



SPEC® CINT2006 Result

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Bull SAS

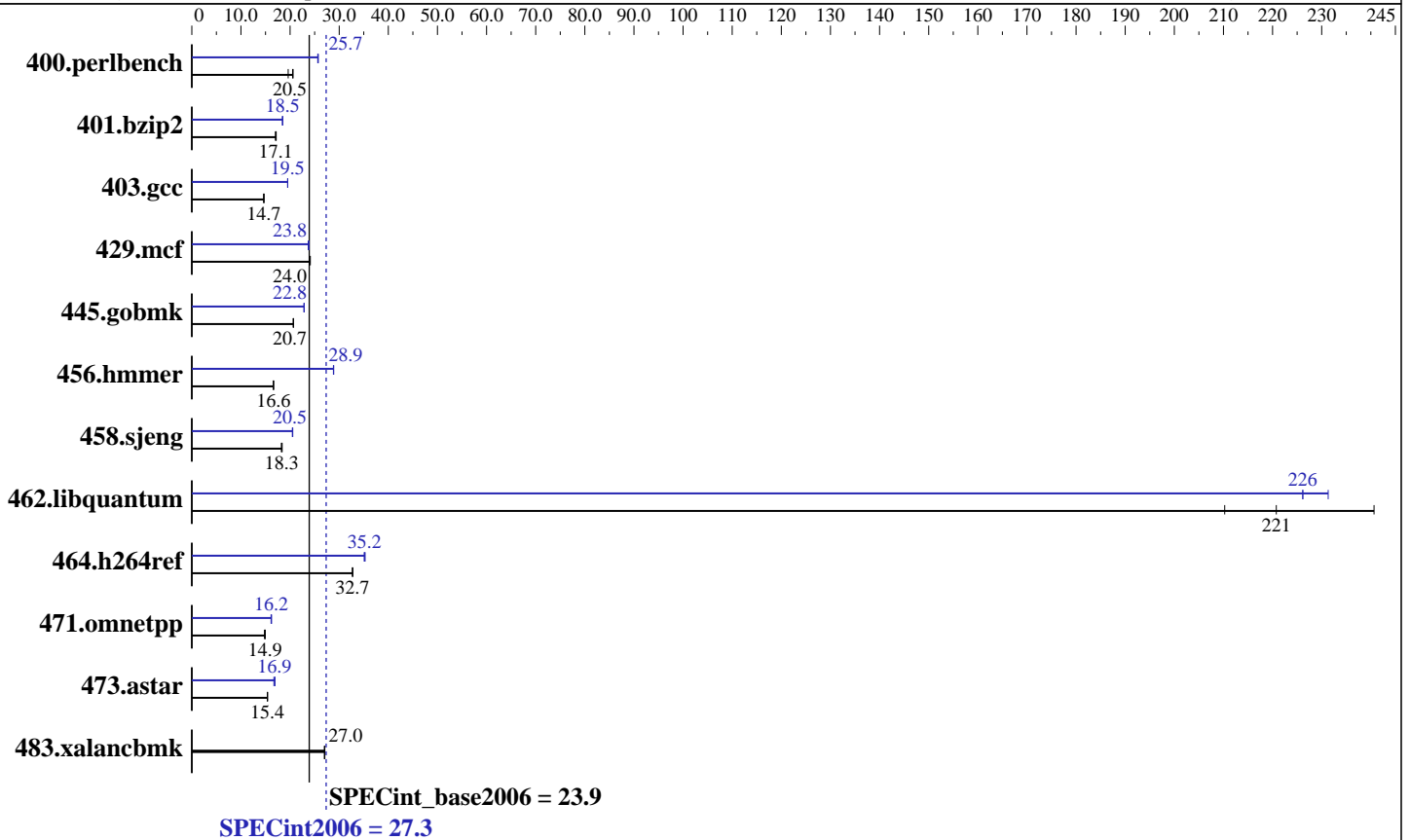
NovaScale R460 E1
(Intel Xeon X5460,3.16GHz)

