CINT2000 Result

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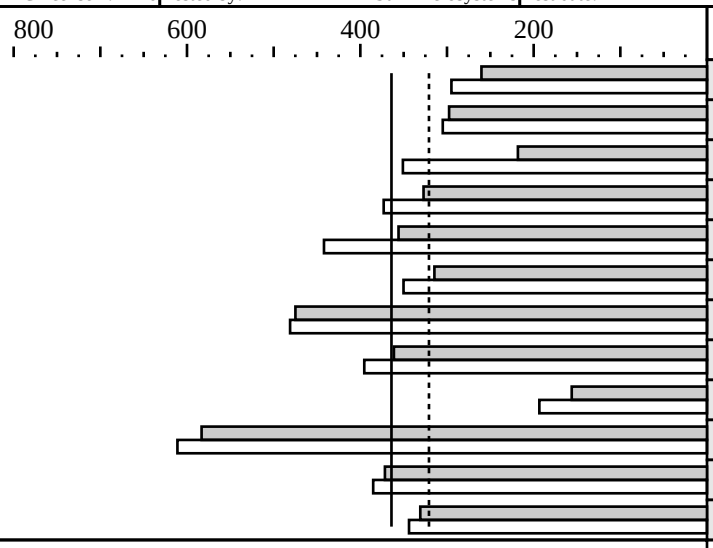
Sun Microsystems
Sun Fire E6900 (24 processor)

SPECint_rate2000 = 364

SPECint_rate_base2000 = 321

SPEC license #: 6 | Tested by: Sun Microsystems | Test date: Jan-2005 | Hardware Avail: Feb-2005 | Software Avail: Jan-2005



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	48	300	260	48	264	295
175.vpr	48	262	298	48	256	305
176.gcc	48	281	218	48	175	351
181.mcf	48	306	327	48	269	373
186.crafty	48	156	356	48	126	442
197.parser	48	319	315	48	286	350
252.eon	48	152	475	48	150	481
253.perlbmk	48	277	361	48	253	395
254.gap	48	392	156	48	317	193
255.vortex	48	181	583	48	173	611
256.bzip2	48	225	372	48	217	385
300.twolf	48	505	331	48	486	344

Hardware

CPU:	UltraSPARC IV
CPU MHz:	1350
FPU:	Integrated
CPU(s) enabled:	48 cores, 24 chips, 2 cores/chip
CPU(s) orderable:	4, 8, 12, 16, 20, 24 (order by number of 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:	192GB 16-way interleaved
Disk Subsystem:	Sun StorEdge S1 Disk Array (2x36GB) Sun StorEdge 6120 Array (14x73GB)
Other Hardware:	None

Software

Operating System:	Solaris 10
Compiler:	Sun Studio 10
File System:	ufs (default ufs logging on with Solaris 10)
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=30,
               -Qeps:do_spec_load=1
  175.vpr:     -fast -xalias_level=std -xipo=2 -Wc,-Qeps:enabled=1,
               -Qeps:rp_filtering_margin=100,-Qeps:do_spec_load=1 -lmopt -lm
  176.gcc:     -fast -xipo=2 -ll2amm
  181.mcf:     -fast -xipo=2 -xprefetch_level=2 -Wc,-Qeps:enabled=1
```

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Notes/Tuning Information (Continued)

```
    186.crafty:  -fast -xinline= -xipo=2 -xalias_level=strong -W2,-Ashort_ldst
                 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
    253.perlbmk: -fast -xipo=2 -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 -W2,-Abcopy -xvector
                 -xprefetch_level=3
    255.vortex:  -fast -xrestrict -xipo=2 -Wc,-Qeps:enable=1
                 -W2,-Ainline:recursion=1:cs=500:irs=6000
                 -Wc,-Qdepgraph-early_cross_call=1 -Wc,-Qiselect-funcalign=32
                 -Wc,-Qpeep-Sh0 -W2,-crit -ll2amm
    256.bzip2:   -fast -xipo -xalias_level=strong -xrestrict
                 -Wc,-Qeps:enabled=1 -xsafe=mem -Qeps:rp_filtering_margin=99
    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
                 srcalt = fmax_errno
    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

  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 6120 Array, using H/W Raid 5 and ufs with
  ufs logging file system.
```