CINT2000 Result

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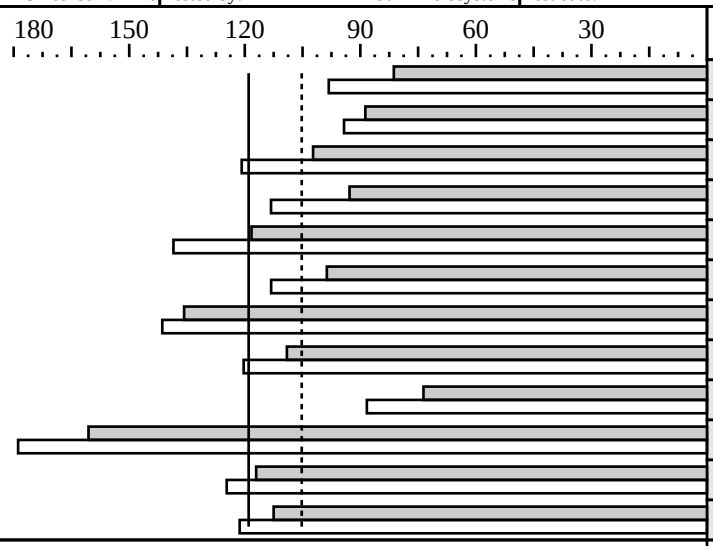
Sun Microsystems
Sun Fire 12K

SPECint_rate2000 = 119

SPECint_rate_base2000 = 105

SPEC license #: 6 | Tested by: Sun Microsystems | Test date: Mar-2003 | Hardware Avail: Mar-2003 | Software Avail: May-2003



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	16	320	81.3	16	265	98.2
175.vpr	16	293	88.7	16	276	94.2
176.gcc	16	200	102	16	169	121
181.mcf	16	360	92.8	16	295	113
186.crafty	16	157	118	16	134	139
197.parser	16	339	98.7	16	295	113
252.eon	16	178	136	16	171	141
253.perlbmk	16	306	109	16	278	120
254.gap	16	277	73.6	16	231	88.3
255.vortex	16	220	161	16	197	179
256.bzip2	16	238	117	16	223	125
300.twolf	16	495	113	16	459	121

Hardware

CPU:	UltraSPARC III Cu
CPU MHz:	1200
FPU:	Integrated
CPU(s) enabled:	16 cores, 16 chips, 1 core/chip
CPU(s) orderable:	4-52
Parallel:	No
Primary Cache:	32KBI+64KBD on chip
Secondary Cache:	8MB(I+D) off chip
L3 Cache:	None
Other Cache:	None
Memory:	128GB 16-way interleaved
Disk Subsystem:	1 x 36GB (System Disk) Sun StorEdge T3, 9 x 18GB striped
Other Hardware:	None

Software

Operating System:	Solaris 9 12/02
Compiler:	Sun ONE Studio 8 (pre-FCS build 3/9) Sun Performance Library 8 (pre-FCS build 3/9)
File System:	ufs with ufs logging
System State:	Multi-User

Notes/Tuning Information

```
Compiler invocation:
  C: cc
  CXX: CC
  F90: f90
  F77: f90

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

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

 164.gzip:    -xO4  -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 -lmopt -lm
 176.gcc:     -fast -xipo=2 -ll2amm
 181.mcf:     -fast -xipo=2 -xprefetch_level=3 -Wc,-Qeps:enabled=1
 186.crafty:  -fast -xinline= -xipo=2 -xalias_level=strong -W2,-Ashort_ldst
```

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Notes/Tuning Information (Continued)

```
                Feedback adds -xlinkopt in PASS2
 197.parser:    -fast -xipo=2 -xalias_level=strong
                -Wc,-Qgsched-T6,-Qipa:valueprediction
 252.eon:       -fast -xipo=2 -xalias_level=compatible -noex
                -Qoption cg -Qeps:enabled=1,-Qeps:ws=32
 253.perlbmk:   -xO5 -xtarget=native -xipo -xalias_level=std -xsafe=mem
                -Wc,-Qeps:enabled=1,-Qeps:ws=8,-Qiselect-sw_pf_tbl_th=20,
                -Qiselect-funcalign=32,-Qicache-chbab=1
 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 -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
 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=4M
  MPSSSTACK=4M
  LD_PRELOAD=mpss.so.1

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

Processes were bound to CPUs using submit=pbind
```