SPEC® CINT2006 Result

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Fujitsu

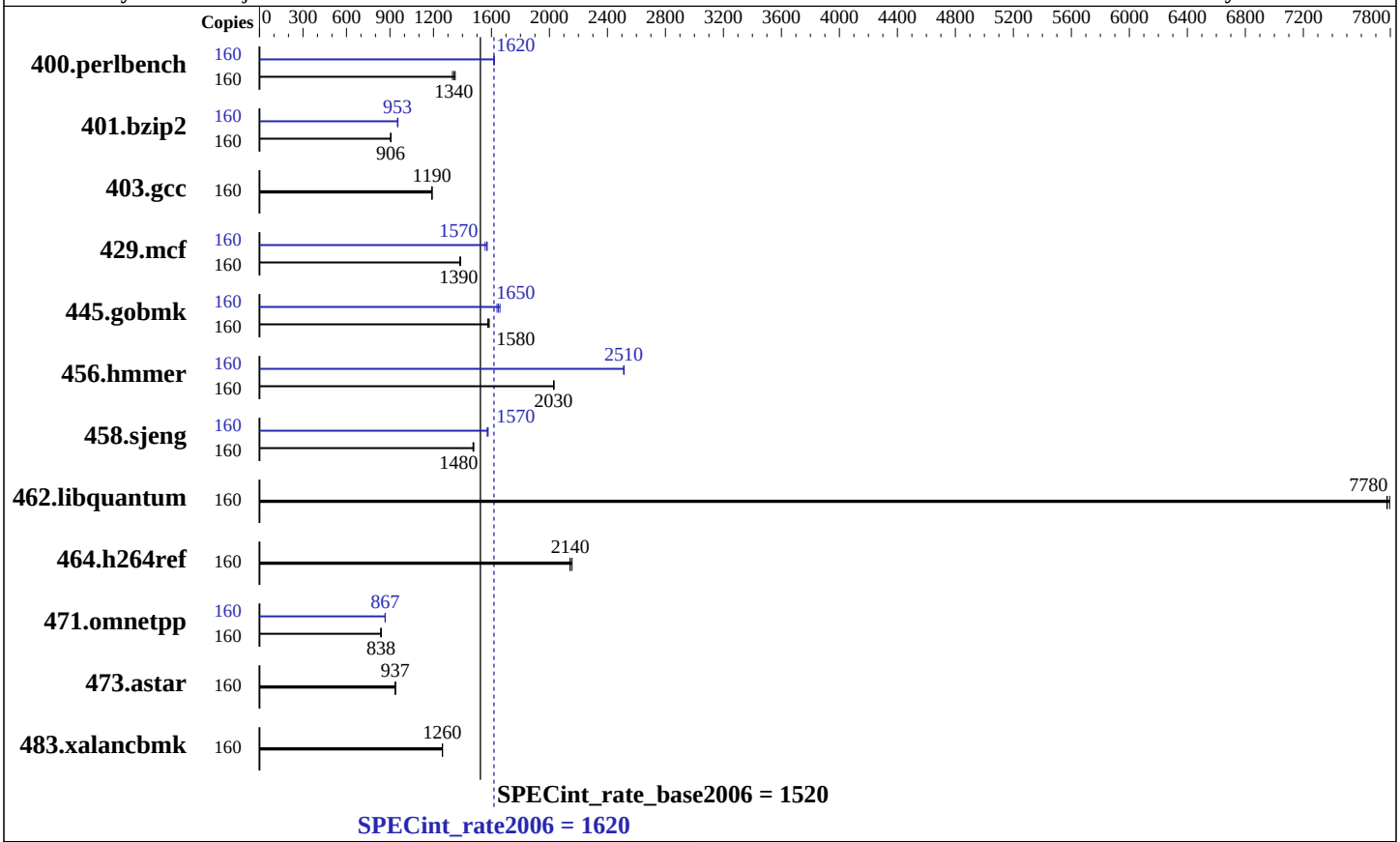
PRIMERGY RX900 S2, Intel Xeon E7-8850, 2.00 GHz

SPECint®_rate2006 = 1620

SPECint_rate_base2006 = 1520

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

Test date: Apr-2011
Hardware Availability: Jun-2011
Software Availability: Jan-2011



Hardware

CPU Name:	Intel Xeon E7-8850
CPU Characteristics:	Intel Turbo Boost Technology up to 2.40 GHz
CPU MHz:	2000
FPU:	Integrated
CPU(s) enabled:	80 cores, 8 chips, 10 cores/chip, 2 threads/core
CPU(s) orderable:	4,6,8 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:	24 MB I+D on chip per chip
Other Cache:	None
Memory:	1 TB (128 x 8 GB 4Rx8 PC3-10600R-9, ECC, running at 1066 MHz)
Disk Subsystem:	2 x 147 GB (SAS, 15000RPM, RAID0)
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:	ext2
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	160	1158	1350	1174	1330	**1165**	**1340**	160	965	1620	**966**	**1620**	968	1620
401.bzip2	160	**1704**	**906**	1703	907	1707	904	160	1621	953	**1620**	**953**	1616	956
403.gcc	160	**1083**	**1190**	1083	1190	1082	1190	160	**1083**	**1190**	1083	1190	1082	1190
429.mcf	160	**1053**	**1390**	1052	1390	1056	1380	160	929	1570	938	1560	**930**	**1570**
445.gobmk	160	1059	1580	**1063**	**1580**	1066	1570	160	1025	1640	**1018**	**1650**	1012	1660
456.hmmer	160	735	2030	**736**	**2030**	736	2030	160	**594**	**2510**	594	2510	593	2520
458.sjeng	160	**1311**	**1480**	1311	1480	1315	1470	160	1227	1580	1233	1570	**1230**	**1570**
462.libquantum	160	426	7780	425	7800	**426**	**7780**	160	426	7780	425	7800	**426**	**7780**
464.h264ref	160	1642	2160	**1652**	**2140**	1653	2140	160	1642	2160	**1652**	**2140**	1653	2140
471.omnetpp	160	1191	840	1195	837	**1193**	**838**	160	**1153**	**867**	1153	867	1154	867
473.astar	160	1200	936	1197	938	**1199**	**937**	160	1200	936	1197	938	**1199**	**937**
483.xalancbmk	160	874	1260	876	1260	**875**	**1260**	160	874	1260	876	1260	**875**	**1260**

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

```
Large pages were not enabled for this run

The following command was used prior to run
   ulimit -s unlimited
   echo 1 > /proc/sys/vm/zone_reclaim_mode
```

General Notes

```
Binaries were compiled on RHEL5.5

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`
`-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`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64`
401.bzip2: `-DSPEC_CPU_LP64`

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Peak Portability Flags (Continued)

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: basepeak = yes

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

473.astar: basepeak = yes

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Peak Optimization Flags (Continued)

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-ic12.0-linux64-revB.html`
`http://www.spec.org/cpu2006/flags/RX900S2_Platform.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/RX900S2_Platform.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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