



SPEC® CINT2006 Result

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Fujitsu

SPECint®2006 = 47.5

PRIMERGY RX300 S7, Intel Xeon E5-2637, 3.0 GHz

SPECint_base2006 = 45.1

CPU2006 license: 19

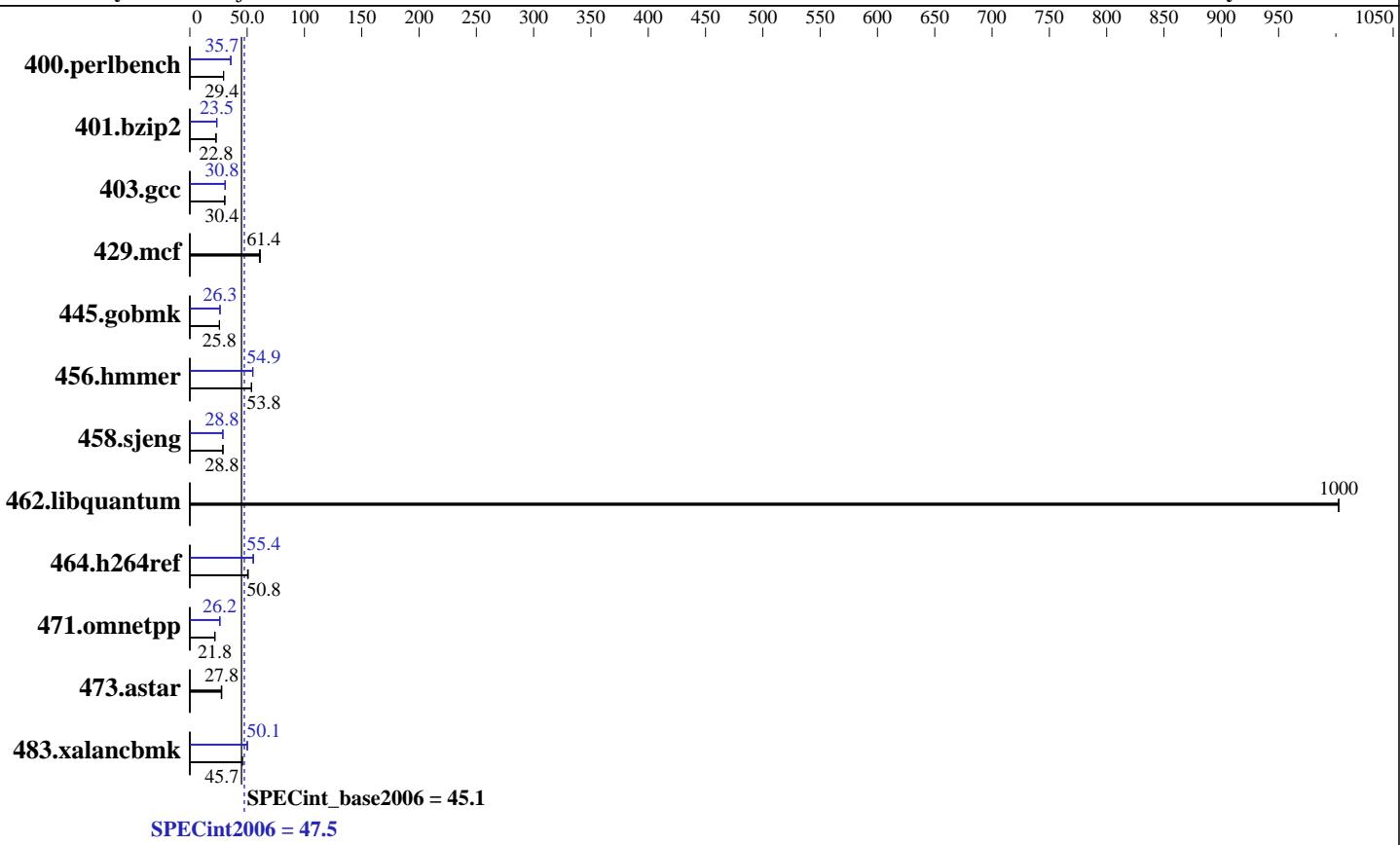
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Jan-2012

