



CINT2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

Sun Microsystems
Sun Fire X4200

SPECint2000 = 1829
SPECint_base2000 = 1660

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

| Benchmark | Reference Time | Base Runtime | Base Ratio | Runtime | Ratio | 1000 2000 3000 4000 | | | |
|-------------|----------------|--------------|------------|---------|-------|--|--|--|--|
| 164.gzip | 1400 | 95.4 | 1467 | 93.2 | 1502 | [Bar chart showing ratio bars for 164.gzip] | | | |
| 175.vpr | 1400 | 102 | 1369 | 94.2 | 1486 | [Bar chart showing ratio bars for 175.vpr] | | | |
| 176.gcc | 1100 | 56.9 | 1934 | 56.4 | 1950 | [Bar chart showing ratio bars for 176.gcc] | | | |
| 181.mcf | 1800 | 164 | 1097 | 153 | 1178 | [Bar chart showing ratio bars for 181.mcf] | | | |
| 186.crafty | 1000 | 59.6 | 1678 | 41.3 | 2419 | [Bar chart showing ratio bars for 186.crafty] | | | |
| 197.parser | 1800 | 126 | 1432 | 125 | 1444 | [Bar chart showing ratio bars for 197.parser] | | | |
| 252.eon | 1300 | 47.7 | 2725 | 43.5 | 2988 | [Bar chart showing ratio bars for 252.eon] | | | |
| 253.perlbnk | 1800 | 98.2 | 1833 | 92.8 | 1940 | [Bar chart showing ratio bars for 253.perlbnk] | | | |
| 254.gap | 1100 | 76.7 | 1434 | 68.8 | 1599 | [Bar chart showing ratio bars for 254.gap] | | | |
| 255.vortex | 1900 | 78.6 | 2419 | 61.9 | 3068 | [Bar chart showing ratio bars for 255.vortex] | | | |
| 256.bzip2 | 1500 | 111 | 1354 | 104 | 1444 | [Bar chart showing ratio bars for 256.bzip2] | | | |
| 300.twolf | 3000 | 165 | 1823 | 157 | 1905 | [Bar chart showing ratio bars for 300.twolf] | | | |

Hardware

CPU: AMD Opteron (TM) 254
CPU MHz: 2800
FPU: Integrated
CPU(s) enabled: 1 core, 1 chip, 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: 8GB (4x2GB, PC3200 CL3 DDR SDRAM ECC Registered)
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



CINT2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

Sun Microsystems
Sun Fire X4200

SPECint2000 = 1829
SPECint_base2000 = 1660

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

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 ; Only one CPU was present on the system

This result was measured on Sun Fire X4100;
Sun Fire X4100 and Sun Fire X4200 are electronically equivalent.