



# CINT2000 Result

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Sun Microsystems  
Sun Fire V40z

SPECint\_rate2000 = 76.7  
SPECint\_rate\_base2000 = 68.0

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	4	91.2	71.2	4	91.7	70.9
175.vpr	4	125	52.2	4	122	53.3
176.gcc	4	66.2	77.1	4	66.1	77.3
181.mcf	4	323	25.9	4	182	45.9
186.crafty	4	45.6	102	4	44.5	104
197.parser	4	164	51.1	4	131	63.7
252.eon	4	53.7	112	4	49.3	122
253.perlbnk	4	108	77.7	4	96.7	86.4
254.gap	4	70.8	72.1	4	69.6	73.3
255.vortex	4	81.0	109	4	73.5	120
256.bzip2	4	112	62.4	4	112	62.4
300.twolf	4	234	59.4	4	174	79.9

### Hardware

CPU: AMD Opteron (TM) 852  
CPU MHz: 2600  
FPU: Integrated  
CPU(s) enabled: 4 cores, 4 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: 16GB (8x2GB, 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.