



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## SGI

SGI Altix ICE 8200EX (Intel Xeon X5570, 2.93 GHz)

SPECint®\_rate2006 = 999

SPECint\_rate\_base2006 = 931

CPU2006 license: 4

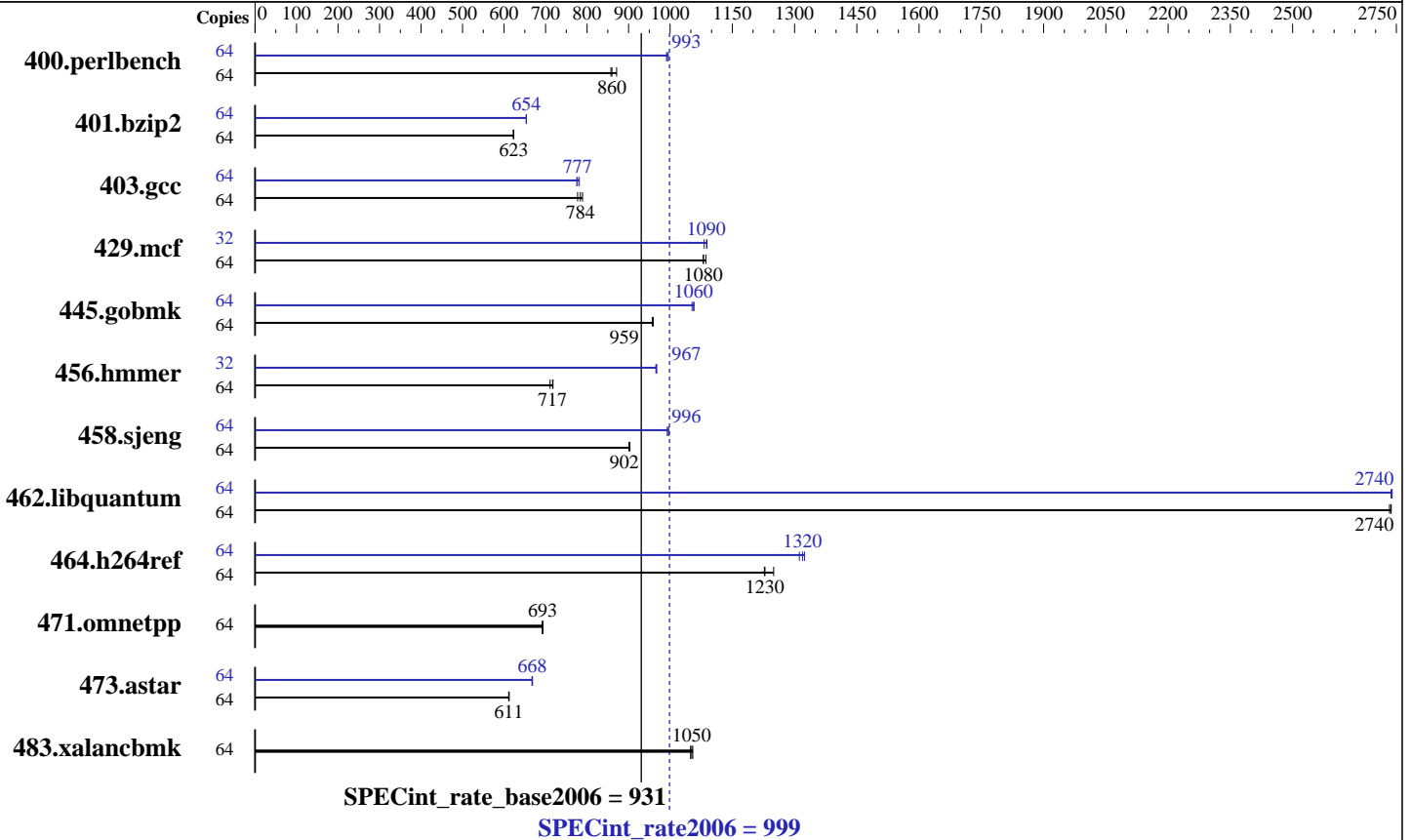
Test sponsor: SGI

Tested by: SGI

Test date: May-2009

Hardware Availability: Mar-2009

Software Availability: Feb-2009



### Hardware

CPU Name: Intel Xeon X5570  
 CPU Characteristics: Quad Core, 2.93 GHz  
 Intel Turbo Boost Technology up to 3.33 GHz  
 CPU MHz: 2933  
 FPU: Integrated  
 CPU(s) enabled: 32 cores, 8 chips, 4 cores/chip, 2 threads/core  
 CPU(s) orderable: 1,2 chips per blade, 2-16384 blades  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 256 KB I+D on chip per core  
 L3 Cache: 8 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 192 GB (4 x 12\*4GB DDR3-1066 CL7 RDIMMs)  
 Disk Subsystem: 13 TB Lustre Parallel Filesystem  
 1 Metadata Server and 6 Object Storage Servers  
 96 x 136 GB SAS (Seagate Cheetah 15000 rpm)  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 10 (x86\_64) SP2  
 with patch Linux kernel 20080917,  
 Kernel 2.6.16.60-0.30-smp  
 Compiler: Intel C++ Compiler 11.0 for Linux  
 Build 20090131 Package ID: l\_cproc\_p\_11.0.080  
 Auto Parallel: No  
 File System: lustre v1.6.7 over DDR Infiniband  
 System State: Multi-user, run level 3  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: SGI ProPack 6 for Linux Service Pack 2  
 Microquill SmartHeap V8.1  
 Binutils 2.18.50.0.7.20080502



