



# SPEC® CINT2006 Result

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Dell Inc.

SPECint®\_rate2006 = 168

PowerEdge M910 (Intel Xeon E7520, 1.87 GHz)

SPECint\_rate\_base2006 = 156

CPU2006 license: 55

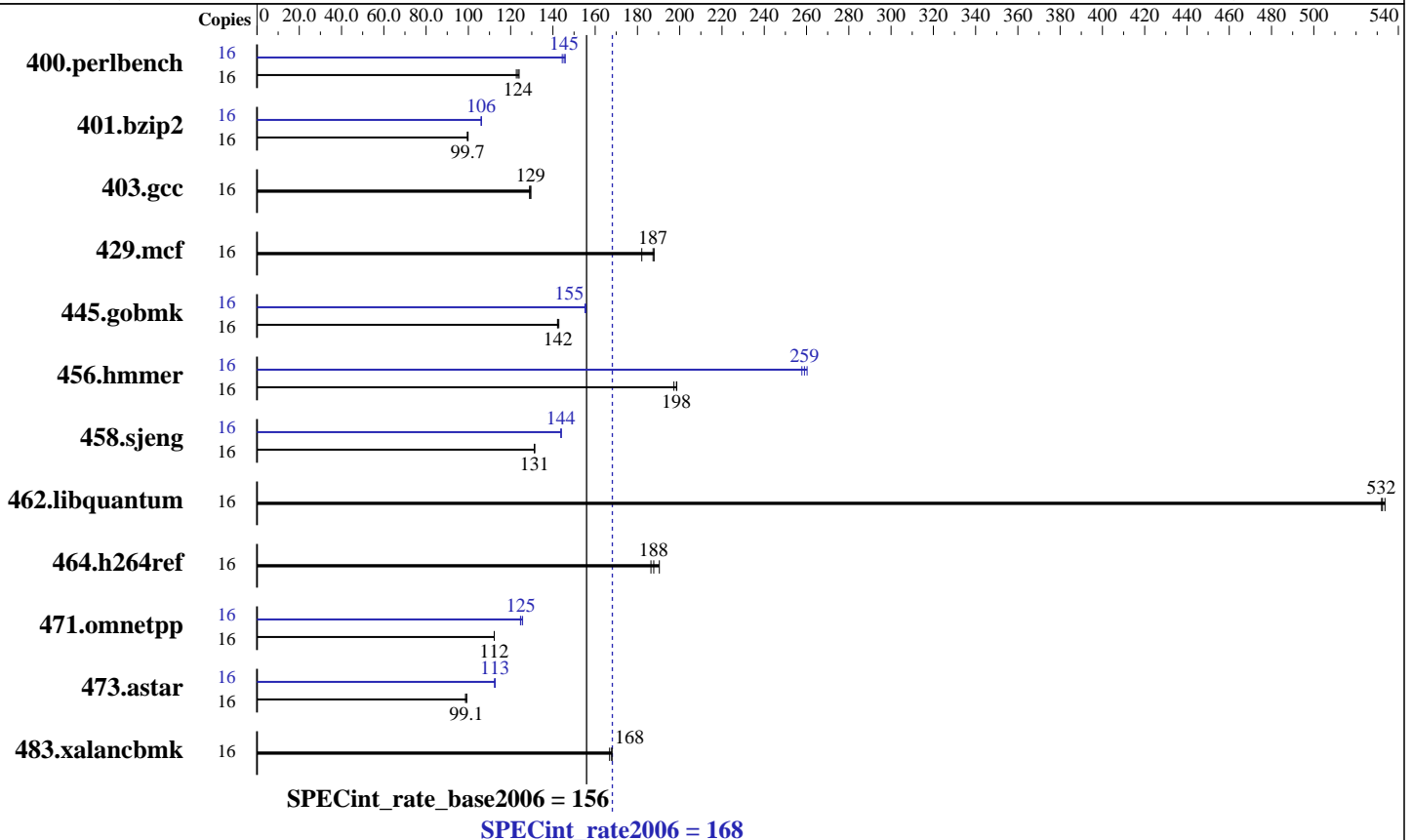
Test date: May-2010

Test sponsor: Dell Inc.

Hardware Availability: Mar-2010

Tested by: Dell Inc.

Software Availability: Dec-2009



## Hardware

CPU Name: Intel Xeon E7520  
 CPU Characteristics:  
 CPU MHz: 1867  
 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: 18 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	1260	124	1274	123	<b><u>1266</u></b>	<b><u>124</u></b>	16	1082	144	<b><u>1076</u></b>	<b><u>145</u></b>	1072	146
401.bzip2	16	1546	99.9	<b><u>1549</u></b>	<b><u>99.7</u></b>	1552	99.5	16	1456	106	1454	106	<b><u>1455</u></b>	<b><u>106</u></b>
403.gcc	16	994	130	999	129	<b><u>995</u></b>	<b><u>129</u></b>	16	994	130	999	129	<b><u>995</u></b>	<b><u>129</u></b>
429.mcf	16	<b><u>779</u></b>	<b><u>187</u></b>	801	182	777	188	16	<b><u>779</u></b>	<b><u>187</u></b>	801	182	777	188
445.gobmk	16	1181	142	<b><u>1179</u></b>	<b><u>142</u></b>	1175	143	16	1079	156	1081	155	<b><u>1081</u></b>	<b><u>155</u></b>
456.hammer	16	757	197	752	199	<b><u>752</u></b>	<b><u>198</u></b>	16	<b><u>576</u></b>	<b><u>259</u></b>	579	258	574	260
458.sjeng	16	1475	131	<b><u>1474</u></b>	<b><u>131</u></b>	1474	131	16	<b><u>1346</u></b>	<b><u>144</u></b>	1345	144	1346	144
462.libquantum	16	623	532	<b><u>623</u></b>	<b><u>532</u></b>	621	534	16	623	532	<b><u>623</u></b>	<b><u>532</u></b>	621	534
464.h264ref	16	<b><u>1886</u></b>	<b><u>188</u></b>	1860	190	1900	186	16	<b><u>1886</u></b>	<b><u>188</u></b>	1860	190	1900	186
471.omnetpp	16	891	112	<b><u>891</u></b>	<b><u>112</u></b>	891	112	16	<b><u>801</u></b>	<b><u>125</u></b>	802	125	796	126
473.astar	16	1133	99.2	<b><u>1133</u></b>	<b><u>99.1</u></b>	1139	98.6	16	<b><u>998</u></b>	<b><u>113</u></b>	999	112	997	113
483.xalancbmk	16	662	167	657	168	<b><u>658</u></b>	<b><u>168</u></b>	16	662	167	657	168	<b><u>658</u></b>	<b><u>168</u></b>

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.icl1.1/libic1.1-32bit -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: basepeak = yes

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: basepeak = yes

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

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-ic11.1-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 other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.1.  
Report generated on Wed Jul 23 13:09:19 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 8 July 2010.