Hardware Availability: Mar-2012

Software Availability: Dec-2011



Hardware

CPU Name: Intel Xeon E5-2637
CPU Characteristics: Intel Turbo Boost Technology up to 3.50 GHz
CPU MHz: 3000
FPU: Integrated
CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
CPU(s) orderable: 1,2 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: 5 MB I+D on chip per chip
Other Cache: None
Memory: 128 GB (16 x 8 GB 2Rx4 PC3L-12800R-11, ECC)
Disk Subsystem: 1 x SATA, 500 GB, 7200 RPM
Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.2 (Santiago)
Compiler: 2.6.32-220.el6.x86_64
C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux
Auto Parallel: Yes
File System: ext4
System State: Run level 3 (multi-user)
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V9.01



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	333	29.4	332	29.4	<u>332</u>	<u>29.4</u>	273	35.7	<u>274</u>	<u>35.7</u>	274	35.7
401.bzip2	<u>423</u>	<u>22.8</u>	423	22.8	422	22.9	<u>410</u>	<u>23.5</u>	410	23.5	411	23.5
403.gcc	264	30.5	<u>265</u>	<u>30.4</u>	265	30.4	<u>261</u>	<u>30.8</u>	261	30.8	261	30.8
429.mcf	149	61.4	150	60.7	<u>149</u>	<u>61.4</u>	149	61.4	150	60.7	<u>149</u>	<u>61.4</u>
445.gobmk	406	25.9	<u>406</u>	<u>25.8</u>	407	25.8	399	26.3	399	26.3	<u>399</u>	<u>26.3</u>
456.hmmer	174	53.7	173	53.8	<u>173</u>	<u>53.8</u>	<u>170</u>	<u>54.9</u>	170	54.9	170	54.9
458.sjeng	420	28.8	<u>420</u>	<u>28.8</u>	420	28.8	<u>420</u>	<u>28.8</u>	420	28.8	421	28.7
462.libquantum	<u>20.7</u>	<u>1000</u>	20.7	1000	20.7	1000	<u>20.7</u>	<u>1000</u>	20.7	1000	20.7	1000
464.h264ref	<u>436</u>	<u>50.8</u>	435	50.8	439	50.4	<u>399</u>	<u>55.4</u>	398	55.6	402	55.1
471.omnetpp	<u>286</u>	<u>21.8</u>	287	21.8	286	21.9	<u>239</u>	<u>26.2</u>	239	26.2	239	26.2
473.astar	<u>253</u>	<u>27.8</u>	253	27.8	256	27.4	<u>253</u>	<u>27.8</u>	253	27.8	256	27.4
483.xalancbmk	151	45.6	<u>151</u>	<u>45.7</u>	150	45.9	<u>138</u>	<u>50.1</u>	138	50.0	137	50.2

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 configuration:

Intel HT Technology = Disable

Frequency Floor Override = Enable

General Notes

Environment variables set by runspec before the start of the run:

KMP_AFFINITY = "granularity=fine,scatter"

LD_LIBRARY_PATH = "/SPECcpu2006/lib32:/SPECcpu2006/lib64"

OMP_NUM_THREADS = "4"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/redhat_transparent_hugepage/enable

For information about Fujitsu please visit: <http://www.fujitsu.com>

Base Compiler Invocation

C benchmarks:

icc -m64

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Base Compiler Invocation (Continued)

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.hammer: -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/smartheap -lsmartheap64`

Base Other Flags

C benchmarks:

`403.gcc: -Dalloca=_alloca`

Peak Compiler Invocation

C benchmarks (except as noted below):

`icc -m64`

400.perlbench: `icc -m32`

445.gobmk: `icc -m32`

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Peak Compiler Invocation (Continued)

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: -xSSE4.2 -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 -unroll12 -auto-ilp32
-ansi-alias

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)
-unroll14

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Peak Optimization Flags (Continued)

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) -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/smartheap -lsmartheap
```

473.astar: basepeak = yes

```
483.xalancbmk: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias
                -Wl,-z,muldefs -L/smartheap -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/Fujitsu-Platform.20120320.html>
<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20120320.xml>
<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.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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