



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint®2006 = 21.0

PowerEdge T710 (Intel Xeon E5504, 2.00 GHz)

SPECint\_base2006 = 19.0

CPU2006 license: 55

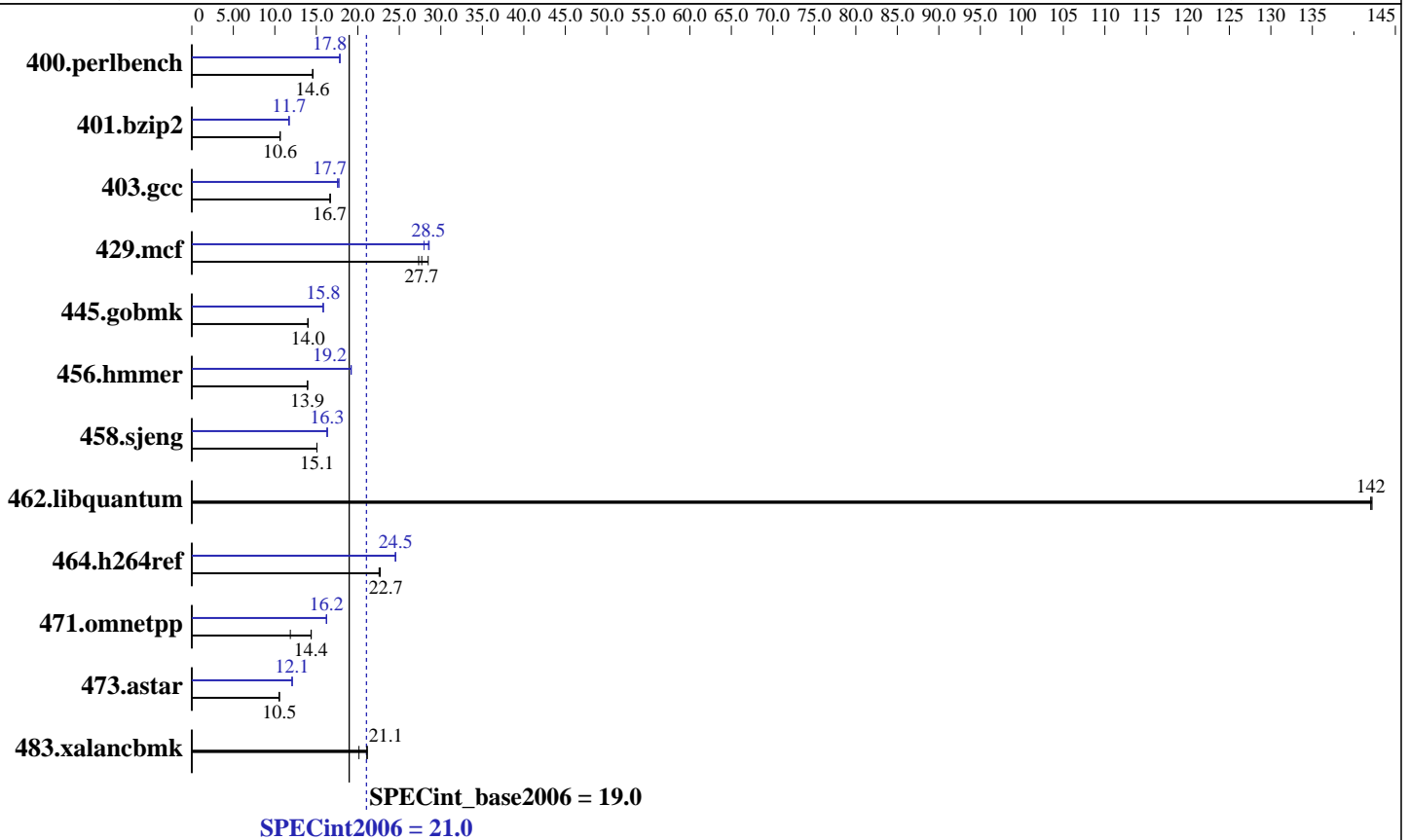
Test date: May-2009

Test sponsor: Dell Inc.

Hardware Availability: Jun-2009

Tested by: Dell Inc.

Software Availability: Feb-2009



## Hardware

CPU Name: Intel Xeon E5504  
 CPU Characteristics:  
 CPU MHz: 2000  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 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: 4 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 24 GB (6 x 4 GB DDR3-1066 DR RDIMM downclocked to 800 MHz)  
 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	<b><u>671</u></b>	<b><u>14.6</u></b>	671	14.6	669	14.6	548	17.8	<b><u>548</u></b>	<b><u>17.8</u></b>	548	17.8
401.bzip2	908	10.6	<b><u>907</u></b>	<b><u>10.6</u></b>	906	10.6	824	11.7	824	11.7	<b><u>824</u></b>	<b><u>11.7</u></b>
403.gcc	483	16.7	<b><u>483</u></b>	<b><u>16.7</u></b>	483	16.7	459	17.6	454	17.7	<b><u>455</u></b>	<b><u>17.7</u></b>
429.mcf	334	27.3	<b><u>329</u></b>	<b><u>27.7</u></b>	320	28.5	326	28.0	319	28.6	<b><u>320</u></b>	<b><u>28.5</u></b>
445.gobmk	<b><u>750</u></b>	<b><u>14.0</u></b>	750	14.0	750	14.0	<b><u>663</u></b>	<b><u>15.8</u></b>	663	15.8	662	15.8
456.hammer	669	13.9	670	13.9	<b><u>669</u></b>	<b><u>13.9</u></b>	486	19.2	486	19.2	<b><u>486</u></b>	<b><u>19.2</u></b>
458.sjeng	803	15.1	803	15.1	<b><u>803</u></b>	<b><u>15.1</u></b>	741	16.3	<b><u>742</u></b>	<b><u>16.3</u></b>	742	16.3
462.libquantum	<b><u>146</u></b>	<b><u>142</u></b>	146	142	146	142	<b><u>146</u></b>	<b><u>142</u></b>	146	142	146	142
464.h264ref	975	22.7	981	22.6	<b><u>976</u></b>	<b><u>22.7</u></b>	<b><u>902</u></b>	<b><u>24.5</u></b>	901	24.6	903	24.5
471.omnetpp	<b><u>435</u></b>	<b><u>14.4</u></b>	527	11.9	434	14.4	<b><u>385</u></b>	<b><u>16.2</u></b>	386	16.2	385	16.2
473.astar	<b><u>666</u></b>	<b><u>10.5</u></b>	667	10.5	665	10.6	580	12.1	581	12.1	<b><u>581</u></b>	<b><u>12.1</u></b>
483.xalancbmk	326	21.2	343	20.1	<b><u>327</u></b>	<b><u>21.1</u></b>	326	21.2	343	20.1	<b><u>327</u></b>	<b><u>21.1</u></b>

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

C benchmarks:

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

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 questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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