



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

SPECint®_rate2006 = 330

NovaScale R430 F2 (Intel Xeon X5660, 2.8 GHz)

SPECint_rate_base2006 = 311

CPU2006 license: 20

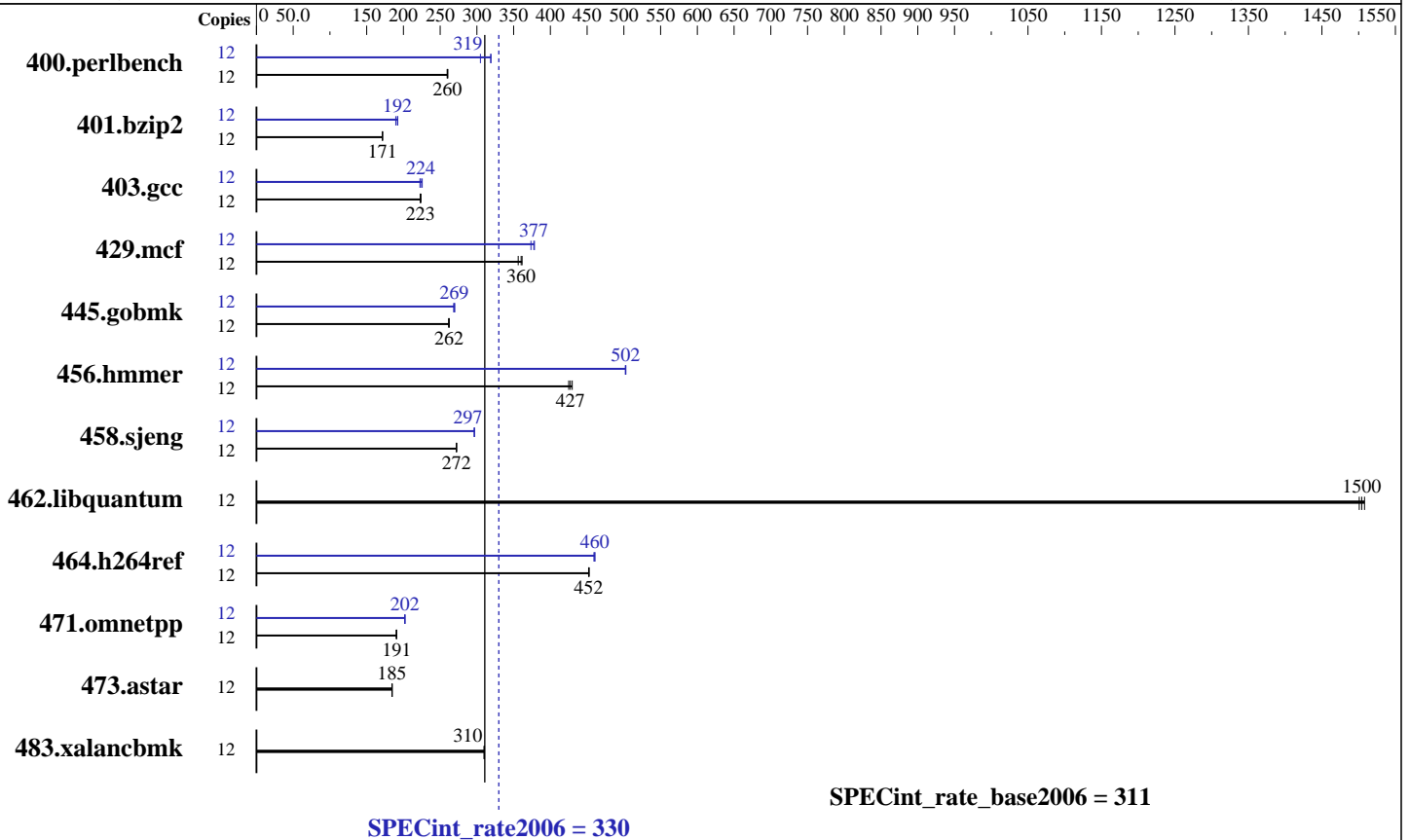
Test sponsor: Bull SAS

Tested by: Dell Inc.

Test date: Jun-2011

Hardware Availability: Mar-2010

Software Availability: Jan-2011



Hardware

CPU Name: Intel Xeon X5660
 CPU Characteristics: Intel Turbo Boost Technology up to 3.20 GHz
 CPU MHz: 2800
 FPU: Integrated
 CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip, 2 threads/core
 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: 12 MB I+D on chip per chip
 Other Cache: None
 Memory: 48 GB (6 x 8 GB 2Rx4 PC3-10600R-9, ECC)
 Disk Subsystem: 1 x 146 GB 15000 RPM SAS
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 11 SP1 (x86_64), Kernel 2.6.32.12-0.7-default
 Compiler: Intel C++ Compiler XE for applications running on IA-32 Version 12.0.1.116 Build 20101116
 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 V9.01



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

SPECint_rate2006 = 330

NovaScale R430 F2 (Intel Xeon X5660, 2.8 GHz)

SPECint_rate_base2006 = 311

CPU2006 license: 20
Test sponsor: Bull SAS
Tested by: Dell Inc.

