



CINT2000 Result

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Sun Microsystems
Sun Fire V890 (8 processor)

SPECint_rate2000 = 174
SPECint_rate_base2000 = 156

SPEC license #: 6 Tested by: Sun Microsystems Test date: Oct-2005 Hardware Avail: Oct-2005 Software Avail: Nov-2005

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	16	207	126	16	186	140
175.vpr	16	185	140	16	175	149
176.gcc	16	162	126	16	112	182
181.mcf	16	237	141	16	204	163
186.crafty	16	96.9	191	16	89.0	208
197.parser	16	242	138	16	209	160
252.eon	16	127	190	16	119	203
253.perlbnk	16	193	173	16	183	183
254.gap	16	208	98.0	16	187	109
255.vortex	16	117	301	16	108	325
256.bzip2	16	177	158	16	171	163
300.twolf	16	351	159	16	313	178

Hardware

CPU: UltraSPARC IV+
CPU MHz: 1500
FPU: Integrated
CPU(s) enabled: 16 cores, 8 chips, 2 cores/chip
CPU(s) orderable: 2, 4, 8 (order by number of chips)
Parallel: No
Primary Cache: 64KBI+64KBD per core on chip (128KBI+128KBD on chip)
Secondary Cache: 2MB(I+D) per chip (on chip)
L3 Cache: 32MB(I+D) per chip (off chip)
Other Cache: None
Memory: 64GB 8-way interleaved
Disk Subsystem: 1x72GB
Other Hardware: None

Software

Operating System: Solaris 10
Compiler: Sun Studio 11
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: -x04 -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 -Wc,-Qeps:enabled=1,-Qeps:do_spec_load=1,
-Qeps:rp_filtering_margin=30 -xipo=2 -xpagesize_stack=8K
-lmopt -lm
176.gcc: -fast -xipo=2 -Wc,-Qicache-chbab=1 -Wc,-Qeps:enabled=1
-Qeps:ws=32 -Wc,-Qdepgraph-early_cross_call=1
-Wc,-Qms_pipe-pref_prolog -l12amm
181.mcf: -fast -xipo=2 -xprefetch_level=2



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Notes/Tuning Information (Continued)

```

186.crafty: -fast -xpagesize=8k -xipo=2 -xalias_level=strong
            -W2,-Ashort_ldst -xinline= -xprefetch -xrestrict
            Feedback adds -xlinkopt during pass2
197.parser: -fast -xipo=2 -xalias_level=strong -Wc,Qgsched-T6
            -Wc,-Qipa:valueprediction -Wc,-Qms_pipe-prefstrong=0,
            -Qlp-pt=weak
252.eon:     -fast -xipo=2 -xalias_level=compatible -Qoption cg
            -Qeps:enabled=1 -xvector -Qoption iropt -Abcopy -xunroll=16
253.perlbnk:-fast -xipo -Wc,-Qeps:enabled=1,-Qeps:ws=16 -xalias_level=std
            -xsafe=mem -Wc,-Qiselect-funcalign=128,-Qicache-chbab=1
            -Wc,-Qiselect-sw_pf_tbl_th=40,-Qeps:do_spec_load=1
254.gap:    -fast -W2,-Abcopy -xvector -xprefetch_level=3
255.vortex: -fast -xrestrict -xipo=2 -Wc,-Qeps:enabled=1
            -W2,-Ainline:recursion=1:cs=400:irs=5000
            -Wc,-Qdepgraph-early_cross_call=1 -Wc,-Qiselect-funcalign=64
            -Wc,-Qpeep-Sh0 -W2,-crit -xprefetch=latx:1.7 -fsimple=1
            -Wc,-Qiselect-sw_pf_tbl_th=30 -Wc,-Qicache-chbab=1
            -W2,-Ainline:inc=300 -ll2amm
256.bzip2:  -fast -xipo=2 -xalias_level=strong -xrestrict
            -Wc,-Qeps:enabled=1,-Qeps:do_spec_load=1
300.twolf:  -fast -xalias_level=strong -xsafe=mem -xipo=2
            -xprefetch=no%auto -Wc,-Qms_pipe+intdivusefp -xinline=

```

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:    -DFMAX_IS_DOUBLE -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):

```

autoup=900
tune_t_fsflushr=1

```