



SPEC[®] CINT2006 Result

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Fujitsu

SPECint[®]_rate2006 = 415

PRIMERGY BX922 S2, Intel Xeon X5690, 3.47 GHz

SPECint_rate_base2006 = 388

CPU2006 license: 19

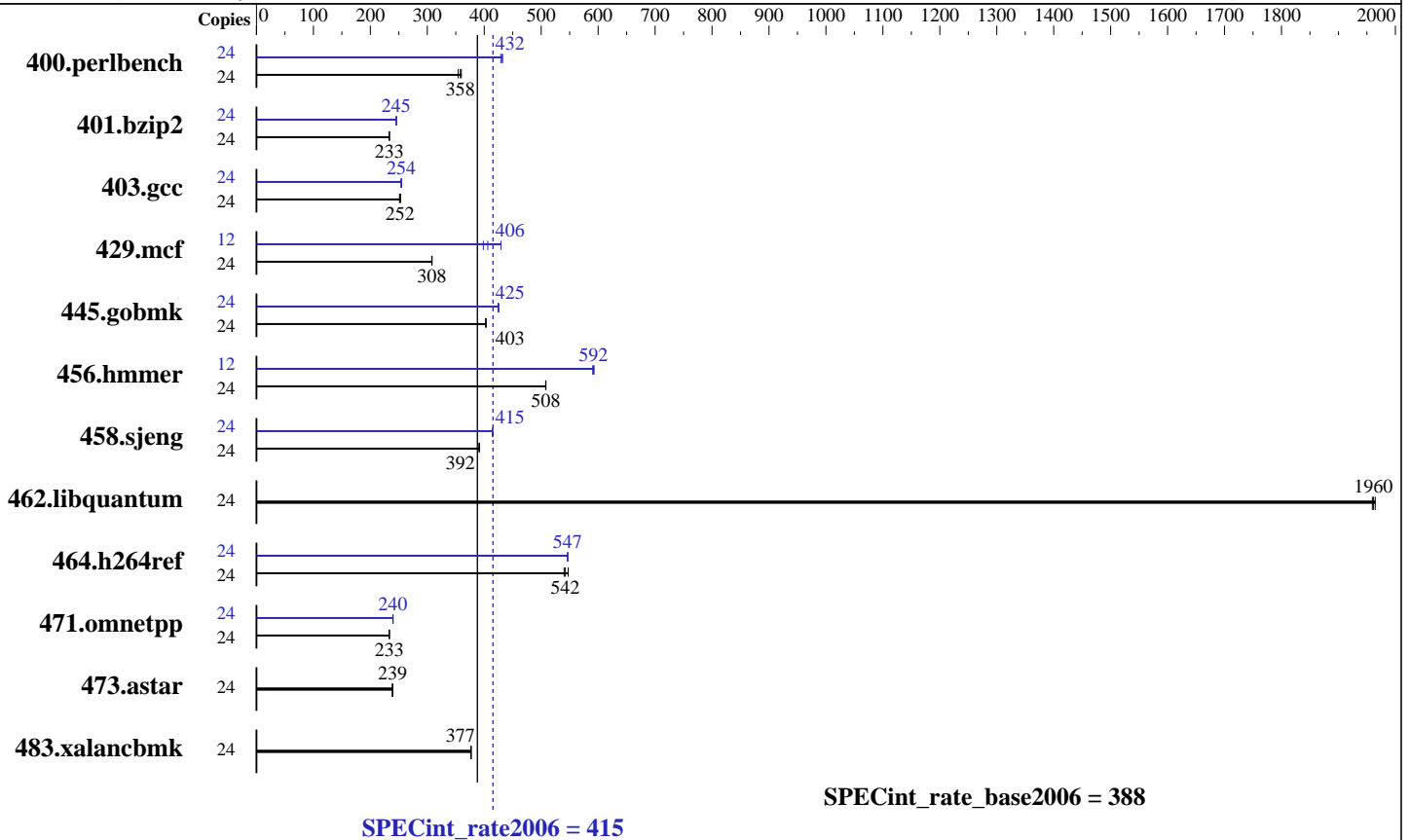
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Jan-2011

