



# CINT2000 Result

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## IBM

IBM eServer 326m, 2.0 GHz Dual Core AMD Opteron(tm) Processor 270

SPECint2000 = 1452

SPECint\_base2000 = 1282

SPEC license #: 11 | Tested by: IBM Corporation | Test date: Nov-2005 | Hardware Avail: Nov-2005 | Software Avail: Nov-2005

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	115	1217	115	1216	
175.vpr	1400	134	1046	130	1080	
176.gcc	1100	79.1	1391	78.3	1405	
181.mcf	1800	283	637	171	1055	
186.crafty	1000	56.1	1782	55.0	1817	
197.parser	1800	194	928	155	1162	
252.eon	1300	63.5	2048	53.4	2432	
253.perlbmk	1800	134	1343	116	1556	
254.gap	1100	81.9	1343	78.7	1397	
255.vortex	1900	94.2	2018	83.6	2273	
256.bzip2	1500	126	1190	126	1190	
300.twolf	3000	252	1189	201	1492	

### Hardware

CPU: AMD Opteron(tm) Processor 270  
 CPU MHz: 2000  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip  
 CPU(s) orderable: 1,2  
 Parallel: No  
 Primary Cache: 64KBI + 64KBD (on chip) per core  
 Secondary Cache: 1024KB (I+D) (on chip) per core  
 L3 Cache: N/A  
 Other Cache: N/A  
 Memory: 8 x 1024GB PC3200  
 Disk Subsystem: SCSI, 36GB 15K RPM  
 Other Hardware: None

### Software

Operating System: SuSE Linux 9.0 SP2 SLES 64 bit Kernel 2.6.5-7.191-smp (SP2)  
 Compiler: PathScale EKO Compiler Suite, Release 2.2.1  
 File System: Linux/reiserfs  
 System State: Multi-user, run level 3

## Notes/Tuning Information

Tested by IBM Corporation

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

Base tuning for C programs: -Ofast +FDO

Base tuning for C++ programs: -Ofast +FDO

Portability flags:

186.crafty: -DLINUX\_i386

252.eon: -DHAS\_ERRLIST -DSPEC\_CPU2000\_LP64

253.perlbmk: -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\_CALLOC\_PROTO -DSPEC\_CPU2000\_LP64

255.vortex: -DSPEC\_CPU2000\_LP64

Peak tuning:

164.gzip: -O3 -ipa -WOPT:val=0 -OPT:unroll\_size=0 +FDO

175.vpr: -O3 -ipa -m32 +FDO

176.gcc: -O3 -IPA:plimit=10000 -LNO:opt=0 -OPT:goto=off +FDO

181.mcf: -O3 -ipa -IPA:field\_reorder=on -m32 +FDO

186.crafty: -Ofast -CG:local\_fwd\_sched=on -LNO:opt=0 -WOPT:val=0 +FDO

197.parser: -O3 -ipa -m32 -IPA:ctype=on +FDO

252.eon: -Ofast -CG:gcm=off:p2align\_freq=1:prefetch=off -IPA:plimit=4000

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http://www.spec.org



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### Notes/Tuning Information (Continued)

```

-OPT:treeheight=on -TENV:X=4:frame_pointer=off -fno-exception
-LNO:fu=10:full_unroll_outer=on -GRA:optimize_boundary=on +FDO
253.perlbnk: -O2 -ipa -OPT:Ofast:transform_to_memlib=off
              -fno-math-errno -IPA:plimit=10000 +FDO
254.gap:      -Ofast -IPA:min_hotness=5 -OPT:alias=disjoint -CG:movnti=1 +FDO
255.vortex:   -Ofast -OPT:goto=off +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

```

#### BIOS Configuration Notes

Node Interleaving Disabled

#### Other Configuration Notes

Taskset utility used to bind process to CPU(s)