



CINT2000 Result

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IBM Corporation
IBM System X 3455 (AMD Opteron (TM) 2216)

SPECint2000 = 1628
SPECint_base2000 = 1449

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	96.3	1454	96.3	1454	
175.vpr	1400	123	1143	118	1189	
176.gcc	1100	68.1	1615	67.5	1629	
181.mcf	1800	303	594	173	1040	
186.crafty	1000	48.3	2070	48.3	2070	
197.parser	1800	165	1090	131	1373	
252.eon	1300	51.1	2544	45.9	2835	
253.perlbnk	1800	115	1561	102	1761	
254.gap	1100	70.7	1556	70.7	1556	
255.vortex	1900	83.3	2281	77.7	2447	
256.bzip2	1500	113	1331	113	1331	
300.twolf	3000	237	1266	183	1642	

Hardware

CPU: AMD Opteron 2216
 CPU MHz: 2400
 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: 8x2GB, PC2-5300
 Disk Subsystem: SATA, 80GB 10K 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)

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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.perlbnk: -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
```