SPEC® CINT2006 Result

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Fujitsu

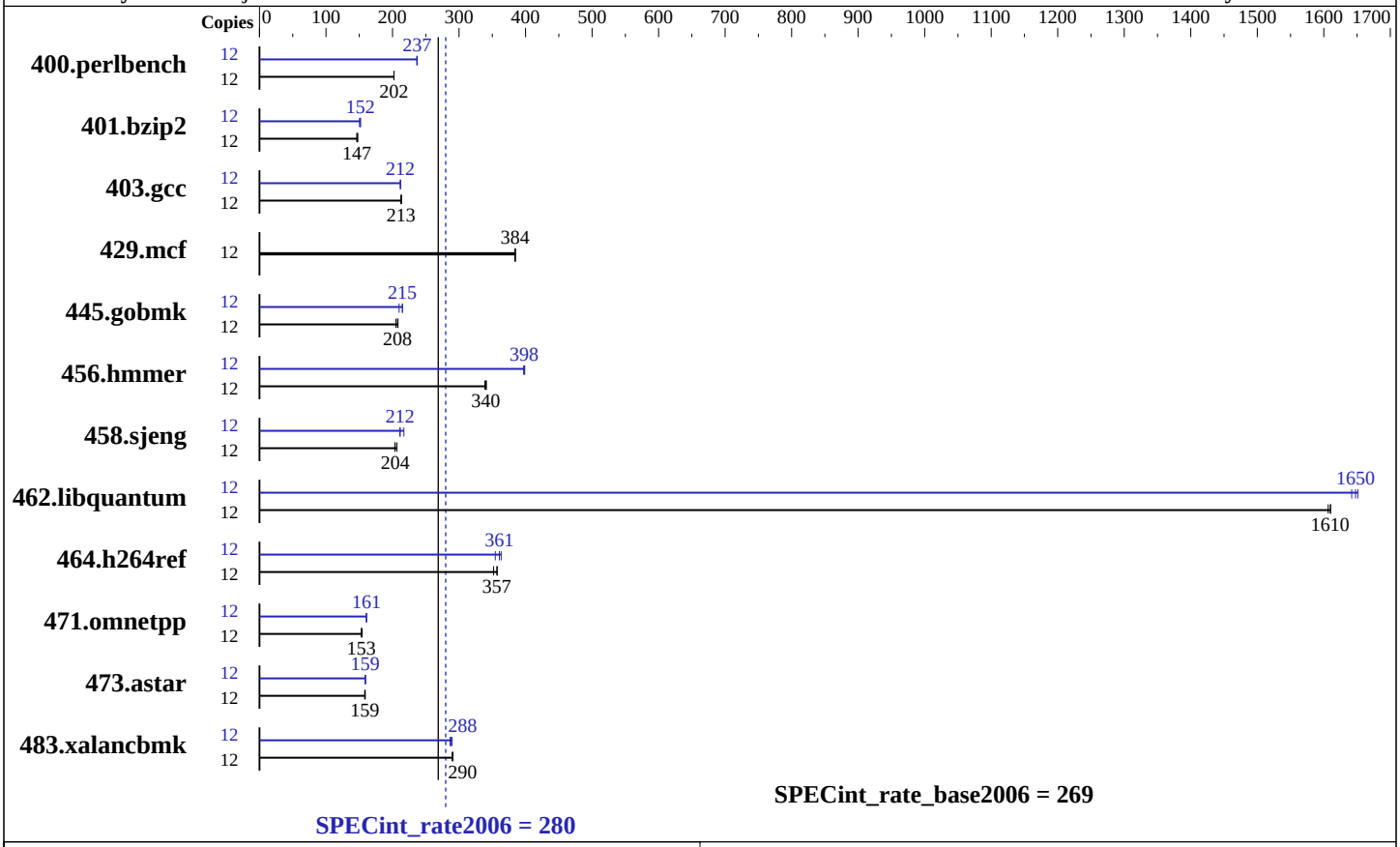
CELSIUS M720 (Intel Xeon E5-1650)

SPECint®_rate2006 = 280

SPECint_rate_base2006 = 269

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

Test date: Mar-2012
Hardware Availability: Mar-2012
Software Availability: Dec-2011



