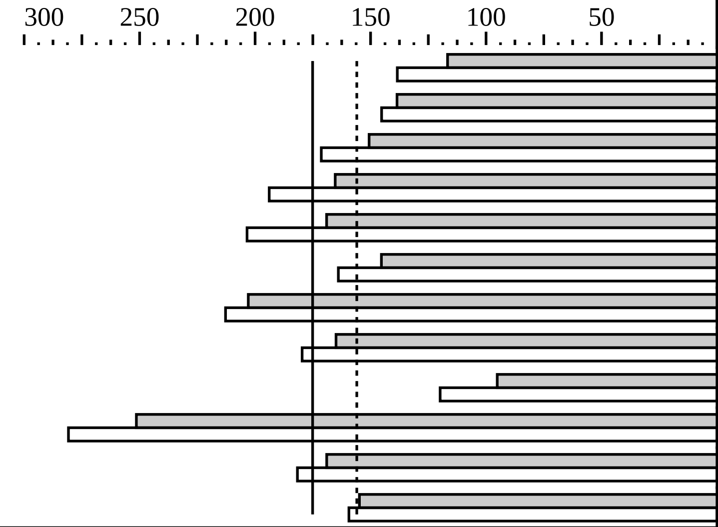
CINT2000 Result

Sun Microsystems
Sun Fire E4900 (12 processor)

SPECint_rate2000 = 175
SPECint_rate_base2000 = 156

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	24	334	117	24	282	138
175.vpr	24	281	139	24	268	145
176.gcc	24	203	151	24	179	171
181.mcf	24	303	165	24	258	194
186.crafty	24	165	169	24	137	203
197.parser	24	345	145	24	306	164
252.eon	24	178	203	24	170	213
253.perlbmk	24	304	165	24	279	180
254.gap	24	322	95.2	24	255	120
255.vortex	24	210	251	24	188	281
256.bzip2	24	247	169	24	230	182
300.twolf	24	539	155	24	524	159

Hardware

CPU:	UltraSPARC s400
CPU MHz:	1200
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=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.
```