



SPEC® CINT2006 Result

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Bull SAS

NovaScale R440
(Intel Xeon processor E5320,1.86GHz)

SPECint®2006 = 14.0

SPECint_base2006 = 12.7

CPU2006 license: 20

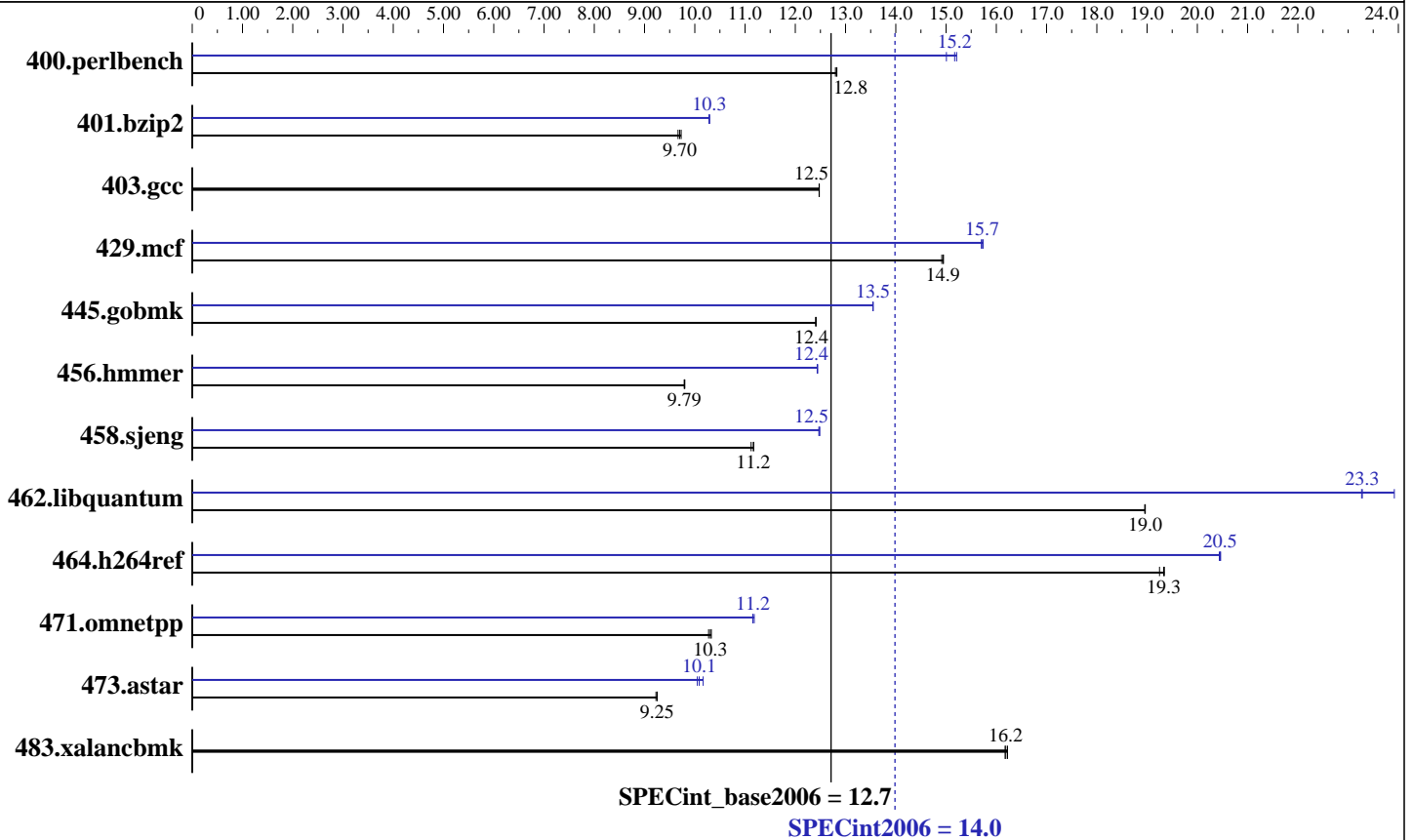
Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: Jul-2007

