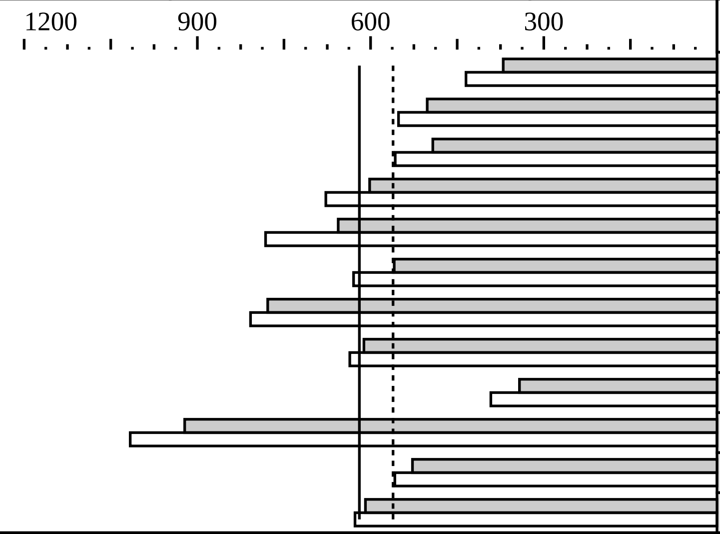
CINT2000 Result

Sun Microsystems
Sun Fire E25K (48 processor)

SPECint_rate2000 = 619

SPECint_rate_base2000 = 561

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	96	421	370	96	359	435
175.vpr	96	311	502	96	283	552
176.gcc	96	249	492	96	220	557
181.mcf	96	333	602	96	296	677
186.crafty	96	170	656	96	142	782
197.parser	96	359	559	96	318	629
252.eon	96	186	778	96	179	808
253.perlbmk	96	328	612	96	315	636
254.gap	96	358	342	96	313	392
255.vortex	96	229	922	96	208	1016
256.bzip2	96	317	527	96	299	558
300.twolf	96	549	609	96	533	627

Hardware

CPU:	UltraSPARC IV
CPU MHz:	1200
FPU:	Integrated
CPU(s) enabled:	96 cores, 48 chips, 2 cores/chip
CPU(s) orderable:	4-72 (order by chips in groups of 4)
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:	192GB 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 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)

```
                 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.
```