SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

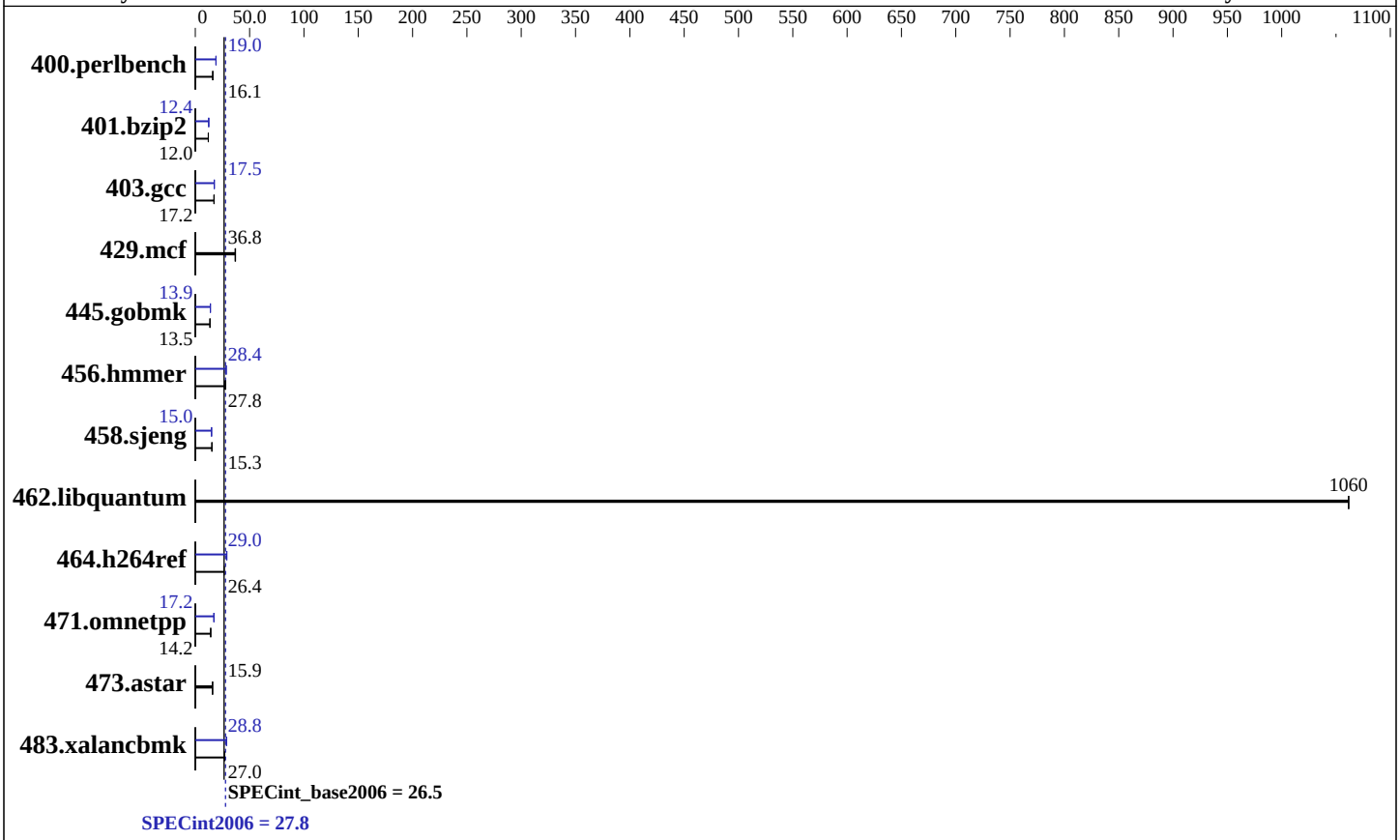
BL275 (Intel Xeon E5-2403, 1.80 GHz)

SPECint®2006 = 27.8

SPECint_base2006 = 26.5

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

Test date: Feb-2013
Hardware Availability: Sep-2012
Software Availability: Oct-2012



Hardware

CPU Name:	Intel Xeon E5-2403
CPU Characteristics:	
CPU MHz:	1800
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:	256 KB I+D on chip per core
L3 Cache:	10 MB I+D on chip per chip
Other Cache:	None
Memory:	96 GB (12 x 8 GB 2Rx4 PC3-12800R-11, ECC, running at 1066 MHz and CL7)
Disk Subsystem:	2 x 146 GB 15000 RPM SAS, RAID 0
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 6.2 (Santiago) 2.6.32-220.el6.x86_64
Compiler:	C/C++: Version 13.0.0.133 of Intel C++ Studio XE for Linux
Auto Parallel:	Yes
File System:	ext4
System State:	Run level 3 (multi-user)
Base Pointers:	32/64-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V9.01

SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

BL275 (Intel Xeon E5-2403, 1.80 GHz)

SPECint2006 = 27.8

SPECint_base2006 = 26.5

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

Test date: Feb-2013
Hardware Availability: Sep-2012
Software Availability: Oct-2012

