



# SPEC® CINT2006 Result

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Dell Inc.

SPECint®\_rate2006 = 154

PowerEdge M910 (Intel Xeon E6510, 1.73 GHz)

SPECint\_rate\_base2006 = 143

CPU2006 license: 55

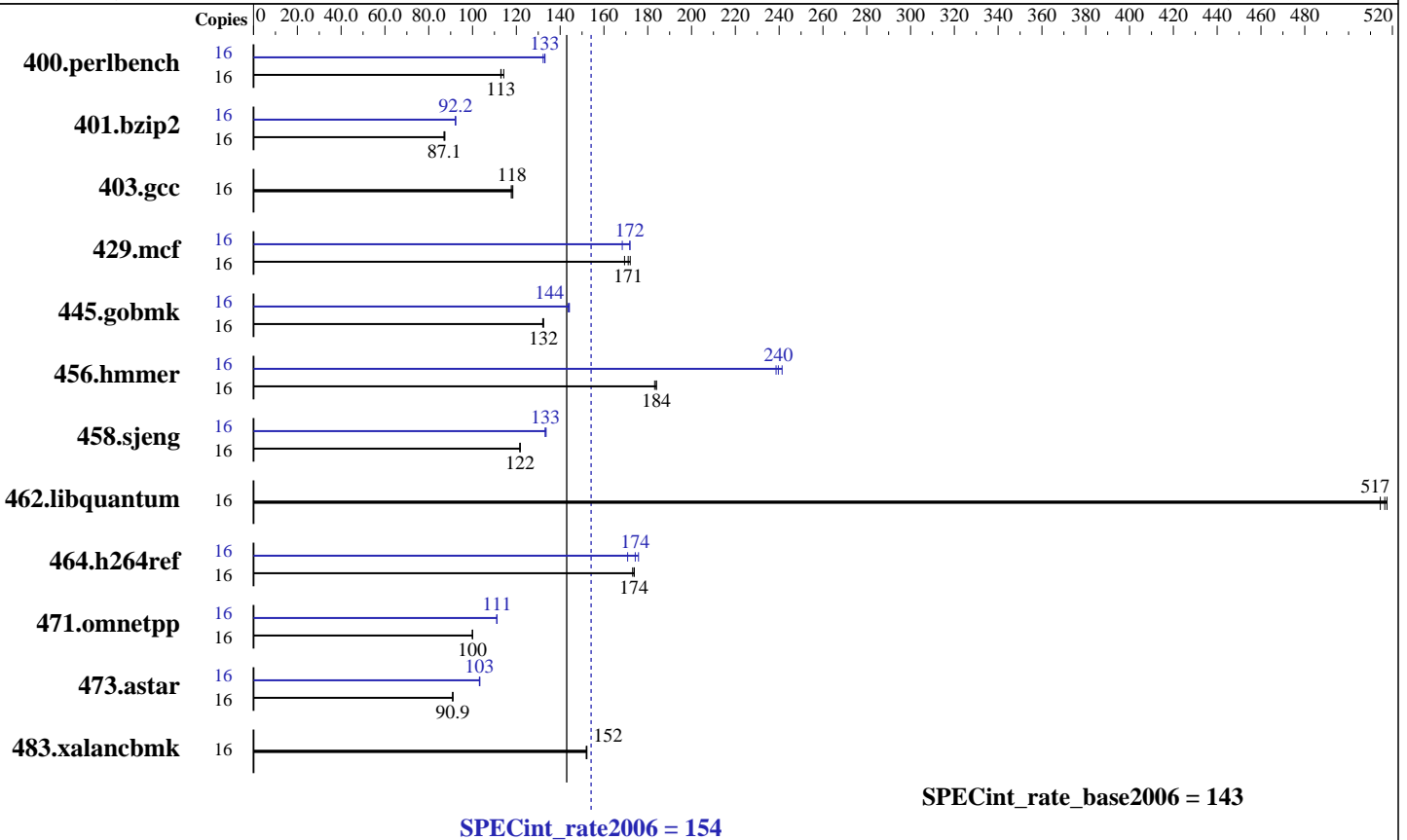
Test date: Jun-2010

Test sponsor: Dell Inc.

Hardware Availability: Mar-2010

Tested by: Dell Inc.

