



# CINT2000 Result

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## IBM

AMD Opteron LS20 for IBM eServer Blade Center (Opteron(tm) 280)

SPECint\_rate2000 = 75.3

SPECint\_rate\_base2000 = 66.3

SPEC license #: 11 | Tested by: IBM Corporation | Test date: Feb-2006 | Hardware Avail: Feb-2006 | Software Avail: Nov-2005

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.zip	4	96.6	67.3	4	96.5	67.3
175.vpr	4	124	52.4	4	117	55.5
176.gcc	4	69.4	73.5	4	68.9	74.1
181.mcf	4	335	24.9	4	206	40.5
186.crafty	4	46.9	99.0	4	46.0	101
197.parser	4	165	50.5	4	131	63.8
252.eon	4	53.3	113	4	44.8	135
253.perlbnk	4	113	73.9	4	98.1	85.1
254.gap	4	76.8	66.5	4	74.3	68.7
255.vortex	4	81.3	108	4	72.8	121
256.bzip2	4	113	61.5	4	113	61.5
300.twolf	4	232	60.1	4	179	77.7

### Hardware

CPU: AMD Opteron(tm) Processor 280  
 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  
 Secondary Cache: 1024KB (I+D) on chip  
 L3 Cache: N/A  
 Other Cache: N/A  
 Memory: 4 x 2048GB PC3200  
 Disk Subsystem: SCSI, 36GB 10K RPM  
 Other Hardware: None

### Software

Operating System: SuSE Linux 9.0 SP2 SLES 64 bit Kernel 2.6.5-7.191-smp (SP2)  
 Compiler: PathScale EKO Compiler Suite, Release 2.2.1  
 File System: Linux/reiserfs  
 System State: Multi-user, run level 3

## Notes/Tuning Information

Tested by IBM Corporation

+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.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.zip: -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

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### Notes/Tuning Information (Continued)

```

-OPT:treeheight=on -TENV:X=4:frame_pointer=off -fno-exception
-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:unroll_times_max=8:unroll_size=256:alias=disjoint:Ofast
             -WOPT:mem_opnds=on -m32 +FDO

```

#### BIOS Configuration Notes

Node Interleaving Disabled

#### Other Configuration Notes

Taskset utility used to bind process to CPU(s)