



CINT2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

Sun Microsystems
Sun Ultra 40

SPECint_rate2000 = 42.7
SPECint_rate_base2000 = 39.6

SPEC license #: 6 Tested by: Sun Microsystems, Santa Clara Test date: Feb-2006 Hardware Avail: Jan-2006 Software Avail: Nov-2005

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	2	94.5	34.4	2	92.8	35.0
175.vpr	2	95.5	34.0	2	94.4	34.4
176.gcc	2	56.8	44.9	2	56.1	45.5
181.mcf	2	157	26.6	2	153	27.3
186.crafty	2	59.1	39.2	2	40.7	57.0
197.parser	2	120	34.9	2	124	33.7
252.eon	2	47.8	63.1	2	43.4	69.5
253.perlbnk	2	97.7	42.7	2	91.8	45.5
254.gap	2	74.4	34.3	2	67.9	37.6
255.vortex	2	76.8	57.4	2	62.3	70.8
256.bzip2	2	103	33.7	2	103	33.7
300.twolf	2	161	43.2	2	155	44.8

Hardware

CPU: AMD Opteron (TM) 254
CPU MHz: 2800
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: SATA,250GB,7200 RPM
Other Hardware: None

Software

Operating System: Solaris 10 3/05 HW2
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



CINT2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

Sun Microsystems
Sun Ultra 40

SPECint_rate2000 = 42.7
SPECint_rate_base2000 = 39.6

SPEC license #: 6 | Tested by: Sun Microsystems, Santa Clara | Test date: Feb-2006 | Hardware Avail: Jan-2006 | Software Avail: Nov-2005

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.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 (base): -DSOLARIS_X86
186.crafty (peak): -DSOLARIS_X64
252.eon:          -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"

Processes were bound to CPUs using submit=pbind

Default BIOS setting was used