



SPEC® CINT2006 Result

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Fujitsu

SPECint®_rate2006 = 358

PRIMERGY RX500 S7, Intel Xeon E5-4607, 2.20 GHz

SPECint_rate_base2006 = 344

CPU2006 license: 19

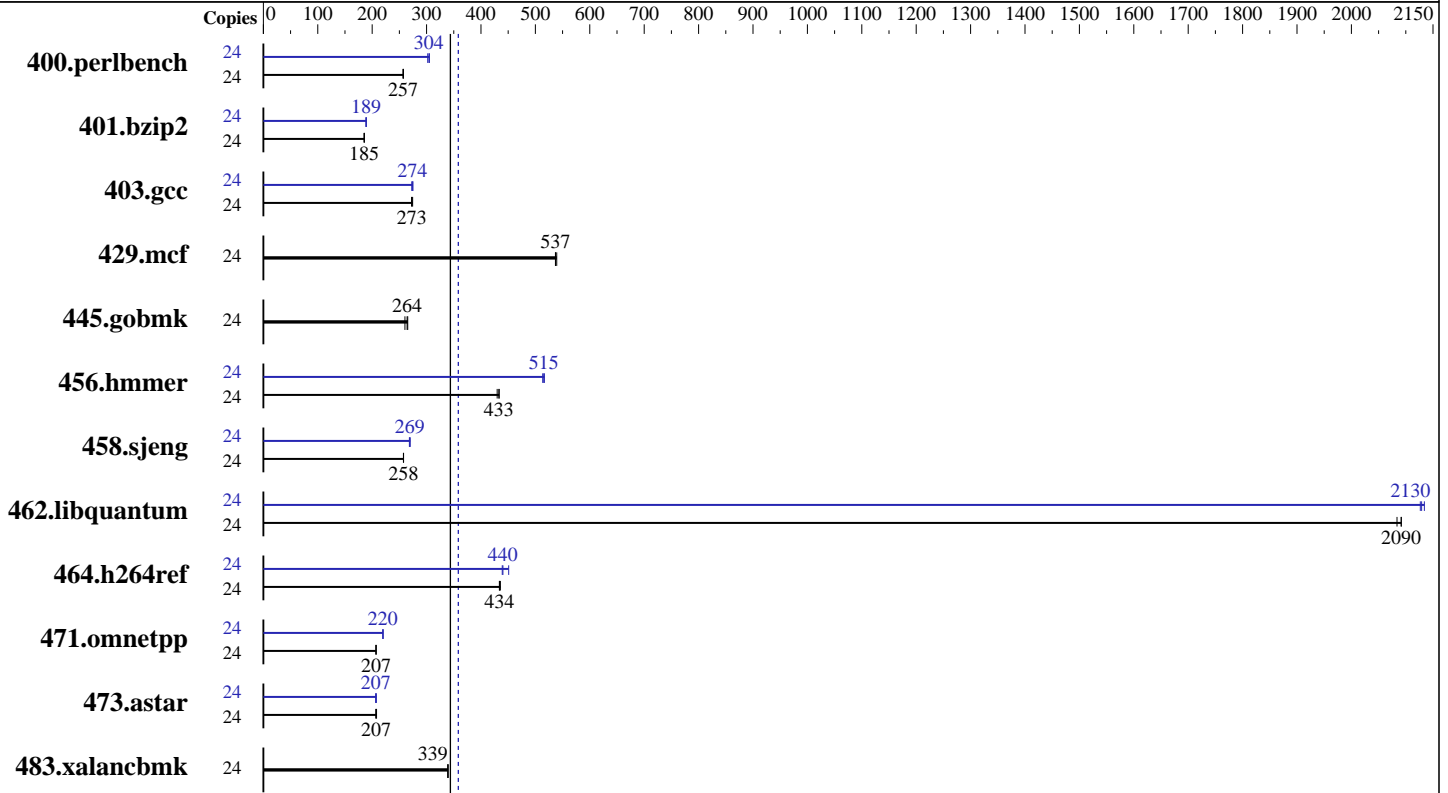
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Jul-2012

