



SPEC® CINT2006 Result

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Fujitsu

SPECint®2006 = 43.1

CELSIUS M720 (Intel Xeon E5-1607)

SPECint_base2006 = 40.8

CPU2006 license: 19

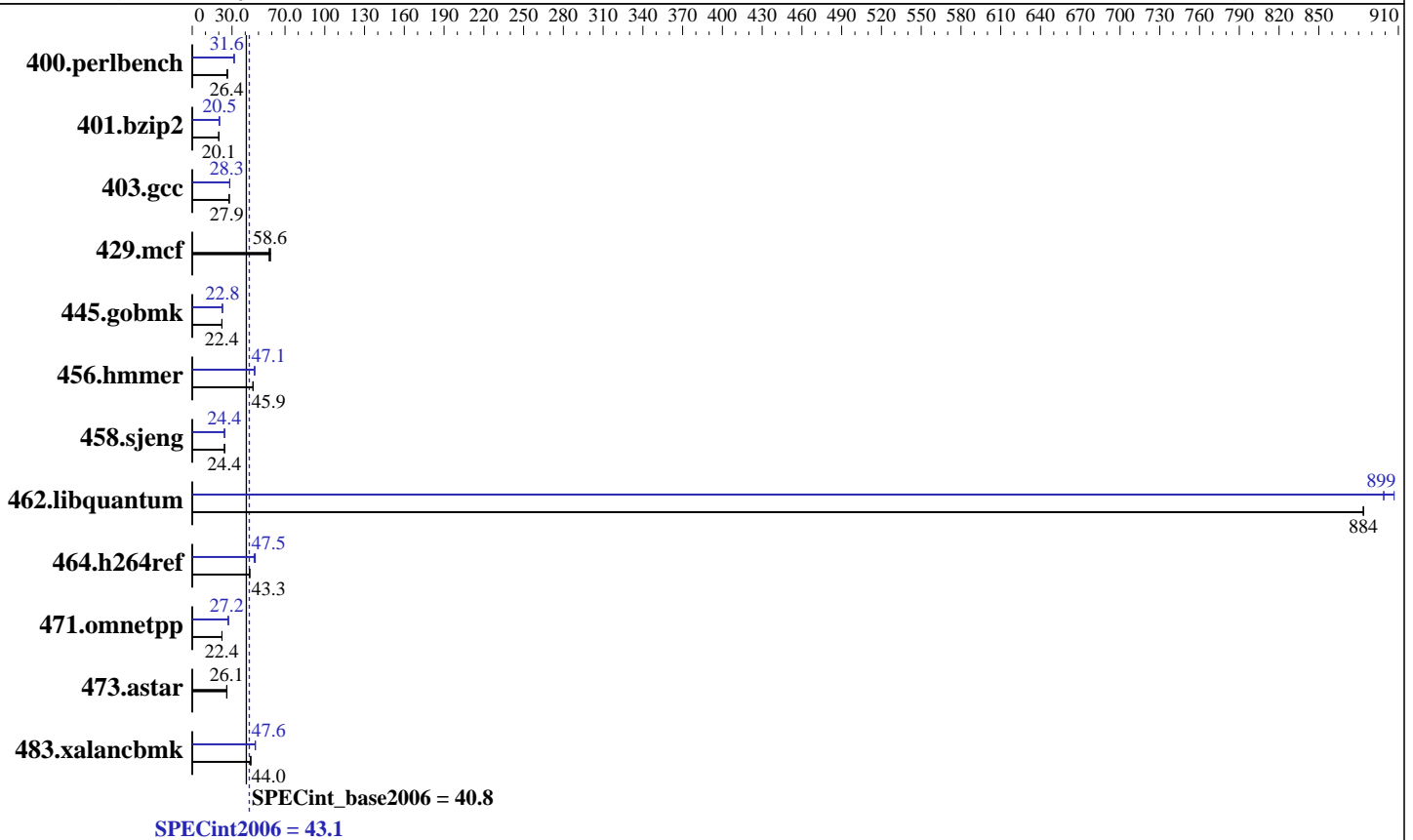
Test sponsor: Fujitsu

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: Yes
 File System: ReiserFS
 System State: Run level 3 (multi - user)
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap 10 (Multi-Core)



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	368	26.5	370	26.4	371	26.4	309	31.6	309	31.6	309	31.6
401.bzip2	480	20.1	481	20.1	482	20.0	472	20.5	470	20.5	470	20.5
403.gcc	289	27.9	289	27.9	289	27.9	285	28.2	284	28.3	284	28.3
429.mcf	156	58.6	157	58.0	154	59.1	156	58.6	157	58.0	154	59.1
445.gobmk	468	22.4	468	22.4	468	22.4	461	22.8	461	22.8	461	22.8
456.hammer	203	45.9	203	45.9	204	45.8	198	47.1	198	47.1	198	47.1
458.sjeng	496	24.4	497	24.4	496	24.4	497	24.4	497	24.3	497	24.4
462.libquantum	23.4	884	23.4	884	23.4	884	22.8	907	23.0	899	23.0	899
464.h264ref	511	43.3	510	43.4	511	43.3	474	46.7	465	47.5	465	47.5
471.omnetpp	279	22.4	279	22.4	278	22.5	229	27.3	230	27.2	230	27.2
473.astar	268	26.2	269	26.1	270	26.0	268	26.2	269	26.1	270	26.0
483.xalancbmk	156	44.2	157	44.0	157	44.0	145	47.6	145	47.6	145	47.6

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

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:
KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH = "/work/cpu2006/libs/32:/work/cpu2006/libs/64"
OMP_NUM_THREADS = "4"

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 enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled



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Base Compiler Invocation

C benchmarks:
icc -m64

C++ benchmarks:
icpc -m64

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-Wl,-z,muldefs -L/opt/SmartHeap/lib64 -lsmartheap64

Base Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

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

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Peak Compiler Invocation (Continued)

400.perlbench: `icc -m32`

445.gobmk: `icc -m32`

464.h264ref: `icc -m32`

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`

403.gcc: `-DSPEC_CPU_LP64`

429.mcf: `-DSPEC_CPU_LP64`

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) -prof-use(pass 2)
-opt-prefetch -ansi-alias`

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

403.gcc: `-xAVX -ipo -O3 -no-prec-div -inline-calloc
-opt-malloc-options=3 -auto-ilp32`

429.mcf: `basepeak = yes`

445.gobmk: `-xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias`

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

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Peak Optimization Flags (Continued)

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

462.libquantum: -xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch
-auto-p32

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)
-opt-ra-region-strategy=block -ansi-alias
-Wl,-z,muldefs -L/opt/SmartHeap/lib -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias
-Wl,-z,muldefs -L/opt/SmartHeap/lib -lsmartheap

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.

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