CINT2000 Result

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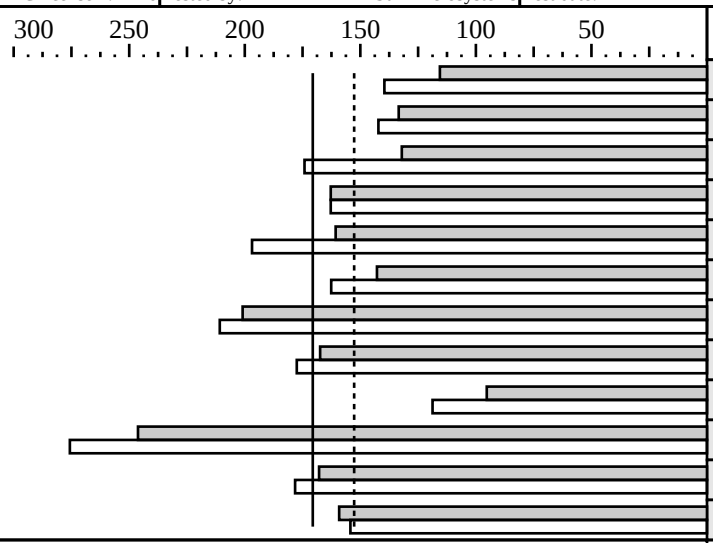
Sun Microsystems
Sun Fire E2900 (12 processor)

SPECint_rate2000 = 171

SPECint_rate_base2000 = 153

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	24	337	116	24	279	140
175.vpr	24	292	133	24	274	142
176.gcc	24	232	132	24	176	174
181.mcf	24	308	163	24	308	163
186.crafty	24	173	161	24	141	197
197.parser	24	351	143	24	308	163
252.eon	24	180	201	24	172	211
253.perlbmk	24	299	167	24	282	177
254.gap	24	321	95.3	24	258	119
255.vortex	24	215	246	24	192	276
256.bzip2	24	249	168	24	234	178
300.twolf	24	525	159	24	541	154

Hardware

CPU:	UltraSPARC s400
CPU MHz:	1200
FPU:	Integrated
CPU(s) enabled:	24 cores, 12 chips, 2 cores/chip
CPU(s) orderable:	4,8,12 (order by # 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:	48GB 16-way interleaved
Disk Subsystem:	1 x 73GB
Other Hardware:	None

Software

Operating System:	Solaris 9 04/04
Compiler:	Sun ONE Studio 8 Sun Performance Library 8
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=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
 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
```

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Notes/Tuning Information (Continued)

```
                -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
 181.mcf:   basepeak=yes
 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
```