



# CINT2000 Result

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**Hewlett-Packard Company**  
ProLiant DL145 G3 (AMD Opteron (TM) 2218)

SPECint\_rate2000 = **81.3**  
SPECint\_rate\_base2000 = **72.0**

SPEC license #: 3 | Tested by: Hewlett-Packard Company | Test date: Nov-2006 | Hardware Avail: Jan-2006 | Software Avail: Sep-2006

| Benchmark   | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|-------------|-------------|--------------|------------|--------|---------|-------|
| 164.gzip    | 4           | 89.5         | 72.6       | 4      | 89.3    | 72.7  |
| 175.vpr     | 4           | 114          | 56.8       | 4      | 110     | 59.3  |
| 176.gcc     | 4           | 61.6         | 82.9       | 4      | 62.6    | 81.5  |
| 181.mcf     | 4           | 289          | 28.9       | 4      | 173     | 48.2  |
| 186.crafty  | 4           | 45.7         | 102        | 4      | 45.2    | 103   |
| 197.parser  | 4           | 150          | 55.6       | 4      | 119     | 70.1  |
| 252.eon     | 4           | 47.2         | 128        | 4      | 42.5    | 142   |
| 253.perlbnk | 4           | 111          | 75.5       | 4      | 91.1    | 91.6  |
| 254.gap     | 4           | 67.3         | 75.8       | 4      | 66.2    | 77.1  |
| 255.vortex  | 4           | 78.0         | 113        | 4      | 70.2    | 125   |
| 256.bzip2   | 4           | 105          | 66.1       | 4      | 105     | 66.1  |
| 300.twolf   | 4           | 220          | 63.4       | 4      | 170     | 81.8  |

### Hardware

CPU: AMD Opteron (TM) 2218  
 CPU MHz: 2600  
 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 PC2-5300P CL5.0)  
 Disk Subsystem: 1x250 GB SATA  
 Other Hardware:

### Software

Operating System: SuSE Linux Enterprise Server 9 (x86\_64) SP 3  
 SuSE kernel 2.6.5-7.244-smp  
 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.perlbnk: -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
```

### BIOS Configuration Notes

Node Interleaving Disabled

### Other Configuration Notes

Taskset utility used to bind process to CPU(s)