SPEC® CINT2006 Result

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Fujitsu

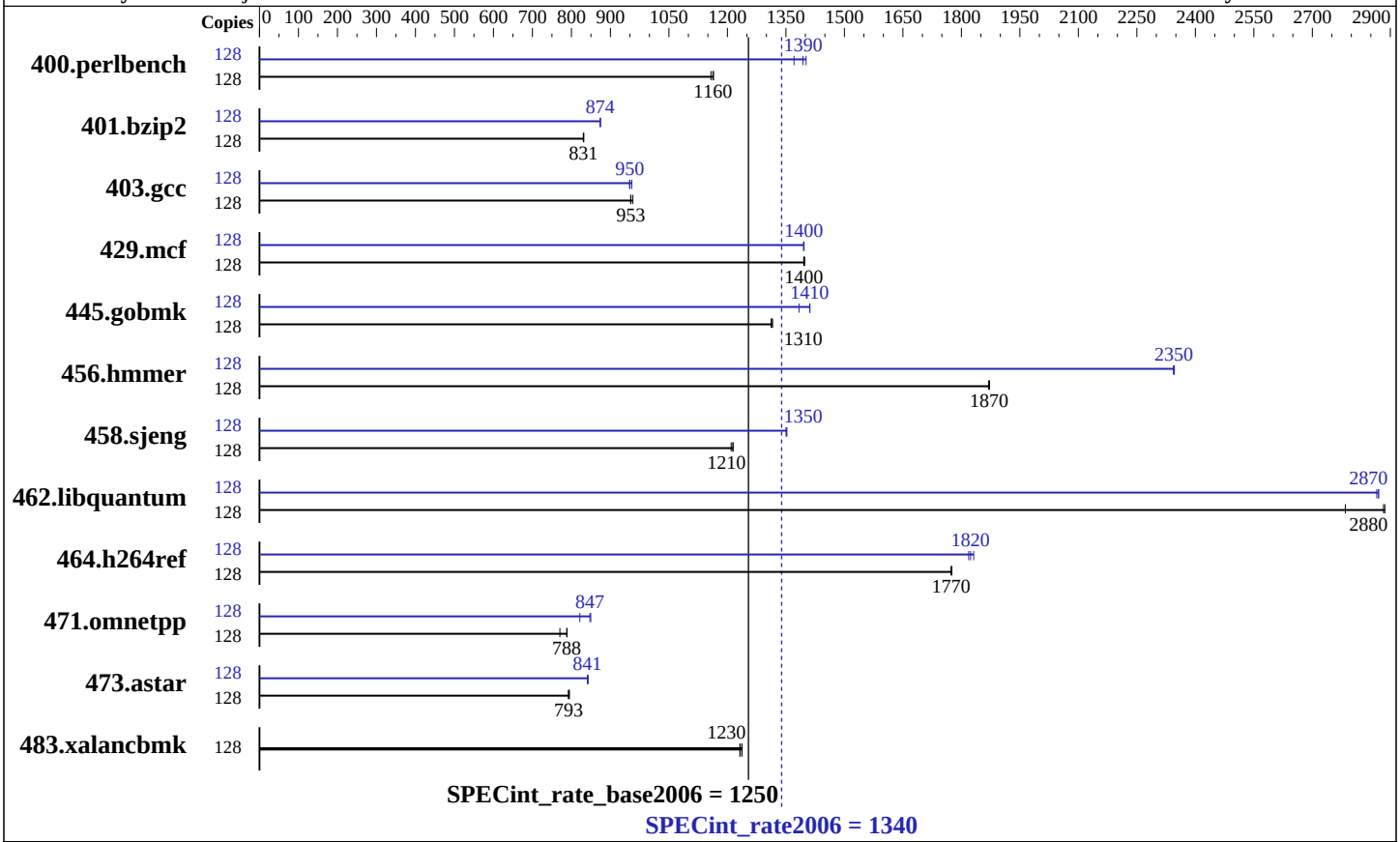
PRIMEQUEST 1800E(Intel Xeon X7560)

SPECint®_rate2006 = 1340

SPECint_rate_base2006 = 1250

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Mar-2010
Hardware Availability: Jun-2010
Software Availability: Feb-2010



