



CINT2000 Result

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Sun Microsystems
Sun Ultra 25

SPECint2000 = 727
SPECint_base2000 = 651

SPEC license #: 6 Tested by: Sun Microsystems Test date: Jun-2006 Hardware Avail: Jun-2006 Software Avail: Jan-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	226	620	203	691	
175.vpr	1400	259	540	251	557	
176.gcc	1100	176	624	136	811	
181.mcf	1800	472	381	351	512	
186.crafty	1000	121	826	107	931	
197.parser	1800	328	549	290	622	
252.eon	1300	147	886	137	947	
253.perlbmk	1800	246	732	227	791	
254.gap	1100	201	547	181	607	
255.vortex	1900	159	1196	154	1234	
256.bzip2	1500	266	564	262	572	
300.twolf	3000	448	669	409	733	

Hardware

CPU: UltraSPARC IIIi
 CPU MHz: 1336
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 1 core/chip
 CPU(s) orderable: 1
 Parallel: No
 Primary Cache: 32KBI+64KBD per chip (on chip)
 Secondary Cache: 1MB(I+D) per chip (on chip)
 L3 Cache: None
 Other Cache: None
 Memory: 4GB(4x1GB DDR333 ECC REG)
 Disk Subsystem: SATA,80GB,7200RPM
 Other Hardware: None

Software

Operating System: Solaris 10 1/06
 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 for all benchmarks
Profile feedback used for those marked with +FDO

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 +FDO
 175.vpr: -fast -Wc,-Qeps:enabled=1,-Qeps:do_spec_load=1,
 -Qeps:rp_filtering_margin=30 -xipo=2 -xpagesize_stack=8K
 -lmopt -lm +FDO
 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 +FDO



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Notes/Tuning Information (Continued)

```

181.mcf: -fast -xipo=2 -xprefetch_level=3 -Wc,-Qeps:enabled=1 -W2,-Apf:l1list=3:noninnerl1list
186.crafty: -fast -xpagesize=8k -xipo=2 -xalias_level=strong
           -W2,-Ashort_ldst -xinline= -xprefetch -xrestrict
           +FDO (-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 +FDO
252.eon: -fast -xipo=2 -xalias_level=compatible -Qoption cg
          -Qeps:enabled=1 -xvector -Qoption iropt -Abcopy -xunroll=16
          +FDO
253.perlbnk: -fast -xipo -Wc,-Qeps:enabled=1,-Qeps:ws=16 -xalias_lvel=std
            -xsafe=mem -Wc,-Qiselect-funcalign=128,-Qicache-chbab=1
            -Wc,-Qiselect-sw_pf_tbl_th=40,-Qeps:do_spec_load=1 +FDO
254.gap: -fast -xipo=2 -xalias_level=strong -xvector -xprefetch_level=3 -W2,-Abcopy +FDO
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-funcaligh=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 -l12amm +FDO
256.bzip2: -fast -xipo=2 -xalias_level=strong -xrestrict
            -Wc,-Qeps:enabled=1,-Qeps:do_spec_load=1 +FDO
300.twolf: -fast -xalias_level=strong -xsafe=mem -xipo=2
            -xprefetch=no%auto -Wc,-Qms_pipe_intdivusefp -xinline= +FDO

```

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
253.perlbnk: -DSPEC_CPU2000_SOLARIS
254.gap: -DSYS_IS_USG -DSYS_HAS_TIME_PROTO -DSYS_HAS_SIGNAL_PROTO -DSYS_HAS_CALLOC_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

```