



# CFP2000 Result

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**Hewlett-Packard Company**  
ProLiant DL145 G3 (AMD Opteron (TM) 2220SE)

SPECfp\_rate2000 = **80.1**  
SPECfp\_rate\_base2000 = **73.0**

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	60.3	123	4	60.3	123
171.swim	4	214	67.2	4	181	79.3
172.mgrid	4	125	66.7	4	125	66.7
173.applu	4	169	57.8	4	151	64.4
177.mesa	4	129	50.3	4	64.7	100
178.galgel	4	109	124	4	107	126
179.art	4	68.5	176	4	68.5	176
183.equake	4	98.5	61.3	4	98.5	61.3
187.facerec	4	104	84.5	4	109	81.1
188.amp	4	189	54.1	4	153	66.9
189.lucas	4	134	69.4	4	129	72.2
191.fma3d	4	149	65.6	4	135	72.2
200.sixtrack	4	131	38.9	4	131	38.9
301.apsi	4	171	70.4	4	171	70.4

**Hardware**

CPU: AMD Opteron (TM) 2220SE  
CPU MHz: 2800  
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: Windows Server 2003 Enterprise SP1  
Compiler: Intel C++ Compiler for 32-bit applications, (version 9.1 Build 20060816Z)  
Intel Fortran Compiler for 32-bit applications, (version 9.1 build 20060816Z)  
PGI Fortran compiler 6.0-8 for Windows XP (32-bit)  
PGI C compiler 6.0-8 for Windows XP (32-bit)  
Microsoft Visual Studio .NET 7.0.9466 (for libraries)  
AMD Core Math Library V3.5.0

File System: NTFS  
System State: Default

## Notes/Tuning Information

```
+FDO: PASS1=-Qprof_gen PASS2=-Qprof_use (Intel compiler)
+FDO*: PASS1=-Mpfi PASS2=-Mpfo (PGI compiler)
+ACML is linking with AMD Core Math Library V3.5.0
ifort is the Intel Fortran compiler, icl is the Intel C++ compiler and
pgf90 is the PGI Fortran compiler, pgcc is the PGI C compiler.
Base tuning for C programs: pgcc -fastsse -Mipa=fast,inline
Base tuning for FORTRAN programs: pgf90 -fastsse -Mipa=fast,inline +FDO* ONESTEP=1
Portability flags:
178.galgel: -Mfixed
Peak tuning:
168.wupwise: pgf90 basepeak=yes
171.swim: ifort -Qipo -O3 -QaxN -QxW +FDO -Qunroll0 ONESTEP=1
172.mgrid: pgf90 basepeak=yes
173.applu: ifort -Qipo -O3 -QaxN -QxW +FDO -auto ONESTEP=1
177.mesa: icl -Qipo -arch:SSE2 +FDO -Qunroll1 -Qansi_alias ONESTEP=1
-Qoption,c,-ip_ninl_max_stats=1500,-ip_ninl_max_total_stats=4500
178.galgel: pgf90 -fastsse -Mipa=fast,safe RM_SOURCES=lapak.f90 -Munix +ACML ONESTEP=1
```



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## Notes/Tuning Information (Continued)

```

179.art:          pgcc -fastsse -Mipa=fast,inline
183.quake:       icl basepeak=yes
187.facerec:     ifort -Qipo -QxW +FDO -Qunroll3 ONESTEP=1
                  -Qoption,f,-ip_ninl_max_stats=2500,-ip_ninl_max_total_stats=7000
188.ampp:        icl -Oa -arch:SSE2 -Zp4 -Qansi_alias ONESTEP=1
189.lucas:       ifort -Qipo -QxW -Qunroll1 ONESTEP=1
191.fma3d:       ifort -Qipo -QaxN -QxW +FDO -Qansi_alias- ONESTEP=1
200.sixtrack:   pgf90 basepeak=yes
301.apsi:        pgf90 basepeak=yes

```

### BIOS Configuration Notes

Node Interleaving is Disabled

### Other Configuration Notes

The start /b /wait /affinity command is used to bind CPU(s) to processes.