



CFP2000 Result

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Hewlett-Packard Company
ProLiant DL145 G2 (AMD Opteron (TM) 280)

SPECfp_rate2000 = 33.7
SPECfp_rate_base2000 = 30.8

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	70.1	52.9	2	70.1	52.9
171.swim	2	273	26.4	2	242	29.7
172.mgrid	2	161	25.9	2	161	25.9
173.applu	2	203	24.0	2	183	26.7
177.mesa	2	148	22.0	2	74.2	43.8
178.galgel	2	129	52.3	2	124	54.2
179.art	2	84.1	71.7	2	84.1	71.7
183.quake	2	114	26.6	2	114	26.6
187.facerec	2	123	35.7	2	123	35.9
188.amp	2	205	24.9	2	163	31.3
189.lucas	2	161	28.7	2	157	29.6
191.fma3d	2	180	27.1	2	172	28.4
200.sixtrack	2	150	17.0	2	150	17.0
301.apsi	2	196	30.8	2	196	30.8

Hardware

CPU: AMD Opteron (TM) 280
 CPU MHz: 2400
 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)

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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.amp:     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.