



# CINT2000 Result

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Sun Microsystems  
Sun Fire V40z

SPECint\_rate2000 = 40.2  
SPECint\_rate\_base2000 = 35.9

SPEC license #: 6 Tested by: Sun Microsystems, Santa Clara Test date: Feb-2005 Hardware Avail: Apr-2005 Software Avail: Jan-2005

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	2	90.9	35.7	2	91.3	35.6
175.vpr	2	114	28.5	2	112	28.9
176.gcc	2	63.4	40.3	2	62.0	41.1
181.mcf	2	258	16.2	2	158	26.4
186.crafty	2	45.6	50.8	2	44.4	52.2
197.parser	2	154	27.1	2	126	33.0
252.eon	2	54.0	55.8	2	49.5	60.9
253.perlbnk	2	105	39.8	2	93.8	44.5
254.gap	2	68.1	37.5	2	66.1	38.6
255.vortex	2	76.3	57.8	2	69.0	63.9
256.bzip2	2	106	32.9	2	106	32.9
300.twolf	2	217	32.1	2	166	42.0

### Hardware

CPU: AMD Opteron (TM) 852  
 CPU MHz: 2600  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 2 chips, 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: 8GB (8x1GB, PC3200 CL3 DDR)  
 Disk Subsystem: SCSI, 73GB, 10K RPM  
 Other Hardware: None

### Software

Operating System: SUSE LINUX Enterprise Server 9  
 Compiler: PathScale EKOPath Compiler Suite, Release 2.0  
 File System: Linux/ext3  
 System State: Multi-user, Run level 3

## Notes/Tuning Information

+FDO: PASS1= -fb\_create fbdata PASS2= -fb\_opt fbdata

### Baseline optimization flags:

C programs: -Ofast +FDO  
 C++ programs: -Ofast +FDO

### Portability Flags and Alternate Source:

176.gcc : srcalt=64bitgcc  
 186.crafty : -DLINUX\_i386  
 252.eon : -DHAS\_ERRLIST -DSPEC\_CPU2000\_LP64 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

### Peak Tuning:

164.gzip : -O3 -ipa -m3dnow -WOPT:val=0 +FDO



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## Notes/Tuning Information (Continued)

```
175.vpr      : -O2 -ipa -OPT:alias=disjoint -CG:p2align_freq=500000 -INLINE:aggressive=on
              -IPA:space=300:plimit=10000:callee_limit=5000:linear=on +FDO
176.gcc      : -O3 -ipa -OPT:goto=off +FDO
181.mcf      : -O3 -ipa -IPA:field_reorder=on -m32 +FDO
186.crafty   : -O3 -OPT:goto=off +FDO
197.parser   : -O3 -ipa -m32 -IPA:ctype=on +FDO
252.eon      : -Ofast -CG:gcm=off:p2align_freq=1:prefetch=off -OPT:treeheight=on
              -TENV:X=4:frame_pointer=off -fno-exceptions
              -LNO:fu=10:full_unroll_outer=on -IPA:plimit=4000 +FDO
253.perlbmk  : -Ofast -OPT:transform_to_memlib=off -IPA:plimit=10000 +FDO
254.gap      : -Ofast -WOPT:aggstr=0 +FDO
255.vortex   : -Ofast -OPT:goto=off -IPA:plimit=1800 -CG:p2align=on +FDO
256.bzip2    : basepeak = true
300.twolf    : -O2 -CG:gcm=off:p2align_freq=100000
              -OPT:Ofast:unroll_times_max=8:unroll_size=256:alias=disjoint
              -WOPT:mem_opnds=on -m32 +FDO
```

Note: The config file requested the vortex "closed\_files" srcalt, but that srcalt was not in fact installed, so it was not used.  
Default BIOS setting was used; Only two CPUs were present on the system.