CINT2000 Result

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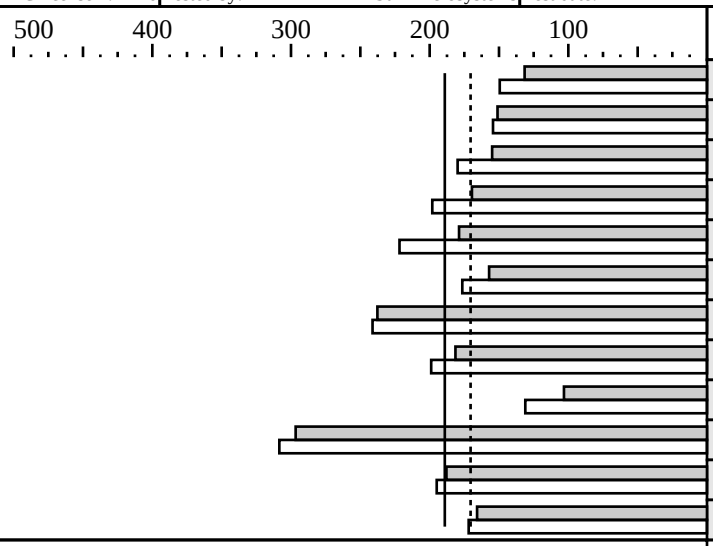
Sun Microsystems
Sun Fire E6900 (12 processor)

SPECint_rate2000 = 189

SPECint_rate_base2000 = 170

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	24	296	132	24	261	149
175.vpr	24	258	151	24	253	154
176.gcc	24	198	155	24	170	180
181.mcf	24	296	170	24	253	198
186.crafty	24	156	179	24	126	222
197.parser	24	319	157	24	284	176
252.eon	24	152	238	24	150	241
253.perlbmk	24	276	181	24	252	199
254.gap	24	297	103	24	234	131
255.vortex	24	178	297	24	172	308
256.bzip2	24	222	188	24	214	195
300.twolf	24	504	166	24	486	172

Hardware

CPU:	UltraSPARC IV
CPU MHz:	1350
FPU:	Integrated
CPU(s) enabled:	24 cores, 12 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:	96GB 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.
```