CINT2000 Result

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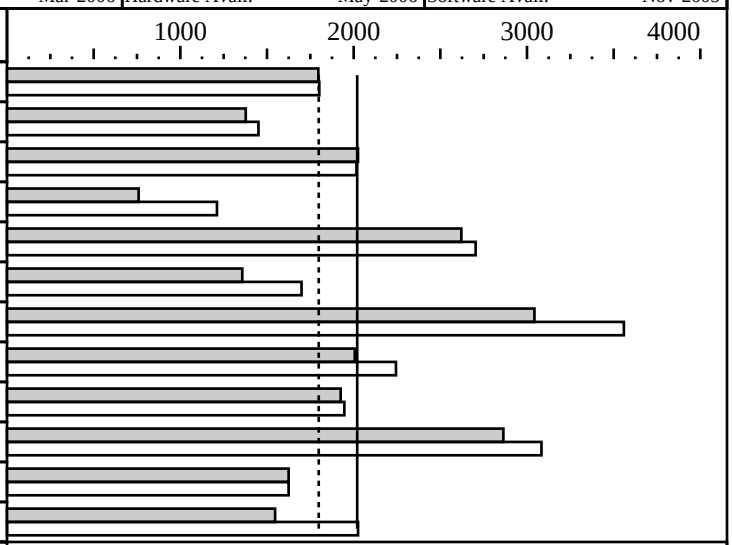
Sun Microsystems
Sun Fire X4200

SPECint2000 = 2020

SPECint_base2000 = 1798

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
164.gzip	1400	77.9	1796	77.7	1802
175.vpr	1400	102	1377	96.5	1451
176.gcc	1100	54.3	2025	54.6	2016
181.mcf	1800	237	759	149	1211
186.crafty	1000	38.2	2621	37.0	2704
197.parser	1800	133	1357	106	1699
252.eon	1300	42.7	3043	36.5	3559
253.perlbmk	1800	89.7	2006	80.2	2244
254.gap	1100	57.1	1925	56.5	1946
255.vortex	1900	66.3	2864	61.6	3084
256.bzip2	1500	92.3	1625	92.3	1625
300.twolf	3000	194	1547	148	2025



Hardware

CPU:	AMD Opteron (TM) 256
CPU MHz:	3000
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 ECC Registered SDRAM)
Disk Subsystem:	SAS,36GB,10K RPM
Other Hardware:	None

Software

Operating System:	SUSE LINUX Enterprise Server 9 SP3 (x86_64)
Compiler:	PathScale EKOPath(TM) Compiler Suite, Version 2.3
File System:	ufs
System State:	Multi-user

Notes/Tuning Information

```
Portability flags:
 186.crafty:  -DLINUX_i386
 252.eon:     -DHAS_ERRLIST -DSPEC_CPU2000_LP64
 253.perlbmk: -DSPEC_CPU2000_LINUX_I386 -DSPEC_CPU2000_NEED_BOOL
              -DSPEC_CPU2000_GLIBC22 -DSPEC_CPU2000_LP64
 254.gap:     -DSYS_IS_USG -DSYS_HAS_IOCTL_PROTO -DSYS_HAS_TIME_PROTO
              -DSYS_HAS_CALLOC_PROTO -DSPEC_CPU2000_LP64
 255.vortex:  -DSPEC_CPU2000_LP64

Feedback Optimization:
 +FDO: PASS1=-fb_create fbdata   PASS2=-fb_opt fbdata

Baseline Optimization Flags:
   C programs:       -Ofast +FDO
   C++ programs:     -Ofast +FDO

Peak Tuning Flags:
 164.gzip:   -O3 -ipa -WOPT:val=0 -OPT:unroll_size=0 +FDO
 175.vpr:    -O3 -ipa -m32 +FDO
 176.gcc:    -O3 -IPA:plimit=10000 -LNO:opt=0 -OPT:goto=off +FDO
```

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Notes/Tuning Information (Continued)

```
 181.mcf:    -O3 -ipa -IPA:field_reorder=on -m32 +FDO
 186.crafty: -Ofast -CG:local_fwd_sched=on -LNO:opt=0 -WOPT:val=0 +FDO
 197.parser: -O3 -ipa -m32 -IPA:ctype=on +FDO
 252.eon:    -Ofast -CG:gcm=off:p2align_freq=1:prefetch=off -IPA:plimit=4000
             -OPT:treeheight=on -TENV:X=4:frame_pointer=off -fno-exceptions
             -LNO:fu=10:full_unroll_outer=on -GRA:optimize_boundary=on +FDO
 253.perlbmk:-O2 -ipa -OPT:Ofast:transform_to_memlib=off
             -fno-math-errno -IPA:plimit=10000 +FDO
 254.gap:    -Ofast -IPA:min_hotness=5 -OPT:alias=disjoint -CG:movnti=1 +FDO
 255.vortex: -Ofast -OPT:goto=off +FDO
 256.bzip2:  basepeak = true
 300.twolf:  -O2 -CG:gcm=off:p2align_freq=100000
             -OPT:Ofast:unroll_times_max=8:unroll_size=256:alias=disjoint
             -WOPT:mem_opnds=on -m32 +FDO

Default BIOS settings was used.
System was tested in 1-chip configuration.

This result was measured on the Sun Fire X4200.  In addition,
Sun has submitted the same result for the Sun Fire X4100, which is
electronically equivalent to the Sun Fire X4200.
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