



# CINT2000 Result

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Hewlett-Packard Company  
ProLiant BL45p (AMD Opteron (TM) 880)

SPECint\_rate2000 = 19.3  
SPECint\_rate\_base2000 = 17.4

SPEC license #: 3 Tested by: Hewlett-Packard Company Test date: Aug-2005 Hardware Avail: Sep-2005 Software Avail: Apr-2005

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	1	96.4	16.9	1	96.7	16.8
175.vpr	1	118	13.7	1	115	14.1
176.gcc	1	64.8	19.7	1	63.9	20.0
181.mcf	1	245	8.53	1	155	13.5
186.crafty	1	48.8	23.8	1	47.7	24.3
197.parser	1	157	13.3	1	132	15.8
252.eon	1	57.0	26.4	1	51.5	29.3
253.perlbnk	1	112	18.6	1	98.3	21.2
254.gap	1	68.9	18.5	1	66.7	19.1
255.vortex	1	79.6	27.7	1	75.9	29.1
256.bzip2	1	110	15.8	1	110	15.8
300.twolf	1	222	15.7	1	172	20.2

### Hardware

CPU: AMD Opteron (TM) 880  
 CPU MHz: 2400  
 FPU: Integrated  
 CPU(s) enabled: 1 core, 1 chip, 2 cores/chip  
 CPU(s) orderable: 1,2,4  
 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: 4x2048MB PC3200 CL3.0  
 Disk Subsystem: 1x36.4GB 15K Ultra320 SCSI  
 Other Hardware:

### Software

Operating System: SuSE Linux Enterprise Server 9 (x86\_64) SP 1  
 SuSE kernel 2.6.5-7.139-default  
 Compiler: PathScale EKOPath(TM) Compiler Suite, Release 2.1  
 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:
176.gcc: srcalt=64bitgcc
186.crafty: -DLINUX_i386
252.eon: -DHAS_ERRLIST -DSPEC_CPU2000_LP64 srcalt=fmax_errno
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 srcalt=closed_files
Peak tuning:
164.gzip: -O3 -ipa -WOPT:val=0 -OPT:unroll_size=0 +FDO
175.vpr: -O2 -ipa -OPT:alias=disjoint -CG:p2align_freq=500000
-INLINE:aggressive=on
-IPA:space=300:plimit=10000:callee_limit=5000:linear=on +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
```



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## Notes/Tuning Information (Continued)

```
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:     -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
```

BIOS Configuration Notes  
Node Interleaving Disabled

Other Configuration Notes  
Single-processor kernel was used