CINT2000 Result

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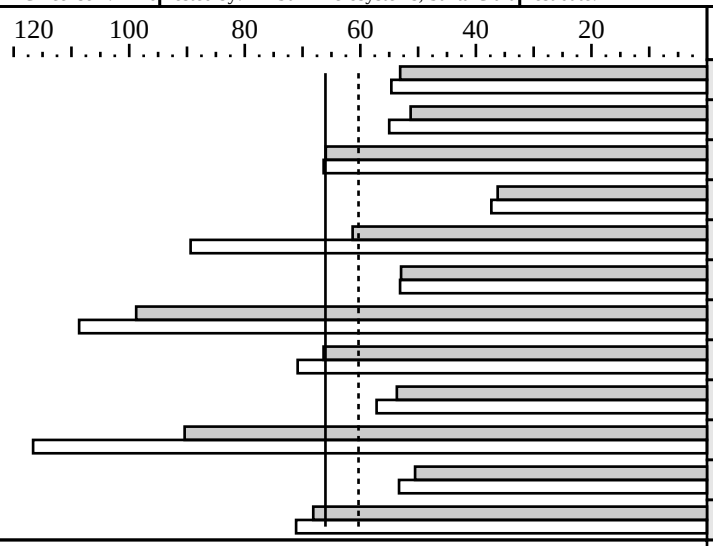
Sun Microsystems
Sun Fire X4200

SPECint_rate2000 = 66.0

SPECint_rate_base2000 = 60.3

SPEC license #: 6 | Tested by: Sun Microsystems, Santa Clara | Test date: Nov-2005 | Hardware Avail: Oct-2005 | Software Avail: Nov-2005



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	4	122	53.1	4	119	54.6
175.vpr	4	127	51.3	4	118	55.0
176.gcc	4	77.4	66.0	4	76.9	66.4
181.mcf	4	231	36.2	4	224	37.3
186.crafty	4	75.7	61.3	4	51.9	89.4
197.parser	4	158	52.9	4	157	53.1
252.eon	4	61.1	98.8	4	55.5	109
253.perlbmk	4	126	66.4	4	118	70.8
254.gap	4	95.1	53.7	4	89.3	57.2
255.vortex	4	97.5	90.4	4	75.6	117
256.bzip2	4	138	50.5	4	131	53.3
300.twolf	4	204	68.1	4	196	71.1

Hardware

CPU:	AMD Opteron (TM) 275
CPU MHz:	2200
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1,2 (order by # of chips)
Parallel:	No
Primary Cache:	64KBI + 64KBD (on chip) per core
Secondary Cache:	1024KB (I+D) (on chip) per core
L3 Cache:	N/A
Other Cache:	N/A
Memory:	16GB (8x2GB, PC3200 CL3 DDR ECC Registered SDRAM)
Disk Subsystem:	SAS, 36GB, 10K RPM
Other Hardware:	None

Software

Operating System:	Solaris 10 3/05 HW1
Compiler:	Sun Studio 11
File System:	ufs
System State:	Multi-user

Notes/Tuning Information

```
Compiler invocation:
  C: cc
  CXX: CC

FDO:  PASS1= -xprofile=collect:./feedback PASS2= -xprofile=use:./feedback
      fdo_pre0:  rm -rf ./feedback.profile


Integer base flags:
     Base tuning for C programs  : -fast  -xcrossfile -xalias_level=std +FDO ONESTEP=yes
     Base tuning for C++ programs: -fast  -xcrossfile -xarch=amd64 +FDO ONESTEP=yes

Integer peak flags:
 ONESTEP=yes +FDO for all benchmarks

 164.gzip:     -fast -xpagesize=2m -xcrossfile -M /usr/lib/ld/map.bssalign
 175.vpr:     -fast -xpagesize=2m -W2,-Ainline:inc=200:cs=500 -M /usr/lib/ld/map.bssalign -lmopt -lm
 176.gcc:     -fast -xipo=2 -Wd,-iropt-prof -xalias_level=strong -xrestrict
 181.mcf:     -fast -xpagesize=2m -xcrossfile -M /usr/lib/ld/map.bssalign
 186.crafty:  -fast -xrestrict -xipo=2 -xprefetch -xarch=amd64 -xpagesize=2m
```

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Notes/Tuning Information (Continued)

```
                -M /usr/lib/ld/map.bssalign -Wd,-iropt-prof -W2,-Ashort_ldst:ldld
                -W2,-Ainline:rs=50
 197.parser:   -fast -xpagesize=2m -xipo=2 -W2,-Ainline:inc=200:cs=500 -M /usr/lib/ld/map.bssalign
 252.eon:      -fast -xipo=2 -qoption CC -iropt-prof -xvector -qoption iropt -Abcopy -xalias_level
                -xarch=amd64 -xrestrict -Qoption ube -xcallee=yes -xregs=frameptr
 253.perlbmk:  -fast -xcrossfile  -M /usr/lib/ld/map.bssalign -lbsdmalloc
 254.gap:      -fast -xipo=2 -Wd,-iropt-prof -xvector -W2,-Abcopy -lbsdmalloc -xprefetch
                -W2,-Ainline:cp=5:rs=1300:irs=3300:inc=100 -W2,-Arestrict_g
 255.vortex:  -fast -xipo=2 -Wd,-iropt-prof -lbsdmalloc -xrestrict -xprefetch -M /usr/lib/ld/map.bssalign
 256.bzip2:    -fast -xpagesize=2m -xcrossfile -xarch=sse2 -Xc -M /usr/lib/ld/map.bssalign -lbsdmalloc
 300.twolf:    -fast -xipo=2 -Wd,-iropt-prof -xrestrict -M /usr/lib/ld/map.bssalign

Portability:
 186.crafty:  -DUNIX -DHAS_LONGLONG -DLITTLE_ENDIAN_ARCH
 252.eon:     -DFMAX_IS_DOUBLE -DSPEC_CPU2000_LP64 -DUSE_STRERROR
 253.perlbmk: -DSPEC_CPU2000_SOLARIS_X86
 254.gap:     -DSYS_IS_USG -DSYS_HAS_SIGNAL_PROTO -DSYS_HAS_TIME_PROTO -DSYS_HAS_CALLOC_PROTO

Shell Environments:
  Stack size set to unlimited via "ulimit -s unlimited"

Processes were bound to CPUs using submit=pbind

Default BIOS setting was used

This result was measured on the Sun Fire X4200.  In addition,
Sun has submitted the same result for the Sun Fire X4100, which is
electronically equivalent to the Sun Fire X4200.
```