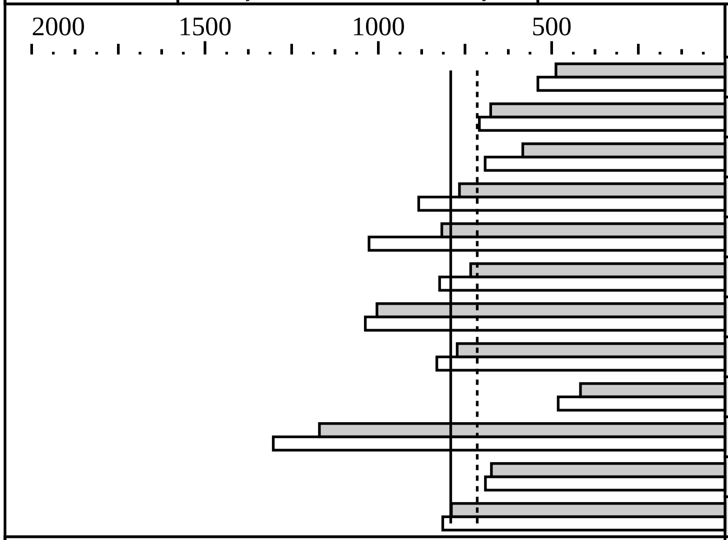
CINT2000 Result

Sun Microsystems
Sun Fire E25K (64 processor)

SPECint_rate2000 = 791
SPECint_rate_base2000 = 715

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	128	426	488	128	385	540
175.vpr	128	308	676	128	293	709
176.gcc	128	280	583	128	236	692
181.mcf	128	349	766	128	302	884
186.crafty	128	182	817	128	145	1027
197.parser	128	364	734	128	325	823
252.eon	128	192	1004	128	186	1038
253.perlbmk	128	346	773	128	322	831
254.gap	128	392	417	128	339	481
255.vortex	128	241	1170	128	216	1303
256.bzip2	128	331	674	128	322	691
300.twolf	128	564	789	128	547	814

Hardware

CPU:	UltraSPARC IV
CPU MHz:	1200
FPU:	Integrated
CPU(s) enabled:	128 cores, 64 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:	256GB 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.
```