SPEC® CINT2006 Result

Bull SAS

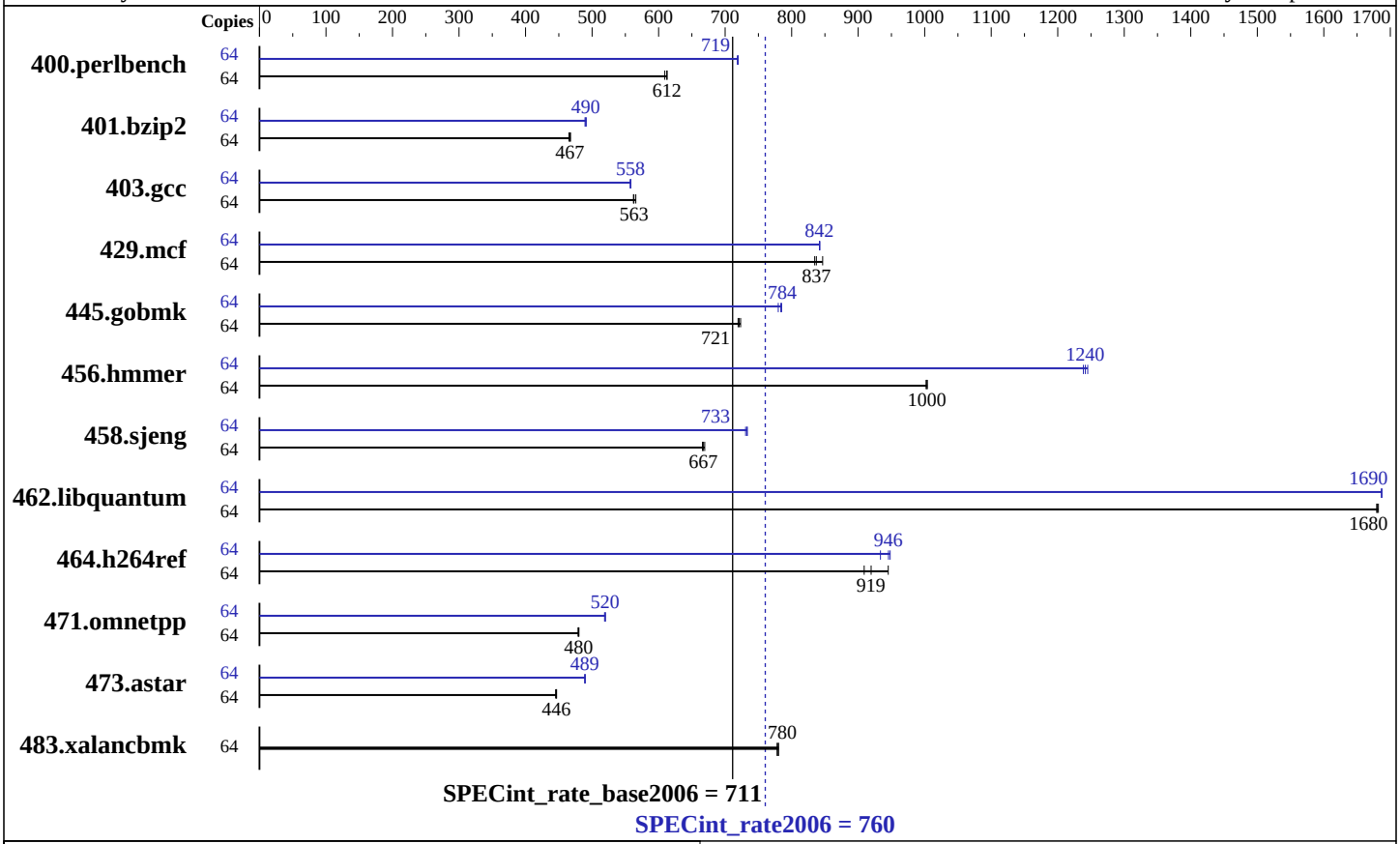
novascale bullion (Intel Xeon X7560, 2.27 GHz)

