



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint®2006 = 39.7

PowerEdge T610 (Intel Xeon X5650, 2.66 GHz)

SPECint\_base2006 = 37.7

CPU2006 license: 55

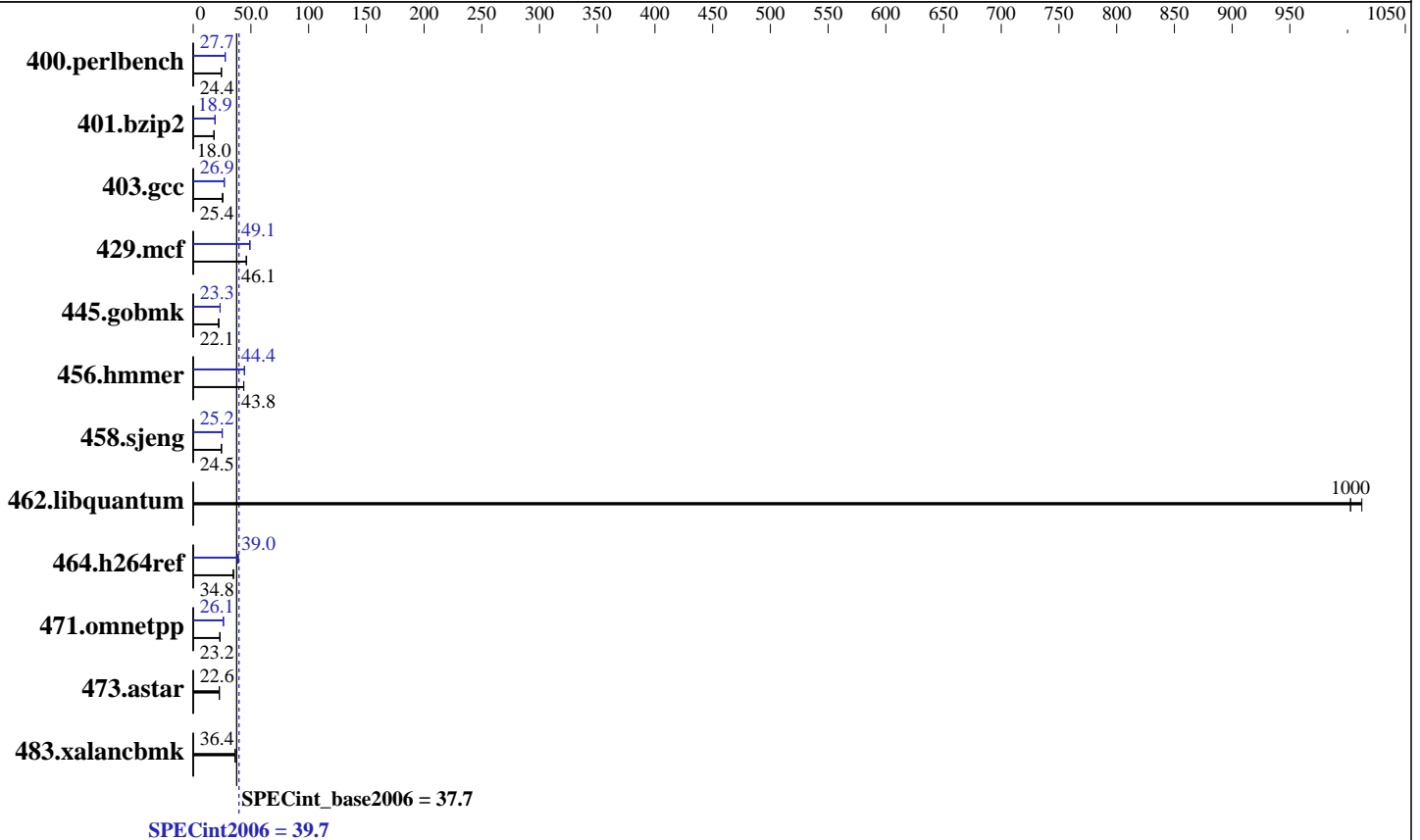
Test date: Jul-2011

Test sponsor: Dell Inc.

Hardware Availability: Mar-2010

Tested by: Dell Inc.

Software Availability: Jan-2011



## Hardware

CPU Name: Intel Xeon X5650  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.06 GHz  
 CPU MHz: 2667  
 FPU: Integrated  
 CPU(s) enabled: 12 cores, 2 chips, 6 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: 12 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 48 GB (12 x 4 GB 2Rx4 PC3-10600R-9, ECC)  
 Disk Subsystem: 1 x 146 GB 15000 RPM SAS  
 Other Hardware: None

## Software

Operating System: SUSE Linux Enterprise Server 11 SP1 (x86\_64), Kernel 2.6.32.12-0.7-default  
 Compiler: Intel C++ Intel 64 Compiler XE for applications running on Intel 64 Version 12.0.1.116 Build 20101116  
 Auto Parallel: Yes  
 File System: ext3  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32/64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V9.01



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint2006 = 39.7

PowerEdge T610 (Intel Xeon X5650, 2.66 GHz)

SPECint\_base2006 = 37.7

CPU2006 license: 55  
Test sponsor: Dell Inc.  
Tested by: Dell Inc.

