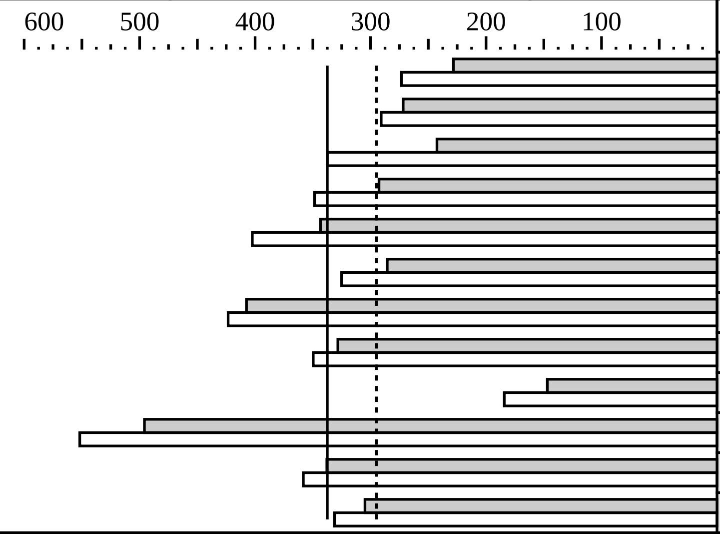
CINT2000 Result

Sun Microsystems
Sun Fire E6900 (24 processor)

SPECint_rate2000 = 337

SPECint_rate_base2000 = 295

SPEC license #:	6	Tested by:	Sun Microsystems	Test date:	Dec-2003	Hardware Avail:	Mar-2004	Software Avail:	Apr-2004



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	48	342	228	48	285	273
175.vpr	48	287	272	48	268	291
176.gcc	48	253	243	48	181	337
181.mcf	48	342	293	48	288	348
186.crafty	48	162	343	48	138	402
197.parser	48	351	286	48	308	325
252.eon	48	178	407	48	171	423
253.perlbmk	48	305	328	48	287	350
254.gap	48	417	147	48	332	184
255.vortex	48	213	496	48	192	552
256.bzip2	48	247	338	48	233	358
300.twolf	48	548	305	48	504	331

Hardware

CPU:	UltraSPARC s400
CPU MHz:	1200
FPU:	Integrated
CPU(s) enabled:	48 cores, 24 chips, 2 cores/chip
CPU(s) orderable:	4-24 (multiples of 4 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:	96GB 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)

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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.
```