CINT2000 Result

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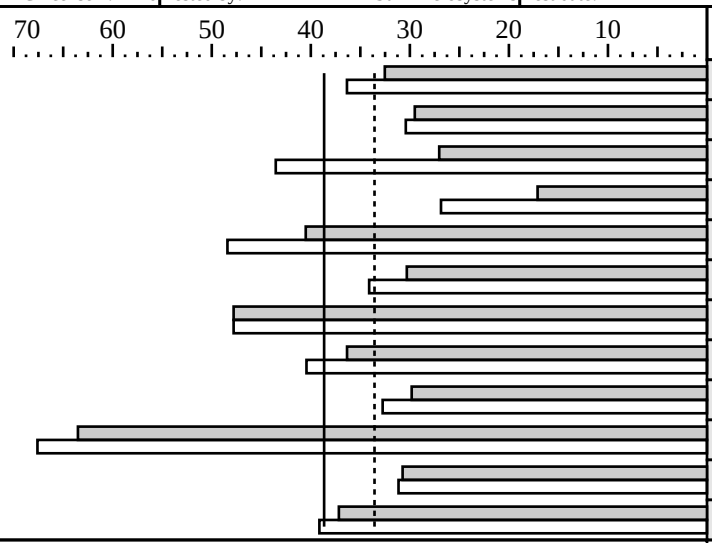
Sun Microsystems
Sun Fire V440 (1600MHz)

SPECint_rate2000 = 38.7

SPECint_rate_base2000 = 33.6

SPEC license #: 6 | Tested by: Sun Microsystems | Test date: Nov-2004 | Hardware Avail: Nov-2004 | Software Avail: Jan-2005



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	4	200	32.5	4	179	36.3
175.vpr	4	220	29.5	4	214	30.4
176.gcc	4	189	27.0	4	117	43.5
181.mcf	4	488	17.1	4	311	26.9
186.crafty	4	115	40.5	4	95.8	48.4
197.parser	4	276	30.3	4	245	34.1
252.eon	4	126	47.8	4	126	47.8
253.perlbmk	4	230	36.3	4	207	40.4
254.gap	4	171	29.8	4	156	32.7
255.vortex	4	139	63.5	4	130	67.6
256.bzip2	4	226	30.7	4	223	31.1
300.twolf	4	375	37.2	4	356	39.1

Hardware

CPU:	UltraSPARC IIIi
CPU MHz:	1600
FPU:	Integrated
CPU(s) enabled:	4 cores, 4 chips, 1 core/chip
CPU(s) orderable:	2,4
Parallel:	No
Primary Cache:	32KBI+64KBD on chip
Secondary Cache:	1MB(I+D) on chip
L3 Cache:	None
Other Cache:	None
Memory:	16GB
Disk Subsystem:	1 x 73GB
Other Hardware:	None

Software

Operating System:	Solaris 10
Compiler:	Sun Studio 9
File System:	ufs
System State:	Multi-User

Notes/Tuning Information

```
Compiler invocation:
  C: cc
  CXX: CC



Integer base flags:
     -fast -xipo=2 with ONESTEP=yes and feedback

Integer peak flags:
 ONESTEP=yes and feedback for all benchmarks

 164.gzip:    -xO5 -xbuiltin=%all -xtarget=native -xalias_level=std
              -xipo=2 -Wc,-Qeps:enabled=1,-Qeps:rp_filtering_margin=100
 175.vpr:     -fast -xalias_level=std -xipo=2
              -Wc,-Qeps:enabled=1,-Qeps:rp_filtering_margin=100,
              -Qeps:do_spec_load=1  -lmopt -lm
 176.gcc:     -fast -xipo=2 -ll2amm
 181.mcf:     -fast -xipo=2 -xprefetch_level=3 -Wc,-Qeps:enabled=1
              -W2,-Apf:llist=3:noinnerllist
```

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Notes/Tuning Information (Continued)

```
 186.crafty:  -fast -xinline= -xipo=2 -xalias_level=strong -W2,-Ashort_ldst
              Feedback adds -xlinkopt in PASS2
 197.parser:  -fast -xipo=2 -xalias_level=strong
              -Wc,-Qgsched-T6,-Qipa:valueprediction
 252.eon:      basepeak = yes
 253.perlbmk: -xO5 -xtarget=native -xmemalign=4s -xipo
              -Wc,-Qeps:enabled=1,-Qeps:ws=8 -xalias_level=std
              -xsafe=mem -Wc,-Qiselect-funcalign=32,-Qicache-chbab=1 -Wc,
              -Qiselect-sw_pf_tbl_th=20,-Qeps:do_spec_load=1 -xprefetch=no
 254.gap:     -fast -xipo=2 -xalias_level=strong -xvector
              -xprefetch_level=3 -W2,-Abcopy
 255.vortex:  -fast -xrestrict -xipo=2
              -W2,-crit,-Ainline:recursion=1:cs=500:irs=6000
              -Wc,-Qeps:enabled=1,-Qdepgraph-early_cross_call=1,
              -Qiselect-funcalign=32,-Qpeep-Sh0 -ll2amm
 256.bzip2:   -fast -xipo=2 -xalias_level=strong -xrestrict
              -Wc,-Qeps:enabled=1
 300.twolf:   -fast -xalias_level=strong -xsafe=mem -xipo=2
              -xprefetch=no%auto -Wc,-Qms_pipe+intdivusefp

Feedback is done as follows, unless otherwise noted:
 fdo_pre0:  rm -rf ./feedback.profile ./SunWS_cache
 PASS1:     -xprofile=collect:./feedback
 PASS2:     -xprofile=use:./feedback

Portability:
 176.gcc:     -Dalloca=__builtin_alloca -DHOST_WORDS_BIG_ENDIAN
 186.crafty:  -DSUN
 252.eon:     -library=iostream
              srcalt=fmax_errno
 253.perlbmk: -DSPEC_CPU2000_SOLARIS
 254.gap:     -DSYS_IS_USG -DSYS_HAS_TIME_PROTO -DSYS_HAS_SIGNAL_PROTO
              -DSYS_HAS_CALLOC_PROTO -DSYS_HAS_IOCTL_PROTO

Shell Environments:
  Stack size set to unlimited via "ulimit -s unlimited"
  MPSSHEAP=512K
  MPSSSTACK=512K
  LD_PRELOAD=mpss.so.1

Kernel Parameters (/etc/system):
  autoup=900
  tune_t_fsflushr=1
```