Hardware Availability: Jul-2012

Software Availability: Feb-2012



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Hardware

CPU Name: Intel Xeon E5-4607
 CPU Characteristics:
 CPU MHz: 2200
 FPU: Integrated
 CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip, 2 threads/core
 CPU(s) orderable: 2,4 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: 128 GB (16 x 8 GB 2Rx4 PC3L-12800R-11, ECC)
 Disk Subsystem: 1 x SATA, 500 GB, 7200 RPM
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.2 (Santiago)
 2.6.32-220.el6.x86_64
 Compiler: C/C++: Version 12.1.0.293 of Intel C++ Studio XE for Linux
 Auto Parallel: No
 File System: ext4
 System State: Run level 3 (multi-user)
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V10.0



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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 | <u>912</u> | <u>257</u> | 911 | 258 | 913 | 257 | 24 | <u>771</u> | <u>304</u> | 768 | 305 | 776 | 302 |
| 401.bzip2 | 24 | <u>1249</u> | <u>185</u> | 1249 | 185 | 1249 | 185 | 24 | 1224 | 189 | 1227 | 189 | <u>1227</u> | <u>189</u> |
| 403.gcc | 24 | 704 | 274 | <u>707</u> | <u>273</u> | 709 | 272 | 24 | 703 | 275 | 708 | 273 | <u>704</u> | <u>274</u> |
| 429.mcf | 24 | <u>408</u> | <u>537</u> | 408 | 537 | 406 | 539 | 24 | <u>408</u> | <u>537</u> | 408 | 537 | 406 | 539 |
| 445.gobmk | 24 | <u>953</u> | <u>264</u> | 949 | 265 | 968 | 260 | 24 | <u>953</u> | <u>264</u> | 949 | 265 | 968 | 260 |
| 456.hammer | 24 | 521 | 430 | 517 | 433 | <u>517</u> | <u>433</u> | 24 | 434 | 517 | 436 | 513 | <u>435</u> | <u>515</u> |
| 458.sjeng | 24 | <u>1127</u> | <u>258</u> | 1127 | 258 | 1128 | 257 | 24 | 1076 | 270 | <u>1080</u> | <u>269</u> | 1082 | 268 |
| 462.libquantum | 24 | <u>238</u> | <u>2090</u> | 238 | 2090 | 239 | 2080 | 24 | <u>234</u> | <u>2130</u> | 234 | 2130 | 233 | 2130 |
| 464.h264ref | 24 | 1219 | 436 | 1224 | 434 | <u>1224</u> | <u>434</u> | 24 | 1178 | 451 | 1210 | 439 | <u>1206</u> | <u>440</u> |
| 471.omnetpp | 24 | <u>724</u> | <u>207</u> | 725 | 207 | 724 | 207 | 24 | 683 | 220 | 682 | 220 | <u>682</u> | <u>220</u> |
| 473.astar | 24 | 815 | 207 | <u>813</u> | <u>207</u> | 810 | 208 | 24 | 811 | 208 | 816 | 206 | <u>814</u> | <u>207</u> |
| 483.xalancbmk | 24 | 488 | 339 | <u>488</u> | <u>339</u> | 488 | 339 | 24 | 488 | 339 | <u>488</u> | <u>339</u> | 488 | 339 |

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/SPECcpu2006/libs/32:/SPECcpu2006/libs/64"

Binaries compiled on a system with 2x E5-2650 CPU + 96 GB memory using RHEL6.2
For information about Fujitsu please visit: <http://www.fujitsu.com>

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 -opt-mem-layout-trans=3

C++ benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3
-Wl,-z,muldefs -L/opt/SmartHeap/lib -lsmartheap

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)
-auto-ilp32
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
429.mcf: basepeak = yes
445.gobmk: basepeak = yes
456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
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: -xAVX -ipo -O3 -no-prec-div -opt-prefetch
-opt-mem-layout-trans=3
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/opt/SmartHeap/lib -lsmarheap
473.astar: -xAVX -ipo -O3 -no-prec-div -opt-prefetch
-opt-mem-layout-trans=3 -Wl,-z,muldefs
-L/opt/SmartHeap/lib -lsmarheap

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Peak Optimization Flags (Continued)

483.xalanbmk: basepeak = yes

Peak 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-ic12.1-official-linux64.20111122.html>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20120320.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20120320.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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