



CINT2000 Result

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Sun Microsystems
Sun Fire V880 (1050MHz)

SPECint_rate2000 = 14.1
SPECint_rate_base2000 = 12.6

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	2	342	9.49	2	279	11.6
175.vpr	2	304	10.7	2	283	11.5
176.gcc	2	190	13.5	2	178	14.3
181.mcf	2	328	12.7	2	275	15.2
186.crafty	2	177	13.1	2	152	15.3
197.parser	2	370	11.3	2	320	13.0
252.eon	2	197	15.3	2	190	15.9
253.perlbnk	2	328	12.7	2	300	13.9
254.gap	2	285	8.96	2	245	10.4
255.vortex	2	228	19.3	2	201	21.9
256.bzip2	2	252	13.8	2	234	14.9
300.twolf	2	534	13.0	2	493	14.1

Hardware

CPU: UltraSPARC III Cu
CPU MHz: 1050
FPU: Integrated
CPU(s) enabled: 2 cores, 2 chips, 1 core/chip
CPU(s) orderable: 2,4,8
Parallel: No
Primary Cache: 32KBI+64KBD on chip
Secondary Cache: 8MB(I+D) off chip
L3 Cache: None
Other Cache: None
Memory: 4GB 8-way interleaved
Disk Subsystem: 1 x 36GB
Other Hardware: None

Software

Operating System: Solaris 9 4/03
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
F90: f90
F77: f90

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 -l12amm
181.mcf: -fast -xipo=2 -xprefetch_level=3 -Wc,-Qeps:enabled=1
186.crafty: -fast -xinline= -xipo=2 -xalias_level=strong -W2,-Ashort_ldst
Feedback adds -xlinkopt in PASS2



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Notes/Tuning Information (Continued)

```
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.perlbnk: -x05 -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.perlbnk: -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):

```
set autoup=900
set tune_t_fsflushr=1
```