CINT2000 Result

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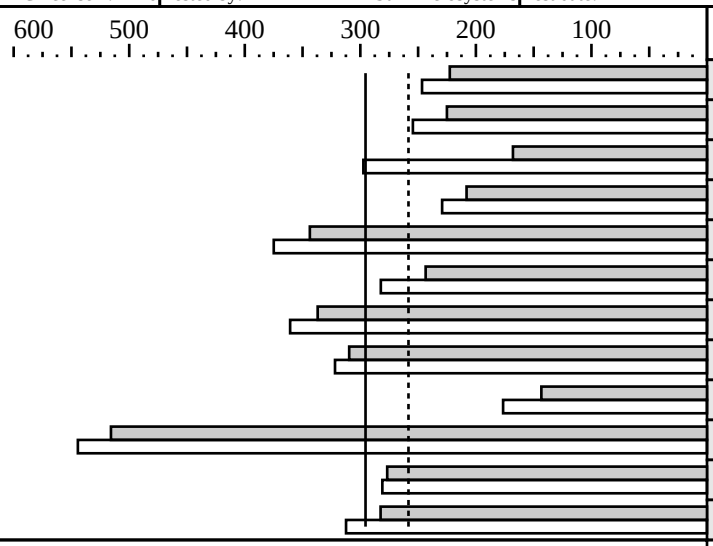
Sun Microsystems
Sun Fire E2900

SPECint_rate2000 = 295

SPECint_rate_base2000 = 258

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	24	175	223	24	158	247
175.vpr	24	173	225	24	153	255
176.gcc	24	182	168	24	103	297
181.mcf	24	241	208	24	219	229
186.crafty	24	81.0	344	24	74.3	375
197.parser	24	206	243	24	178	282
252.eon	24	107	337	24	100	361
253.perlbmk	24	162	310	24	156	322
254.gap	24	214	143	24	174	176
255.vortex	24	103	516	24	97.2	544
256.bzip2	24	151	277	24	149	281
300.twolf	24	296	282	24	267	312

Hardware

CPU:	UltraSPARC IV+
CPU MHz:	1800
FPU:	Integrated
CPU(s) enabled:	24 cores, 12 chips, 2 cores/chip
CPU(s) orderable:	4,8,12 (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:	96GB (16-way interleaved, 96x1GB DIMMs)
Disk Subsystem:	2x72GB (10k rpm, Seagate ST373307)
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
```