



CINT2000 Result

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Sun Microsystems
Sun Blade 2500 (1.6GHz)

SPECint_rate2000 = 19.5
SPECint_rate_base2000 = 17.1

SPEC license #: 6 Tested by: Sun Microsystems, Santa Clara Test date: Dec-2004 Hardware Avail: Feb-2005 Software Avail: Jan-2005

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	2	198	16.4	2	171	19.0
175.vpr	2	220	14.8	2	215	15.1
176.gcc	2	151	16.9	2	118	21.7
181.mcf	2	496	8.41	2	291	14.3
186.crafty	2	115	20.3	2	95.6	24.3
197.parser	2	277	15.1	2	246	17.0
252.eon	2	126	24.0	2	126	24.0
253.perlbnk	2	225	18.6	2	207	20.2
254.gap	2	171	14.9	2	154	16.6
255.vortex	2	137	32.3	2	131	33.8
256.bzip2	2	228	15.3	2	221	15.8
300.twolf	2	380	18.3	2	352	19.7

Hardware

CPU: UltraSPARC IIIi
CPU MHz: 1600
FPU: Integrated
CPU(s) enabled: 2 cores, 2 chips, 1 core/chip
CPU(s) orderable: 1,2
Parallel: No
Primary Cache: 32KBI+64KBD on chip
Secondary Cache: 1MB(I+D) off chip
L3 Cache: None
Other Cache: None
Memory: 8GB (8x1GB DIMM)
Disk Subsystem: 1 x 146GB 10K RPM SCSI
Other Hardware: None

Software

Operating System: Solaris 10
Compiler: Sun Studio 9
File System: ufs
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 -l12amm
181.mcf: -fast -xipo=2 -xprefetch_level=3 -Wc,-Qeps:enabled=1
-W2,-Apf:l1list=3:noinnerl1list
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



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Notes/Tuning Information (Continued)

```

-Wc,-Qgsched-T6,-Qipa:valueprediction
252.eon: basepeak=yes
253.perlbmk: -xO5 -xtarget=native -xmalign=4s -xipo -Wc,-Qeps:enabled=1
-Qeps:ws=8, -xalias_level=std -xsafe=mem -Wc,-Qiselect-funcalign=32,
-Qicache-chbab=1 -Wc,-Qiselect-sw_pf_tbl_th=20,-Qeps:do_spec_load=1 -xprefetch=no
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 -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=512K
MPSSSTACK=512K
LD_PRELOAD=mpss.so.1

```

Kernel Parameters (/etc/system):

```

autoup=900
tune_t_fsflushr=1

```