SPEC® CINT2006 Result

Fujitsu

PRIMERGY RX4770 M1, Intel Xeon E7-4890 v2, 2.80 GHz

SPECint®_rate2006 =   2370

SPECint_rate_base2006 = 2300

Benchmark results (Copies = 120 for all):

Benchmark	Peak	Base
400.perlbench	2220	1880
401.bzip2	1220	1210
403.gcc	1680	1680
429.mcf		3030
445.gobmk	1910	1870
456.hmmer	3550	3380
458.sjeng	1920	1830
462.libquantum		16400
464.h264ref	3230	3190
471.omnetpp	1080	1040
473.astar		1280
483.xalancbmk		2380

SPECint_rate_base2006 = 2300

SPECint_rate2006 = 2370

Hardware

CPU Name:	Intel Xeon E7-4890 v2
CPU Characteristics:	Intel Turbo Boost Technology up to 3.40 GHz
CPU MHz:	2800
FPU:	Integrated
CPU(s) enabled:	60 cores, 4 chips, 15 cores/chip, 2 threads/core
CPU(s) orderable:	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:	37.5 MB I+D on chip per chip
Other Cache:	None
Memory:	1 TB (64 x 16 GB 2Rx4 PC3L-12800R-11, ECC, running at 1333 MHz and CL9)
Disk Subsystem:	1 x SATA, 500 GB, 7200 RPM
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 6.5 (Santiago) 2.6.32-431.el6.x86_64
Compiler:	C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
Auto Parallel:	No
File System:	ext4
System State:	Run level 5 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V10.0

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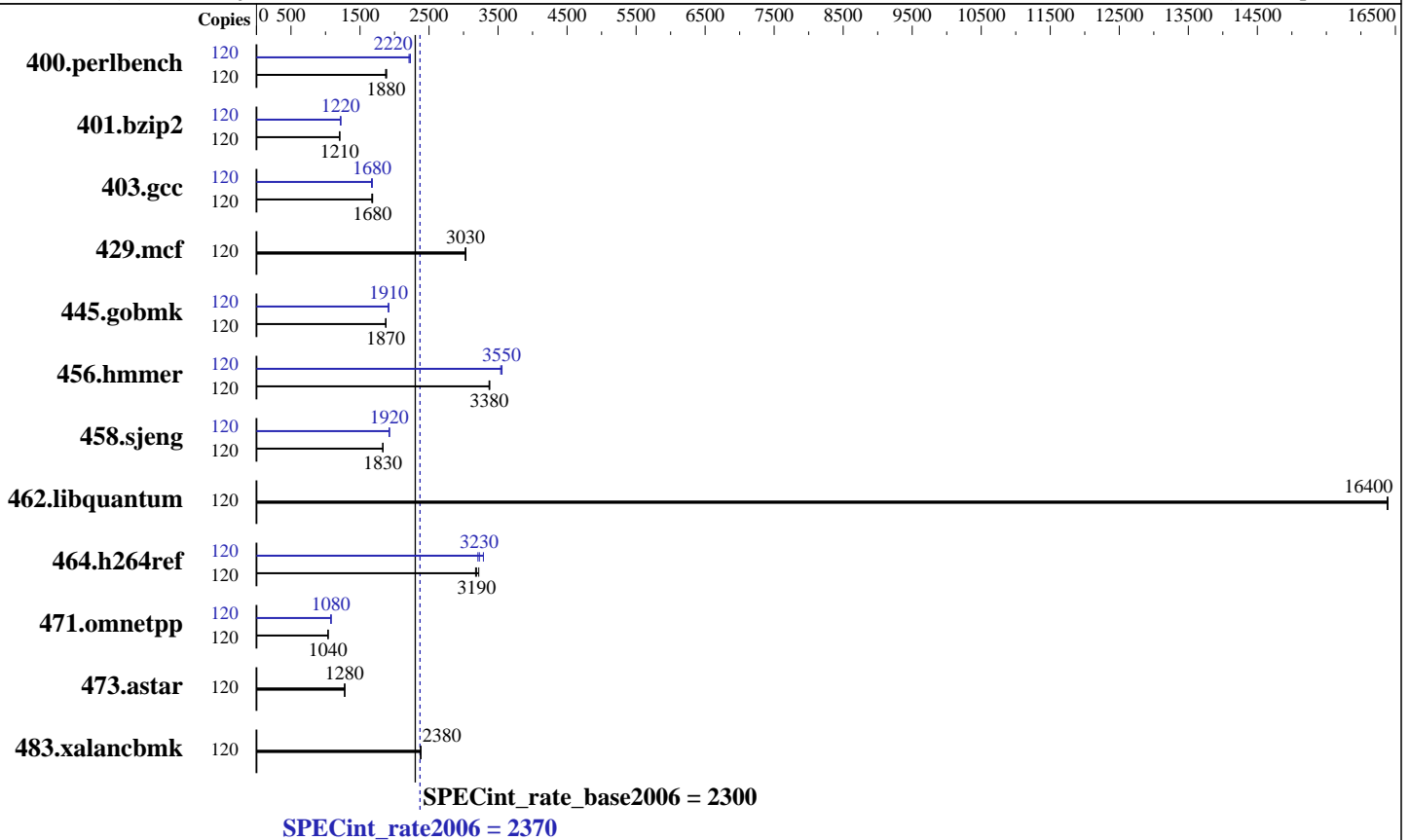SPECint_rate_base2006 = 2300

