



CINT2000 Result

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Sun Microsystems
Sun Java Workstation W2100z

SPECint2000 = 1584
SPECint_base2000 = 1437

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	96.3	1453	96.1	1457	
175.vpr	1400	121	1158	116	1208	
176.gcc	1100	66.3	1658	66.3	1658	
181.mcf	1800	251	718	159	1129	
186.crafty	1000	48.1	2081	48.1	2081	
197.parser	1800	164	1097	142	1266	
252.eon	1300	75.7	1717	62.7	2073	
253.perlbnk	1800	110	1634	102	1771	
254.gap	1100	73.9	1488	73.9	1488	
255.vortex	1900	80.3	2367	80.3	2367	
256.bzip2	1500	112	1334	112	1334	
300.twolf	3000	233	1285	179	1673	

Hardware

CPU: AMD Opteron (TM) 250
 CPU MHz: 2400
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 1 core/chip
 CPU(s) orderable: 2
 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, PC3200 CL3 DDR SDRAM ECC Registered
 Disk Subsystem: SCSI, 73GB, 10K RPM
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux WS 3 (AMD64)
 Compiler: PathScale EKO Compiler Suite, Release 1.1
 Red Hat gcc 3.5 ssa (from RHEL WS 3)
 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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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 A5S1, default setting was used.
Only one CPU was present in the system, other CPU was physically removed.