



# SPEC® CINT2006 Result

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**SGI**

**SPECint\_rate2006 = Not Run**

SGI Altix UV 1000 (Intel Xeon E7-4870, 2.4 GHz)

**SPECint\_rate\_base2006 = 27900**

**CPU2006 license:** 4

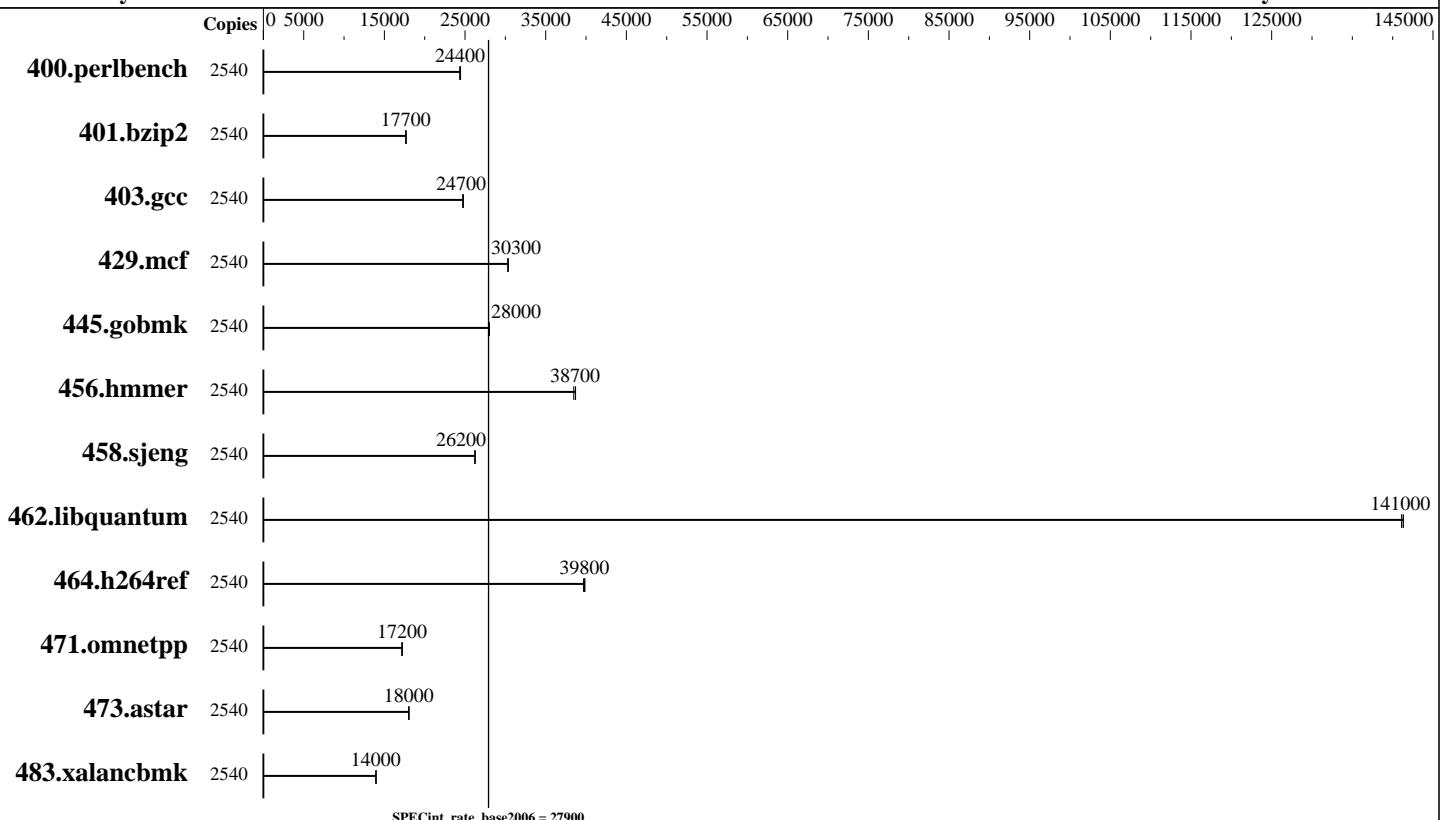
**Test date:** Feb-2011

**Test sponsor:** SGI

**Hardware Availability:** Apr-2011

**Tested by:** SGI

**Software Availability:** Mar-2011



## Hardware

CPU Name: Intel Xeon E7-4870  
 CPU Characteristics: Intel Turbo Boost Technology not enabled  
 CPU MHz: 2400  
 FPU: Integrated  
 CPU(s) enabled: 1280 cores, 128 chips, 10 cores/chip, 2 threads/core  
 CPU(s) orderable: 2-256 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: 30 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 4 TB (1024 x 4 GB 4Rx8 PC3-8500R-7, ECC)  
 Disk Subsystem: 4 TB tmpfs  
 Other Hardware: NUMALink5 routers

## Software

Operating System: SUSE Linux Enterprise Server 11 (x86\_64) SP1, Kernel 2.6.32.12-0.7.1-uv  
 Compiler: Intel C++ Compiler XE for applications running on IA-32 Version 12.0.1.116 Build 20101116  
 Auto Parallel: No  
 File System: tmpfs  
 System State: Run Level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: Not Applicable  
 Other Software: Microquill SmartHeap V9.01



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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	2540	1019	24300	<b>1017</b>	<b>24400</b>	1015	24400							
401.bzip2	2540	<b>1387</b>	<b>17700</b>	1385	17700	1388	17700							
403.gcc	2540	825	24800	827	24700	<b>826</b>	<b>24700</b>							
429.mcf	2540	763	30400	<b>764</b>	<b>30300</b>	764	30300							
445.gobmk	2540	955	27900	951	28000	<b>952</b>	<b>28000</b>							
456.hammer	2540	616	38500	612	38700	<b>613</b>	<b>38700</b>							
458.sjeng	2540	1171	26300	<b>1172</b>	<b>26200</b>	1172	26200							
462.libquantum	2540	373	141000	372	141000	<b>373</b>	<b>141000</b>							
464.h264ref	2540	<b>1411</b>	<b>39800</b>	1410	39900	1417	39700							
471.omnetpp	2540	<b>922</b>	<b>17200</b>	922	17200	925	17200							
473.astar	2540	990	18000	<b>988</b>	<b>18000</b>	988	18000							
483.xalancbmk	2540	1256	14000	<b>1256</b>	<b>14000</b>	1254	14000							

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

Large pages were disabled for this run  
Tmpfs filesystem set up with:  

```
mkdir -p /mnt/shm
mount -t tmpfs -o size=4096g,rw,mpol=interleave tmpfs /mnt/shm/
The mpol=interleave option sets the NUMA memory allocation
policy for all files to allocate from each node in turn.
```

```
ulimit -s unlimited
Kernel is generally available as 2.6.32.29-0.3.1.2687.3.PTF-default
```

## Platform Notes

OS on 146 GB SAS disk

## General Notes

Binaries compiled on RHEL5.5 with binutils-2.17.50.0.6-14.el5



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## 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/libhugetlbf/ -Wl,-hugetlbf-link=BDT

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/smartheap -lsmartheap  
-B /usr/share/libhugetlbf/ -Wl,-hugetlbf-link=BDT

## Base 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/platform.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>  
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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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