



# CFP2000 Result

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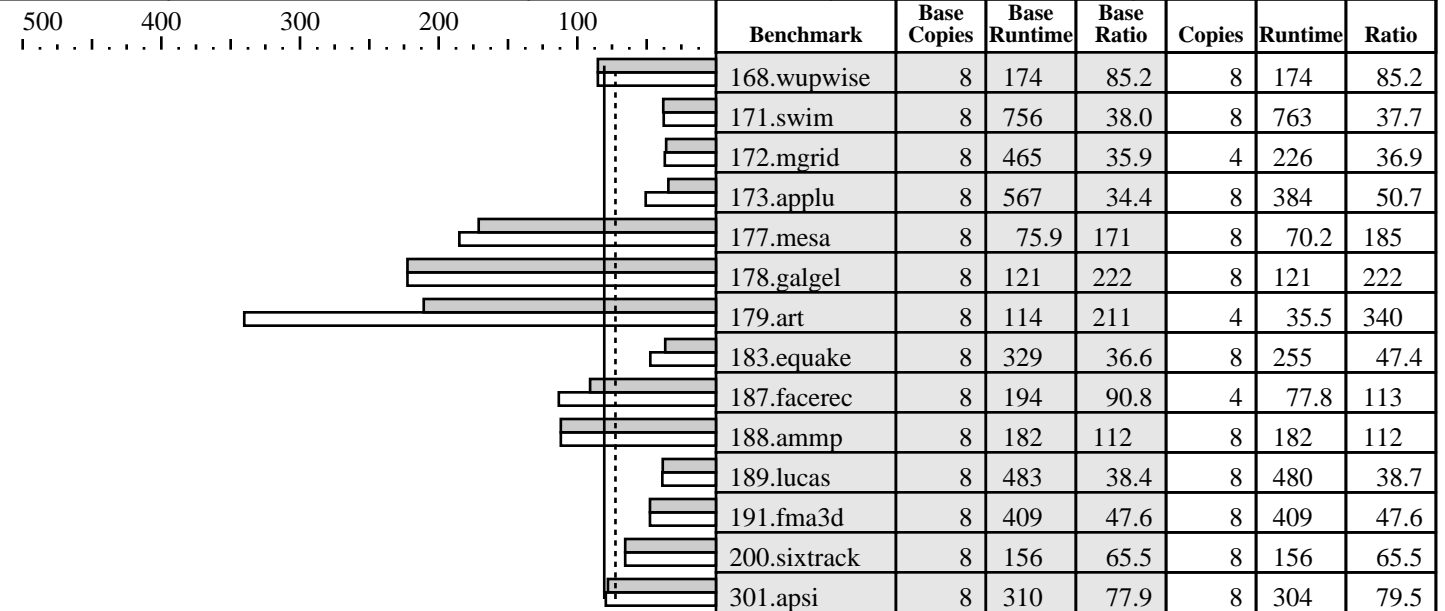
## Hewlett-Packard Company

ProLiant ML350 G5 (1.86 GHz, Intel Xeon processor E5320)

SPECfp\_rate2000 = 80.6

SPECfp\_rate\_base2000 = 72.5

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: 8 GB (4x2 GB PC2-5300F CL5)  
 Disk Subsystem: 2x36 GB 10 K 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: 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)

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-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

```