



# CFP2000 Result

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Hewlett-Packard Company  
ProLiant BL35p (AMD Opteron (TM) 280)

SPECfp\_rate2000 = 64.7  
SPECfp\_rate\_base2000 = 59.0

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	71.4	104	4	71.4	104
171.swim	4	320	45.0	4	247	58.3
172.mgrid	4	162	51.5	4	162	51.5
173.applu	4	211	46.1	4	192	50.9
177.mesa	4	148	43.9	4	74.1	87.7
178.galgel	4	138	97.4	4	131	102
179.art	4	85.0	142	4	85.0	142
183.equake	4	120	50.4	4	120	50.4
187.facerec	4	128	68.9	4	126	69.8
188.amp	4	212	48.3	4	181	56.3
189.lucas	4	180	51.6	4	177	52.4
191.fma3d	4	183	53.4	4	181	53.7
200.sixtrack	4	152	33.7	4	152	33.7
301.apsi	4	203	59.4	4	203	59.4

**Hardware**

CPU: AMD Opteron (TM) 280  
CPU MHz: 2400  
FPU: Integrated  
CPU(s) enabled: 4 cores, 2 chips, 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 9.0 Build 20060120Z)  
Intel Fortran Compiler for 32-bit applications, (Version 9.0 build 20060120Z)  
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 V3.0.0

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 V3.0.0
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.