



CINT2000 Result

Copyright ©1999-2004, Standard Performance Evaluation Corporation

Sun Microsystems
Sun Fire 4800

SPECint_rate2000 = 91.8
SPECint_rate_base2000 = 81.0

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	12	310	62.9	12	256	76.2
175.vpr	12	286	68.2	12	267	73.1
176.gcc	12	186	82.5	12	161	94.9
181.mcf	12	351	71.3	12	290	86.3
186.crafty	12	155	89.9	12	133	105
197.parser	12	333	75.3	12	289	86.6
252.eon	12	172	105	12	164	110
253.perlbnk	12	298	84.2	12	274	91.5
254.gap	12	279	55.0	12	227	67.5
255.vortex	12	211	125	12	187	141
256.bzip2	12	232	90.1	12	217	96.3
300.twolf	12	488	85.6	12	450	92.8

Hardware

CPU: UltraSPARC III Cu
CPU MHz: 1200
FPU: Integrated
CPU(s) enabled: 12 cores, 12 chips, 1 core/chip
CPU(s) orderable: 4-12
Parallel: No
Primary Cache: 32KBI+64KBD on chip
Secondary Cache: 8MB(I+D) off chip
L3 Cache: None
Other Cache: None
Memory: 24GB 16-way interleaved
Disk Subsystem: 2 x 36GB
4 x Sun StorEdge T3, 9x18GB raid5
4-way striped
Other Hardware: None

Software

Operating System: Solaris 9 12/02
Compiler: Sun ONE Studio 8 (pre-FCS build 3/9)
Sun Performance Library 8 (pre-FCS build 3/9)
File System: ufs with ufs logging
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=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



CINT2000 Result

Copyright ©1999-2004, Standard Performance Evaluation Corporation

Sun Microsystems
Sun Fire 4800

SPECint_rate2000 = 91.8
SPECint_rate_base2000 = 81.0

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

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: -xO5 -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 -l12amm
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):

```

autoup=900
tune_t_fsflushr=1

```

Processes were bound to CPUs using submit=pbind

The benchmark was run on the Sun StorEdge T3 disk resident file system.