



# CINT2000 Result

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IBM Corporation  
IBM BladeCenter LS21 (AMD Opteron 2220)

SPECint2000 = 1888  
SPECint\_base2000 = 1680

SPEC license #: 11 | Tested by: IBM Corporation | Test date: Feb-2007 | Hardware Avail: Feb-2007 | Software Avail: Oct-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	83.0	1686	82.6	1694	
175.vpr	1400	105	1329	102	1370	
176.gcc	1100	56.8	1937	57.1	1926	
181.mcf	1800	244	737	147	1221	
186.crafty	1000	42.4	2361	42.0	2380	
197.parser	1800	148	1218	120	1495	
252.eon	1300	43.7	2976	39.2	3320	
253.perlbmk	1800	101	1778	85.6	2103	
254.gap	1100	59.6	1846	58.3	1887	
255.vortex	1900	73.0	2603	66.9	2841	
256.bzip2	1500	101	1487	101	1487	
300.twolf	3000	206	1455	158	1901	

### Hardware

CPU: AMD Opteron 2220  
 CPU MHz: 2800  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip  
 CPU(s) orderable: 1,2 chips  
 Parallel: No  
 Primary Cache: 64 KB I + 64 KB D on chip (per core)  
 Secondary Cache: 1 MB I+D on chip (per core)  
 L3 Cache: N/A  
 Other Cache: N/A  
 Memory: 16 GB (8x2 GB PC2-5300)  
 Disk Subsystem: 1x73 GB 10K SAS  
 Other Hardware:

### Software

Operating System: SuSE Linux Enterprise Server 9 (x86\_64) SP 3  
 SuSE kernel 2.6.5-7.244-default  
 Compiler: PathScale EKOPath(TM) Compiler Suite, Release 2.5  
 File System: Linux/ext2  
 System State: Multi-user run level 3

## Notes/Tuning Information

```
+FDO: PASS1= -fb_create fbdata PASS2= -fb_opt fbdata
Base tuning for C programs: -Ofast +FDO
Base tuning for C++ programs: -Ofast +FDO
Portability flags:
 186.crafty: -DLINUX_i386
 252.eon: -DHAS_ERRLIST -DSPEC_CPU2000_LP64
 253.perlbmk: -DSPEC_CPU2000_LINUX_I386 -DSPEC_CPU2000_NEED_BOOL
              -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
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
```



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## Notes/Tuning Information (Continued)

```
-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:      -Ofast -IPA:min_hotness=5 -OPT:alias=disjoint -CG:movnti=1 +FDO
255.vortex:   -Ofast -OPT:goto=off +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
```