SPEC® CINT2006 Result

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Sun Microsystems

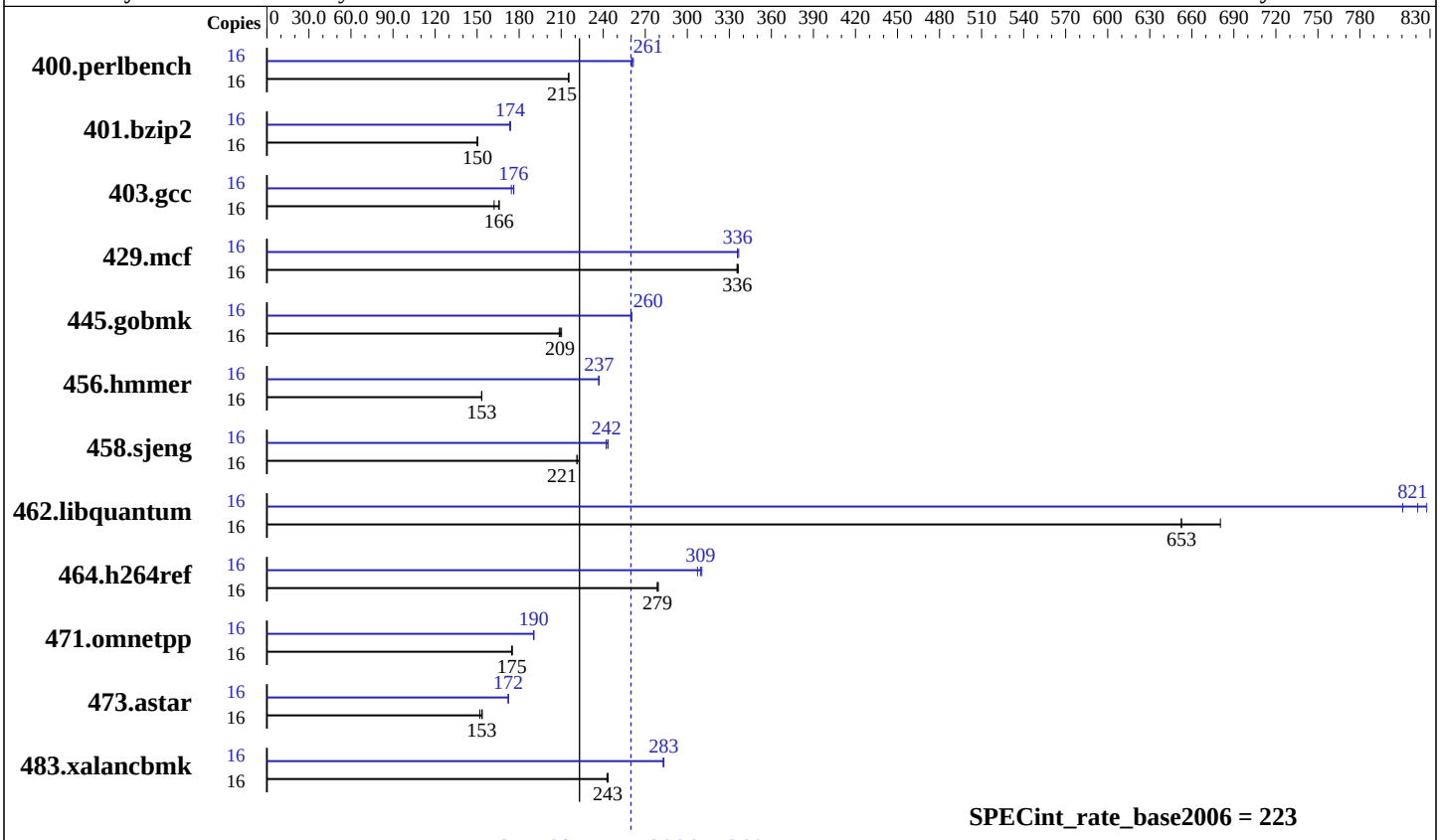
Sun Blade X6270 (Intel Xeon X5570 2.93GHz)

SPECint®_rate2006 = 260

SPECint_rate_base2006 = 223

CPU2006 license: 6
Test sponsor: Sun Microsystems
Tested by: Sun Microsystems

Test date: Apr-2009
Hardware Availability: Apr-2009
Software Availability: Jun-2009



Hardware

CPU Name:	Intel Xeon X5570
CPU Characteristics:	Intel Turbo Boost Technology up to 3.33 GHz
CPU MHz:	2933
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip, 2 threads/core
CPU(s) orderable:	1 or 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:	8 MB I+D on chip per chip
Other Cache:	None
Memory:	24 GB (6 x 4 GB DDR3-1333)
Disk Subsystem:	134 GB using 1x ST914602SSUN146GSAS SAS 10 K RPM
Other Hardware:	None

