



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

SPECint®_rate2006 = 344

NovaScale R480 F2 (Intel Xeon E7520, 1.87 GHz)

SPECint_rate_base2006 = 324

CPU2006 license: 20

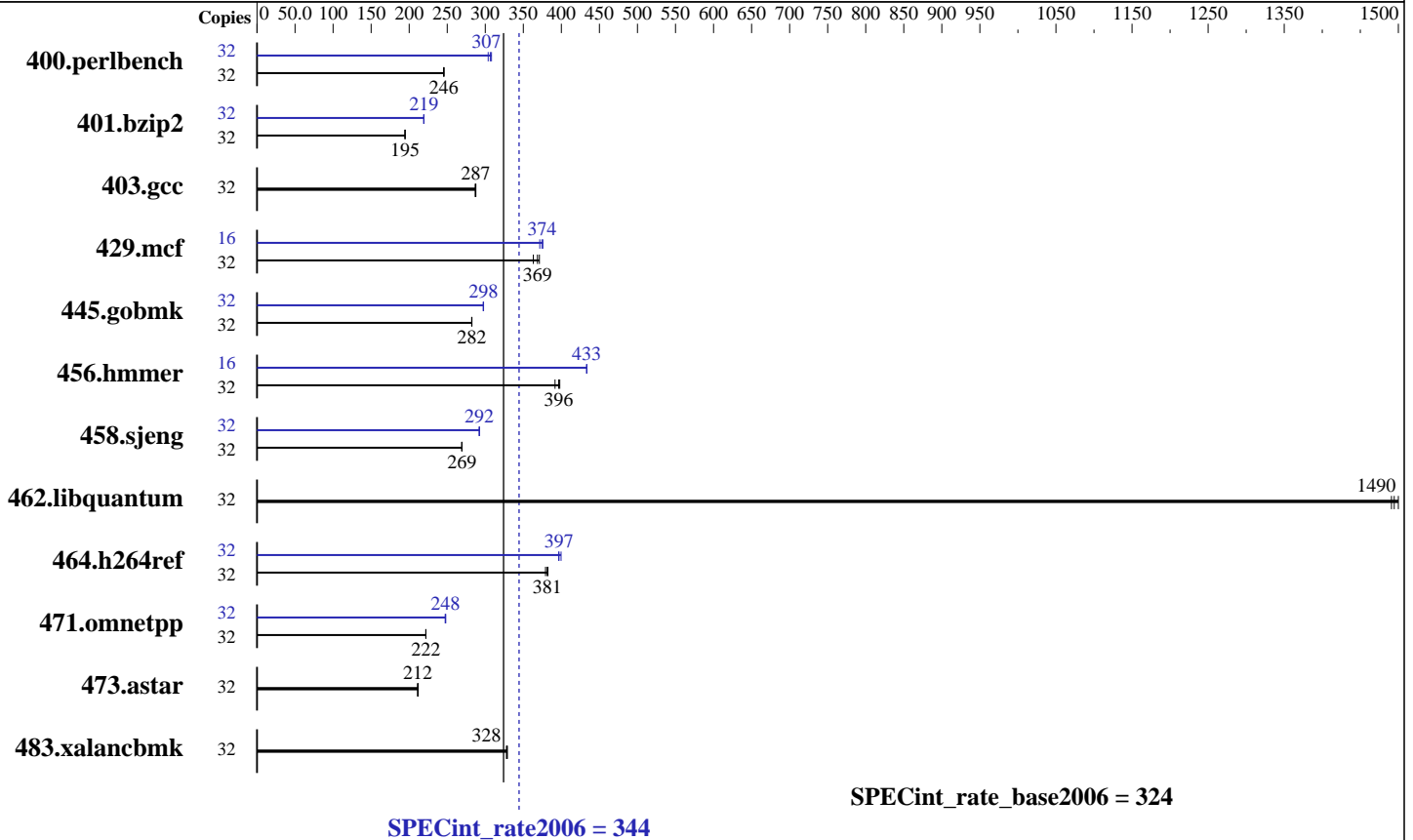
Test sponsor: Bull SAS

Tested by: Dell Inc.

