



# CINT2000 Result

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Hewlett-Packard Company  
ProLiant BL45p (AMD Opteron (TM) 885)

SPECint\_rate2000 = 79.5  
SPECint\_rate\_base2000 = 70.7

SPEC license #: 3 Tested by: Hewlett-Packard Company Test date: Feb-2006 Hardware Avail: Mar-2006 Software Avail: Feb-2006

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	4	89.1	72.9	4	88.7	73.3
175.vpr	4	120	54.1	4	113	57.3
176.gcc	4	63.5	80.4	4	63.5	80.4
181.mcf	4	340	24.6	4	213	39.3
186.crafty	4	43.2	107	4	42.1	110
197.parser	4	155	53.8	4	121	69.3
252.eon	4	49.2	123	4	41.8	144
253.perlbnk	4	103	81.1	4	91.6	91.1
254.gap	4	70.0	72.9	4	70.7	72.2
255.vortex	4	74.8	118	4	69.4	127
256.bzip2	4	108	64.7	4	108	64.7
300.twolf	4	222	62.7	4	173	80.6

### Hardware

CPU: AMD Opteron (TM) 885  
 CPU MHz: 2600  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 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: 8x2048MB PC3200 CL3.0  
 Disk Subsystem: 1x36.4GB 15K Ultra320 SCSI  
 Other Hardware:

### Software

Operating System: SuSE Linux Enterprise Server 9 (x86\_64) SP3  
 SuSE kernel 2.6.5-7.244-smp  
 Compiler: PathScale EKOPATH(TM) Compiler Suite, Release 2.3  
 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.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
 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
```

### BIOS Configuration Notes

Node Interleaving Disabled

### Other Configuration Notes

Taskset utility used to bind process to CPU(s)