



SPEC[®] CINT2006 Result

Copyright 2006-2009 Standard Performance Evaluation Corporation

Dell Inc.

SPECint[®]2006 = 28.2

PowerEdge T710 (Intel Xeon E5530, 2.40 GHz)

SPECint_base2006 = 25.4

CPU2006 license: 55

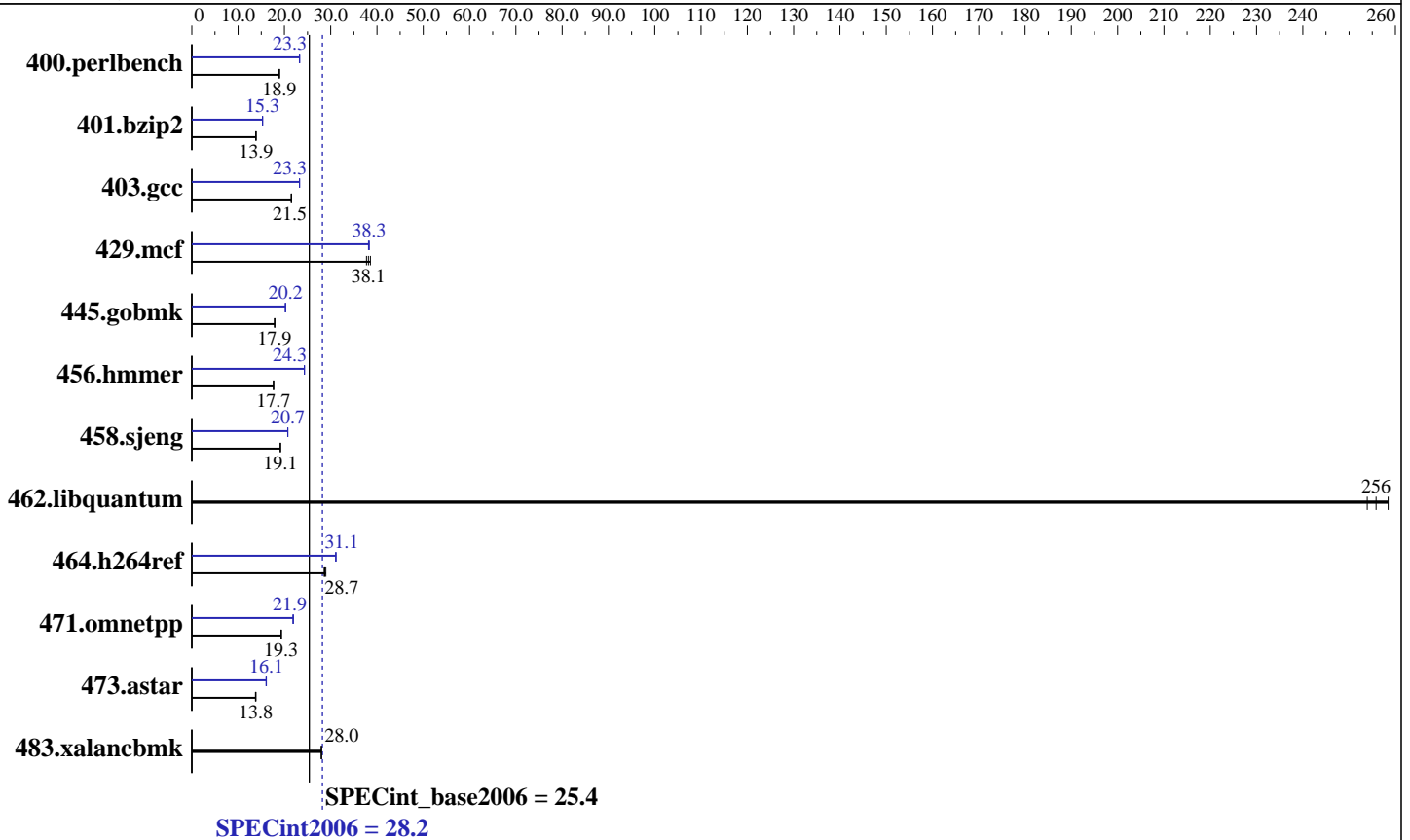
Test date: May-2009

Test sponsor: Dell Inc.

