



# SPEC® CINT2006 Result

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## ScaleMP

vSMP Foundation with PowerEdge M610  
(Intel Xeon X5570, 2.93 GHz)

**SPECint\_rate2006 = Not Run**

**SPECint\_rate\_base2006 = 3150**

**CPU2006 license:** 2929

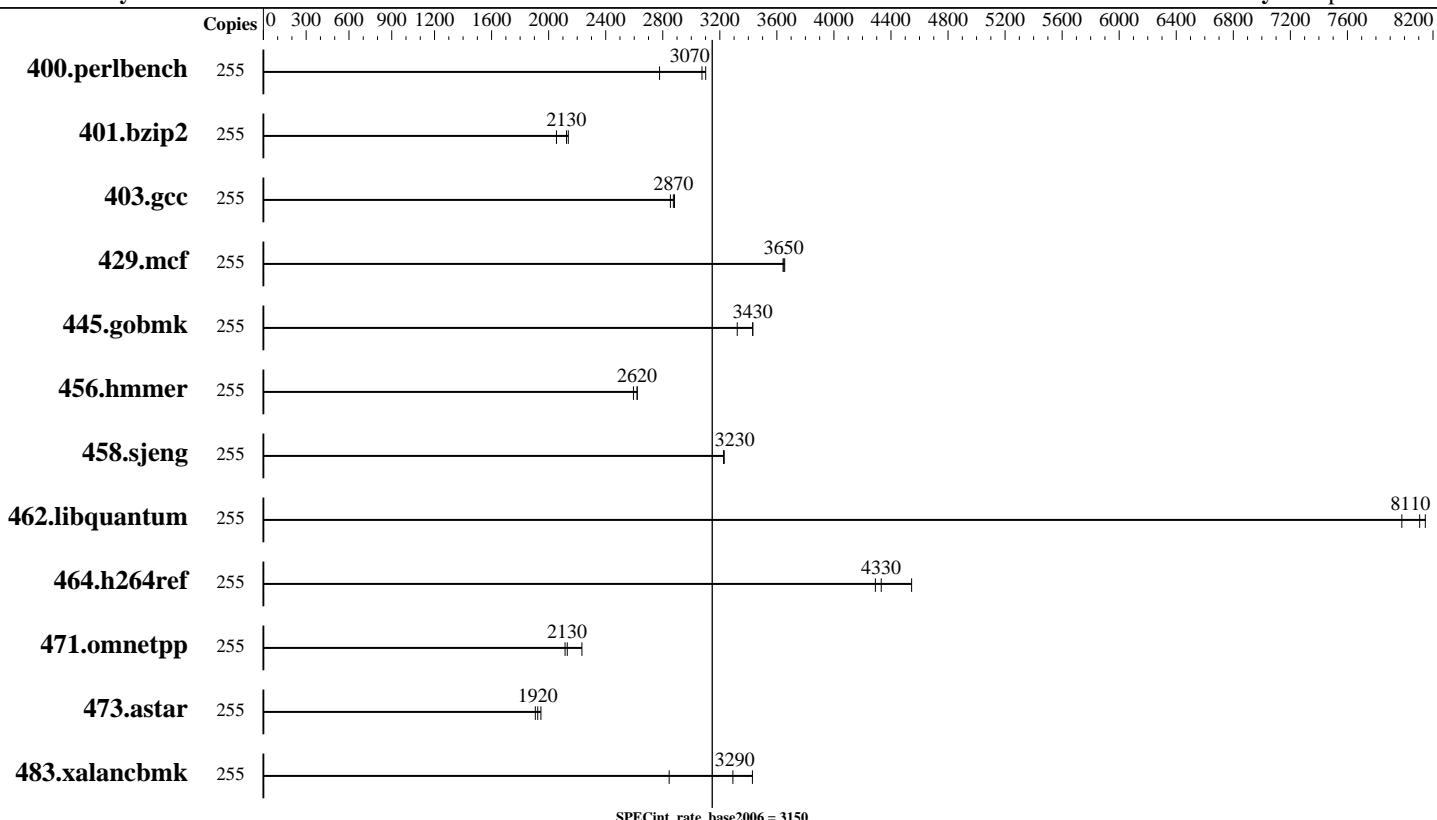
**Test date:** Aug-2009

**Test sponsor:** ScaleMP

**Hardware Availability:** Apr-2009

**Tested by:** ScaleMP

**Software Availability:** Apr-2009



### Hardware

CPU Name: Intel Xeon X5570  
CPU Characteristics: Intel Turbo Boost Technology is not-enabled  
CPU MHz: 2933  
FPU: Integrated  
CPU(s) enabled: 128 cores, 32 chips, 4 cores/chip, 2 threads/core  
CPU(s) orderable: 8,16,24,32,40,48,56,64,96,128 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: 8 MB I+D on chip per chip  
Other Cache: 92 GB I+D off chip per system  
Memory: 768 GB (16 x 2 x 6 x 4 GB DDR3-1066R, ECC, CL9)  
Disk Subsystem: 16 x 160 GB SATA, 7200 RPM  
Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 5.3 (Tikanga)  
Compiler: Kernel: 2.6.21.7-16.vSMP.nomc  
Auto Parallel: Intel C++ Compiler 11.0 for Linux  
File System: Build 20081105 Package ID: l\_cproc\_p\_11.0.074  
System State: No  
Base Pointers: xfs  
Peak Pointers: Multi-user, run level 3  
Other Software: 32-bit  
Not Applicable  
Hoard (libhoard) 3.7.1, released Feb. 08, 2008  
ScaleMP vSMP Foundation 2.0.65.35



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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	255	897	2780	<b>810</b>	<b>3070</b>	803	3100							
401.bzip2	255	1198	2050	1151	2140	<b>1158</b>	<b>2130</b>							
403.gcc	255	719	2850	<b>714</b>	<b>2870</b>	712	2880							
429.mcf	255	636	3660	638	3640	<b>637</b>	<b>3650</b>							
445.gobmk	255	805	3320	<b>780</b>	<b>3430</b>	780	3430							
456.hammer	255	917	2590	<b>908</b>	<b>2620</b>	908	2620							
458.sjeng	255	<b>956</b>	<b>3230</b>	956	3230	956	3230							
