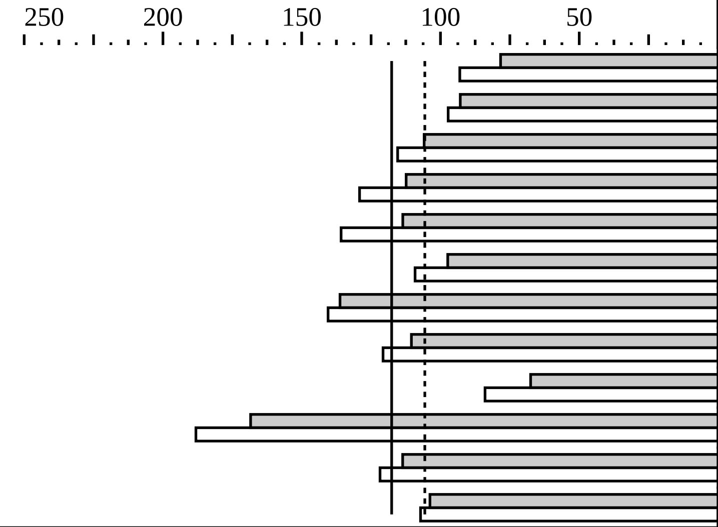
CINT2000 Result

Sun Microsystems
Sun Fire E4900 (8 processor)

SPECint_rate2000 = 118

SPECint_rate_base2000 = 106

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	16	332	78.3	16	279	93.0
175.vpr	16	280	92.9	16	267	97.2
176.gcc	16	193	106	16	177	115
181.mcf	16	297	112	16	259	129
186.crafty	16	163	114	16	137	136
197.parser	16	343	97.4	16	306	109
252.eon	16	177	136	16	172	141
253.perlbmk	16	302	110	16	277	121
254.gap	16	302	67.5	16	243	83.9
255.vortex	16	209	168	16	187	188
256.bzip2	16	245	114	16	229	122
300.twolf	16	536	104	16	519	107

Hardware

CPU:	UltraSPARC s400
CPU MHz:	1200
FPU:	Integrated
CPU(s) enabled:	16 cores, 8 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:	32GB 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=2 -Wc,-Qeps:enabled=1
  186.crafty:  -fast -xinline= -xipo=2 -xalias_level=strong -W2,-Ashort_ldst
```

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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.
```