Test date: Apr-2011

Hardware Availability: Jul-2011

Software Availability: Jan-2011



Hardware

CPU Name: Intel Xeon E7520
 CPU Characteristics: 1866
 CPU MHz: 1866
 FPU: Integrated
 CPU(s) enabled: 16 cores, 4 chips, 4 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: 18 MB I+D on chip per chip
 Other Cache: None
 Memory: 512 GB (64 x 8 GB 4Rx8 PC3-8500R-7, ECC, running at 800 MHz)
 Disk Subsystem: 1 x 500 GB 7200 RPM SAS 6Gb
 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 = 344

NovaScale R480 F2 (Intel Xeon E7520, 1.87 GHz)

SPECint_rate_base2006 = 324

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

Test date: Apr-2011
Hardware Availability: Jul-2011
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	32	1275	245	1272	246	<u>1273</u>	<u>246</u>	32	<u>1020</u>	<u>307</u>	1029	304	1015	308
401.bzip2	32	1586	195	<u>1587</u>	<u>195</u>	1588	194	32	<u>1408</u>	<u>219</u>	1409	219	1407	219
403.gcc	32	896	288	899	287	<u>896</u>	<u>287</u>	32	896	288	899	287	<u>896</u>	<u>287</u>
429.mcf	32	786	371	804	363	<u>792</u>	<u>369</u>	16	393	372	388	376	<u>390</u>	<u>374</u>
445.gobmk	32	<u>1189</u>	<u>282</u>	1190	282	1188	282	32	1130	297	<u>1128</u>	<u>298</u>	1128	298
456.hammer	32	750	398	<u>753</u>	<u>396</u>	762	392	16	345	433	344	433	<u>344</u>	<u>433</u>
458.sjeng	32	1440	269	<u>1437</u>	<u>269</u>	1437	269	32	1325	292	1325	292	<u>1325</u>	<u>292</u>
462.libquantum	32	<u>444</u>	<u>1490</u>	442	1500	445	1490	32	<u>444</u>	<u>1490</u>	442	1500	445	1490
464.h264ref	32	1852	382	<u>1857</u>	<u>381</u>	1868	379	32	<u>1784</u>	<u>397</u>	1772	400	1787	396
471.omnetpp	32	901	222	<u>901</u>	<u>222</u>	901	222	32	809	247	807	248	<u>807</u>	<u>248</u>
473.astar	32	1065	211	<u>1062</u>	<u>212</u>	1061	212	32	1065	211	<u>1062</u>	<u>212</u>	1061	212
483.xalancbmk	32	671	329	<u>673</u>	<u>328</u>	673	328	32	671	329	<u>673</u>	<u>328</u>	673	328

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 28800 > /proc/sys/vm/nr_hugepages
export HUGETLB_MORECORE=yes
export LD_PRELOAD=/usr/lib64/libhugetlbfs.so
```

Platform Notes

BIOS Settings:
Power Management = Maximum Performance (Default = Active Power Controller)

General Notes

The Dell PowerEdge R910 and the Bull NovaScale R480 F2 models are electronically equivalent. The results have been measured on a Dell PowerEdge R910 model. Binaries were compiled on RHEL5.5



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

SPECint_rate2006 = 344

NovaScale R480 F2 (Intel Xeon E7520, 1.87 GHz)

SPECint_rate_base2006 = 324

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

Test date: Apr-2011
Hardware Availability: Jul-2011
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 = 344

NovaScale R480 F2 (Intel Xeon E7520, 1.87 GHz)

SPECint_rate_base2006 = 324

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

Test date: Apr-2011
Hardware Availability: Jul-2011
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: basepeak = yes

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

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

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

SPECint_rate2006 = 344

NovaScale R480 F2 (Intel Xeon E7520, 1.87 GHz)

SPECint_rate_base2006 = 324

CPU2006 license: 20

Test sponsor: Bull SAS

Tested by: Dell Inc.

Test date: Apr-2011

Hardware Availability: Jul-2011

Software Availability: Jan-2011

Peak Optimization Flags (Continued)

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 Wed Jul 23 20:14:54 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 24 May 2011.