Software Availability: Dec-2009



## Hardware

CPU Name: Intel Xeon E6510  
 CPU Characteristics:  
 CPU MHz: 1733  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip, 2 threads/core  
 CPU(s) orderable: 2,4 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: 128 GB (32 x 4 GB DDR3-1066 QR RDIMM, CL7, ECC, downclocked to 800 MHz)  
 Disk Subsystem: 1 x 146 GB 15000 RPM SAS  
 Other Hardware: None

## Software

Operating System: SUSE Linux Enterprise Server 11 (x86\_64), Kernel 2.6.27.19-5-smp  
 Compiler: Intel C++ Professional Compiler for IA32 and Intel 64, Version 11.1  
 Build 20091130 Package ID: l\_cproc\_p\_11.1.064  
 Auto Parallel: No  
 File System: ext3  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V8.1



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## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	16	1368	114	<b><u>1383</u></b>	<b><u>113</u></b>	1384	113	16	1174	133	<b><u>1176</u></b>	<b><u>133</u></b>	1182	132
401.bzip2	16	1767	87.4	1774	87.0	<b><u>1773</u></b>	<b><u>87.1</u></b>	16	1673	92.3	1676	92.1	<b><u>1674</u></b>	<b><u>92.2</u></b>
403.gcc	16	1095	118	1088	118	<b><u>1091</u></b>	<b><u>118</u></b>	16	1095	118	1088	118	<b><u>1091</u></b>	<b><u>118</u></b>
429.mcf	16	861	169	848	172	<b><u>853</u></b>	<b><u>171</u></b>	16	<b><u>849</u></b>	<b><u>172</u></b>	849	172	867	168
445.gobmk	16	1268	132	1271	132	<b><u>1268</u></b>	<b><u>132</u></b>	16	<b><u>1165</u></b>	<b><u>144</u></b>	1168	144	1164	144
456.hammer	16	815	183	<b><u>812</u></b>	<b><u>184</u></b>	812	184	16	619	241	<b><u>623</u></b>	<b><u>240</u></b>	626	239
458.sjeng	16	<b><u>1591</u></b>	<b><u>122</u></b>	1592	122	1590	122	16	1454	133	<b><u>1453</u></b>	<b><u>133</u></b>	1449	134
462.libquantum	16	<b><u>642</u></b>	<b><u>517</u></b>	644	514	641	518	16	<b><u>642</u></b>	<b><u>517</u></b>	644	514	641	518
464.h264ref	16	2036	174	2046	173	<b><u>2038</u></b>	<b><u>174</u></b>	16	2014	176	<b><u>2031</u></b>	<b><u>174</u></b>	2073	171
471.omnetpp	16	<b><u>1000</u></b>	<b><u>100</u></b>	1000	100	1000	100	16	901	111	<b><u>900</u></b>	<b><u>111</u></b>	899	111
473.astar	16	<b><u>1235</u></b>	<b><u>90.9</u></b>	1233	91.1	1236	90.9	16	1089	103	1087	103	<b><u>1088</u></b>	<b><u>103</u></b>
483.xalancbmk	16	727	152	<b><u>726</u></b>	<b><u>152</u></b>	725	152	16	727	152	<b><u>726</u></b>	<b><u>152</u></b>	725	152

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

## Submit Notes

The config file option 'submit' was used.  
numactl was used to bind copies to the cores

## Operating System Notes

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

## Platform Notes

vm.zone\_reclaim\_mode = 1 in /etc/sysctl.conf file  
BIOS Settings:  
Power Management = Maximum Performance (Default = Active Power Controller)

## General Notes

Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502

## Base Compiler Invocation

C benchmarks:  
icc -m32  
  
C++ benchmarks:  
icpc -m32



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## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-32bit -lsmartheap

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m32

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

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  
456.hmmer: -DSPEC\_CPU\_LP64  
458.sjeng: -DSPEC\_CPU\_LP64

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## Peak Portability Flags (Continued)

462.libquantum: -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) -static(pass 2)  
-prof-use(pass 2) -ansi-alias

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

403.gcc: basepeak = yes

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/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-32bit -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 -Wl,-z,muldefs  
-L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-64bit -lsmartheap64

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## Peak Optimization Flags (Continued)

483.xalanbmk: basepeak = yes

## 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-ic11.1-linux64-revE.20100330.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100330.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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