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Apr-2014
Hardware Availability: Jun-2014
Software Availability: Sep-2013

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	120	621	1890	**625**	**1880**	626	1870	120	531	2210	**527**	**2220**	526	2230
401.bzip2	120	960	1210	962	1200	**961**	**1210**	120	948	1220	951	1220	**949**	**1220**
403.gcc	120	574	1680	578	1670	**574**	**1680**	120	**576**	**1680**	579	1670	576	1680
429.mcf	120	**361**	**3030**	362	3020	361	3030	120	**361**	**3030**	362	3020	361	3030
445.gobmk	120	672	1870	671	1880	**672**	**1870**	120	**658**	**1910**	658	1910	658	1910
456.hmmer	120	**332**	**3380**	331	3380	332	3370	120	316	3540	**315**	**3550**	315	3560
458.sjeng	120	**793**	**1830**	793	1830	793	1830	120	755	1920	**754**	**1920**	753	1930
462.libquantum	120	152	16400	152	16400	**152**	**16400**	120	152	16400	152	16400	**152**	**16400**
464.h264ref	120	837	3170	**833**	**3190**	825	3220	120	**822**	**3230**	808	3290	828	3210
471.omnetpp	120	**723**	**1040**	724	1040	723	1040	120	695	1080	694	1080	**695**	**1080**
473.astar	120	660	1280	658	1280	**660**	**1280**	120	660	1280	658	1280	**660**	**1280**
483.xalancbmk	120	348	2380	347	2380	**348**	**2380**	120	348	2380	347	2380	**348**	**2380**

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"

Platform Notes

    BIOS configuration:
    Energy Performance = Performance

General Notes

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

    Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
    memory using RedHat EL 6.4
    Transparent Huge Pages enabled with:
    echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
    Filesystem page cache cleared with:
    echo 1>   /proc/sys/vm/drop_caches
    runspec command invoked through numactl i.e.:
    numactl --interleave=all runspec <etc>

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General Notes (Continued)

For information about Fujitsu please visit: http://www.fujitsu.com

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 -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/sh -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

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Peak Compiler Invocation (Continued)

      458.sjeng: `icc -m64`

C++ benchmarks:
      `icpc -m32`

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: `-xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)`
                `-ansi-alias -opt-mem-layout-trans=3`

     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: `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`

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Peak Optimization Flags (Continued)

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/sh -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: 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-ic14.0-official-linux64-revB.html
http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20131009.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64-revB.xml
http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20131009.xml

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

Tested with SPEC CPU2006 v1.2.
Report generated on Thu Jul 24 23:32:13 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 16 June 2014.