SPECint®_rate2006 = 760

SPECint_rate_base2006 = 711

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

Test date: Jul-2010
Hardware Availability: Apr-2010
Software Availability: Apr-2010



Hardware

CPU Name:	Intel Xeon X7560
CPU Characteristics:	Intel Turbo Boost Technology up to 2.67 GHz
CPU MHz:	2266
FPU:	Integrated
CPU(s) enabled:	32 cores, 4 chips, 8 cores/chip, 2 threads/core
CPU(s) orderable:	2,4 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core
L3 Cache:	24 MB I+D on chip per chip
Other Cache:	None
Memory:	256 GB (32 x 8 GB DDR3-1067 QR RDIMM, CL7, ECC)
Disk Subsystem:	1 x 250 GB 7200 RPM SATA, 4 x 160 GB Intel SSD
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 5.5, Kernel 2.6.18-194.el5
Compiler:	Intel C++ Professional Compiler for IA32 and Intel 64, Version 11.1 Build 20091130 Package ID: l_cproc_p_11.1.064
Auto Parallel:	No
File System:	ext3
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V8.1

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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	64	**1021**	**612**	1020	613	1026	609	64	869	720	**869**	**719**	870	718
401.bzip2	64	1321	468	**1323**	**467**	1328	465	64	1262	489	1257	491	**1260**	**490**
403.gcc	64	911	566	916	562	**915**	**563**	64	923	558	**924**	**558**	924	557
429.mcf	64	**697**	**837**	699	835	689	847	64	693	842	**693**	**842**	693	843
445.gobmk	64	928	723	**931**	**721**	933	719	64	**857**	**784**	861	780	855	785
456.hmmer	64	595	1000	**595**	**1000**	596	1000	64	480	1250	**481**	**1240**	482	1240
458.sjeng	64	**1161**	**667**	1157	669	1163	666	64	1060	731	1056	733	**1056**	**733**
462.libquantum	64	**789**	**1680**	790	1680	788	1680	64	786	1690	786	1690	**786**	**1690**
464.h264ref	64	1558	909	1498	945	**1540**	**919**	64	**1498**	**946**	1517	934	1494	948
471.omnetpp	64	833	480	**834**	**480**	835	479	64	771	519	**770**	**520**	769	520
473.astar	64	1006	447	1009	445	**1007**	**446**	64	919	489	917	490	**918**	**489**
483.xalancbmk	64	**566**	**780**	566	780	568	778	64	**566**	**780**	566	780	568	778

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

Submit Notes

```
The config file option 'submit' was used.
 numactl was used to bind copies to the cores
```

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
```

General Notes

```
 Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502
 The Bull novascale bullion and
 the Bull bullx S6030 models are electronically equivalent.
 The results have been measured on a novascale bullion model.
```

Base Compiler Invocation

C benchmarks:

```
icc  -m32
```

C++ benchmarks:

```
icpc -m32
```

Base Portability Flags

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

Base Optimization Flags

C benchmarks:
`-xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch`

C++ benchmarks:
`-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs`
`-L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-32bit -lsmartheap`

Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

Peak Compiler Invocation

C benchmarks (except as noted below):
`icc -m32`

401.bzip2: `icc -m64`

456.hmmer: `icc -m64`

458.sjeng: `icc -m64`

462.libquantum: `icc -m64`

C++ benchmarks (except as noted below):
`icpc -m32`

473.astar: `icpc -m64`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`
401.bzip2: `-DSPEC_CPU_LP64`

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Peak Portability Flags (Continued)

456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -ansi-alias

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -opt-prefetch -ansi-alias -auto-ilp32

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -static

429.mcf: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -O2
-ipo -no-prec-div -ansi-alias

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2
-ansi-alias -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -unroll4 -auto-ilp32

462.libquantum: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32
-opt-prefetch

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
-prof-use(pass 2) -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs
-L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-32bit -lsmartheap

473.astar: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-ansi-alias -opt-ra-region-strategy=routine -Wl,-z,muldefs

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Peak Optimization Flags (Continued)

473.astar (continued):
`-L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-64bit -lsmartheap64`

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/Intel-ic11.1-linux64-revG.20100804.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revG.20100804.xml`

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

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