SPEC® CINT2006 Result

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Bull SAS

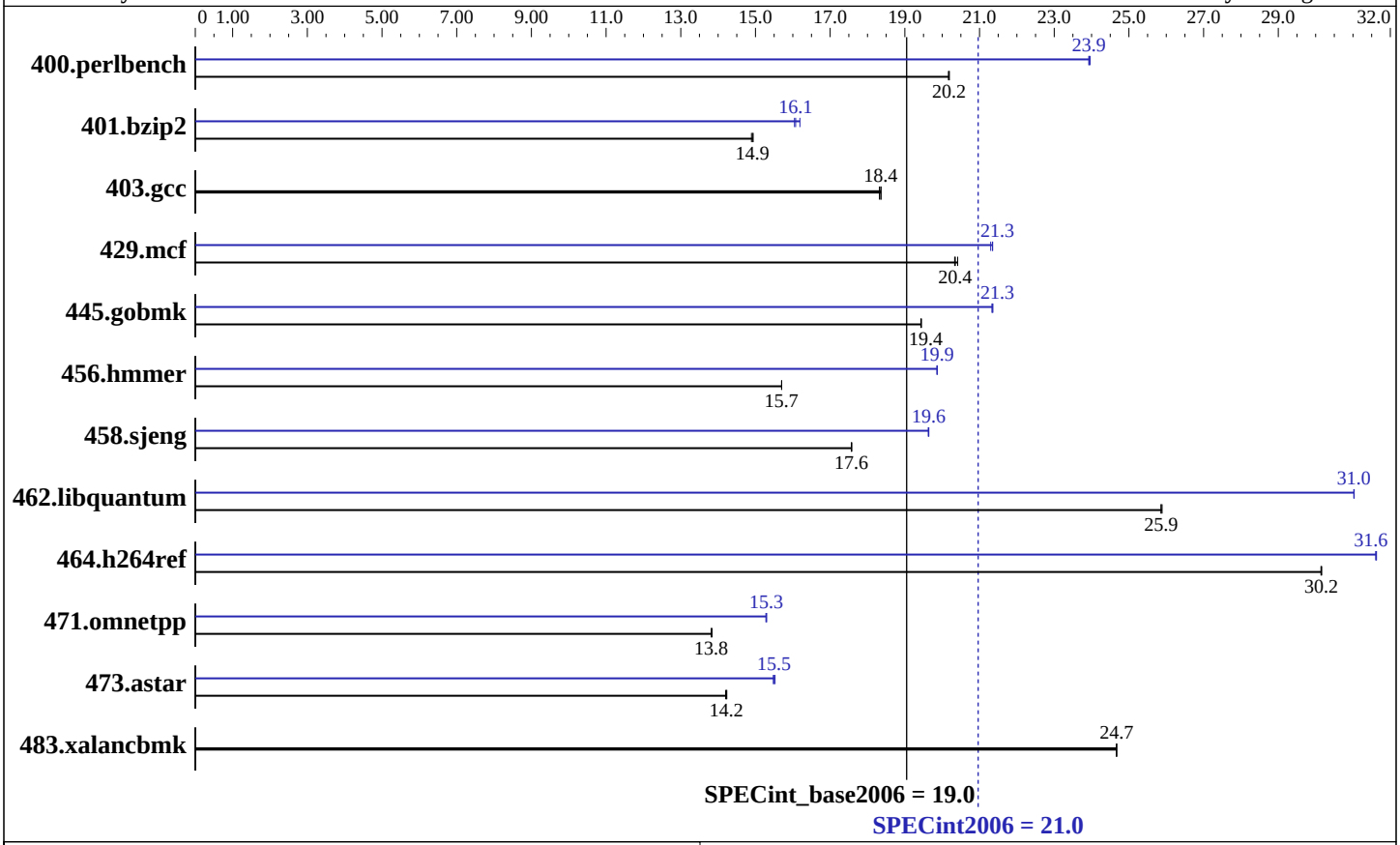
NovaScale R422
(Intel Xeon processor 5160,3.00GHz)

SPECint®2006 = 21.0

SPECint_base2006 = 19.0

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

Test date: Sep-2007
Hardware Availability: Aug-2007
Software Availability: Aug-2007



Hardware

CPU Name:	Intel Xeon 5160
CPU Characteristics:	3.00 GHz, 4 MB L2, 1333 MHz system bus
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1 to 2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per chip
L3 Cache:	None
Other Cache:	None
Memory:	8 GB (8x1 GB) FB-DIMM PC2-5300F ECC CL5
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 version 10.0 Build 20070809 Package ID: l_cc_p_10.0.026
Auto Parallel:	No
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	484	20.2	**484**	**20.2**	484	20.2	408	24.0	408	23.9	**408**	**23.9**
401.bzip2	**647**	**14.9**	646	14.9	648	14.9	**600**	**16.1**	601	16.0	596	16.2
403.gcc	**439**	**18.4**	439	18.3	438	18.4	**439**	**18.4**	439	18.3	438	18.4
429.mcf	**448**	**20.4**	447	20.4	449	20.3	427	21.4	428	21.3	**427**	**21.3**
445.gobmk	540	19.4	540	19.4	**540**	**19.4**	491	21.4	**492**	**21.3**	492	21.3
456.hmmer	594	15.7	**594**	**15.7**	594	15.7	470	19.9	470	19.9	**470**	**19.9**
458.sjeng	**689**	**17.6**	688	17.6	689	17.6	616	19.6	617	19.6	**616**	**19.6**
462.libquantum	801	25.9	**801**	**25.9**	800	25.9	668	31.0	668	31.0	**668**	**31.0**
464.h264ref	734	30.1	734	30.2	**734**	**30.2**	**700**	**31.6**	700	31.6	700	31.6
471.omnetpp	452	13.8	452	13.8	**452**	**13.8**	409	15.3	**409**	**15.3**	409	15.3
473.astar	494	14.2	**494**	**14.2**	493	14.2	454	15.5	**453**	**15.5**	452	15.5
483.xalancbmk	280	24.7	280	24.7	**280**	**24.7**	280	24.7	280	24.7	**280**	**24.7**

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

General Notes

```
 'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
 The R422 is built with two identical (half size) motherboards.
 Only one of the two motherboards was powered on during the test 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`

Base Optimization Flags

C benchmarks:
`-fast`

C++ benchmarks:
`-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs`
`-L/tmp/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/10.0.026/bin/icc`
`-L/opt/intel/cce/10.0.026/lib`
`-I/opt/intel/cce/10.0.026/include`

456.hmmer: `/opt/intel/cce/10.0.026/bin/icc`
`-L/opt/intel/cce/10.0.026/lib`
`-I/opt/intel/cce/10.0.026/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

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`

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/tmp/spec/cpu2006/lib -lsmartheap`

473.astar: `Same as 471.omnetpp`

483.xalancbmk: `basepeak = yes`

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/EM64T_Intel100_flags.html`

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

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