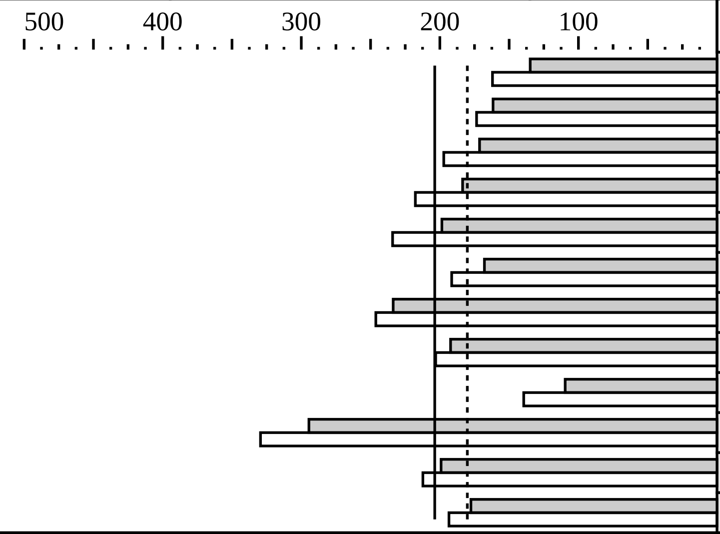
CINT2000 Result

Sun Microsystems
Sun Fire E6900 (16 processor)

SPECint_rate2000 = 204

SPECint_rate_base2000 = 180

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	32	385	135	32	321	162
175.vpr	32	322	162	32	300	173
176.gcc	32	238	171	32	207	197
181.mcf	32	364	184	32	307	218
186.crafty	32	187	199	32	159	234
197.parser	32	398	168	32	349	191
252.eon	32	206	234	32	196	246
253.perlbmk	32	348	192	32	329	203
254.gap	32	373	110	32	293	139
255.vortex	32	239	294	32	214	329
256.bzip2	32	280	199	32	262	212
300.twolf	32	627	178	32	576	193

Hardware

CPU:	UltraSPARC s400
CPU MHz:	1050
FPU:	Integrated
CPU(s) enabled:	32 cores, 16 chips, 2 cores/chip
CPU(s) orderable:	4, 8, 12, 16, 20, 24 (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:	64GB 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 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
  181.mcf:     -fast -xipo=2 -xprefetch_level=3 -Wc,-Qeps:enabled=1
  186.crafty:  -fast -xinline= -xipo=2 -xalias_level=strong -W2,-Ashort_ldst
```

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Notes/Tuning Information (Continued)

```
                 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.
```