Test date: Jul-2011  
Hardware Availability: Mar-2010  
Software Availability: Jan-2011

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	402	24.3	399	24.5	<b>400</b>	<b>24.4</b>	352	27.7	352	27.7	<b>352</b>	<b>27.7</b>
401.bzip2	535	18.0	535	18.0	<b>535</b>	<b>18.0</b>	<b>509</b>	<b>18.9</b>	509	18.9	509	18.9
403.gcc	<b>317</b>	<b>25.4</b>	314	25.7	317	25.4	299	26.9	<b>299</b>	<b>26.9</b>	299	26.9
429.mcf	<b>198</b>	<b>46.1</b>	198	46.1	198	46.1	186	49.0	185	49.2	<b>186</b>	<b>49.1</b>
445.gobmk	<b>474</b>	<b>22.1</b>	474	22.1	475	22.1	<b>450</b>	<b>23.3</b>	450	23.3	450	23.3
456.hammer	<b>213</b>	<b>43.8</b>	213	43.8	213	43.8	<b>210</b>	<b>44.4</b>	210	44.4	210	44.4
458.sjeng	498	24.3	<b>494</b>	<b>24.5</b>	494	24.5	481	25.2	<b>481</b>	<b>25.2</b>	481	25.2
462.libquantum	20.7	1000	20.5	1010	<b>20.7</b>	<b>1000</b>	20.7	1000	20.5	1010	<b>20.7</b>	<b>1000</b>
464.h264ref	638	34.7	<b>635</b>	<b>34.8</b>	634	34.9	567	39.0	<b>568</b>	<b>39.0</b>	568	39.0
471.omnetpp	270	23.1	270	23.2	<b>270</b>	<b>23.2</b>	239	26.1	239	26.2	<b>239</b>	<b>26.1</b>
473.astar	310	22.6	310	22.6	<b>310</b>	<b>22.6</b>	310	22.6	310	22.6	<b>310</b>	<b>22.6</b>
483.xalancbmk	<b>190</b>	<b>36.4</b>	190	36.4	190	36.3	<b>190</b>	<b>36.4</b>	190	36.4	190	36.3

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

'mount -t hugetlbfs nodev /mnt/hugepages' was used to enable large pages
echo 900 > /proc/sys/vm/nr_hugepages
export HUGETLB_MORECORE=yes
export LD_PRELOAD=/usr/lib64/libhugetlbfs.so
```

## Platform Notes

BIOS Settings:  
Power Management = Maximum Performance (Default = Active Power Controller)  
Data Reuse = Disabled (Default = Enabled)  
Logical Processor = Disabled (Default = Enabled)

## General Notes

OMP\_NUM\_THREADS set to number of cores  
The Dell PowerEdge T610 and  
the Bull NovaScale T840 F2 models are electronically equivalent.  
The results have been measured on a Dell PowerEdge T610 model  
Binaries were compiled on RHEL5.5



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint2006 = 39.7

PowerEdge T610 (Intel Xeon X5650, 2.66 GHz)

SPECint\_base2006 = 37.7

CPU2006 license: 55  
Test sponsor: Dell Inc.  
Tested by: Dell Inc.

Test date: Jul-2011  
Hardware Availability: Mar-2010  
Software Availability: Jan-2011

## 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  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT  
  
C++ benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/smartheap -lsmartheap64  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

## Base Other Flags

C benchmarks:  
403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

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

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint2006 = 39.7

PowerEdge T610 (Intel Xeon X5650, 2.66 GHz)

SPECint\_base2006 = 37.7

CPU2006 license: 55

Test date: Jul-2011

Test sponsor: Dell Inc.

Hardware Availability: Mar-2010

Tested by: Dell Inc.

Software Availability: Jan-2011

## Peak Compiler Invocation (Continued)

400.perlbench: icc -m32

429.mcf: icc -m32

445.gobmk: icc -m32

464.h264ref: icc -m32

C++ benchmarks (except as noted below):

icpc -m64

471.omnetpp: icpc -m32

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32

401.bzip2: -DSPEC\_CPU\_LP64

403.gcc: -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\_LP64 -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  
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

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-alloc  
-opt-malloc-options=3 -auto-ilp32  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

429.mcf: -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 -ansi-alias  
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint2006 = 39.7

PowerEdge T610 (Intel Xeon X5650, 2.66 GHz)

SPECint\_base2006 = 37.7

CPU2006 license: 55

Test date: Jul-2011

Test sponsor: Dell Inc.

Hardware Availability: Mar-2010

Tested by: Dell Inc.

Software Availability: Jan-2011

## Peak Optimization Flags (Continued)

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
-auto-ilp32 -ansi-alias  
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32  
-ansi-alias  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

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: 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  
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

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  
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

## 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-ic12.0-linux64-revB.html>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20110524.00.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.xml>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20110524.00.xml>



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint2006 = 39.7

PowerEdge T610 (Intel Xeon X5650, 2.66 GHz)

SPECint\_base2006 = 37.7

CPU2006 license: 55

Test date: Jul-2011

Test sponsor: Dell Inc.

Hardware Availability: Mar-2010

Tested by: Dell Inc.

Software Availability: Jan-2011

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.1.  
Report generated on Wed Jul 23 23:33:59 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 16 August 2011.