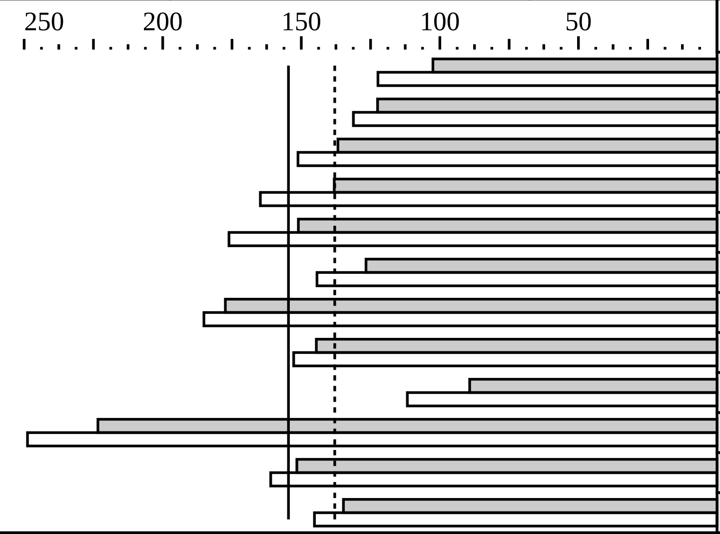
CINT2000 Result

Sun Microsystems
Sun Fire E4900 (12 processor)

SPECint_rate2000 = 155

SPECint_rate_base2000 = 138

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	24	380	103	24	319	122
175.vpr	24	318	122	24	297	131
176.gcc	24	224	137	24	203	151
181.mcf	24	363	138	24	304	165
186.crafty	24	184	151	24	158	176
197.parser	24	396	127	24	347	144
252.eon	24	204	177	24	195	185
253.perlbmk	24	347	145	24	328	153
254.gap	24	343	89.2	24	274	112
255.vortex	24	237	223	24	213	249
256.bzip2	24	275	152	24	259	161
300.twolf	24	620	135	24	575	145

Hardware

CPU:	UltraSPARC s400
CPU MHz:	1050
FPU:	Integrated
CPU(s) enabled:	24 cores, 12 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:	48GB 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.
```