



# CINT2000 Result

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Hewlett-Packard Company  
ProLiant BL45p (AMD Opteron (TM) 854)

SPECint\_rate2000 = 84.7  
SPECint\_rate\_base2000 = 75.2

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	4	82.5	78.8	4	83.3	78.0
175.vpr	4	112	57.9	4	109	59.6
176.gcc	4	60.5	84.3	4	59.5	85.8
181.mcf	4	288	29.0	4	164	50.9
186.crafty	4	41.7	111	4	40.7	114
197.parser	4	147	56.9	4	119	70.5
252.eon	4	48.5	124	4	44.0	137
253.perlbnk	4	98.8	84.5	4	86.8	96.3
254.gap	4	63.0	81.0	4	61.3	83.2
255.vortex	4	73.0	121	4	68.7	128
256.bzip2	4	102	68.5	4	102	68.5
300.twolf	4	211	66.0	4	160	86.9

### Hardware

CPU: AMD Opteron (TM) 854  
CPU MHz: 2800  
FPU: Integrated  
CPU(s) enabled: 4 cores, 4 chips, 1 core/chip  
CPU(s) orderable: 1, 2, 4  
Parallel: No  
Primary Cache: 64KBI + 64KBD on chip  
Secondary Cache: 1024KB(I+D) on chip  
L3 Cache: N/A  
Other Cache: N/A  
Memory: 16x2048MB 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-smp  
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

Taskset utility used to bind process to CPU(s)