SPEC® CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM BladeCenter HS22V (Intel Xeon X5690)

SPECint®_rate2006 = 412

SPECint_rate_base2006 = 384

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

Test date: Jan-2011
Hardware Availability: Feb-2011
Software Availability: Jan-2011

Copies

Benchmark		
400.perlbench	24	434
	24	348
401.bzip2	24	248
	24	230
403.gcc	24	250
	24	250
429.mcf	12	369
	24	296
445.gobmk	24	425
	24	403
456.hmmer	12	587
	24	497
458.sjeng	24	425
	24	391
462.libquantum	24	1920
464.h264ref	24	561
471.omnetpp	24	238
	24	231
473.astar	24	237
483.xalancbmk	24	374

SPECint_rate_base2006 = 384

SPECint_rate2006 = 412

Hardware

CPU Name: Intel Xeon X5690
CPU Characteristics: Intel Turbo Boost Technology up to 3.73 GHz
CPU MHz: 3467
FPU: Integrated
CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip, 2 threads/core
CPU(s) orderable: 1,2 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: 12 MB I+D on chip per chip
Other Cache: None
Memory: 48 GB (12 x 4 GB 2Rx8 PC3-10600R-9, ECC)
Disk Subsystem: 2 x 50 GB SATA, SSD, 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
Binaries compiled on RHEL5.5 with binutils-2.17.50.0.6-14.el5

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM BladeCenter HS22V (Intel Xeon X5690)

SPECint_rate2006 = 412
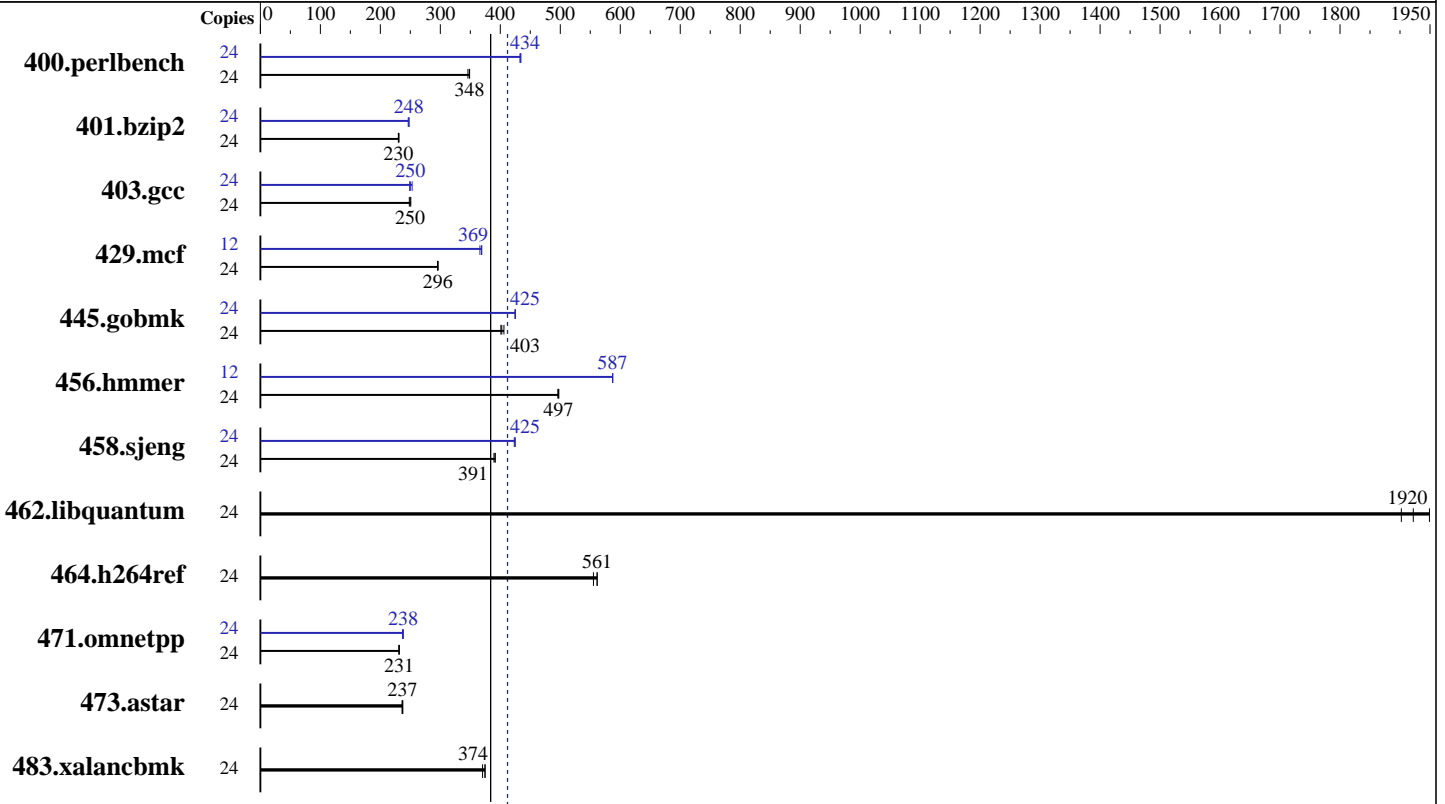
SPECint_rate_base2006 = 384

