



# CFP2000 Result

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Hewlett-Packard Company  
ProLiant DL385 (AMD Opteron (TM) 275)

SPECfp\_rate2000 = 17.9  
SPECfp\_rate\_base2000 = 17.2

SPEC license #: 3 Tested by: Hewlett-Packard Company Test date: Jul-2005 Hardware Avail: Jul-2005 Software Avail: Jun-2005

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	1	70.3	26.4	1	70.3	26.4
171.swim	1	154	23.3	1	152	23.7
172.mgrid	1	130	16.0	1	130	16.0
173.applu	1	163	15.0	1	152	16.1
177.mesa	1	86.9	18.7	1	80.5	20.2
178.galgel	1	116	28.9	1	107	31.4
179.art	1	161	18.7	1	160	18.8
183.quake	1	90.3	16.7	1	90.3	16.7
187.facerec	1	115	19.2	1	115	19.2
188.amp	1	200	12.8	1	185	13.8
189.lucas	1	126	18.4	1	110	21.1
191.fma3d	1	157	15.5	1	149	16.3
200.sixtrack	1	164	7.76	1	164	7.76
301.apsi	1	201	15.0	1	201	15.0

### Hardware

CPU: AMD Opteron (TM) 275  
 CPU MHz: 2200  
 FPU: Integrated  
 CPU(s) enabled: 1 core, 1 chip, 2 cores/chip  
 CPU(s) orderable: 1,2  
 Parallel: No  
 Primary Cache: 64KBI + 64KBD on chip  
 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 8.0 Build 20040318Z  
 Intel Fortran Compiler for 32-bit applications 8.1 build 20050517Z  
 PGI Fortran compiler 6.0-4 for Windows XP (32-bit)  
 Microsoft Visual Studio .NET 7.0.9466 (for libraries)  
 MicroQuill Smartheap Library 7.0  
 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.
The Intel C++ 8.0 and the Intel Fortran 8.1 compilers are setup in the following order:
"c:\program files\intel\fortran\compiler80\ia32\bin\ifortvars.bat"
"c:\program files\intel\cpp\compiler80\ia32\bin\iclvars.bat"
To make sure that the correct libraries are selected, the following link option is
added for the peak runs where Intel Fortran 8.1 compiler is used:
LDOPT = -Fe$@ -link -LIBPATH:"c:\program files\intel\fortran\compiler80\ia32\lib"
(denoted by +LIBPATH:INTEL8.1 in the optimization flags listed below)
Base tuning for C programs: icl -fast -arch:SSE2 -QaxW +FDO
Base tuning for FORTRAN programs: pgf90 -fastsse -Mipa=fast,inline
Portability flags:
178.galgel: -Mfixed
Peak tuning:
```



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## Notes/Tuning Information (Continued)

```

168.wupwise:      pgf90 basepeak=yes
171.swim:         ifort -Qipo -O3 -QaxN -QxW +FDO -Qunroll0      +LIBPATH:INTEL8.1
172.mgrid:       pgf90 basepeak=yes
173.applu:       ifort -Qipo -O3 -QaxN -QxW +FDO -auto      +LIBPATH:INTEL8.1
177.mesa:        icl -Qipo -arch:SSE2 +FDO -Qunroll1 -Qansi_alias
                  -Qoption,f,-ip_ninl_max_stats=1500,-ip_ninl_max_total_stats=4500
178.galgel:     pgf90 -fastsse -Mipa=fast,safe RM_SOURCES=lapak.f90 -Munix +ACML
179.art:         icl -Qipo -Zp4 +FDO
183.equake:      icl basepeak=yes
187.facerec:    ifort -Qipo -QxW +FDO -Qunroll3      +LIBPATH:INTEL8.1
                  -Qoption,f,-ip_ninl_max_stats=2500,-ip_ninl_max_total_stats=7000
188.ammp:       icl -Oa -arch:SSE2 -Zp4 -Qansi_alias
189.lucas:      ifort -Qipo -QxW -Qunroll1      +LIBPATH:INTEL8.1
191.fma3d:      ifort -Qipo -QaxN -QxW +FDO -Qansi-alias- +LIBPATH:INTEL8.1
200.sixtrack:   pgf90 basepeak=yes
301.apsi:       pgf90 basepeak=yes

```

### Other Configuration Notes

/NUMPROC=1 flag was added to boot.ini to invoke uniprocessor environment.

### BIOS Configuration Notes

Node Interleaving is Disabled