



# SPEC® CINT2006 Result

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## ScaleMP

SPECint®\_rate2006 = Not Run

vSMP Foundation (AMD Opteron 6172, 2.10 GHz)

SPECint\_rate\_base2006 = 2170

CPU2006 license: 2929

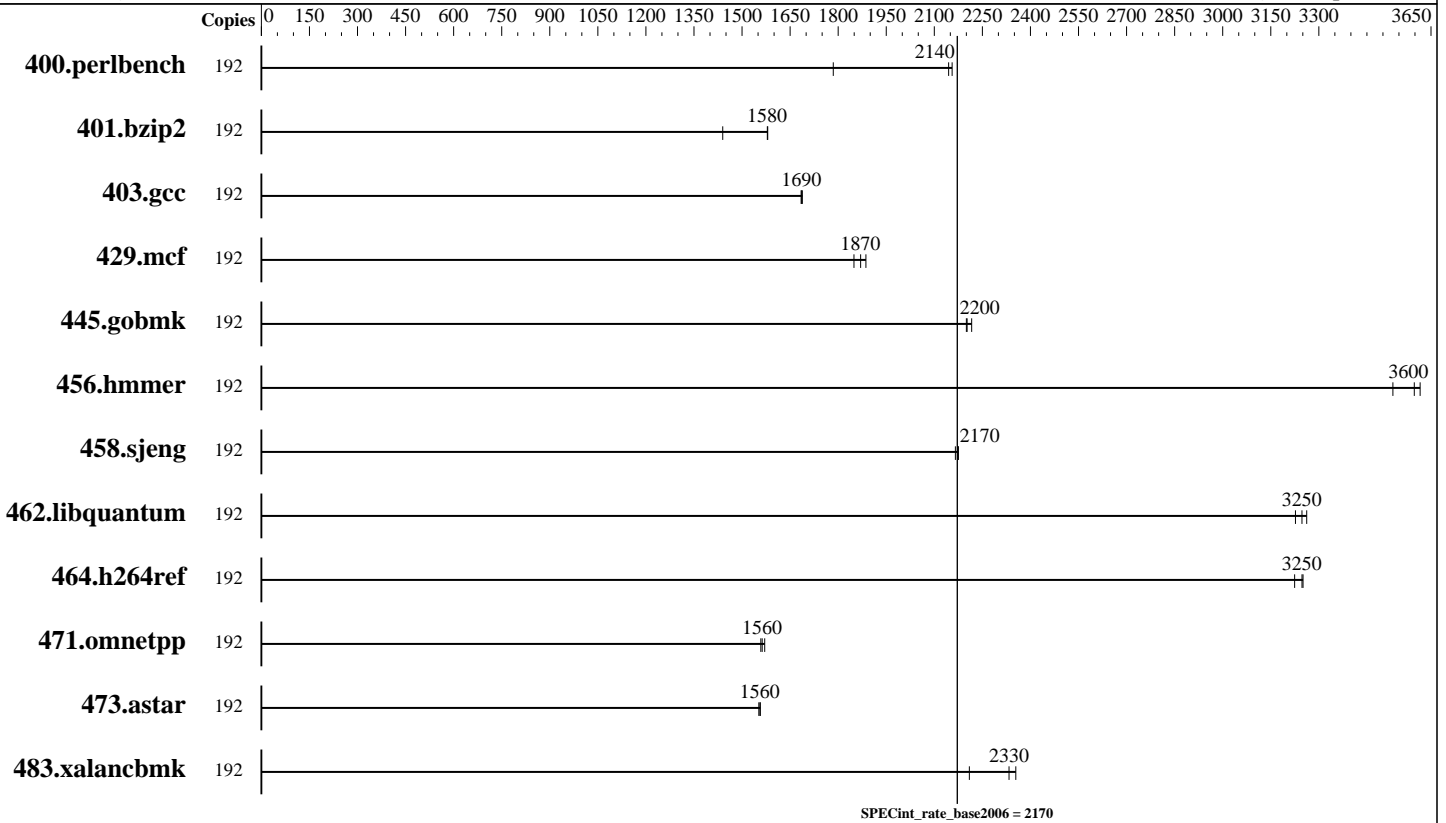
Test sponsor: ScaleMP

Tested by: ScaleMP

Test date: Sep-2011

Hardware Availability: Aug-2010

Software Availability: Sep-2011



### Hardware

CPU Name: AMD Opteron 6172  
 CPU Characteristics:  
 CPU MHz: 2100  
 FPU: Integrated  
 CPU(s) enabled: 192 cores, 16 chips, 12 cores/chip  
 CPU(s) orderable: 2 to 64 boards with 2 to 4 chips per board  
 Primary Cache: 64 KB I + 64 KB D on chip per core  
 Secondary Cache: 512 KB I+D on chip per core  
 L3 Cache: 12 MB I+D on chip per chip, 6 MB shared / 6 cores  
 Other Cache: 60 GB I+D off chip per system  
 Memory: 512 GB (8 x 16 x 4 GB 2Rx4 PC3-10600R-9, ECC)  
 Disk Subsystem: 8 x 250 GB SATA, 7200 RPM  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 5.5 (Tikanga)  
 Kernel 2.6.32.46-5.vSMP  
 Compiler: C/C++/Fortran: Version 4.2.4 of Open64 Compiler Suite  
 Auto Parallel: No  
 File System: xfs  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32/64-bit  
 Peak Pointers: Not Applicable  
 Other Software: Hoard (libhoard) 3.8, 32-bit Library for Linux  
 ScaleMP vSMP Foundation 3.5.284, released Sep. 13, 2011



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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	192	1051	1780	<b><u>875</u></b>	<b><u>2140</u></b>	870	2160							
401.bzip2	192	1287	1440	<b><u>1174</u></b>	<b><u>1580</u></b>	1173	1580							
403.gcc	192	<b><u>917</u></b>	<b><u>1690</u></b>	916	1690	918	1680							
429.mcf	192	928	1890	<b><u>936</u></b>	<b><u>1870</u></b>	947	1850							
445.gobmk	192	<b><u>915</u></b>	<b><u>2200</u></b>	909	2220	915	2200							
456.hammer	192	507	3530	<b><u>498</u></b>	<b><u>3600</u></b>	495	3620							
458.sjeng	192	1068	2170	<b><u>1068</u></b>	<b><u>2170</u></b>	1073	2170							
