



# CINT2000 Result

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Sun Microsystems  
Sun Java Workstation W1100z

SPECint2000 = 1582  
SPECint\_base2000 = 1434

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	121	1160	117	1201	
176.gcc	1100	66.3	1658	66.3	1658	
181.mcf	1800	250	720	161	1115	
186.crafty	1000	48.2	2077	48.2	2077	
197.parser	1800	164	1098	143	1262	
252.eon	1300	75.8	1714	61.8	2102	
253.perlbmk	1800	111	1627	102	1766	
254.gap	1100	74.6	1474	74.6	1474	
255.vortex	1900	80.4	2363	80.4	2363	
256.bzip2	1500	113	1328	113	1328	
300.twolf	3000	234	1280	178	1690	

### Hardware

CPU: AMD Opteron (TM) 150  
 CPU MHz: 2400  
 FPU: Integrated  
 CPU(s) enabled: 1 core, 1 chip, 1 core/chip  
 CPU(s) orderable: 1  
 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: IDE, 80GB, 7200RPM  
 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.