



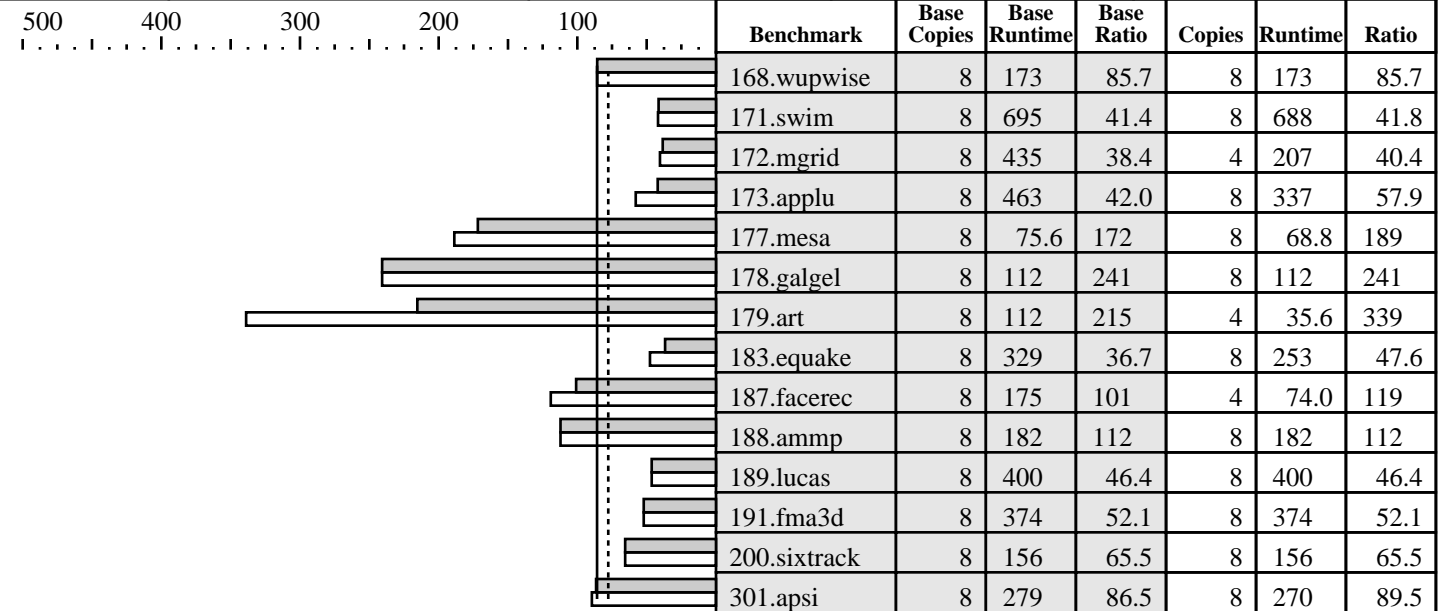
# CFP2000 Result

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**Hewlett-Packard Company**  
ProLiant ML370 G5 (1.86GHz, Intel Xeon processor E5320)

SPECfp\_rate2000 = **85.7**  
SPECfp\_rate\_base2000 = **77.7**

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



### Hardware

CPU: Intel Xeon processor E5320 (1.86 GHz, 2x4 MB L2 shared, 1066 MHz bus)  
 CPU MHz: 1860  
 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: 2x72GB 10K SAS  
 Other Hardware:

### Software

Operating System: SuSE Linux Enterprise Server 10 (x86\_64)  
 Kernel 2.6.16.21-0.8-smp  
 Compiler: Intel C++ Compiler for EM64T-based applications, (Version 9.1 Build 20061101)  
 Intel Fortran Compiler for EM64T-based applications, (Version 9.1 Build 20061101)  
 PathScale EKOPath(TM) Compiler Suite, Release 2.5  
 File System: ext2  
 System State: Default

## 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)
"ulimit -s unlimited" set

```