462.libquantum	255	662	7980	<b>652</b>	<b>8110</b>	649	8150							
464.h264ref	255	1315	4290	<b>1303</b>	<b>4330</b>	1242	4540							
471.omnetpp	255	754	2120	714	2230	<b>748</b>	<b>2130</b>							
473.astar	255	939	1910	920	1950	<b>931</b>	<b>1920</b>							
483.xalancbmk	255	618	2840	<b>535</b>	<b>3290</b>	513	3430							

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

## Platform Notes

### ScaleMP

vSMP Foundation: 2.0.65.35

### Other Cache:

ScaleMP vSMP Foundation manages cache coherency between the InfiniBand-connected systems via multiple concurrent memory coherency mechanisms, on a per-block basis, based on real-time memory activity access patterns.

This mechanism reserves 92 GB of the main memory across all boards (distributed), which is used as a 4th level cache.

### Hardware Details:

System was aggregated using 16 X Dell PowerEdge M610.

The servers were connected with Mellanox InfiniBand QDR and a QDR switch.

### CPU Characteristics: Intel Turbo Boost Technology not-enabled:

As the prerequisites listed below for enablement of this technology did not exist.

The prerequisites for Turbo Boost Technology are:

- Hardware: Enabling Turbo Boost Technology require BIOS setting.
- Software: OS needs to be ACPI-aware and set P0 power state.



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## Base Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc

## 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 -static -inline-calloc  
-opt-malloc-options=3 -opt-prefetch

C++ benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
/mnt/test/SPEC2006/cpu2006/libhoard.so

## Base 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-revE.20090918.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-revE.20090918.xml>



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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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