SPEC® CINT2006 Result

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Oracle Corporation

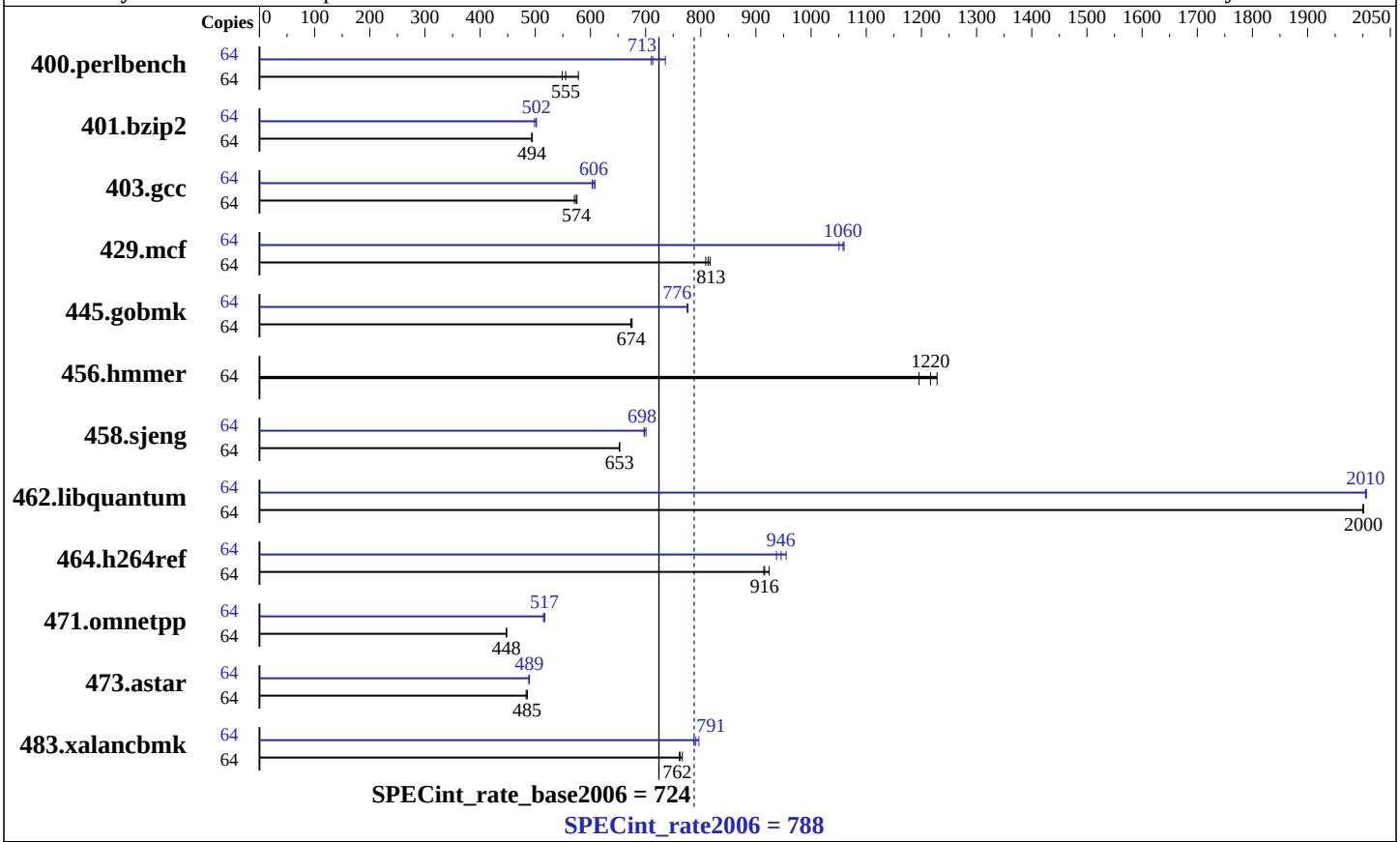
Sun Fire X4470 (Intel Xeon X7560 2.26GHz)

SPECint®_rate2006 = 788

SPECint_rate_base2006 = 724

CPU2006 license: 6
Test sponsor: Oracle Corporation
Tested by: Oracle Corporation

Test date: May-2010
Hardware Availability: Aug-2010
Software Availability: Jun-2010



Hardware

CPU Name:	Intel Xeon X7560
CPU Characteristics:	Intel Turbo Boost Technology up to 2.67 GHz
CPU MHz:	2266
FPU:	Integrated
CPU(s) enabled:	32 cores, 4 chips, 8 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:	24 MB I+D on chip per chip
Other Cache:	None
Memory:	256 GB (64x4GB, DDR3-1066 CL7 dual-rank ECC Reg)
Disk Subsystem:	1 x 500 GB, SATA, 7200 RPM
Other Hardware:	None

Software

Operating System:	Oracle Solaris 10 10/09
Compiler:	Oracle Solaris Studio Express 6/10
Auto Parallel:	No
File System:	zfs
System State:	Default
Base Pointers:	32/64-bit
Peak Pointers:	32/64-bit
Other Software:	MicroQuill SmartHeap Library 9.01 for x64