Software

Operating System:	OpenSolaris 2008.11
Compiler:	Sun Studio 12 Update 1 (internal build 39.0)
Auto Parallel:	No
File System:	zfs with gzip compression
System State:	Default
Base Pointers:	32-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	16	**726**	**215**	725	216	727	215	16	**600**	**261**	601	260	598	262
401.bzip2	16	1029	150	1027	150	**1027**	**150**	16	891	173	888	174	**889**	**174**
403.gcc	16	794	162	**777**	**166**	777	166	16	731	176	738	174	**731**	**176**
429.mcf	16	434	336	435	335	**435**	**336**	16	435	336	**434**	**336**	433	337
445.gobmk	16	798	210	805	209	**802**	**209**	16	646	260	**645**	**260**	645	260
456.hmmer	16	**974**	**153**	974	153	973	153	16	**630**	**237**	631	237	630	237
458.sjeng	16	**875**	**221**	875	221	869	223	16	800	242	**799**	**242**	795	244
462.libquantum	16	**508**	**653**	487	680	508	653	16	**404**	**821**	401	828	409	810
464.h264ref	16	1271	279	1268	279	**1270**	**279**	16	1141	310	**1144**	**309**	1152	307
471.omnetpp	16	**572**	**175**	571	175	572	175	16	525	190	526	190	**525**	**190**
473.astar	16	**732**	**153**	731	154	739	152	16	**652**	**172**	652	172	652	172
483.xalancbmk	16	**454**	**243**	454	243	455	243	16	**390**	**283**	390	283	391	283

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, along with 'pbind", to
assign processes to cores.
```

Operating System Notes

```
ulimit -s 131072  (shell): increases stack

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

Platform Notes

```
AMIBIOS Build Date 1/26/09 ID 07.01.36.00
  Default BIOS settings used except:
  Intel VT-d: Disabled.  VT-d, if enabled, supports
  remapping of I/O DMA transfers for virtualization.
```

Base Compiler Invocation

C benchmarks:
```
/data1/SUNWspro.b39/SUNWspro/bin/cc
```

C++ benchmarks:
```
/data1/SUNWspro.b39/SUNWspro/bin/CC
```

Base Portability Flags

400.perlbench: `-DSPEC_CPU_SOLARIS_IA32`
403.gcc: `-DSPEC_CPU_SOLARIS`
462.libquantum: `-DSPEC_CPU_SOLARIS`
483.xalancbmk: `-DSPEC_CPU_SOLARIS`

Base Optimization Flags

C benchmarks:
```
-fast -xipo=2 -xpagesize=2M -M /usr/lib/ld/map.bssalign
```

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

Base Other Flags

C benchmarks:
```
-V -# -xjobs=16
```

C++ benchmarks:
```
-verbose=diags,version -xjobs=16
```

Peak Compiler Invocation

C benchmarks:
```
/data1/SUNWspro.b39/SUNWspro/bin/cc
```

C++ benchmarks:
```
/data1/SUNWspro.b39/SUNWspro/bin/CC
```

Peak Portability Flags

400.perlbench: -DSPEC_CPU_SOLARIS_IA32
403.gcc: -DSPEC_CPU_SOLARIS
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=2
-xpagesize=2M -xvector=simd -xalias_level=std -lbsdmalloc
-lumem

401.bzip2: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m64
-xpagesize=2M -xalias_level=strong -lumem

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

429.mcf: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xpagesize=2M -xalias_level=std -M /usr/lib/ld/map.bssalign

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

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

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

462.libquantum: -fast -xipo=2 -m64 -xpagesize=2M -xvector=simd

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

C++ benchmarks:

471.omnetpp: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xpagesize=2M

Continued on next page

Peak Optimization Flags (Continued)

471.omnetpp (continued):
-L/data1/SmartHeap_9/lib -R/data1/SmartHeap_9/lib -lsmartheap
-library=stlport4

473.astar: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2 -m64
-xpagesize=2M
-L/data1/SmartHeap_9/lib -R/data1/SmartHeap_9/lib -lsmartheap_mt64
-xalias_level=compatible -library=stlport4

483.xalancbmk: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xpagesize=2M -xunroll=8
-L/data1/SmartHeap_9/lib -R/data1/SmartHeap_9/lib -lsmartheap
-library=stlport4

Peak Other Flags

C benchmarks:
-V -# -xjobs=16

C++ benchmarks:
-verbose=diags,version -xjobs=16

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Sun-OpenSolaris-Studio-x86_64.20090710.00.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Sun-OpenSolaris-Studio-x86_64.20090710.00.xml

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