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## SGI

SGI Altix ICE 8200EX (Intel Xeon X5570, 2.93 GHz)

SPECint\_rate2006 = 999

SPECint\_rate\_base2006 = 931

CPU2006 license: 4

Test sponsor: SGI

Tested by: SGI

Test date: May-2009

Hardware Availability: Mar-2009

Software Availability: Feb-2009

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	64	<u>727</u>	<b>860</b>	729	857	718	871	64	631	991	628	996	<u>629</u>	<b>993</b>
401.bzip2	64	993	622	<u>991</u>	<b>623</b>	991	623	64	945	653	<u>945</u>	<b>654</b>	944	654
403.gcc	64	663	777	<b>657</b>	<b>784</b>	653	789	64	659	781	665	775	<b>663</b>	<b>777</b>
429.mcf	64	<b>540</b>	<b>1080</b>	537	1090	540	1080	32	<b>268</b>	<b>1090</b>	268	1090	270	1080
445.gobmk	64	<b>700</b>	<b>959</b>	700	960	701	957	64	638	1050	635	1060	<b>635</b>	<b>1060</b>
456.hammer	64	<b>833</b>	<b>717</b>	840	711	832	718	32	<b>309</b>	<b>967</b>	309	968	309	966
458.sjeng	64	860	901	<b>859</b>	<b>902</b>	857	903	64	<b>777</b>	<b>996</b>	780	993	777	996
462.libquantum	64	484	2740	485	2730	<b>485</b>	<b>2740</b>	64	484	2740	484	2740	<b>484</b>	<b>2740</b>
464.h264ref	64	1133	1250	1154	1230	<b>1153</b>	<b>1230</b>	64	1070	1320	1080	1310	<b>1074</b>	<b>1320</b>
471.omnetpp	64	578	692	577	693	<b>577</b>	<b>693</b>	64	578	692	577	693	<b>577</b>	<b>693</b>
473.astar	64	735	611	734	612	<b>735</b>	<b>611</b>	64	672	668	<b>672</b>	<b>668</b>	673	667
483.xalancbmk	64	421	1050	<b>420</b>	<b>1050</b>	419	1050	64	421	1050	<b>420</b>	<b>1050</b>	419	1050

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.  
A submit.pl script was used to distribute benchmark copies across the 4 blades and to pin processes to cores using dplace. Each blade runs a separate instance of the operating system.

## General Notes

Adjacent cache line prefetch enabled  
System has 4 blades with 2 chips/blade.

## Base Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## SGI

SGI Altix ICE 8200EX (Intel Xeon X5570,  
2.93 GHz)

SPECint\_rate2006 = 999

SPECint\_rate\_base2006 = 931

CPU2006 license: 4

Test sponsor: SGI

Tested by: SGI

Test date: May-2009

Hardware Availability: Mar-2009

Software Availability: Feb-2009

## Base Portability Flags (Continued)

462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -inline-calloc  
-opt-malloc-options=3 -opt-prefetch

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/spec/cpu2006.1.1/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/Compiler/11.0/080/bin/intel64/icc

456.hmmer: /opt/intel/Compiler/11.0/080/bin/intel64/icc

458.sjeng: /opt/intel/Compiler/11.0/080/bin/intel64/icc

C++ benchmarks (except as noted below):

icpc

473.astar: /opt/intel/Compiler/11.0/080/bin/intel64/icpc

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
401.bzip2: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64  
458.sjeng: -DSPEC\_CPU\_LP64

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## SGI

SGI Altix ICE 8200EX (Intel Xeon X5570,  
2.93 GHz)

SPECint\_rate2006 = 999

SPECint\_rate\_base2006 = 931

CPU2006 license: 4  
Test sponsor: SGI  
Tested by: SGI

Test date: May-2009  
Hardware Availability: Mar-2009  
Software Availability: Feb-2009

## Peak Portability Flags (Continued)

462.libquantum: -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 -opt-prefetch

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 -inline-alloc  
-opt-malloc-options=3

429.mcf: -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

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  
-opt-malloc-options=3 -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: basepeak = yes

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 -auto-ilp32  
-Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap64

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## SGI

SGI Altix ICE 8200EX (Intel Xeon X5570, 2.93 GHz)

**SPECint\_rate2006 = 999**

**SPECint\_rate\_base2006 = 931**

**CPU2006 license:** 4

**Test sponsor:** SGI

**Tested by:** SGI

**Test date:** May-2009

**Hardware Availability:** Mar-2009

**Software Availability:** Feb-2009

## Peak Optimization Flags (Continued)

483.xalanbmk: 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-ic11.0-int-linux64-revA.20090710.13.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090710.13.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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.1.  
Report generated on Wed Jul 23 00:34:36 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 28 May 2009.