CINT2000 Result

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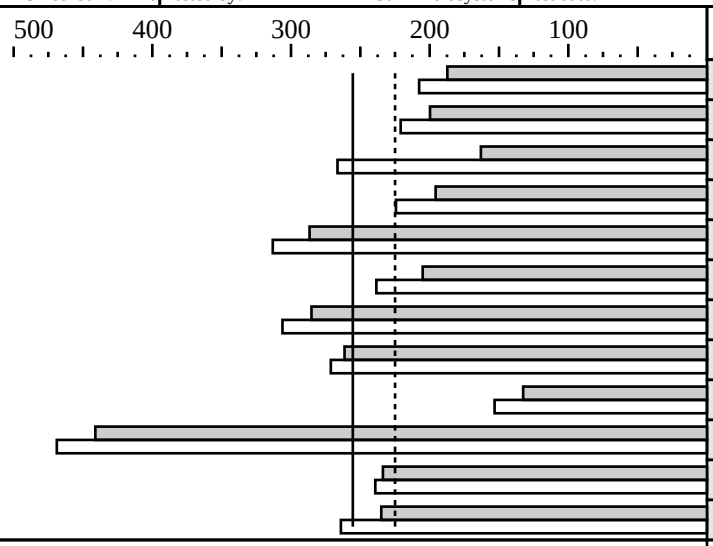
Sun Microsystems
Sun Fire E2900 (12 processor)

SPECint_rate2000 = 255

SPECint_rate_base2000 = 225

SPEC license #: 6 | Tested by: Sun Microsystems | Test date: Oct-2005 | Hardware Avail: Oct-2005 | Software Avail: Nov-2005



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	24	208	187	24	188	208
175.vpr	24	195	200	24	176	221
176.gcc	24	188	163	24	115	266
181.mcf	24	256	196	24	223	224
186.crafty	24	97.1	287	24	88.9	313
197.parser	24	244	205	24	210	238
252.eon	24	127	285	24	118	306
253.perlbmk	24	192	261	24	185	271
254.gap	24	231	133	24	200	153
255.vortex	24	120	441	24	113	469
256.bzip2	24	179	234	24	175	239
300.twolf	24	356	235	24	316	264

Hardware

CPU:	UltraSPARC IV+
CPU MHz:	1500
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 (128KBI+128KBD 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
Disk Subsystem:	1x72GB
Other Hardware:	None

Software

Operating System:	Solaris 10
Compiler:	Sun Studio 11
File System:	ufs (default ufs logging on with Solaris 10)
System State:	Multi-User

Notes/Tuning Information

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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:   -x04 -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 -Wc,-Qeps:enabled=1,-Qeps:do_spec_load=1,
              -Qeps:rp_filtering_margin=30 -xipo=2 -xpagesize_stack=8K
              -lmopt -lm
  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 -ll2amm
  181.mcf:    -fast -xipo=2 -xprefetch_level=2
```

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Notes/Tuning Information (Continued)

```
  186.crafty: -fast -xpagesize=8k -xipo=2 -xalias_level=strong
              -W2,-Ashort_ldst -xinline= -xprefetch -xrestrict
              Feedback adds -xlinkopt during pass2
  197.parser: -fast -xipo=2 -xalias_level=strong -Wc,Qgsched-T6
              -Wc,-Qipa:valuepredicition -Wc,-Qms_pipe-prefstrong=0,
              -Qlp-pt=weak
  252.eon:    -fast -xipo=2 -xalias_level=compatible -Qoption cg
              -Qeps:enabled=1 -xvector -Qoption iropt -Abcopy -xunroll=16
  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
  254.gap:    -fast -W2,-Abcopy -xvector -xprefetch_level=3
  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-funcalign=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 -ll2amm
  256.bzip2:  -fast -xipo=2 -xalias_level=strong -xrestrict
              -Wc,-Qeps:enabled=1,-Qeps:do_spec_load=1
  300.twolf:  -fast -xalias_level=strong -xsafe=mem -xipo=2 -xprefetch=no%auto
              -Wc,-Qms_pipe+intdivusefp -xinline=

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:    -DFMAX_IS_DOUBLE -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
```