Hardware Availability: Mar-2007

Software Availability: May-2007



Hardware

CPU Name: Intel Xeon E5320
 CPU Characteristics: 1.86 GHz, 8 MB L2, 1066 MHz system bus
 CPU MHz: 1866
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
 CPU(s) orderable: 1 to 2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 8 MB I+D on chip per chip, 4 MB shared / 2 cores
 L3 Cache: None
 Other Cache: None
 Memory: 12 GB (12x1 GB) FB-DIMM PC2-4200F ECC CL4
 Disk Subsystem: 1x73 GB SAS, 15000 RPM
 Other Hardware: None

Software

Operating System: SUSE LINUX Enterprise Server 10
 Kernel 2.6.16.21-0.8-smp for x86_64
 Compiler: Intel C++ Compiler for Linux32 and Linux64 version 10.0
 Build 20070426 Package ID: 1_cc_p_10.0.023
 Auto Parallel: No
 File System: ext2
 System State: Multi-user run level 3
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: SmartHeap library V8.1
 Binutils 2.17.50.0.15



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	762	12.8	762	12.8	763	12.8	644	15.2	651	15.0	642	15.2
401.bzip2	998	9.67	992	9.73	995	9.70	938	10.3	938	10.3	938	10.3
403.gcc	645	12.5	645	12.5	645	12.5	645	12.5	645	12.5	645	12.5
429.mcf	611	14.9	610	14.9	610	14.9	580	15.7	581	15.7	580	15.7
445.gobmk	845	12.4	845	12.4	845	12.4	775	13.5	774	13.5	774	13.6
456.hmmer	952	9.80	953	9.79	953	9.79	750	12.4	750	12.4	750	12.4
458.sjeng	1088	11.1	1083	11.2	1084	11.2	969	12.5	970	12.5	969	12.5
462.libquantum	1093	19.0	1093	19.0	1093	19.0	866	23.9	890	23.3	890	23.3
464.h264ref	1145	19.3	1150	19.2	1144	19.3	1083	20.4	1081	20.5	1082	20.5
471.omnetpp	605	10.3	606	10.3	608	10.3	560	11.2	559	11.2	560	11.2
473.astar	761	9.23	759	9.25	759	9.25	690	10.2	699	10.0	696	10.1
483.xalancbmk	425	16.2	426	16.2	427	16.2	425	16.2	426	16.2	427	16.2

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

All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmer, for peak, are compiled in 64-bit mode

General Notes

The NovaScale R440 and the NovaScale R460 models are electronically equivalent.
The results have been measured on a NovaScale R460 model.

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc



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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:
-fast

C++ benchmarks:
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs
-L/spec/cpu2006/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/cce/10.0.023/bin/icc
-L/opt/intel/cce/10.0.023/lib
-I/opt/intel/cce/10.0.023/include

456.hmmer: /opt/intel/cce/10.0.023/bin/icc
-L/opt/intel/cce/10.0.023/lib
-I/opt/intel/cce/10.0.023/include

C++ benchmarks:
icpc

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX

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Peak Portability Flags (Continued)

483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -prof_gen(pass 1) -prof_use(pass 2) -fast -ansi-alias
-prefetch

401.bzip2: -prof_gen(pass 1) -prof_use(pass 2) -fast

403.gcc: basepeak = yes

429.mcf: -fast -prefetch

445.gobmk: -prof_gen(pass 1) -prof_use(pass 2) -xT -O2 -ipo
-no-prec_div -ansi-alias

456.hmmer: -prof_gen(pass 1) -prof_use(pass 2) -fast -unroll2
-ansi-alias

458.sjeng: -prof_gen(pass 1) -prof_use(pass 2) -fast -unroll4

462.libquantum: -prof_gen(pass 1) -prof_use(pass 2) -fast -unroll4 -Ob0
-prefetch -opt-streaming-stores always

464.h264ref: Same as 456.hmmer

C++ benchmarks:

471.omnetpp: -prof_gen(pass 1) -prof_use(pass 2) -xT -O3 -ipo
-no-prec_div -ansi-alias -Wl,-z,muldefs
-L/spec/cpu2006/lib -lsmartheap

473.astar: Same as 471.omnetpp

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca



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The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/EM64T_Intel100_flags.20090714.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/EM64T_Intel100_flags.20090714.xml

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Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 14:48:40 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 16 October 2007.