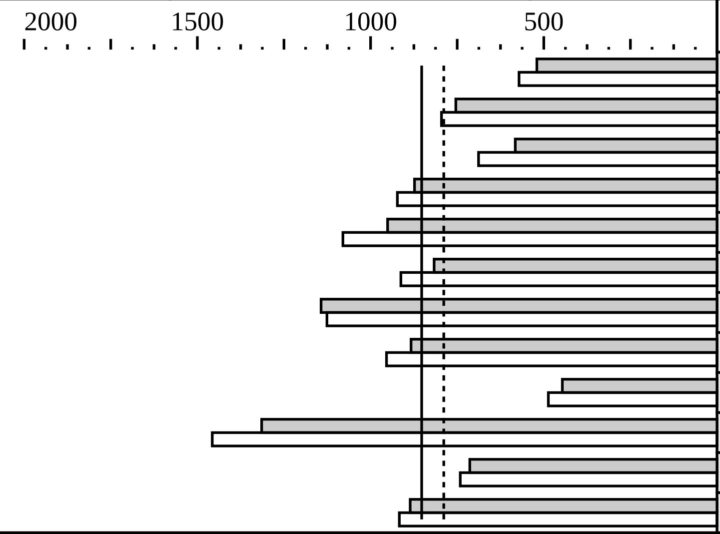
CINT2000 Result

Sun Microsystems
Sun Fire E25K (72 processor)

SPECint_rate2000 = 852
SPECint_rate_base2000 = 789

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	144	450	520	144	409	572
175.vpr	144	310	754	144	294	795
176.gcc	144	316	582	144	267	688
181.mcf	144	344	873	144	326	923
186.crafty	144	176	951	144	155	1080
197.parser	144	368	817	144	329	913
252.eon	144	190	1143	144	193	1126
253.perlbmk	144	340	883	144	315	954
254.gap	144	412	446	144	377	487
255.vortex	144	241	1314	144	218	1457
256.bzip2	144	351	714	144	338	741
300.twolf	144	566	886	144	546	917

Hardware

CPU:	UltraSPARC IV
CPU MHz:	1200
FPU:	Integrated
CPU(s) enabled:	144 cores, 72 chips, 2 cores/chip
CPU(s) orderable:	4-72 (order by chips in groups of 4)
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:	288GB 16-way interleaved
Disk Subsystem:	Sun StorEdge S1 Disk Array (2x36GB) Sun StorEdge T3 Array for the Workgroup (9x36GB)
Other Hardware:	None

Software

Operating System:	Solaris 9 04/04
Compiler:	Sun Studio 8 Sun Performance Library 8
File System:	ufs with ufs logging
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:    -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
  181.mcf:     -fast -xipo=2 -xprefetch_level=2 -Wc,-Qeps:enabled=1
  186.crafty:  -fast -xinline= -xipo=2 -xalias_level=strong -W2,-Ashort_ldst
```

Notes/Tuning Information (Continued)

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                 Feedback adds -xlinkopt in PASS2
   197.parser:   -fast -xipo=2 -xalias_level=strong
                 -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
   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

 Processes were bound to CPUs using submit=pbind

 The system was configured with multiple file systems.
 The O/S was installed on one disk of the Sun StorEdge S1
 Disk Array (ufs, ufs w/logging).  The benchmark was run on
 the Sun StorEdge T3 Array, using H/W Raid 5 and ufs with
 ufs logging file system.
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