



# CFP2000 Result

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Hewlett-Packard Company  
ProLiant BL35p (AMD Opteron (TM) 275)

SPECfp\_rate2000 = 55.3  
SPECfp\_rate\_base2000 = 52.5

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	79.5	93.4	4	79.5	93.4
171.swim	4	350	41.0	4	262	55.0
172.mgrid	4	177	47.1	4	177	47.1
173.applu	4	230	42.5	4	208	46.8
177.mesa	4	88.4	73.5	4	81.2	80.0
178.galgel	4	151	89.0	4	145	92.5
179.art	4	271	44.5	4	256	47.1
183.quake	4	130	46.5	4	130	46.5
187.facerec	4	139	63.3	4	138	63.7
188.amp	4	214	47.7	4	193	52.9
189.lucas	4	197	47.0	4	194	47.9
191.fma3d	4	200	48.8	4	191	51.0
200.sixtrack	4	165	30.9	4	165	30.9
301.apsi	4	222	54.2	4	222	54.2

**Hardware**

CPU: AMD Opteron (TM) 275  
 CPU MHz: 2200  
 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: 1x60GB ATA100 5400RPM  
 Other Hardware:

**Software**

Operating System: Windows Server 2003 Enterprise SP1  
 Compiler: Intel C++ Compiler 8.0 Build 20040318Z  
 Intel Fortran Compiler 8.1 build 20050517Z  
 PGI Fortran compiler 6.0-4 for Windows XP  
 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 V2.0
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.
"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:
168.wupwise: pgf90 basepeak=yes
```



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## Notes/Tuning Information (Continued)

```

171.swim:      ifort -Qipo -O3 -QaxN -QxW +FDO -Qunroll10      +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 -Qunroll11 -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 -Qunroll13 +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 -Qunroll11 +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

```

### BIOS Configuration Notes

Node Interleaving is Disabled

### Other Configuration Notes

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