



# CFP2000 Result

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Hewlett-Packard Company  
ProLiant DL385 (AMD Opteron (TM) 280)

SPECfp\_rate2000 = 66.7  
SPECfp\_rate\_base2000 = 60.8

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	70.9	105	4	70.9	105
171.swim	4	276	52.1	4	239	60.2
172.mgrid	4	160	52.1	4	160	52.1
173.applu	4	203	48.0	4	183	53.3
177.mesa	4	149	43.6	4	74.7	87.0
178.galgel	4	131	102	4	125	108
179.art	4	85.4	141	4	85.3	141
183.equake	4	115	52.3	4	115	52.3
187.facerec	4	125	70.6	4	125	70.7
188.amp	4	208	49.0	4	165	62.0
189.lucas	4	164	56.7	4	161	57.7
191.fma3d	4	181	53.8	4	172	56.6
200.sixtrack	4	151	33.7	4	151	33.7
301.apsi	4	202	59.6	4	202	59.6

### 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: 8x2048MB 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
+ACML is linking with AMD Core Math Library V2.6.0
ONESTEP is set for all peak runs.
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
Portability flags:
  178.galgel: -Mfixed
Peak tuning:
  168.wupwise: pgf90 basepeak=yes
  171.swim: ifort -Qipo -O3 -QaxN -QxW +FDO -Qunroll0
  172.mgrid: pgf90 basepeak=yes
  173.applu: ifort -Qipo -O3 -QaxN -QxW +FDO -auto
  177.mesa: icl -Qipo -arch:SSE2 +FDO -Qunroll1 -Qansi_alias
             -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
```



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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
                  -Qoption,f,-ip_ninl_max_stats=2500,-ip_ninl_max_total_stats=7000
188.ampp:         icl -Oa -arch:SSE2 -Zp4 -Qansi_alias
189.lucas:        ifort -Qipo -QxW -Qunroll1
191.fma3d:        ifort -Qipo -QaxN -QxW +FDO -Qansi_alias-
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.