Hardware Availability: Feb-2011

Software Availability: Nov-2010



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 2Rx4 PC3-10600R-9, ECC)
 Disk Subsystem: 1 x SAS, 300 GB, 10000 RPM
 Other Hardware: --

Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64) with SP1, Kernel 2.6.32.12-0.7-default
 Compiler: Intel C++ Compiler XE for applications running on IA-32, Version 12.0.0.082 Build 20101006
 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 | Base | | | | | | | Peak | | | | | | |
|----------------|--------|-------------------|-------------------|-------------------|--------------------|-------------------|-------------------|--------|-------------------|-------------------|-------------------|--------------------|-------------------|-------------------|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 400.perlbench | 24 | 652 | 360 | <u>655</u> | <u>358</u> | 662 | 354 | 24 | 543 | 432 | 546 | 429 | <u>543</u> | <u>432</u> |
| 401.bzip2 | 24 | 992 | 233 | 994 | 233 | <u>992</u> | <u>233</u> | 24 | 941 | 246 | <u>944</u> | <u>245</u> | 944 | 245 |
| 403.gcc | 24 | 769 | 251 | <u>766</u> | <u>252</u> | 763 | 253 | 24 | <u>760</u> | <u>254</u> | 761 | 254 | 758 | 255 |
| 429.mcf | 24 | 710 | 308 | <u>711</u> | <u>308</u> | 711 | 308 | 12 | 275 | 398 | 255 | 430 | <u>269</u> | <u>406</u> |
| 445.gobmk | 24 | <u>625</u> | <u>403</u> | 625 | 403 | 625 | 403 | 24 | 593 | 425 | <u>593</u> | <u>425</u> | 592 | 426 |
| 456.hammer | 24 | 441 | 508 | <u>441</u> | <u>508</u> | 440 | 508 | 12 | <u>189</u> | <u>592</u> | 190 | 590 | 189 | 593 |
| 458.sjeng | 24 | <u>741</u> | <u>392</u> | 743 | 391 | 741 | 392 | 24 | 701 | 415 | <u>700</u> | <u>415</u> | 700 | 415 |
| 462.libquantum | 24 | 254 | 1960 | <u>253</u> | <u>1960</u> | 253 | 1960 | 24 | 254 | 1960 | <u>253</u> | <u>1960</u> | 253 | 1960 |
| 464.h264ref | 24 | 983 | 540 | <u>979</u> | <u>542</u> | 970 | 547 | 24 | 972 | 547 | 972 | 546 | <u>972</u> | <u>547</u> |
| 471.omnetpp | 24 | 642 | 233 | <u>643</u> | <u>233</u> | 643 | 233 | 24 | <u>626</u> | <u>240</u> | 625 | 240 | 626 | 240 |
| 473.astar | 24 | 705 | 239 | 706 | 239 | <u>705</u> | <u>239</u> | 24 | 705 | 239 | 706 | 239 | <u>705</u> | <u>239</u> |
| 483.xalancbmk | 24 | <u>440</u> | <u>377</u> | 440 | 376 | 439 | 377 | 24 | <u>440</u> | <u>377</u> | 440 | 376 | 439 | 377 |

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
Large pages were not enabled for this run

Platform Notes

BIOS configuration:
Data Reuse Optimization = Disable
Performance/Power Setting = Traditional

General Notes

For information about Fujitsu please visit: <http://www.fujitsu.com>
Binaries were compiled on SLES 10 SP1 with Binutils 2.18.50.0.7.20080502

Base Compiler Invocation

C benchmarks:
icc -m32

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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



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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)

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

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

462.libquantum: basepeak = yes

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
 -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
 -unroll2 -ansi-alias

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

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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.20110222.00.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.20110222.00.xml>

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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