Hardware

CPU Name:	Intel Xeon E5-1650
CPU Characteristics:	Intel Turbo Boost Technology up to 3.80 GHz
CPU MHz:	3200
FPU:	Integrated
CPU(s) enabled:	6 cores, 1 chip, 6 cores/chip, 2 threads/core
CPU(s) orderable:	1 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core
L3 Cache:	12 MB I+D on chip per chip
Other Cache:	None
Memory:	32 GB (8 x 4 GB 2Rx8 PC3-12800E-11, ECC)
Disk Subsystem:	1 x SATA III, 500 GB, 7200 rpm
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 6.1, 2.6.32-131.0.15.el6.x86_64
Compiler:	C/C++: Version 12.1.2.273 of Intel C++ Studio XE for Linux
Auto Parallel:	No
File System:	ReiserFS
System State:	Run level 3 (multi - user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap 10 (Multi-Core)

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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	12	580	202	**580**	**202**	580	202	12	494	237	496	237	**495**	**237**
401.bzip2	12	784	148	791	146	**790**	**147**	12	762	152	**764**	**152**	770	150
403.gcc	12	454	213	453	213	**454**	**213**	12	455	212	**456**	**212**	456	212
429.mcf	12	285	384	284	385	**285**	**384**	12	285	384	284	385	**285**	**384**
445.gobmk	12	604	208	614	205	**607**	**208**	12	**586**	**215**	586	215	600	210
456.hmmer	12	**329**	**340**	330	339	328	341	12	**281**	**398**	281	399	282	397
458.sjeng	12	703	207	713	204	**712**	**204**	12	**687**	**212**	688	211	669	217
462.libquantum	12	155	1610	154	1610	**154**	**1610**	12	**151**	**1650**	151	1640	151	1650
464.h264ref	12	**744**	**357**	754	352	743	357	12	**736**	**361**	731	363	749	354
471.omnetpp	12	**489**	**153**	486	154	489	153	12	**466**	**161**	467	161	466	161
473.astar	12	533	158	530	159	**531**	**159**	12	528	159	**529**	**159**	531	159
483.xalancbmk	12	286	290	**285**	**290**	285	291	12	286	290	289	287	**288**	**288**

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

Submit Notes

```
The taskset mechanism was used to bind copies to processors. The config file option 'submit'
was used to generate taskset commands to bind each copy to a specific processor.
For details, please see the config file.
```

Operating System Notes

```
Stack size set to unlimited using "ulimit -s unlimited"
```

Platform Notes

```
BIOS settings:
Frequency Floor Override = Enabled
```

General Notes

```
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/work/cpu2006/libs/32:/work/cpu2006/libs/64"

 Binaries compiled on a system with
 Red Hat Enterprise Linux Server release 6.1 (Santiago)
 Added glibc-static-2.12-1.25.el6.x86_64.rpm
 to enable static linking
```

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 -opt-prefetch -opt-mem-layout-trans=3
```

C++ benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3
-Wl,-z,muldefs -L/opt/SmartHeap/lib -lsmartheap
```

Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

Peak Compiler Invocation

C benchmarks (except as noted below):
```
icc -m64
```

403.gcc: `icc  -m32`

429.mcf: `icc  -m32`

445.gobmk: `icc  -m32`

462.libquantum: `icc -m32`

464.h264ref: `icc  -m32`

Continued on next page

Peak Compiler Invocation (Continued)

C++ benchmarks:
icpc -m32

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
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) -prof-use(pass 2) -auto-ilp32

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

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

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias -opt-mem-layout-trans=3

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

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

462.libquantum: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3

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

C++ benchmarks:

Continued on next page

Peak Optimization Flags (Continued)

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/lib -lsmartheap`

473.astar: `-xAVX -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3 -Wl,-z,muldefs -L/opt/SmartHeap/lib -lsmartheap`

483.xalancbmk: `Same as 473.astar`

Peak Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.html
http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20120313.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml
http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20120313.xml

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Tested with SPEC CPU2006 v1.2.
Report generated on Thu Jul 24 03:39:07 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 28 March 2012.