CINT2000 Result

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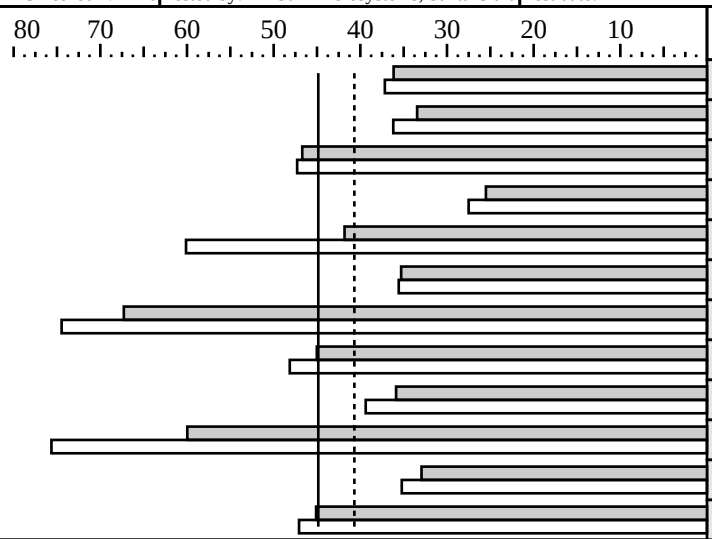
Sun Microsystems
Sun Fire X4100

SPECint_rate2000 = 44.8

SPECint_rate_base2000 = 40.7

SPEC license #: 6 | Tested by: Sun Microsystems, Santa Clara | Test date: Mar-2006 | Hardware Avail: May-2006 | Software Avail: Jan-2006



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	2	89.8	36.2	2	87.4	37.2
175.vpr	2	97.1	33.4	2	89.7	36.2
176.gcc	2	54.6	46.7	2	54.0	47.3
181.mcf	2	164	25.5	2	152	27.5
186.crafty	2	55.5	41.8	2	38.6	60.1
197.parser	2	118	35.3	2	117	35.6
252.eon	2	44.8	67.3	2	40.5	74.5
253.perlbmk	2	92.8	45.0	2	86.7	48.1
254.gap	2	71.1	35.9	2	64.8	39.4
255.vortex	2	73.5	60.0	2	58.3	75.6
256.bzip2	2	106	32.9	2	98.8	35.2
300.twolf	2	154	45.1	2	148	47.1

Hardware

CPU:	AMD Opteron (TM) 256
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	2 cores, 2 chips, 1 core/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 1/06
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
               -M /usr/lib/ld/map.bssalign -Wd,-iropt-prof -W2,-Ashort_ldst:ldld
```

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Notes/Tuning Information (Continued)

```
                -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 (base):  -DSOLARIS_X86
 186.crafty (peak):  -DSOLARIS_X64
 252.eon:     -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.
Sun Fire X4100 and Sun Fire X4200 are electronically equivalent.
```