



# CINT2000 Result

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IBM Corporation  
IBM eServer e326 (AMD Opteron (TM) 248)

SPECint\_rate2000 = 32.7  
SPECint\_rate\_base2000 = 29.3

SPEC license #: 11 | Tested by: IBM, Inc. | Test date: Jun-2005 | Hardware Avail: Sep-2004 | Software Avail: Apr-2005

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.zip	2	108	30.1	2	108	30.1
175.vpr	2	149	21.8	2	145	22.4
176.gcc	2	75.2	34.0	2	74.6	34.2
181.mcf	2	361	11.6	2	214	19.5
186.crafty	2	54.2	42.8	2	54.4	42.6
197.parser	2	184	22.6	2	152	27.5
252.eon	2	65.0	46.4	2	57.2	52.7
253.perlbnk	2	130	32.2	2	114	36.7
254.gap	2	80.6	31.6	2	79.7	32.0
255.vortex	2	98.0	45.0	2	90.6	48.6
256.bzip2	2	131	26.5	2	131	26.5
300.twolf	2	244	28.5	2	195	35.7

### Hardware

CPU: AMD Opteron 248  
 CPU MHz: 2200  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 2 chips, 1 core/chip  
 CPU(s) orderable: 1,2  
 Parallel: No  
 Primary Cache: 64KBI + 64KBD on chip  
 Secondary Cache: 1024KB (I+D) on chip  
 L3 Cache: N/A  
 Other Cache: N/A  
 Memory: 8 x 1GB, DDR400  
 Disk Subsystem: SCSI, 36GB 10K RPM  
 Other Hardware: None

### Software

Operating System: SuSE Linux 9.0 SP1 SLES 64 bit Kernel 2.6.5-7.151-smp (SP1)  
 Compiler: PathScale EKOPath(TM) Compiler Suite, Release 2.1  
 File System: Linux/reiserfs  
 System State: Multi-user, run level 3

## Notes/Tuning Information

Tested by IBM, Inc.

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

#### Baseline optimization flags:

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

#### Portability Flags:

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 srcalt closed\_files

Peak Tuning:



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## Notes/Tuning Information (Continued)

```
164.gzip: basepeak = true
175.vpr: -O2 -ipa -OPT:alias=disjoint -CG:p2align_freq=500000
        -INLINE:aggressive=on -IPA:plimit=10000:callee_limit=5000
        +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.perlbnk: -O2 -ipa -OPT:Ofast:transform_to_memlib=off
        -fno-math-errno -IPA:plimit=10000 +FDO
254.gap: -Ofast -WOPT:aggstr=off +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
```