Hardware Availability: Jun-2009

Tested by: Dell Inc.

Software Availability: Feb-2009



Hardware

CPU Name: Intel Xeon E5530
 CPU Characteristics: Intel Turbo Boost Technology up to 2.66 GHz
 CPU MHz: 2400
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip, 2 threads/core
 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: 8 MB I+D on chip per chip
 Other Cache: None
 Memory: 24 GB (6 x 4 GB DDR3-1066 DR RDIMM)
 Disk Subsystem: 1 x 73 GB 15000 RPM SAS
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 10 (x86_64) SP2, Kernel 2.6.16.60-0.21-smp
 Compiler: Intel C++ Compiler Professional 11.0 for Linux Build 20090131 Package ID: l_cproc_p_11.0.080
 Auto Parallel: Yes
 File System: ReiserFS
 System State: Run level 3 (multi-user)
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V8.1 Binutils 2.18.50.0.7.20080502



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	518	18.9	<u>516</u>	<u>18.9</u>	516	18.9	<u>420</u>	<u>23.3</u>	420	23.2	419	23.3
401.bzip2	<u>696</u>	<u>13.9</u>	699	13.8	694	13.9	<u>632</u>	<u>15.3</u>	632	15.3	631	15.3
403.gcc	375	21.5	<u>374</u>	<u>21.5</u>	374	21.5	<u>346</u>	<u>23.3</u>	346	23.3	346	23.3
429.mcf	242	37.7	236	38.6	<u>239</u>	<u>38.1</u>	239	38.2	238	38.3	<u>238</u>	<u>38.3</u>
445.gobmk	<u>586</u>	<u>17.9</u>	586	17.9	586	17.9	519	20.2	518	20.2	<u>518</u>	<u>20.2</u>
456.hammer	<u>528</u>	<u>17.7</u>	529	17.7	528	17.7	383	24.3	384	24.3	<u>383</u>	<u>24.3</u>
458.sjeng	633	19.1	<u>632</u>	<u>19.1</u>	632	19.1	<u>583</u>	<u>20.7</u>	584	20.7	583	20.7
462.libquantum	<u>81.0</u>	<u>256</u>	80.2	258	81.6	254	<u>81.0</u>	<u>256</u>	80.2	258	81.6	254
464.h264ref	<u>771</u>	<u>28.7</u>	774	28.6	764	29.0	<u>711</u>	<u>31.1</u>	712	31.1	711	31.1
471.omnetpp	323	19.4	324	19.3	<u>324</u>	<u>19.3</u>	<u>285</u>	<u>21.9</u>	286	21.9	285	21.9
473.astar	507	13.8	511	13.7	<u>508</u>	<u>13.8</u>	436	16.1	438	16.0	<u>436</u>	<u>16.1</u>
483.xalancbmk	247	28.0	246	28.0	<u>246</u>	<u>28.0</u>	247	28.0	246	28.0	<u>246</u>	<u>28.0</u>

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

Operating System Notes

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

General Notes

OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to granularity=fine,scatter

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX



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Base Optimization Flags

C benchmarks:

```
-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel  
-par-runtime-control -opt-prefetch
```

C++ benchmarks:

```
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/spec/cpu2006.1.1/lib -lsmartheap
```

Base Other Flags

C benchmarks:

```
403.gcc: -Dalloca=_alloca
```

Peak Compiler Invocation

C benchmarks (except as noted below):

icc

```
401.bzip2: /opt/intel/Compiler/11.0/080/bin/intel64/icc
```

```
456.hmmer: /opt/intel/Compiler/11.0/080/bin/intel64/icc
```

```
458.sjeng: /opt/intel/Compiler/11.0/080/bin/intel64/icc
```

C++ benchmarks (except as noted below):

icpc

```
473.astar: /opt/intel/Compiler/11.0/080/bin/intel64/icpc
```

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
```



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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 -opt-prefetch

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) -auto-ilp32 -opt-prefetch -ansi-alias

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -static -inline-alloc
 -opt-malloc-options=3

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/spec/cpu2006.1.1/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 -auto-ilp32
 -Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap64

483.xalancbmk: basepeak = yes



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Peak Other Flags

Same as Base Other Flags

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090805.01.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090805.01.xml>

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For other inquiries, please contact webmaster@spec.org.

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