



# CFP2000 Result

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Hewlett-Packard Company  
ProLiant DL145 G2 (AMD Opteron (TM) 275)

SPECfp\_rate2000 = 32.3  
SPECfp\_rate\_base2000 = 29.5

SPEC license #: 3 Tested by: Hewlett-Packard Company Test date: Dec-2005 Hardware Avail: Sep-2005 Software Avail: Nov-2005

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	73.9	50.2	2	73.9	50.2
171.swim	2	273	26.3	2	243	29.6
172.mgrid	2	163	25.6	2	163	25.6
173.applu	2	206	23.6	2	186	26.2
177.mesa	2	160	20.2	2	80.6	40.3
178.galgel	2	135	49.9	2	130	52.0
179.art	2	86.8	69.5	2	86.7	69.6
183.quake	2	116	26.0	2	116	26.0
187.facerec	2	130	33.9	2	129	34.1
188.amp	2	217	23.5	2	176	29.0
189.lucas	2	162	28.7	2	156	29.7
191.fma3d	2	189	25.8	2	182	26.7
200.sixtrack	2	164	15.6	2	164	15.6
301.apsi	2	210	28.7	2	210	28.7

### Hardware

CPU: AMD Opteron (TM) 275  
CPU MHz: 2200  
FPU: Integrated  
CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip  
CPU(s) orderable: 1,2  
Parallel: No  
Primary Cache: 64KBI + 64KBD (on chip) per core  
Secondary Cache: 1024KB(I+D) (on chip) per core  
L3 Cache: N/A  
Other Cache: N/A  
Memory: 4x2048MB PC3200 CL3.0  
Disk Subsystem: 1x36.4GB 15K Ultra320 SCSI  
Other Hardware:

### Software

Operating System: Windows Server 2003 Enterprise SP1  
Compiler: Intel C++ Compiler for 32-bit applications, (version 8.1 Build 20050524Z)  
Intel Fortran Compiler for 32-bit applications, (version 8.1 build 20050517Z)  
PGI Fortran compiler 6.0-4 for Windows XP (32-bit)  
PGI C compiler 6.0-4 for Windows XP (32-bit)  
Microsoft Visual Studio .NET 7.0.9466 (for libraries)  
AMD Core Math Library V2.6.0  
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 V2.6.0
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.equake:   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.