SPECint®2006 = 27.3

SPECint_base2006 = 23.9

CPU2006 license: 20
Test sponsor: Bull SAS
Tested by: NEC Corporation

Test date: Dec-2007
Hardware Availability: Dec-2007
Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon X5460
 CPU Characteristics: 3.16 GHz, 2x6 MB L2 shared, 1333 MHz bus
 CPU MHz: 3160
 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: 12 MB I+D on chip per chip, 6 MB shared / 2 cores
 L3 Cache: None
 Other Cache: None
 Memory: 12 GB (12x1 GB PC2-5300F, 2 rank, CL5-5-5, ECC)
 Disk Subsystem: 1x73.2 GB SAS, 15000RPM
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
 Compiler: Intel C++ Compiler for Linux32 and Linux64 version 10.1 Build 20070913 Package ID: l_cc_p_10.1.008
 Auto Parallel: Yes
 File System: ext2
 System State: Multiuser, Runlevel 3
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: MicroQuill SmartHeap library 8.1 binutils-2.17.tar.gz, Version 2.17



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	474	20.6	476	20.5	498	19.6	381	25.6	380	25.7	380	25.7
401.bzip2	567	17.0	562	17.2	564	17.1	521	18.5	523	18.4	522	18.5
403.gcc	549	14.7	548	14.7	550	14.6	412	19.5	413	19.5	412	19.5
429.mcf	378	24.1	380	24.0	382	23.9	385	23.7	384	23.8	383	23.8
445.gobmk	507	20.7	508	20.7	507	20.7	459	22.8	459	22.9	459	22.8
456.hmmmer	561	16.6	561	16.6	562	16.6	323	28.9	324	28.8	323	28.9
458.sjeng	662	18.3	663	18.3	658	18.4	589	20.5	590	20.5	591	20.5
462.libquantum	93.9	221	98.5	210	86.1	241	91.6	226	91.6	226	89.6	231
464.h264ref	676	32.7	676	32.7	676	32.7	631	35.1	629	35.2	627	35.3
471.omnetpp	419	14.9	419	14.9	423	14.8	386	16.2	387	16.1	386	16.2
473.astar	457	15.4	456	15.4	455	15.4	420	16.7	415	16.9	416	16.9
483.xalancbmk	255	27.1	256	27.0	255	27.0	255	27.1	256	27.0	255	27.0

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
OMP_NUM_THREADS set to number of cores (default).

Platform Notes

Bios settings:
Intel SpeedStep Technology: Disabled

General Notes

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

The NEC Express5800/120Rh-1(Intel Xeon Processor X5460),
the NEC Express5800/120Rj-2(Intel Xeon Processor X5460),
the Bull NovaScale R440 E1 (Intel Xeon X5460,3.16GHz) and
the Bull NovaScale R460 E1 (Intel Xeon X5460,3.16GHz) models are electronically equivalent.
The results have been measured on a NEC Express5800/120Rj-2(Intel Xeon Processor X5460) model.

Base Compiler Invocation

C benchmarks:
icc

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Base Compiler Invocation (Continued)

C++ benchmarks:
icpc

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 -vec-guard-write -parallel -par-runtime-control

C++ benchmarks:
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs
-L/opt/SmartHeap_8.1/lib -lsmarheap

Base Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc

401.bzip2: /opt/intel/cce/10.1.008/bin/icc
-L/opt/intel/cce/10.1.008/lib
-I/opt/intel/cce/10.1.008/include

456.hmmer: /opt/intel/cce/10.1.008/bin/icc
-L/opt/intel/cce/10.1.008/lib
-I/opt/intel/cce/10.1.008/include

C++ benchmarks:
icpc



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Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
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 -prefetch
-auto-ilp32
403.gcc: -fast -inline-calloc -opt-malloc-options=3
429.mcf: -fast -prefetch
445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xT -O2 -ipo
-no-prec-div -ansi-alias
456.hmmer: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive
-auto-ilp32
458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4
462.libquantum: -fast -unroll4 -Ob0 -prefetch
-opt-streaming-stores always -vec-guard-write
-opt-malloc-options=3 -parallel -par-runtime-control
464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo
-no-prec-div -ansi-alias -opt-ra-region-strategy=block
-Wl,-z,muldefs -L/opt/SmartHeap_8.1/lib -lsmartheap
473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine
-Wl,-z,muldefs -L/opt/SmartHeap_8.1/lib -lsmartheap
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/NEC-Intel-ic10.1-FP-intel64-linux-flags.20090713.01.html>

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

<http://www.spec.org/cpu2006/flags/NEC-Intel-ic10.1-FP-intel64-linux-flags.20090713.01.xml>

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For other inquiries, please contact webmaster@spec.org.

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