SPEC® CINT2006 Result

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HITACHI

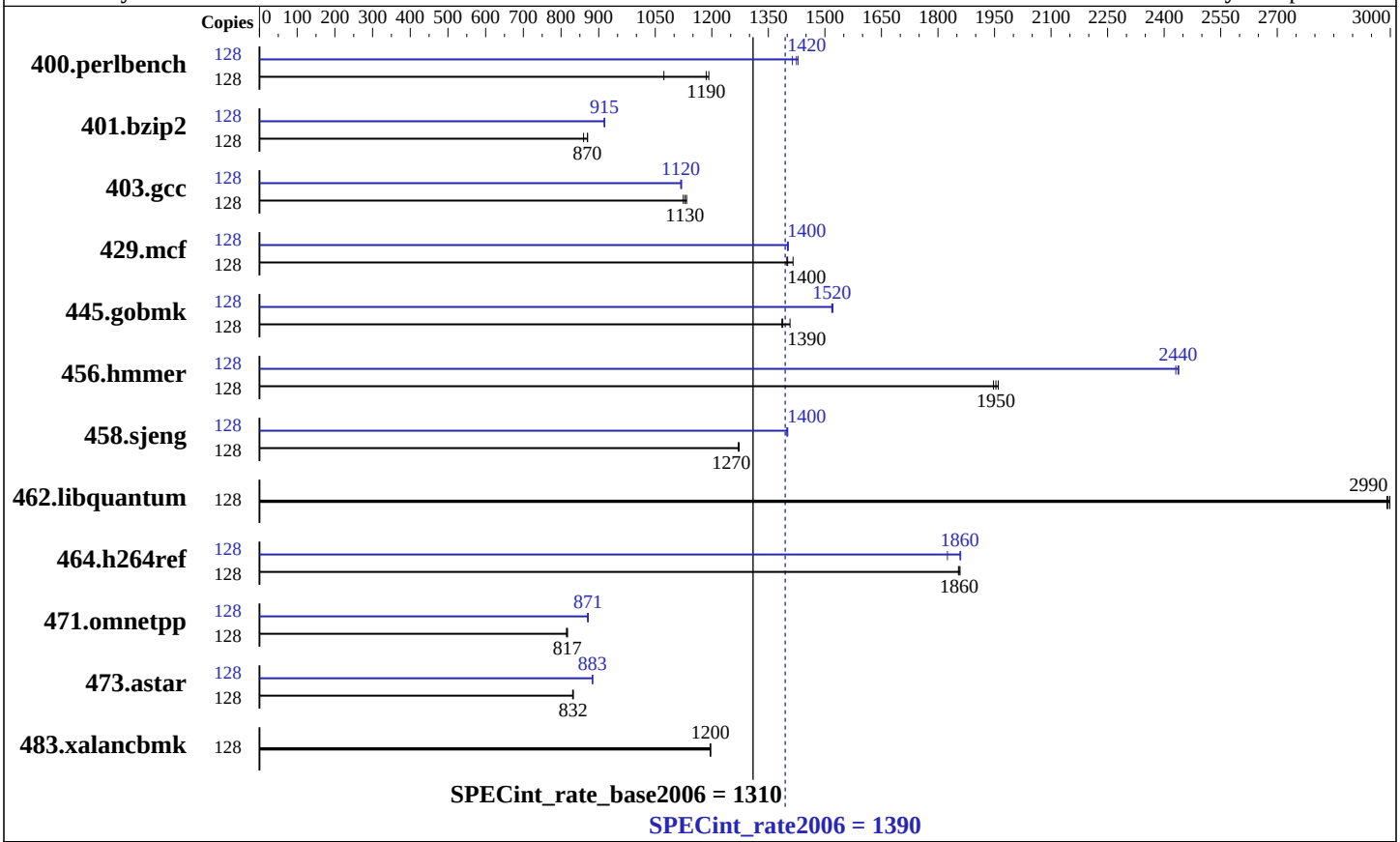
BladeSymphony BS2000 (Intel Xeon X7560)

SPECint®_rate2006 = 1390

SPECint_rate_base2006 = 1310

CPU2006 license: 872
Test sponsor: HITACHI
Tested by: HITACHI

Test date: Sep-2010
Hardware Availability: Aug-2010
Software Availability: Apr-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, 2, 4, 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:	512 GB(128 x 4 GB PC3-10600R, 2 rank, CL9-9-9)
Disk Subsystem:	10 x 73 GB 15000 rpm Fibre Channel RAID1+0 configuration
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 5.4, Advanced Platform, Kernel 2.6.18-164.15.1.el5 on an x86_64
Compiler:	Intel C++ Compiler 11.1 for Linux Build 20100414 Package ID: l_cproc_p_11.1.072
Auto Parallel:	No
File System:	ext3
System State:	Multi-user run level 3
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V8.1

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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	1166	1070	**1055**	**1190**	1049	1190	128	**878**	**1420**	885	1410	875	1430
401.bzip2	128	1437	860	**1419**	**870**	1419	870	128	**1350**	**915**	1350	915	1349	916
403.gcc	128	909	1130	917	1120	**912**	**1130**	128	922	1120	920	1120	**922**	**1120**
429.mcf	128	825	1420	834	1400	**833**	**1400**	128	**833**	**1400**	833	1400	832	1400
445.gobmk	128	954	1410	969	1390	**967**	**1390**	128	**884**	**1520**	883	1520	884	1520
456.hmmer	128	613	1950	609	1960	**611**	**1950**	128	490	2440	**490**	**2440**	491	2430
458.sjeng	128	1217	1270	**1219**	**1270**	1219	1270	128	1105	1400	1107	1400	**1106**	**1400**
462.libquantum	128	**886**	**2990**	884	3000	887	2990	128	**886**	**2990**	884	3000	887	2990
464.h264ref	128	**1526**	**1860**	1528	1850	1524	1860	128	1523	1860	**1524**	**1860**	1552	1830
471.omnetpp	128	979	817	**980**	**817**	982	814	128	919	870	**918**	**871**	917	872
473.astar	128	1079	832	1082	831	**1080**	**832**	128	**1017**	**883**	1017	884	1017	883
483.xalancbmk	128	**738**	**1200**	739	1200	738	1200	128	**738**	**1200**	739	1200	738	1200

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.
'/usr/bin/numactl' used to bind processes to CPUs
```

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
```

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/home/bsc/smartheap/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`

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`
456.hmmer: `-DSPEC_CPU_LP64`
458.sjeng: `-DSPEC_CPU_LP64`
462.libquantum: `-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: basepeak = yes

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/home/bsc/smartheap/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 -L/home/bsc/smartheap/lib -lsmartheap64

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

Continued on next page

Peak Other Flags (Continued)

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-ic11.1-linux64-revE.20100929.03.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100929.03.xml`

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