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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	64	1082	578	**1127**	**555**	1139	549	64	850	736	880	710	**877**	**713**
401.bzip2	64	1248	495	**1250**	**494**	1251	494	64	**1231**	**502**	1239	499	1231	502
403.gcc	64	895	576	**897**	**574**	902	571	64	**850**	**606**	854	603	847	608
429.mcf	64	721	809	714	817	**718**	**813**	64	551	1060	**552**	**1060**	556	1050
445.gobmk	64	997	673	994	675	**996**	**674**	64	866	775	864	777	**865**	**776**
456.hmmer	64	**491**	**1220**	499	1200	486	1230	64	**491**	**1220**	499	1200	486	1230
458.sjeng	64	1186	653	1187	653	**1187**	**653**	64	1105	701	1111	697	**1110**	**698**
462.libquantum	64	**663**	**2000**	663	2000	663	2000	64	661	2010	661	2000	**661**	**2010**
464.h264ref	64	1549	914	**1547**	**916**	1533	924	64	**1498**	**946**	1483	955	1511	937
471.omnetpp	64	893	448	**894**	**448**	894	447	64	**774**	**517**	777	515	774	517
473.astar	64	930	483	926	485	**926**	**485**	64	918	489	**919**	**489**	920	488
483.xalancbmk	64	576	767	**579**	**762**	580	761	64	554	797	561	788	**558**	**791**

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.
```

Operating System Notes

```
ulimit -s unlimited  (shell)

/etc/system parameters
   tune_t_fsflushr=10
   autoup=900
   zfs:zfs_arc_max = 0x10000000
   lpg_alloc_prefer=1
```

Platform Notes

```
  Default BIOS settings used.
```

Base Compiler Invocation

C benchmarks:
cc

C++ benchmarks:
CC

Base Portability Flags

400.perlbench: -DSPEC_CPU_SOLARIS_X64 -DSPEC_CPU_LP64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_SOLARIS -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_SOLARIS -DSPEC_CPU_LP64
464.h264ref: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_SOLARIS

Base Optimization Flags

C benchmarks:
-fast -xipo=2 -m64 -xaddr32=yes -xpagesize=2M

C++ benchmarks:
-fast -xipo=2 -xpagesize=2M -xalias_level=compatible
-L/data1/SmartHeap_9/lib -R/data1/SmartHeap_9/lib -lsmartheap
-library=stlport4

Base Other Flags

C benchmarks:
-V -# -xjobs=64

C++ benchmarks:
-verbose=diags,version -xjobs=64

Peak Compiler Invocation

C benchmarks:
cc

C++ benchmarks:
CC

Peak Portability Flags

400.perlbench: -DSPEC_CPU_SOLARIS_X64 -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64 -DSPEC_CPU_SOLARIS

Continued on next page

Peak Portability Flags (Continued)

456.hmmer: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_SOLARIS
483.xalancbmk: -DSPEC_CPU_SOLARIS

Peak Optimization Flags

C benchmarks:

400.perlbench: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=1 -m64
-xalias_level=std -lbsdmalloc

401.bzip2: -fast -xipo=2 -m64 -xpagesize=2M -xalias_level=std
-lumem

403.gcc: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xpagesize=2M -W2,-Rujam -W2,-Rtile -m64
-xalias_level=std

429.mcf: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m32
-xpagesize=2M -xalias_level=strong -xprefetch=no%auto
-lbsdmalloc

445.gobmk: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -m64 -xpagesize=2M
-xrestrict -xalias_level=strong

456.hmmer: basepeak = yes

458.sjeng: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m64
-xpagesize=2M -xalias_level=strong

462.libquantum: -fast -xipo=2 -m64 -xalias_level=std

464.h264ref: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m64
-xalias_level=strong -xrestrict

C++ benchmarks:

471.omnetpp: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xpagesize=2M -library=stlport4
-L/data1/SmartHeap_9/lib -R/data1/SmartHeap_9/lib -lsmartheap

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Peak Optimization Flags (Continued)

473.astar: `-xprofile=collect:./feedback`(pass 1)
`-xprofile=use:./feedback`(pass 2) `-fast -xipo=2 -m64`
`-xpagesize=2M -xalias_level=compatible -library=stlport4`
`-L/data1/SmartHeap_9/lib -R/data1/SmartHeap_9/lib -lsmartheap64`

483.xalancbmk: `-xprofile=collect:./feedback`(pass 1)
`-xprofile=use:./feedback`(pass 2) `-fast -xipo=2 -xunroll=2`
`-xpagesize=2M -xalias_level=compatible -library=stlport4`
`-m32`
`-L/data1/SmartHeap_9/lib -R/data1/SmartHeap_9/lib -lsmartheap`

Peak Other Flags

C benchmarks:
`-V -# -xjobs=64`

C++ benchmarks:
`-verbose=diags,version -xjobs=64`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Oracle-Solaris-Studio-x86_64.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Oracle-Solaris-Studio-x86_64.xml`

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