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

Test date: Jan-2011
Hardware Availability: Feb-2011
Software Availability: Jan-2011

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	24	**673**	**348**	678	346	672	349	24	**540**	**434**	542	433	540	434
401.bzip2	24	1002	231	**1005**	**230**	1007	230	24	**935**	**248**	940	246	935	248
403.gcc	24	778	248	770	251	**774**	**250**	24	776	249	764	253	**773**	**250**
429.mcf	24	741	296	**740**	**296**	739	296	12	299	366	296	369	**297**	**369**
445.gobmk	24	628	401	**625**	**403**	620	406	24	592	425	593	425	**592**	**425**
456.hmmer	24	450	498	**451**	**497**	451	496	12	**191**	**587**	191	587	191	587
458.sjeng	24	742	391	**742**	**391**	746	389	24	**684**	**425**	686	423	684	425
462.libquantum	24	255	1950	**259**	**1920**	261	1900	24	255	1950	**259**	**1920**	261	1900
464.h264ref	24	956	555	**946**	**561**	946	562	24	956	555	**946**	**561**	946	562
471.omnetpp	24	649	231	648	232	**649**	**231**	24	633	237	630	238	**630**	**238**
473.astar	24	709	237	**711**	**237**	713	236	24	709	237	**711**	**237**	713	236
483.xalancbmk	24	447	370	442	375	**442**	**374**	24	447	370	442	375	**442**	**374**

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
'mount -t hugetlbfs nodev /mnt/hugepages' was used to enable large pages
echo 10800 > /proc/sys/vm/nr_hugepages
export HUGETLB_MORECORE=yes
export LD_PRELOAD=/usr/lib64/libhugetlbfs.so
```

Platform Notes

```
Load Default BIOS Settings and then change the following
Turbo Mode enabled
Turbo Boost set to Traditional
Power C-states enabled
Demand Scrub disabled
```

Base Compiler Invocation

C benchmarks:
```
icc  -m32
```

Continued on next page

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM BladeCenter HS22V (Intel Xeon X5690)

SPECint_rate2006 =   412

SPECint_rate_base2006 = 384

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

Test date: Jan-2011
Hardware Availability: Feb-2011
Software Availability: Jan-2011

Base Compiler Invocation (Continued)

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

Peak Compiler Invocation

C benchmarks (except as noted below):
    icc -m32

    400.perlbench: icc -m64

      401.bzip2: icc -m64

    456.hmmer: icc -m64

      458.sjeng: icc -m64

C++ benchmarks:
    icpc -m32

SPEC CINT2006 Result

IBM Corporation

IBM BladeCenter HS22V (Intel Xeon X5690)

SPECint_rate2006 =   412

SPECint_rate_base2006 = 384

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

Test date: Jan-2011
Hardware Availability: Feb-2011
Software Availability: Jan-2011

Peak Portability Flags

```
400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
    401.bzip2: -DSPEC_CPU_LP64
    456.hmmer: -DSPEC_CPU_LP64
    458.sjeng: -DSPEC_CPU_LP64
 462.libquantum: -DSPEC_CPU_LINUX
 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) -prof-use(pass 2)
               -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

    401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
               -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
               -opt-prefetch -auto-ilp32 -ansi-alias
               -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

      403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div
               -B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

      429.mcf: -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 -auto-ilp32

    445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
               -ansi-alias -auto-ilp32

    456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
               -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

    458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
               -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
               -unroll4 -auto-ilp32
               -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

 462.libquantum: basepeak = yes

   464.h264ref: basepeak = yes
```

C++ benchmarks:

```
  471.omnetpp: -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=block -Wl,-z,muldefs
               -L/smartheap -lsmartheap
```

Continued on next page

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM BladeCenter HS22V (Intel Xeon X5690)

SPECint_rate2006 =　　412

SPECint_rate_base2006 = 384

CPU2006 license: 11			**Test date:**	Jan-2011
Test sponsor:	IBM Corporation		**Hardware Availability:**	Feb-2011
Tested by:	IBM Corporation		**Software Availability:**	Jan-2011

Peak Optimization Flags (Continued)

473.astar: basepeak = yes

483.xalancbmk: 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-ic12.0-linux64-revA.20110303.01.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revA.20110303.01.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.

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 16:18:32 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 3 March 2011.