Test date: Jun-2011
Hardware Availability: Mar-2010
Software Availability: Jan-2011

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	12	<u>451</u>	<u>260</u>	450	261	452	260	12	385	305	367	319	<u>368</u>	<u>319</u>
401.bzip2	12	<u>675</u>	<u>171</u>	675	172	675	171	12	602	192	611	190	<u>604</u>	<u>192</u>
403.gcc	12	<u>433</u>	<u>223</u>	433	223	431	224	12	428	226	<u>432</u>	<u>224</u>	434	223
429.mcf	12	307	356	<u>304</u>	<u>360</u>	303	361	12	<u>290</u>	<u>377</u>	293	374	289	378
445.gobmk	12	481	261	480	262	<u>480</u>	<u>262</u>	12	<u>467</u>	<u>269</u>	466	270	469	268
456.hammer	12	261	430	<u>262</u>	<u>427</u>	263	425	12	223	502	<u>223</u>	<u>502</u>	223	503
458.sjeng	12	<u>533</u>	<u>272</u>	534	272	533	272	12	490	296	<u>490</u>	<u>297</u>	489	297
462.libquantum	12	<u>165</u>	<u>1500</u>	166	1500	165	1510	12	<u>165</u>	<u>1500</u>	166	1500	165	1510
464.h264ref	12	587	452	<u>587</u>	<u>452</u>	586	453	12	577	461	<u>577</u>	<u>460</u>	578	459
471.omnetpp	12	<u>393</u>	<u>191</u>	393	191	395	190	12	<u>371</u>	<u>202</u>	371	202	372	202
473.astar	12	457	184	<u>457</u>	<u>185</u>	456	185	12	457	184	<u>457</u>	<u>185</u>	456	185
483.xalancbmk	12	267	310	267	310	<u>267</u>	<u>310</u>	12	267	310	267	310	<u>267</u>	<u>310</u>

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
'mount -t hugetlbfs nodev /mnt/hugepages' was used to enable large pages
echo NNN > /proc/sys/vm/nr_hugepages
export HUGETLB_MORECORE=yes
```

Platform Notes

BIOS Settings:
Power Management = Maximum Performance (Default = Active Power Controller)
Data Reuse = Disabled (Default = Enabled)
Logical Processor = Disabled (Default = Enabled)

General Notes

Binaries were compiled on RHEL5.5
The Dell PowerEdge R410 and
the Bull NovaScale R430 F2 models are electronically equivalent.
The results have been measured on a Dell PowerEdge R410 model.



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

SPECint_rate2006 = 330

NovaScale R430 F2 (Intel Xeon X5660, 2.8 GHz)

SPECint_rate_base2006 = 311

CPU2006 license: 20
Test sponsor: Bull SAS
Tested by: Dell Inc.

Test date: Jun-2011
Hardware Availability: Mar-2010
Software Availability: Jan-2011

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 -opt-prefetch
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

C++ benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/smartheap -lsmartheap
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

Base Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

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

400.perlbench: icc -m64

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

SPECint_rate2006 = 330

NovaScale R430 F2 (Intel Xeon X5660, 2.8 GHz)

SPECint_rate_base2006 = 311

CPU2006 license: 20
Test sponsor: Bull SAS
Tested by: Dell Inc.

Test date: Jun-2011
Hardware Availability: Mar-2010
Software Availability: Jan-2011

Peak Compiler Invocation (Continued)

C++ benchmarks:
icpc -m32

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
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)
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

401.bzip2: -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 -auto-ilp32 -ansi-alias
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

429.mcf: -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 -auto-ilp32

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias -auto-ilp32

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

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 -auto-ilp32
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

462.libquantum: basepeak = yes

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

SPECint_rate2006 = 330

NovaScale R430 F2 (Intel Xeon X5660, 2.8 GHz)

SPECint_rate_base2006 = 311

CPU2006 license: 20

Test sponsor: Bull SAS

Tested by: Dell Inc.

Test date: Jun-2011

Hardware Availability: Mar-2010

Software Availability: Jan-2011

Peak Optimization Flags (Continued)

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)
-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs
-L/smartheap -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

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-ic12.0-linux64-revB.html>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20110524.00.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.xml>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20110524.00.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 v1.1.

Report generated on Thu Jul 24 00:01:02 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 2 August 2011.