



CINT2000 Result

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Sun Microsystems
Sun Fire X2100

SPECint_rate2000 = 21.1
SPECint_rate_base2000 = 19.2

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	1	95.2	17.1	1	93.0	17.5
175.vpr	1	101	16.0	1	95.2	17.1
176.gcc	1	60.1	21.2	1	59.4	21.5
181.mcf	1	176	11.9	1	166	12.6
186.crafty	1	59.0	19.7	1	40.6	28.6
197.parser	1	125	16.7	1	124	16.8
252.eon	1	47.2	31.9	1	43.1	35.0
253.perlbnk	1	97.5	21.4	1	91.8	22.7
254.gap	1	78.5	16.3	1	69.3	18.4
255.vortex	1	76.6	28.8	1	60.8	36.3
256.bzip2	1	111	15.6	1	106	16.4
300.twolf	1	161	21.6	1	154	22.5

Hardware

CPU: AMD Opteron (TM) 154
 CPU MHz: 2800
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 1 core/chip
 CPU(s) orderable: 1
 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: 4GB (4x1GB, PC3200 CL3 DDR SDRAM)
 Disk Subsystem: SATA, 80GB, 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.perlbnk: -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.perlbnk: -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"

Kernel Parameters (/etc/system):

```
autoup=900
tune_t_fsflushr=1
```

Processes were bound to CPU using submit=pbind

Default BIOS setting was used