



SPEC® CINT2006 Result

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Fujitsu

SPECint®_rate2006 = 141

CELSIUS M720 (Intel Xeon E5-1607)

SPECint_rate_base2006 = 136

CPU2006 license: 19

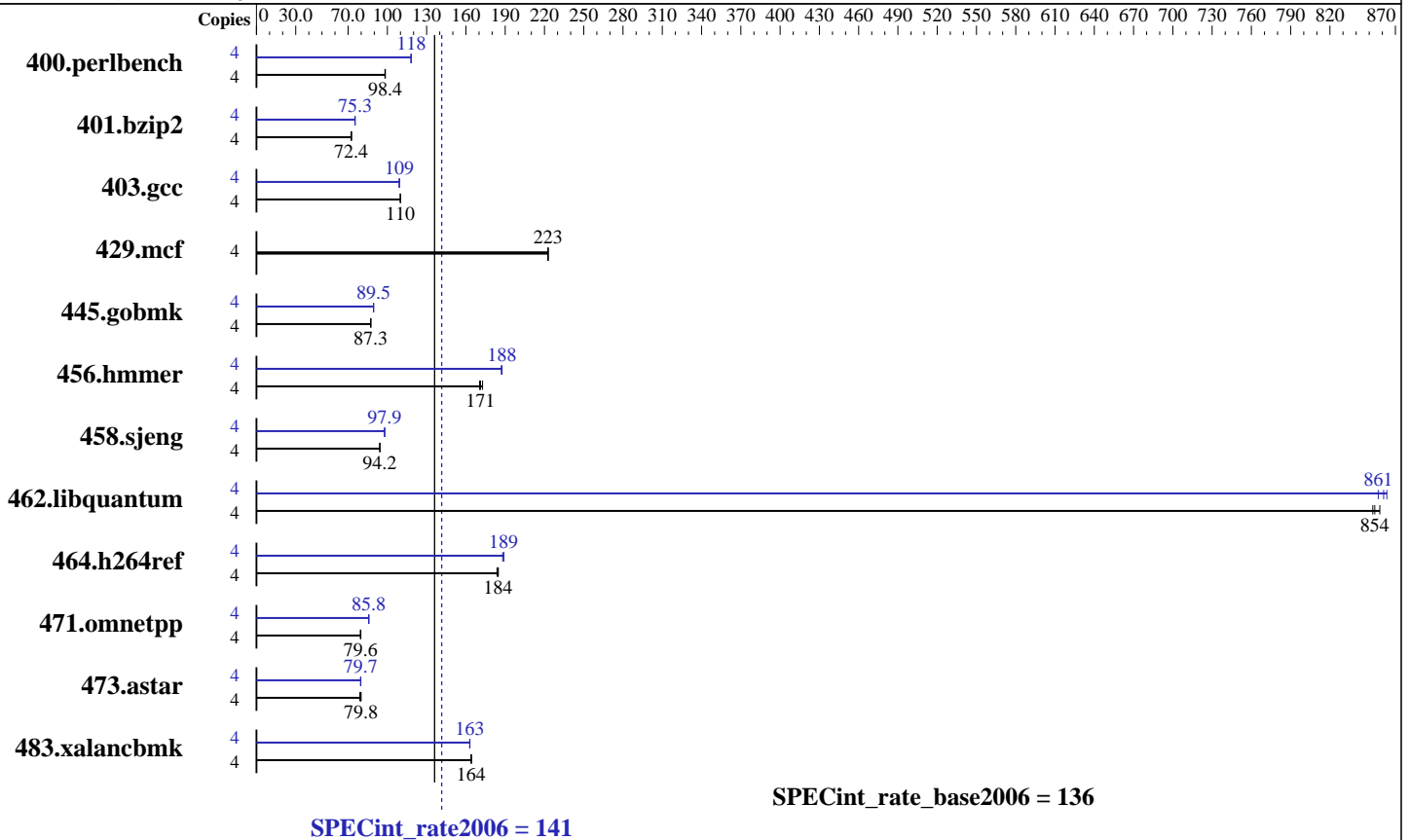
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Mar-2012

Hardware Availability: Mar-2012

Software Availability: Feb-2012



Hardware

CPU Name: Intel Xeon E5-1607
 CPU Characteristics:
 CPU MHz: 3000
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
 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: 10 MB I+D on chip per chip
 Other Cache: None
 Memory: 32 GB (8 x 4 GB 2Rx8 PC3-12800E-11, ECC, running at 1067 MHz and CL8)
 Disk Subsystem: 1 x SATA III, 500 GB, 7200 rpm
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.2, 2.6.32-220.0.el6.x86_64
 Compiler: C/C++: Version 12.1.3.293 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	4	<u>397</u>	<u>98.4</u>	397	98.4	398	98.1	4	332	118	330	118	<u>330</u>	<u>118</u>
401.bzip2	4	532	72.6	533	72.4	<u>533</u>	<u>72.4</u>	4	513	75.3	<u>513</u>	<u>75.3</u>	512	75.4
403.gcc	4	292	110	293	110	<u>293</u>	<u>110</u>	4	<u>295</u>	<u>109</u>	295	109	295	109
429.mcf	4	164	223	<u>164</u>	<u>223</u>	164	223	4	164	223	<u>164</u>	<u>223</u>	164	223
445.gobmk	4	481	87.2	<u>480</u>	<u>87.3</u>	480	87.3	4	469	89.5	<u>469</u>	<u>89.5</u>	469	89.4
456.hammer	4	<u>218</u>	<u>171</u>	216	173	219	170	4	<u>199</u>	<u>188</u>	199	188	200	187
458.sjeng	4	<u>514</u>	<u>94.2</u>	514	94.2	513	94.3	4	494	97.9	494	97.9	<u>494</u>	<u>97.9</u>
462.libquantum	4	97.2	853	96.6	858	<u>97.0</u>	<u>854</u>	4	<u>96.3</u>	<u>861</u>	96.0	863	96.7	857
464.h264ref	4	482	184	479	185	<u>480</u>	<u>184</u>	4	<u>469</u>	<u>189</u>	468	189	471	188
471.omnetpp	4	<u>314</u>	<u>79.6</u>	315	79.4	313	79.7	4	292	85.7	<u>291</u>	<u>85.8</u>	291	85.8
473.astar	4	352	79.9	<u>352</u>	<u>79.8</u>	356	79.0	4	352	79.8	353	79.5	<u>352</u>	<u>79.7</u>
483.xalancbmk	4	168	164	168	164	<u>168</u>	<u>164</u>	4	<u>169</u>	<u>163</u>	169	163	169	163

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 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
2x Xeon E5-2650 CPU + 64 GB memory using
Red Hat Enterprise Linux Server release 6.2 (Santiago)
The RPMs glibc-static-2.12-1.47.el6.x86_64.rpm
and glibc-static-2.12-1.47.el6.i686.rpm
were added to enable static linking.

Transparent Huge Pages disabled with:

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General Notes (Continued)

```
echo never > /sys/kernel/mm/redhat_transparent_hugepage/enabled
Filesystem page cache cleared with:
echo 1> /proc/sys/vm/drop_caches
```

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

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Peak Compiler Invocation (Continued)

445.gobmk: `icc -m32`
462.libquantum: `icc -m32`
464.h264ref: `icc -m32`
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`

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Peak Optimization Flags (Continued)

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:

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 -lsmarheap

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

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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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.

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