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	606	16.1	**608**	**16.1**	609	16.1	514	19.0	**514**	**19.0**	512	19.1
401.bzip2	805	12.0	**806**	**12.0**	806	12.0	780	12.4	**781**	**12.4**	782	12.3
403.gcc	468	17.2	466	17.3	**467**	**17.2**	461	17.5	460	17.5	**461**	**17.5**
429.mcf	248	36.7	246	37.1	**248**	**36.8**	248	36.7	246	37.1	**248**	**36.8**
445.gobmk	777	13.5	**776**	**13.5**	776	13.5	**755**	**13.9**	755	13.9	755	13.9
456.hmmer	342	27.2	**335**	**27.8**	334	28.0	326	28.6	**328**	**28.4**	334	27.9
458.sjeng	791	15.3	790	15.3	**791**	**15.3**	**809**	**15.0**	810	14.9	809	15.0
462.libquantum	19.5	1060	**19.5**	**1060**	19.5	1060	19.5	1060	**19.5**	**1060**	19.5	1060
464.h264ref	837	26.4	**837**	**26.4**	837	26.5	768	28.8	**762**	**29.0**	762	29.0
471.omnetpp	440	14.2	441	14.2	**440**	**14.2**	364	17.2	**364**	**17.2**	365	17.1
473.astar	**443**	**15.9**	439	16.0	444	15.8	**443**	**15.9**	439	16.0	444	15.8
483.xalancbmk	255	27.1	**256**	**27.0**	256	27.0	**240**	**28.8**	240	28.7	239	28.8

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

Operating System Notes

```
Stack size set to unlimited using "ulimit -s unlimited"
```

Platform Notes

```
Sysinfo program /spec/cpu2006.1.2/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on localhost.localdomain Sun Feb 24 10:09:52 2013

This section contains SUT (System Under Test) info as seen by
some common utilities.  To remove or add to this section, see:
  http://www.spec.org/cpu2006/Docs/config.html#sysinfo

From /proc/cpuinfo
   model name : Intel(R) Xeon(R) CPU E5-2403 0 @ 1.80GHz
      2 "physical id"s (chips)
      8 "processors"
   cores, siblings (Caution: counting these is hw and system dependent.  The
   following excerpts from /proc/cpuinfo might not be reliable.  Use with
   caution.)
      cpu cores : 4
      siblings  : 4
      physical 0: cores 0 1 2 3
      physical 1: cores 0 1 2 3
   cache size : 10240 KB

From /proc/meminfo
   MemTotal:       99039688 kB
```

Continued on next page

Platform Notes (Continued)

```
      HugePages_Total:       0
      Hugepagesize:       2048 kB

   /usr/bin/lsb_release -d
      Red Hat Enterprise Linux Server release 6.2 (Santiago)

   From /etc/*release* /etc/*version*
      redhat-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
      system-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
      system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

   uname -a:
      Linux localhost.localdomain 2.6.32-220.el6.x86_64 #1 SMP Wed Nov 9 08:03:13
      EST 2011 x86_64 x86_64 x86_64 GNU/Linux

   run-level 3 Feb 24 10:09

   SPEC is set to: /spec/cpu2006.1.2
      Filesystem     Type    Size  Used Avail Use% Mounted on
      /dev/mapper/VolGroup-lv_root
                     ext4    153G   36G  109G  25% /

   Additional information from dmidecode:
     BIOS IBM Corp. -[AHEG24BUS-1.21]- 01/25/2013
     Memory:
      12x Samsung M392B1K70DM0-CK0 8 GB 1066 MHz 2 rank

   (End of data from sysinfo program)
```

General Notes

```
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/spec/cpu2006.1.2/libs/32:/spec/cpu2006.1.2/libs/64:/spec/cpu2006.1.2/sh"
OMP_NUM_THREADS = "8"

 Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
 memory using RHEL5.5
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
 runspec command invoked through numactl i.e.:
 numactl --interleave=all runspec <etc>
```

Base Compiler Invocation

C benchmarks:

```
icc  -m64
```

C++ benchmarks:

```
icpc -m64
```

Base Portability Flags

400.perlbench: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64`
401.bzip2: `-DSPEC_CPU_LP64`
403.gcc: `-DSPEC_CPU_LP64`
429.mcf: `-DSPEC_CPU_LP64`
445.gobmk: `-DSPEC_CPU_LP64`
456.hmmer: `-DSPEC_CPU_LP64`
458.sjeng: `-DSPEC_CPU_LP64`
462.libquantum: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX`
464.h264ref: `-DSPEC_CPU_LP64`
471.omnetpp: `-DSPEC_CPU_LP64`
473.astar: `-DSPEC_CPU_LP64`
483.xalancbmk: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX`

Base Optimization Flags

C benchmarks:
`-xSSE4.2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32`

C++ benchmarks:
`-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32`
`-Wl,-z,muldefs -L/sh -lsmartheap64`

Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

Peak Compiler Invocation

C benchmarks (except as noted below):
`icc -m64`

400.perlbench: `icc -m32`

445.gobmk: `icc -m32`

464.h264ref: `icc -m32`

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
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
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) -prof-use(pass 2) -opt-prefetch -ansi-alias

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

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -inline-calloc -opt-malloc-options=3 -auto-ilp32

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias

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

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

462.libquantum: basepeak = yes

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(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) -opt-ra-region-strategy=block -ansi-alias -Wl,-z,muldefs -L/sh -lsmartheap

Continued on next page

Peak Optimization Flags (Continued)

473.astar: `basepeak = yes`

483.xalancbmk: `-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias -Wl,-z,muldefs -L/sh -lsmartheap`

Peak Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

The flags files that were used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.html`
`http://www.spec.org/cpu2006/flags/Bull-Platform-Settings-V1.2.20130313.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.xml`
`http://www.spec.org/cpu2006/flags/Bull-Platform-Settings-V1.2.20130313.xml`

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.2.
Report generated on Thu Jul 24 14:43:44 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 12 March 2013.