



CINT2000 Result

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Sun Microsystems
Sun Fire V40z

SPECint_rate2000 = 81.1
SPECint_rate_base2000 = 74.0

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	4	97.1	66.9	4	94.3	68.9
175.vpr	4	105	61.8	4	98.9	65.7
176.gcc	4	59.9	85.2	4	59.3	86.1
181.mcf	4	214	39.0	4	201	41.6
186.crafty	4	59.9	77.5	4	41.0	113
197.parser	4	129	64.7	4	129	64.8
252.eon	4	48.0	126	4	43.6	138
253.perlbnk	4	100	83.3	4	94.2	88.7
254.gap	4	76.7	66.5	4	70.8	72.1
255.vortex	4	80.5	110	4	63.9	138
256.bzip2	4	114	61.3	4	109	64.1
300.twolf	4	167	83.2	4	161	86.7

Hardware

CPU: AMD Opteron (TM) 854
 CPU MHz: 2800
 FPU: Integrated
 CPU(s) enabled: 4 cores, 4 chips, 1 core/chip
 CPU(s) orderable: 2,4 (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: 32GB (16x2GB, PC3200 CL3 DDR ECC Registered SDRAM)
 Disk Subsystem: SCSI, 72GB, 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)

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-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 CPUs using submit=pbind

Default BIOS setting was used