



CINT2000 Result

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Sun Microsystems
Sun Fire V40z

SPECint2000 = 1515
SPECint_base2000 = 1379

SPEC license #: 6 Tested by: Sun Microsystems, Santa Clara Test date: Jun-2004 Hardware Avail: Jul-2004 Software Avail: May-2004

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	96.5	1450	96.3	1454	
175.vpr	1400	124	1128	121	1159	
176.gcc	1100	67.4	1632	67.4	1632	
181.mcf	1800	276	653	180	1000	
186.crafty	1000	48.1	2080	48.1	2080	
197.parser	1800	155	1160	145	1244	
252.eon	1300	75.4	1725	59.5	2185	
253.perlbnk	1800	122	1476	110	1640	
254.gap	1100	76.0	1447	76.0	1447	
255.vortex	1900	99.7	1905	99.7	1905	
256.bzip2	1500	115	1300	115	1300	
300.twolf	3000	243	1234	187	1602	

Hardware

CPU: AMD Opteron (TM) 850
 CPU MHz: 2400
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 1 core/chip
 CPU(s) orderable: 1,2,4
 Parallel: No
 Primary Cache: 64KBI + 64KBD on chip
 Secondary Cache: 1024KB (I+D) on chip
 L3 Cache: N/A
 Other Cache: N/A
 Memory: 4x1GB, PC2700 CL2.5 DDR SDRAM ECC Registered
 Disk Subsystem: SCSI, 73GB, 10K RPM
 Other Hardware: None

Software

Operating System: SuSE Linux 8.0 SLES 64 bit (SP3)
 Compiler: PathScale EKO Compiler Suite, Release 1.1
 SuSE optional gcc 3.3 (from SLES8 SP3)
 File System: Linux/ext3
 System State: Multi-user, Run level 3

Notes/Tuning Information

Feedback-directed optimization is indicated by "+FDO", which means, unless otherwise noted:

```
PASS1: -fb_create fbdata
PASS2: -fb_opt fbdata
```

Compiler: pathcc (PathScale C) unless otherwise noted.

If other compilers are used, they are indicated as:

```
g++      Gnu C++
pathCC   PathScale C++
```

Integer base tuning:

```
C programs: pathcc -O3 -ipa +FDO
C++ programs: pathCC -Ofast +FDO
```

Peak Tuning:

```
164.gzip: -O3 -ipa -WOPT:val=0 -CG:p2align_freq=10000 +FDO
175.vpr: -O2 -ipa -OPT:alias=disjoint -LNO:prefetch Ahead=2
-CG:p2align_freq=500000 -INLINE:aggressive=on
-IPA:space=300:plimit=10000:callee_limit=5000:linear=on
```



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SPECint2000 =	1515
SPECint_base2000 =	1379

SPEC license #:	6	Tested by:	Sun Microsystems, Santa Clara	Test date:	Jun-2004	Hardware Avail:	Jul-2004	Software Avail:	May-2004
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Notes/Tuning Information (Continued)

```

+FDO
176.gcc:      basepeak = true
181.mcf:      -O3 -static -OPT:Ofast -m32 +FDO
186.crafty:   basepeak = true
197.parser:   -O3 -ipa -m32 -IPA:ctype=on +FDO
252.eon:      g++ -O3 -msse2 -funroll-all-loops -ffast-math
              -finline-limit=5000
              Uses g++ style Feedback Directed Optimization:
                PASS1: -fprofile-arcs  PASS2: -fbranch-probabilities
              Previous feedback is removed prior to compiles, using:
                fdo_pre0 = rm -f *.da *.life analyz_prbprob.out
253.perlbnk:  -O3 -ipa -TENV:X=3 -IPA:min_hotness=5:plimit=20000 +FDO
254.gap:      basepeak=yes
255.vortex:   basepeak=yes
256.bzip2:    basepeak=yes
300.twolf:    -O2 -OPT:unroll_times=8:unroll_size=256:alias=disjoint:Ofast
              -CG:gcm=off:p2align_freq=100000 -TENV:X=4 +FDO -m32

```

Portability:

```

186.crafty:   -DLINUX_i386
252.eon:      -DHAS_ERRLIST  -DSPEC_CPU2000_LP64 -lm
              srcalt = fmax_errno
253.perlbnk:  -DSPEC_CPU2000_LINUX_I386 -DSPEC_CPU2000_NEED_BOOL
              -DSPEC_CPU2000_GLIBC22 -DSPEC_CPU2000_LP64
254.gap:      -DSYS_IS_USG -DSYS_HAS_IOCTL_PROTO -DSYS_HAS_TIME_PROTO
              -DSYS_HAS_SIGNAL_PROTO -DSYS_HAS_ANSI -DSYS_HAS_CALLOC_PROTO
              -DSPEC_CPU2000_LP64
255.vortex:   -DSPEC_CPU2000_LP64

```

Notes:

BIOS build 2.1.0.9E, default setting was used.
Only one CPU was present in the system, other CPUs were physically removed.