CINT2000 Result

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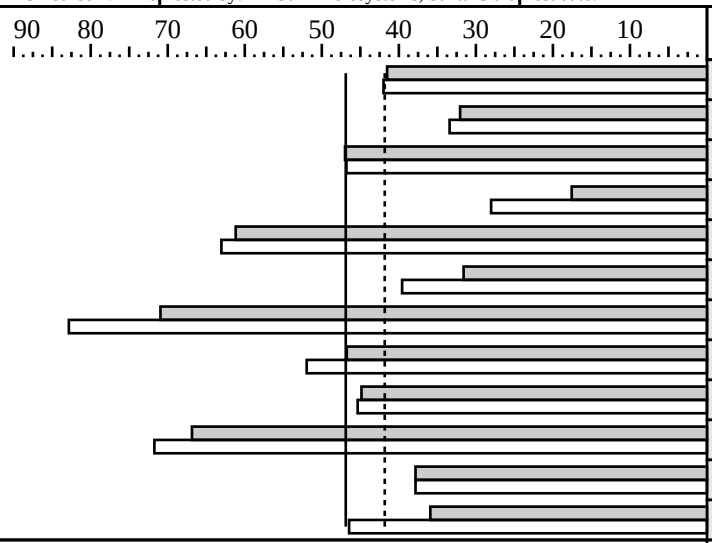
Sun Microsystems
Sun Fire X4200

SPECint_rate2000 = 46.9

SPECint_rate_base2000 = 41.8

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	2	78.2	41.5	2	77.3	42.0
175.vpr	2	101	32.0	2	97.2	33.4
176.gcc	2	54.3	47.0	2	54.5	46.8
181.mcf	2	238	17.6	2	149	28.0
186.crafty	2	37.9	61.2	2	36.8	63.0
197.parser	2	132	31.6	2	106	39.6
252.eon	2	42.5	70.9	2	36.4	82.8
253.perlbmk	2	89.3	46.8	2	80.4	52.0
254.gap	2	56.9	44.9	2	56.3	45.3
255.vortex	2	65.9	66.9	2	61.5	71.7
256.bzip2	2	92.0	37.8	2	92.0	37.8
300.twolf	2	194	35.9	2	150	46.5

Hardware

CPU:	AMD Opteron (TM) 256
CPU MHz:	3000
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:	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

taskset has been used to bind processes to CPUs
Default BIOS settings was used.

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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