Hardware

CPU Name:	Intel Xeon X7560
CPU Characteristics:	Intel Turbo Boost Technology up to 2.67 GHz
CPU MHz:	2266
FPU:	Integrated
CPU(s) enabled:	64 cores, 8 chips, 8 cores/chip, 2 threads/core
CPU(s) orderable:	1-8 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core
L3 Cache:	24 MB I+D on chip per chip
Other Cache:	None
Memory:	256 GB (128x 2GB DDR3-1066 DIMMs)
Disk Subsystem:	2x 147GB (SAS, 15000RPM) No RAID configuration
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 5.4, Advanced Platform with patch RHSA-2010:0019, Kernel 2.6.18-164.10.1.el5
Compiler:	Intel C++ Professional Compiler for IA32 and Intel 64, Version 11.1 Build 20100203 Package ID: l_cproc_p_11.1.069
Auto Parallel:	No
File System:	ext2
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V9.0 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	128	1074	1160	1080	1160	**1076**	**1160**	128	**897**	**1390**	892	1400	912	1370
401.bzip2	128	**1487**	**831**	1487	831	1485	832	128	**1414**	**874**	1413	874	1414	874
403.gcc	128	1083	952	**1082**	**953**	1076	958	128	1086	949	**1084**	**950**	1079	955
429.mcf	128	836	1400	**836**	**1400**	835	1400	128	837	1400	836	1400	**836**	**1400**
445.gobmk	128	**1022**	**1310**	1023	1310	1020	1320	128	971	1380	951	1410	**952**	**1410**
456.hmmer	128	639	1870	**638**	**1870**	638	1870	128	510	2340	**509**	**2350**	509	2350
458.sjeng	128	**1276**	**1210**	1275	1210	1280	1210	128	1147	1350	**1147**	**1350**	1145	1350
462.libquantum	128	**920**	**2880**	919	2890	952	2780	128	**924**	**2870**	926	2870	924	2870
464.h264ref	128	**1597**	**1770**	1597	1770	1595	1780	128	1557	1820	**1553**	**1820**	1547	1830
471.omnetpp	128	1015	788	1038	770	**1015**	**788**	128	**944**	**847**	942	850	974	822
473.astar	128	1130	795	1134	792	**1133**	**793**	128	**1068**	**841**	1068	841	1066	843
483.xalancbmk	128	717	1230	714	1240	**716**	**1230**	128	717	1230	714	1240	**716**	**1230**

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.
 numactl was used to bind copies to the cores
```

Operating System Notes

```
The following command was used prior to run

   ulimit -s unlimited
   mkdir /dev/cpuset
   mount -t cpuset none /dev/cpuset
   echo 1 > /dev/cpuset/memory_spread_page
```

Base Compiler Invocation

C benchmarks:

```
icc  -m32
```

C++ benchmarks:

```
icpc -m32
```

Base Portability Flags

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

Base Optimization Flags

C benchmarks:
`-xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch`

C++ benchmarks:
`-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs -L/opt/SmartHeap_9/lib -lsmartheap`

Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

Peak Compiler Invocation

C benchmarks (except as noted below):
`icc -m32`

401.bzip2: `icc -m64`

456.hmmer: `icc -m64`

458.sjeng: `icc -m64`

462.libquantum: `icc -m64`

C++ benchmarks (except as noted below):
`icpc -m32`

473.astar: `icpc -m64`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`
401.bzip2: `-DSPEC_CPU_LP64`

Continued on next page

Peak Portability Flags (Continued)

456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

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

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -opt-prefetch -ansi-alias -auto-ilp32

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -static

429.mcf: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

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

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2
-ansi-alias -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -unroll4 -auto-ilp32

462.libquantum: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32
-opt-prefetch

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

C++ benchmarks:

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs
-L/opt/SmartHeap_9/lib -lsmartheap

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

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Peak Optimization Flags (Continued)

473.astar (continued):
`-L/opt/SmartHeap_9_64/lib -lsmartheap64`

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/Fujitsu.PQ1800.ic11.1-linux64.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Fujitsu.PQ1800.ic11.1-linux64.xml`

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