



CFP2000 Result

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

SPECfp2000 = 1793
SPECfp_base2000 = 1637

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
168.wupwise	1600	63.4	2522	63.4	2522	
171.swim	3100	142	2180	141	2205	
172.mgrid	1800	119	1512	119	1512	
173.applu	2100	150	1399	139	1515	
177.mesa	1400	148	947	74.0	1893	
178.galgel	2900	106	2724	98.2	2954	
179.art	2600	64.0	4065	64.1	4057	
183.quake	1300	83.1	1565	83.1	1565	
187.facerec	1900	105	1807	106	1793	
188.amp	2200	197	1114	159	1384	
189.lucas	2000	117	1711	100	1991	
191.fma3d	2100	144	1458	137	1535	
200.sixtrack	1100	150	732	150	732	
301.apsi	2600	184	1410	184	1410	

Hardware

CPU: AMD Opteron (TM) 280
 CPU MHz: 2400
 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) 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
/NUMPROC=1 flag was added to boot.ini to invoke uniprocessor environment.