



CFP2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

Hewlett-Packard Company
ProLiant DL585 G2 (AMD Opteron (TM) 8220SE)

SPECfp_rate2000 = 91.1
SPECfp_rate_base2000 = 84.6

SPEC license #: 3 Tested by: Hewlett-Packard Company Test date: Aug-2006 Hardware Avail: Sep-2006 Software Avail: Jul-2006

| Benchmark | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|--------------|-------------|--------------|------------|--------|---------|-------|
| 168.wupwise | 4 | 59.1 | 126 | 4 | 55.0 | 135 |
| 171.swim | 4 | 181 | 79.3 | 4 | 178 | 80.7 |
| 172.mgrid | 4 | 120 | 69.6 | 4 | 116 | 71.9 |
| 173.applu | 4 | 108 | 90.0 | 4 | 97.9 | 99.5 |
| 177.mesa | 4 | 63.5 | 102 | 4 | 60.0 | 108 |
| 178.galgel | 4 | 97.2 | 138 | 4 | 91.9 | 146 |
| 179.art | 4 | 112 | 108 | 4 | 78.6 | 154 |
| 183.quake | 4 | 95.1 | 63.4 | 4 | 86.1 | 70.1 |
| 187.facerec | 4 | 78.7 | 112 | 4 | 74.6 | 118 |
| 188.amp | 4 | 135 | 75.4 | 4 | 131 | 77.9 |
| 189.lucas | 4 | 125 | 74.3 | 4 | 116 | 79.9 |
| 191.fma3d | 4 | 133 | 73.0 | 4 | 134 | 73.0 |
| 200.sixtrack | 4 | 117 | 43.8 | 4 | 111 | 45.8 |
| 301.apsi | 4 | 153 | 78.9 | 4 | 145 | 83.4 |

Hardware

CPU: AMD Opteron (TM) 8220SE
CPU MHz: 2800
FPU: Integrated
CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
CPU(s) orderable: 2,4 chips
Parallel: No
Primary Cache: 64 KB I + 64 KB D on chip per core
Secondary Cache: 1 MB I+D on chip per core
L3 Cache: N/A
Other Cache: N/A
Memory: 16 GB (8x2 GB PC2-5300P CL5)
Disk Subsystem: 1x36.4 GB 10 K SAS
Other Hardware:

Software

Operating System: SuSE Linux Enterprise Server 9 (x86_64) SP 3
SuSE kernel 2.6.5-7.244-smp
Compiler: PathScale EKOPATH(TM) Compiler Suite, Release 2.4
AMD Core Math Library 3.5.0
File System: Linux/ext2
System State: Multi-user run level 3

Notes/Tuning Information

```
+FDO: PASS1= -fb_create fbdata PASS2= -fb_opt fbdata
+ACML: Linked with AMD Core Math Library
Base tuning for C programs: -Ofast -WOPT:mem_opnds=on +FDO
Base tuning for FORTRAN programs: -Ofast -LNO:fusion=2 -OPT:fast_complex=on +FDO
Portability flags:
 178.galgel: -fixedform
Peak tuning:
 168.wupwise: -Ofast -LNO:prefetch Ahead=5:prefetch=3
              -OPT:unroll_times_max=8:unroll_size=128:IEEE NaN_Inf=off:ro=3
              -IPA:linear=on:plimit=50000:callee_limit=5000 -INLINE:aggressive=on
 171.swim:
 172.mgrid: -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 -m3dnow
              -Ofast -CG:gcm=off -OPT:IEEE_a=3:unroll_size=200
              -LNO:fusion=2:fission=1:blocking=off:prefetch Ahead=2 -WOPT:mem_opnds=on:aggstr=0
 173.applu: -Ofast -CG:local_fwd_sched=on -OPT:ro=3 -TENV:X=3
              -LNO:fusion=2:fission=2:full_unroll_size=10000 +FDO
 177.mesa: -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on
              -WOPT:mem_opnds=on +FDO
```



CFP2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

Hewlett-Packard Company
ProLiant DL585 G2 (AMD Opteron (TM) 8220SE)

SPECfp_rate2000 = 91.1
SPECfp_rate_base2000 = 84.6

SPEC license #: 3 | Tested by: Hewlett-Packard Company | Test date: Aug-2006 | Hardware Avail: Sep-2006 | Software Avail: Jul-2006

Notes/Tuning Information (Continued)

```

178.galgel: -Ofast -OPT:fast_complex-on RM_SOURCES=lapak.f90 +ACML +FDO
179.art: -O3 -OPT:Ofast -fno-math-errno -mno-sse2 -m32
183.equake: -Ofast -CG:load_exe=2 -WOPT:mem_opnds=on -m32 +FDO
187.facerec: -Ofast -LNO:fusion=2 -OPT:fast_complex=on:IEEE_NaN_Inf=off:unroll_size=0 +FDO
188.ammp: -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
          -fno-math-errno -TENV:X=4 +FDO
189.lucas: -Ofast -OPT:ro=3:fast_nint=off:unroll_size=256 -WOPT:mem_opnds=on +FDO
191.fma3d: -O2 -ipa -CG:load_exe=1 -OPT:Ofast:IEEE_arith=3:ro=3
          -WOPT:mem_opnds=on:retype_expr=on -IPA:pu_reorder=1 +FDO
200.sixtrack: -O3 -OPT:Ofast:Olimit=6000:early_intrinsics=on -fno-math-errno
          -CG:load_exe=1 +FDO
301.apsi: -Ofast -CG:load_exe=0 -LNO:prefetch=0:simd=2

```

BIOS Configuration Notes
Node Interleaving is Disabled

Other Configuration Notes
Taskset utility used to bind process to CPU(s)