



SPEC[®] CINT2006 Result

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Bull SAS

NovaScale R630
(Intel Xeon X5355,2.66GHz)

SPECint[®]_rate2006 = 97.2

SPECint_rate_base2006 = 79.4

CPU2006 license: 20

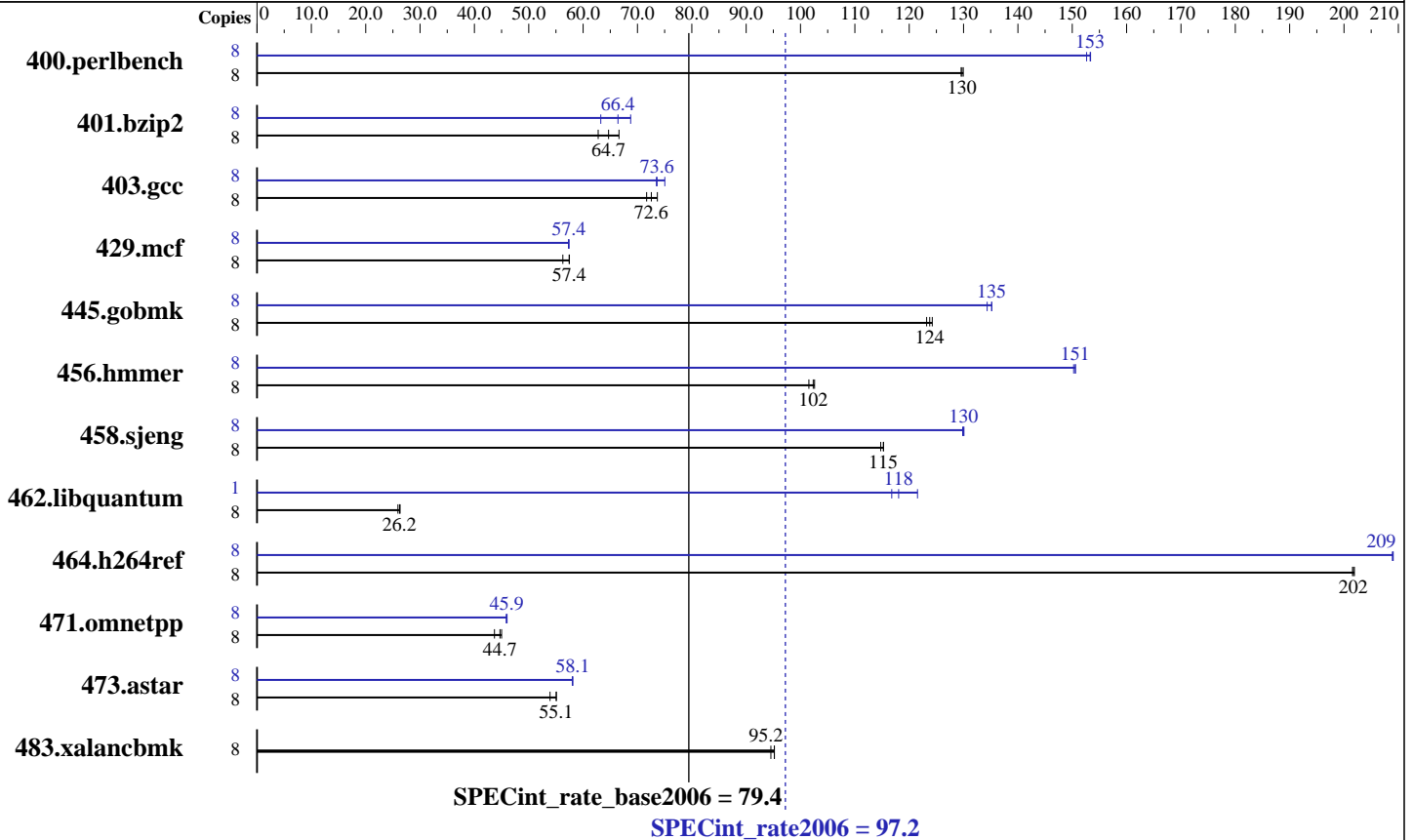
Test sponsor: Bull SAS

Tested by: NEC Corporation

Test date: Apr-2008

Hardware Availability: Oct-2007

Software Availability: Feb-2008



Hardware

CPU Name: Intel Xeon X5355
 CPU Characteristics: 2.66 GHz, 2x4 MB L2 shared, 1333 MHz bus
 CPU MHz: 2667
 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: 8 MB I+D on chip per chip, 4 MB shared / 2 cores
 L3 Cache: None
 Other Cache: None
 Memory: 12 GB (6x2 GB PC2-5300F, 2 rank, CL5-5-5, ECC)
 Disk Subsystem: 2x73.2 GB SAS, 15000RPM, Software RAID Level1
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux AS release 4 (Update 5), Kernel 2.6.9-55.0.12.ELsmp on an X86_64
 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: ext3
 System State: Run level 3 (multi-user)
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: MicroQuill SmartHeap library 8.1 binutils-2.17.tar.gz, Version 2.17 ft Server Control Software 5.0-0231



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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	8	601	130	603	130	603	130	8	512	153	510	153	510	153
401.bzip2	8	1230	62.8	1193	64.7	1159	66.6	8	1221	63.3	1123	68.7	1162	66.4
403.gcc	8	898	71.7	888	72.6	874	73.7	8	876	73.5	875	73.6	858	75.0
429.mcf	8	1297	56.3	1269	57.5	1270	57.4	8	1273	57.3	1271	57.4	1272	57.4
445.gobmk	8	681	123	678	124	675	124	8	625	134	621	135	621	135
456.hmmmer	8	735	102	729	102	728	103	8	497	150	496	151	496	151
458.sjeng	8	840	115	843	115	840	115	8	744	130	746	130	745	130
462.libquantum	8	6393	25.9	6320	26.2	6296	26.3	1	176	118	177	117	170	122
464.h264ref	8	878	202	878	202	877	202	8	847	209	847	209	848	209
471.omnetpp	8	1144	43.7	1118	44.7	1111	45.0	8	1090	45.9	1089	45.9	1087	46.0
473.astar	8	1042	53.9	1020	55.1	1020	55.1	8	967	58.1	967	58.1	968	58.0
483.xalancbmk	8	584	94.5	580	95.2	580	95.2	8	584	94.5	580	95.2	580	95.2

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
OMP_NUM_THREADS set to number of cores

Platform Notes

This Express5800/320Fc-MR is a fault-tolerant server.
Two modules are installed in this server and each module has "2CPU chips,12GB memory",
so total "4CPU chips,24GB memory" are on this server.
With lockstep technology, these two modules communicate each other
and handle the same instructions at the same time,
then logically the "CPU,Memory" is recognized as "2CPU chips,12GB memory" by the OS.

General Notes

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

The NEC Express5800/320Fc-MR(Intel Xeon X5355) and
the Bull NovaScale R630 (Intel Xeon X5355,2.66GHz) models are electronically equivalent.
The results have been measured on a NEC Express5800/320Fc-MR(Intel Xeon X5355) 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 -inline-calloc -opt-malloc-options=3

C++ benchmarks:
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs
-L/opt/SmartHeap_8.1/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/10.1.008/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
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
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 -lsmarheap
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 -lsmarheap
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-INT-ia32-linux-flags.html>

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

<http://www.spec.org/cpu2006/flags/NEC-Intel-ic10.1-INT-ia32-linux-flags.xml>

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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