CINT2000 Result

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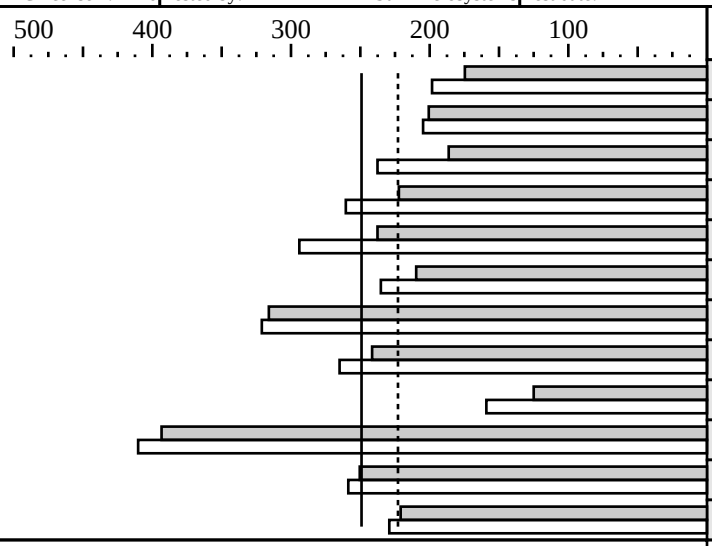
Sun Microsystems
Sun Fire E6900 (16 processor)

SPECint_rate2000 = 249

SPECint_rate_base2000 = 223

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	32	298	175	32	262	198
175.vpr	32	259	201	32	254	205
176.gcc	32	219	186	32	172	238
181.mcf	32	301	222	32	257	260
186.crafty	32	156	238	32	126	294
197.parser	32	319	210	32	284	235
252.eon	32	153	316	32	150	321
253.perlbmk	32	277	242	32	252	265
254.gap	32	327	125	32	257	159
255.vortex	32	179	393	32	172	410
256.bzip2	32	222	250	32	215	259
300.twolf	32	504	221	32	486	229

Hardware

CPU:	UltraSPARC IV
CPU MHz:	1350
FPU:	Integrated
CPU(s) enabled:	32 cores, 16 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:	128GB 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.
```