CINT2000 Result

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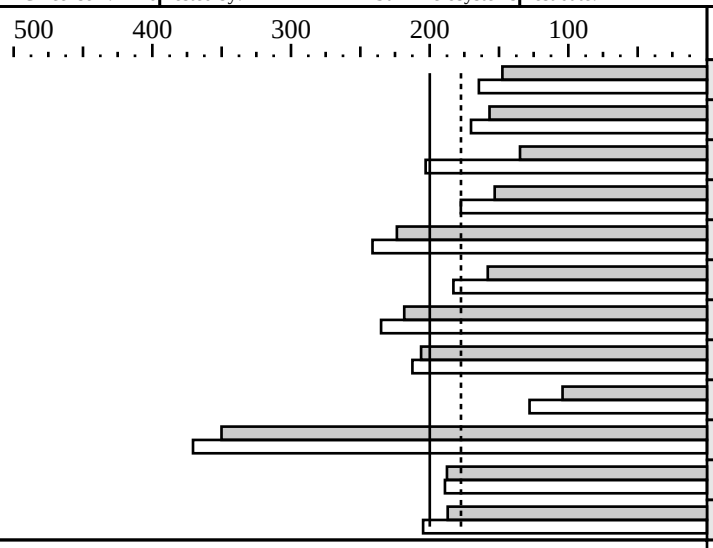
Sun Microsystems
Sun Fire V890 (8 processor)

SPECint_rate2000 = 200

SPECint_rate_base2000 = 177

SPEC license #: 6 | Tested by: Sun Microsystems | Test date: Jun-2006 | Hardware Avail: Aug-2006 | Software Avail: Jan-2006



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	16	176	148	16	158	165
175.vpr	16	166	157	16	153	170
176.gcc	16	151	135	16	101	203
181.mcf	16	218	153	16	188	178
186.crafty	16	83.0	224	16	76.9	241
197.parser	16	211	158	16	183	183
252.eon	16	111	218	16	103	235
253.perlbmk	16	162	206	16	157	212
254.gap	16	196	104	16	160	128
255.vortex	16	101	350	16	95.1	371
256.bzip2	16	148	188	16	147	189
300.twolf	16	298	187	16	272	205

Hardware

CPU:	UltraSPARC IV+
CPU MHz:	1800
FPU:	Integrated
CPU(s) enabled:	16 cores, 8 chips, 2 cores/chip
CPU(s) orderable:	2,4,6,8 (order by number of chips)
Parallel:	No
Primary Cache:	64KBI+64KBD per core on chip
Secondary Cache:	2MB (I+D) per chip (on chip)
L3 Cache:	32MB (I+D) per chip (off chip)
Other Cache:	None
Memory:	64GB (8-way interleaved, 64x1GB DIMMs)
Disk Subsystem:	1x72GB (10k rpm, Hitachi DK32EJ)
Other Hardware:	None

Software

Operating System:	Solaris 10 1/06
Compiler:	Sun Studio 11
File System:	ufs
System State:	Multi-User

Notes/Tuning Information

```
Compiler invocation:
  C:   cc
  C++: CC

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

Integer peak flags:
  ONESTEP=yes for all benchmarks
  Profile feedback used for those marked with +FDO

  164.gzip:   -x04 -xbuiltin=%all -xtarget=native -xalias_level=std
              -xipo=2 -Wc,-Qeps:enabled=1,-Qeps:rp_filtering_margin=30,
              -Qeps:do_spec_load=1 +FDO
  175.vpr:    -fast -Wc,-Qeps:enabled=1,-Qeps:do_spec_load=1,
              -Qeps:rp_filtering_margin=30 -xipo=2 -xpagesize_stack=8K
              -lmopt -lm +FDO
  176.gcc:    -fast -xipo=2 -Wc,-Qicache-chbab=1 -Wc,-Qeps:enabled=1
              -Qeps:ws=32 -Wc,-Qdepgraph-early_cross_call=1
              -Wc,-Qms_pipe-pref_prolog  +FDO
```

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Notes/Tuning Information (Continued)

```
                -ll2amm
    181.mcf:    -fast -xipo=2 -xprefetch_level=2
    186.crafty: -fast -xpagesize=8k -xipo=2 -xalias_level=strong
                -W2,-Ashort_ldst -xinline= -xprefetch -xrestrict
                +FDO (-xlinkopt during pass2)
    197.parser: -fast -xipo=2 -xalias_level=strong -Wc,Qgsched-T6
                -Wc,-Qipa:valueprediction -Wc,-Qms_pipe-prefstrong=0,
                -Qlp-pt=weak +FDO
    252.eon:    -fast -xipo=2 -xalias_level=compatible -Qoption cg
                -Qeps:enabled=1 -xvector -Qoption iropt -Abcopy -xunroll=16
                +FDO
    253.perlbmk:-fast -xipo -Wc,-Qeps:enabled=1,-Qeps:ws=16 -xalias_level=std
                -xsafe=mem -Wc,-Qiselect-funcalign=128,-Qicache-chbab=1
                -Wc,-Qiselect-sw_pf_tbl_th=40,-Qeps:do_spec_load=1 +FDO
    254.gap:    -fast -xipo=2 -xalias_level=strong -xvector -xprefetch_level=3
                -W2,-Abcopy +FDO
    255.vortex: -fast -xrestrict -xipo=2 -Wc,-Qeps:enabled=1
                -W2,-Ainline:recursion=1:cs=400:irs=5000
                -Wc,-Qdepgraph-early_cross_call=1 -Wc,-Qiselect-funcaligh=64
                -Wc,-Qpeep-Sh0 -W2,-crit -xprefetch=latx:1.7 -fsimple=1
                -Wc,-Qiselect-sw_pf_tbl_th=30 -Wc,-Qicache-chbab=1
                -W2,-Ainline:inc=300 +FDO
                -ll2amm
    256.bzip2:  -fast -xipo=2 -xalias_level=strong -xrestrict
                -Wc,-Qeps:enabled=1,-Qeps:do_spec_load=1 +FDO
    300.twolf:  -fast -xalias_level=strong -xsafe=mem -xipo=2
                -xprefetch=no%auto -Wc,-Qms_pipe_intdivusefp -xinline= +FDO

  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
    253.perlbmk: -DSPEC_CPU2000_SOLARIS
    254.gap:     -DSYS_IS_USG -DSYS_HAS_TIME_PROTO -DSYS_HAS_SIGNAL_PROTO -DSYS_HAS_CALLOC_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
```