



# CINT2000 Result

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IBM Corporation  
IBM System X 3755 (AMD Opteron (TM) 8218)

SPECint2000 = 1708  
SPECint\_base2000 = 1499

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	89.0	1574	89.0	1573	
175.vpr	1400	120	1171	114	1227	
176.gcc	1100	65.1	1688	64.9	1695	
181.mcf	1800	320	563	178	1014	
186.crafty	1000	44.5	2246	44.5	2247	
197.parser	1800	170	1057	126	1430	
252.eon	1300	47.0	2765	42.2	3083	
253.perlbnk	1800	108	1669	95.2	1891	
254.gap	1100	68.5	1606	68.5	1606	
255.vortex	1900	80.2	2370	74.7	2545	
256.bzip2	1500	108	1384	108	1384	
300.twolf	3000	235	1276	171	1758	

### Hardware

CPU: AMD Opteron 8218  
CPU MHz: 2600  
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
```