CINT2000 Result

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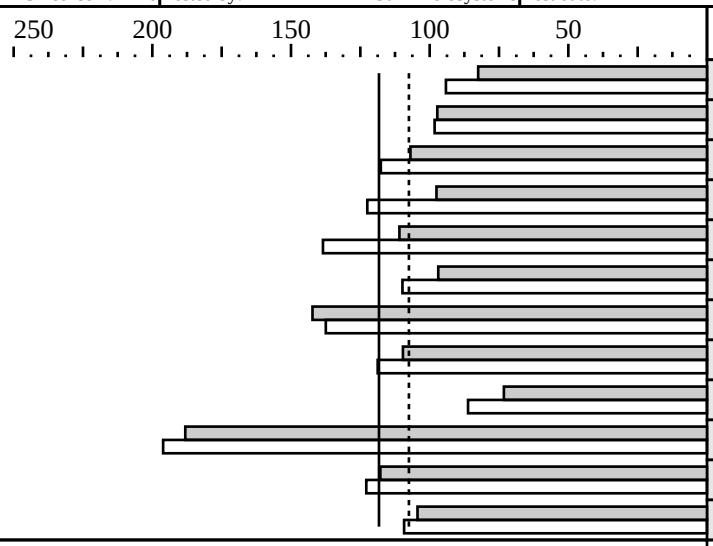
Sun Microsystems
Sun Fire V890 (8 processor)

SPECint_rate2000 = 118

SPECint_rate_base2000 = 107

SPEC license #: 6 | Tested by: Sun Microsystems | Test date: Aug-2004 | Hardware Avail: Sep-2004 | Software Avail: Sep-2004



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	16	315	82.5	16	276	94.1
175.vpr	16	267	97.2	16	265	98.2
176.gcc	16	191	107	16	174	118
181.mcf	16	342	97.5	16	273	122
186.crafty	16	167	111	16	134	138
197.parser	16	345	96.9	16	304	110
252.eon	16	170	142	16	176	137
253.perlbmk	16	305	110	16	281	119
254.gap	16	279	73.2	16	237	86.2
255.vortex	16	187	188	16	180	196
256.bzip2	16	236	118	16	227	123
300.twolf	16	533	104	16	510	109

Hardware

CPU:	UltraSPARC IV
CPU MHz:	1200
FPU:	Integrated
CPU(s) enabled:	16 cores, 8 chips, 2 cores/chips
CPU(s) orderable:	4,8 (order by # of chips)
Parallel:	No
Primary Cache:	32KBI+64KBD per core on chip (64KBI+128KBD on chip)
Secondary Cache:	8MB(I+D) per core off chip (16MB(I+D) off chip)
L3 Cache:	None
Other Cache:	None
Memory:	32GB 8-way interleaved
Disk Subsystem:	1x73GB
Other Hardware:	None

Software

Operating System:	Solaris 9 9/04
Compiler:	Sun Studio 9
File System:	ufs with ufs logging
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:    -xO4  -xbuiltin=%all -xtarget=native -xalias_level=std
              -xipo=2 -Wc,-Qeps:enabled=1,
              -Qeps:rp_filtering_margin=30,-Qeps:do_spec_load=1
 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=2 -Wc,-Qeps:enabled=1
```

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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:     -fast -xipo=2 -noex
              -Qoption cg -Qeps:enabled=1,-Qeps:ws=32
 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 -xalias_level=strong -xrestrict
              -Wc,-Qeps:enabled=1 -xsafe=mem -Qeps:rp_filtering_margin=99
 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=512K
  MPSSSTACK=512K
  LD_PRELOAD=mpss.so.1

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