



SPEC[®] CINT2006 Result

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Bull SAS

NovaScale R422
(Intel Xeon processor X5365,3.00GHz)

SPECint[®]2006 = 24.0

SPECint_base2006 = 20.5

CPU2006 license: 20

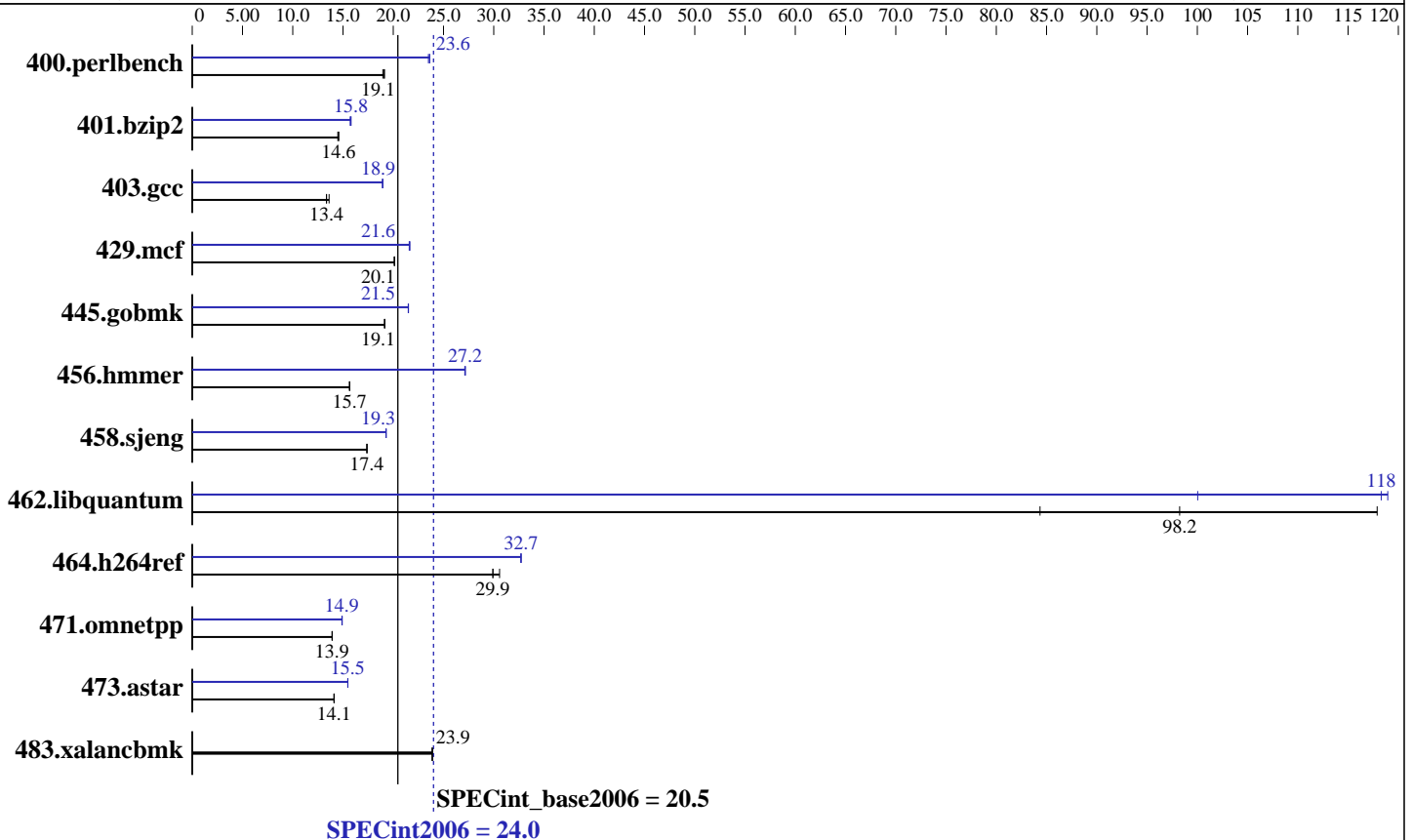
Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: Oct-2007

Hardware Availability: Sep-2007

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon X5365
 CPU Characteristics: 3.00 GHz, 8 MB L2, 1333 MHz system bus
 CPU MHz: 3000
 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: 16 GB (8x2 GB) FB-DIMM PC2-5300F ECC CL5
 Disk Subsystem: 1x147 GB SAS, 15000 RPM
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux AS Release 4 Update 4
 Kernel 2.6.9-42.ELsmp for x86_64
 Compiler: Intel C++ Compiler for Linux32 and Linux64
 version 10.1
 Build 20070725
 Auto Parallel: Yes
 File System: ext3
 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	515	19.0	511	19.1	<u>512</u>	<u>19.1</u>	416	23.5	<u>414</u>	<u>23.6</u>	414	23.6
401.bzip2	666	14.5	<u>663</u>	<u>14.6</u>	662	14.6	614	15.7	<u>611</u>	<u>15.8</u>	611	15.8
403.gcc	591	13.6	603	13.4	<u>603</u>	<u>13.4</u>	<u>425</u>	<u>18.9</u>	425	19.0	425	18.9
429.mcf	<u>453</u>	<u>20.1</u>	453	20.1	454	20.1	<u>422</u>	<u>21.6</u>	421	21.7	422	21.6
445.gobmk	548	19.1	<u>548</u>	<u>19.1</u>	548	19.2	488	21.5	<u>488</u>	<u>21.5</u>	488	21.5
456.hmmer	596	15.7	<u>596</u>	<u>15.7</u>	596	15.7	343	27.2	344	27.1	<u>344</u>	<u>27.2</u>
458.sjeng	696	17.4	696	17.4	<u>696</u>	<u>17.4</u>	627	19.3	627	19.3	<u>627</u>	<u>19.3</u>
462.libquantum	176	118	<u>211</u>	<u>98.2</u>	246	84.3	207	100	174	119	<u>175</u>	<u>118</u>
464.h264ref	724	30.6	<u>740</u>	<u>29.9</u>	740	29.9	<u>677</u>	<u>32.7</u>	677	32.7	676	32.7
471.omnetpp	<u>449</u>	<u>13.9</u>	449	13.9	448	13.9	420	14.9	419	14.9	<u>420</u>	<u>14.9</u>
473.astar	498	14.1	497	14.1	<u>497</u>	<u>14.1</u>	453	15.5	<u>453</u>	<u>15.5</u>	454	15.5
483.xalancbmk	<u>289</u>	<u>23.9</u>	289	23.9	289	23.9	<u>289</u>	<u>23.9</u>	289	23.9	289	23.9

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

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX



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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/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icc

401.bzip2: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/bin/icc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/include

456.hmmer: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/bin/icc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070824/Linux64/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
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

Continued on next page



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Peak Optimization Flags (Continued)

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/home/cmplr/usr3/alrahate/cpu2006.1.0/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/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

483.xalanbmk: basepeak = yes

Peak Other Flags

Same as Base Other Flags

The flags file that was used to format this result can be browsed at

http://www.spec.org/cpu2006/flags/EM64T_Intel101_flags.20090714.00.html



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

http://www.spec.org/cpu2006/flags/EM64T_Intel101_flags.20090714.00.xml

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