



# CINT2000 Result

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**IBM Corporation**  
IBM System X 3755 (AMD Opteron (TM) 8214)

SPECint\_rate2000 = 133  
SPECint\_rate\_base2000 = 117

SPEC license #: 11 | Tested by: IBM Corporation | Test date: Aug-2006 | Hardware Avail: Aug-2006 | Software Avail: Mar-2006

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	8	105	123	8	105	123
175.vpr	8	140	93.1	8	134	97.0
176.gcc	8	77.1	132	8	77.4	132
181.mcf	8	388	43.0	8	224	74.6
186.crafty	8	52.6	176	8	52.5	177
197.parser	8	211	79.0	8	149	112
252.eon	8	55.7	216	8	50.0	241
253.perlbnk	8	126	132	8	111	150
254.gap	8	83.1	123	8	83.1	123
255.vortex	8	92.7	190	8	86.4	204
256.bzip2	8	126	111	8	126	111
300.twolf	8	272	102	8	206	135

### Hardware

CPU: AMD Opteron 8214  
CPU MHz: 2200  
FPU: Integrated  
CPU(s) enabled: 8 cores, 4 chips, 2 cores/chip  
CPU(s) orderable: 1,2,3,4  
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: 16x2GB, PC2-5300  
Disk Subsystem: SAS, 73GB 15K RPM  
Other Hardware: None

### Software

Operating System: SuSE Linux 9.0 SP3 SLES 64 bit Kernel 2.6.5-7.244-smp  
Compiler: PathScale EKO Compiler Suite, Release 2.4  
PathScale EKOPATH(TM) Compiler Suite, Release 2.4  
File System: Linux/reiserfs  
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:

186.crafty: -DLINUX\_i386  
252.eon: -DHAS\_ERRLIST  
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\_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



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## Notes/Tuning Information (Continued)

```
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
-OPT:treeheight=on -TENV:X=4:frame_pointer=off -fno-exceptions
-LNO:fu=10:full_unroll_outer=on -GRA:optimize_boundary=on +FDO
253.perlbmk: -O2 -ipa -OPT:Ofast:transform_to_memlib=off
-fno-math-errno -IPA:plimit=10000 +FDO
254.gap: basepeak = true
255.vortex: -Ofast -OPT:goto=off -CG:p2align=on
-GRA:optimize_boundary=on -IPA:min_hotness=120 +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
```