# CFP2000 Result

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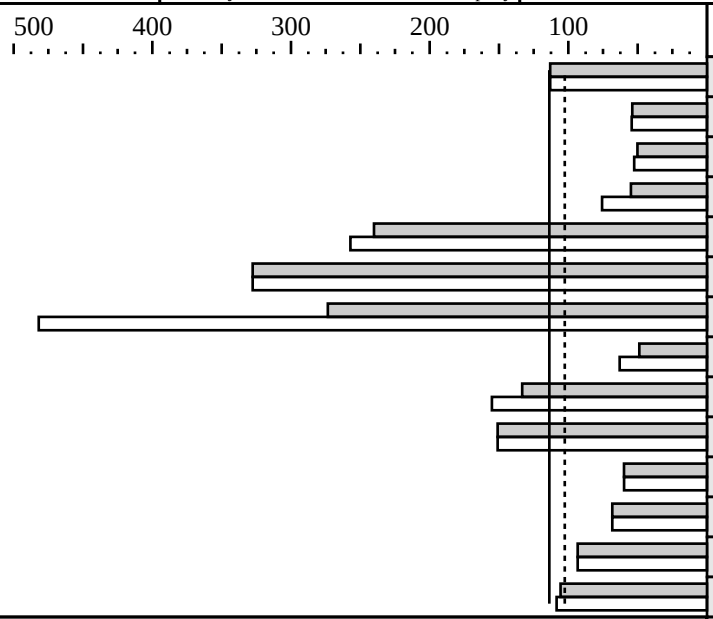
## Hewlett-Packard Company

ProLiant BL480c (2.66 GHz, Intel Xeon processor X5355)

SPECfp_rate2000 = 114

SPECfp_rate_base2000 = 103

SPEC license #: 3 | Tested by: Hewlett-Packard Company | Test date: Feb-2007 | Hardware Avail: Jan-2007 | Software Avail: Nov-2006




| Benchmark | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|---|---|---|---|---|---|---|
| 168.wupwise | 8 | 131 | 113 | 8 | 131 | 113 |
| 171.swim | 8 | 534 | 53.9 | 8 | 530 | 54.3 |
| 172.mgrid | 8 | 333 | 50.2 | 4 | 159 | 52.5 |
| 173.applu | 8 | 355 | 54.9 | 8 | 258 | 75.7 |
| 177.mesa | 8 | 54.1 | 240 | 8 | 50.5 | 257 |
| 178.galgel | 8 | 82.1 | 328 | 8 | 82.1 | 328 |
| 179.art | 8 | 88.2 | 273 | 4 | 25.0 | 482 |
| 183.equake | 8 | 247 | 48.8 | 8 | 192 | 63.0 |
| 187.facerec | 8 | 132 | 133 | 4 | 56.8 | 155 |
| 188.ammp | 8 | 135 | 151 | 8 | 135 | 151 |
| 189.lucas | 8 | 310 | 59.9 | 8 | 310 | 59.8 |
| 191.fma3d | 8 | 285 | 68.3 | 8 | 285 | 68.3 |
| 200.sixtrack | 8 | 109 | 93.3 | 8 | 109 | 93.3 |
| 301.apsi | 8 | 228 | 106 | 8 | 222 | 108 |

### Hardware

| | |
|---|---|
| CPU: | Intel Xeon processor X5355 (2.66 GHz, 2x4 MB L2 shared, 1333 MHz bus) |
| CPU MHz: | 2666 |
| FPU: | Integrated |
| CPU(s) enabled: | 8 cores, 2 chips, 4 cores/chip |
| CPU(s) orderable: | 1,2 chips |
| Parallel: | No |
| Primary Cache: | 32 KB I + 32 KB D on chip per core |
| Secondary Cache: | 8 MB I+D on chip per chip (4 MB shared per 2 cores) |
| L3 Cache: | N/A |
| Other Cache: | N/A |
| Memory: | 16 GB (8x2 GB PC2-5300F CL5) |
| Disk Subsystem: | 1x72 GB 10K SAS |
| Other Hardware: | |

### Software

| | |
|---|---|
| Operating System: | SuSE Linux Enterprise Server 10 (x86_64)<br>Kernel 2.6.16.21-0.8-smp |
| Compiler: | Intel C++ Compiler for EM64T-based applications, (Version 9.1 Build 20061101)<br>Intel Fortran Compiler for EM64T-based applications, (Version 9.1 Build 20061101)<br>PathScale EKOPath(TM) Compiler Suite, Release 2.5 |
| File System: | ext2 |
| System State: | Multi-user run level 3 |

## Notes/Tuning Information

```
+FDO: PASS1= -prof_gen  PASS2=-prof_use (Intel Compiler)
+FDO: PASS1= -fb_create fbdata PASS2=-fb_opt fbdata (PathScale Compiler)
ifort is the Intel Fortran compiler, icc is the Intel C++ compiler; and
pathf95 is PathScale Fortran compiler, pathcc is the PathScale C compiler.
Base tuning for C programs:  icc -fast -auto_ilp32 +FDO
Base tuning for FORTRAN programs:  ifort -fast +FDO
Portability:
  -DSPEC_CPU2000_LP64 applied to all benchmarks
  178.galgel:   -FI
Peak tuning:
  168.wupwise:  basepeak=1
  171.swim:     pathf95 -Ofast -LNO:fusion=2:simd=0 -WOPT:val=0 -march=em64t
  172.mgrid:    pathf95 -Ofast -CG:load_exe=0 -LNO:blocking=off:prefetch_ahead=5
                -OPT:ro=3:unroll_size=256 -WOPT:mem_opnds=on -march=em64t
                users=4
  173.applu:    pathf95 -O3 -ipa -CG:load_exe=0
                -LNO:fission=1:fusion=2:blocking=off:full_unroll_size=9000
```

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## Notes/Tuning Information (Continued)

```
                  -OPT:IEEE_a=3:ro=3 -TENV:X=3 -march=em64t
     177.mesa:    pathcc -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on
                  -GRA:optimize_boundary=on -march=em64t +FDO
     178.galgel:  basepeak=1
     179.art:     icc -fast -auto_ilp32 +FDO users=4
     183.equake:  icc -fast +FDO ONESTEP=yes -rcd -auto-ilp32
     187.facerec: pathf95 -Ofast -IPA:plimit=1500 -LNO:fusion=2
                  -OPT:IEEE_NaN_Inf=off:ro=3:unroll_size=0 -march=em64t +FDO
                  users=4
     188.ammp:    basepeak=1
     189.lucas:   ifort -fast ONESTEP=yes
     191.fma3d:   basepeak=1
     200.sixtrack: basepeak=1
     301.apsi:    pathf95 -Ofast -CG:load_exe=0 -LNO:opt=0:prefetch=1 -march=em64t
  BIOS Configuration Notes
    Power Regulator set to Static High
    Adjacent Sector Prefetch disabled
 Other Configuration Notes
    Taskset utility used to bind process to CPU(s)
```