SPEC® CINT2006 Result
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IBM Corporation
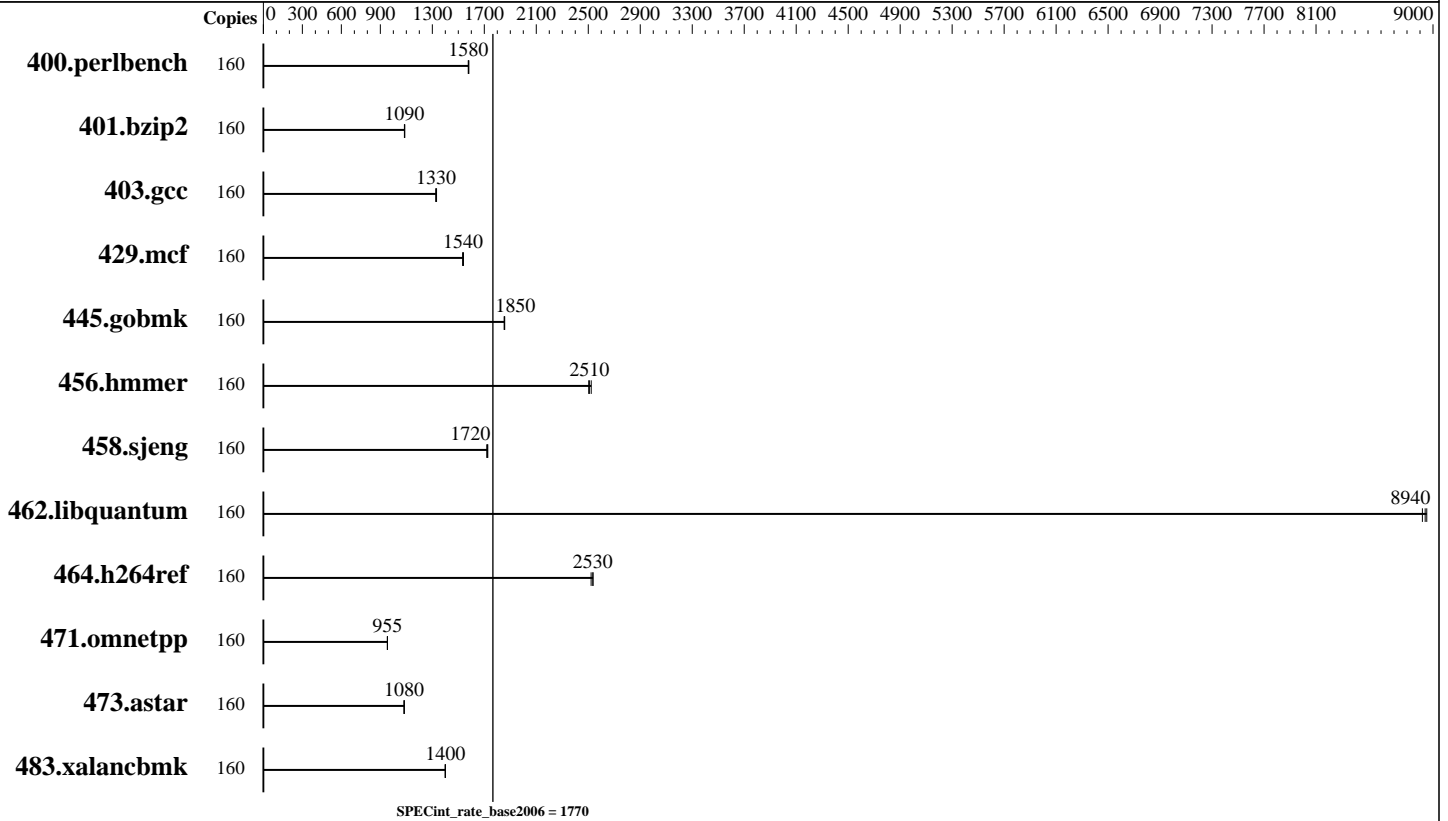
IBM System x3850 X5 (Intel Xeon E7-8870)

$SPECint®\_rate2006 =$ Not Run

$SPECint\_rate\_base2006 =$ 1770

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

Test date: Jul-2011
Hardware Availability: May-2011
Software Availability: Jan-2011

Benchmark	Copies	Result
400.perlbench	160	1580
401.bzip2	160	1090
403.gcc	160	1330
429.mcf	160	1540
445.gobmk	160	1850
456.hmmer	160	2510
458.sjeng	160	1720
462.libquantum	160	8940
464.h264ref	160	2530
471.omnetpp	160	955
473.astar	160	1080
483.xalancbmk	160	1400

SPECint_rate_base2006 = 1770

Hardware

CPU Name:	Intel Xeon E7-8870
CPU Characteristics:	Intel Turbo Boost Technology up to 2.80 GHz
CPU MHz:	2400
FPU:	Integrated
CPU(s) enabled:	80 cores, 8 chips, 10 cores/chip, 2 threads/core
CPU(s) orderable:	2,3,4,5,6,7,8 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:	1 TB (128 x 8 GB 4Rx8 PC3-8500R-7, ECC)
Disk Subsystem:	2 x 147 GB 15k RPM SAS, RAID 0
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

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Results Table

Benchmark	Copies	Base Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Peak Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	160	**991**	**1580**	989	1580	991	1580							
401.bzip2	160	1419	1090	**1422**	**1090**	1423	1090							
403.gcc	160	967	1330	971	1330	**969**	**1330**							
429.mcf	160	**950**	**1540**	948	1540	952	1530							
445.gobmk	160	906	1850	**905**	**1850**	904	1860							
456.hmmer	160	592	2520	596	2500	**595**	**2510**							
458.sjeng	160	1126	1720	**1123**	**1720**	1121	1730							
462.libquantum	160	372	8920	370	8950	**371**	**8940**							
464.h264ref	160	1404	2520	1396	2540	**1397**	**2530**							
471.omnetpp	160	**1048**	**955**	1048	954	1047	955							
473.astar	160	**1037**	**1080**	1037	1080	1036	1080							
483.xalancbmk	160	789	1400	788	1400	**788**	**1400**							

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
echo 1 > /proc/sys/vm/zone_reclaim_mode
'mount -t hugetlbfs nodev /mnt/hugepages' was used to enable large pages
echo 104000 > /proc/sys/vm/nr_hugepages
export HUGETLB_MORECORE=yes
export LD_PRELOAD=/usr/lib64/libhugetlbfs.so
```

Platform Notes

```
BIOS Settings:
Turbo Boost Power Optimization set to Traditional
```

General Notes

```
Binaries were compiled on RHEL5.5
```

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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/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

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/IBM-platform-linux64-revA.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/IBM-platform-linux64-revA.xml

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