462.libquantum	192	1220	3260	<b><u>1225</u></b>	<b><u>3250</u></b>	1233	3230							
464.h264ref	192	1318	3220	1307	3250	<b><u>1308</u></b>	<b><u>3250</u></b>							
471.omnetpp	192	764	1570	770	1560	<b><u>768</u></b>	<b><u>1560</u></b>							
473.astar	192	866	1560	868	1550	<b><u>866</u></b>	<b><u>1560</u></b>							
483.xalancbmk	192	600	2210	563	2350	<b><u>568</u></b>	<b><u>2330</u></b>							

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.  
The taskset command was used to bind processes to cores.

## Operating System Notes

'ulimit -s unlimited' was used to set environment stack size  
'ulimit -l 2097152' was used to set environment locked pages in memory limit

## Platform Notes

ScaleMP  
vSMP Foundation: 3.5.284, released Sep. 13, 2011  
See <http://www.scalemp.com>  
Hardware Details:  
System was aggregated using 8 X SuperMicro AS-2122TG-HIBQRF servers.  
The servers were connected with Mellanox InfiniBand QDR and a QDR switch.

## General Notes

The x86 Open64 Compiler Suite is only available from (and supported by) AMD at <http://developer.amd.com/cpu/open64>  
Binaries were compiled on RHEL5.5 with binutils 2.18



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## Base Compiler Invocation

C benchmarks:  
opencc

C++ benchmarks:  
openCC

## Base Portability Flags

```

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX

```

## Base Optimization Flags

C benchmarks:

```

-march=barcelona -mso -Ofast -CG:local_sched_alg=1
-INLINE:aggressive=on -IPA:plimit=8000 -IPA:small_pu=100

```

C++ benchmarks:

```

-march=barcelona -mso -Ofast -m32 -INLINE:aggressive=on
-CG:cmp_peep=on /usr/local/lib/libhoard.so

```

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/x86-open64-424-flags-rate-revC.20111014.html>

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

<http://www.spec.org/cpu2006/flags/x86-open64-424-flags-rate-revC.20111014.xml>



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For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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