



# CINT2000 Result

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IBM Corporation

IBM System X 3755 (AMD Opteron (TM) 8220 SE)

SPECint2000 = 1818

SPECint\_base2000 = 1611

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	82.6	1694	82.7	1693	
175.vpr	1400	113	1235	107	1313	
176.gcc	1100	60.0	1833	60.4	1822	
181.mcf	1800	310	581	171	1051	
186.crafty	1000	41.3	2424	41.3	2422	
197.parser	1800	150	1202	121	1485	
252.eon	1300	43.6	2981	39.2	3317	
253.perlbnk	1800	101	1788	89.0	2022	
254.gap	1100	63.2	1740	63.2	1740	
255.vortex	1900	75.1	2529	70.1	2711	
256.bzip2	1500	102	1478	102	1478	
300.twolf	3000	221	1359	165	1815	

### Hardware

CPU: AMD Opteron 8220 SE  
 CPU MHz: 2800  
 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
```