Compiler/11.0/042/ipp/em64t/lib
-I/opt/intel/Compiler/11.0/042/ipp/em64t/include

C++ benchmarks:
icpc

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64

Continued on next page

Peak Portability Flags (Continued)

462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -static -ansi-alias -opt-prefetch

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias

403.gcc: -xSSE4.1 -ipo -O3 -no-prec-div -static -inline-calloc -opt-malloc-options=3

429.mcf: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -O2 -ipo -no-prec-div -ansi-alias

456.hmmer: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2 -ansi-alias

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll4

462.libquantum: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-malloc-options=3 -parallel -par-runtime-control -opt-prefetch

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -ansi-alias -opt-ra-region-strategy=routine -Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090713.06.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090713.06.xml`

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For other inquiries, please contact webmaster@spec.org.

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