CFP2000 Result

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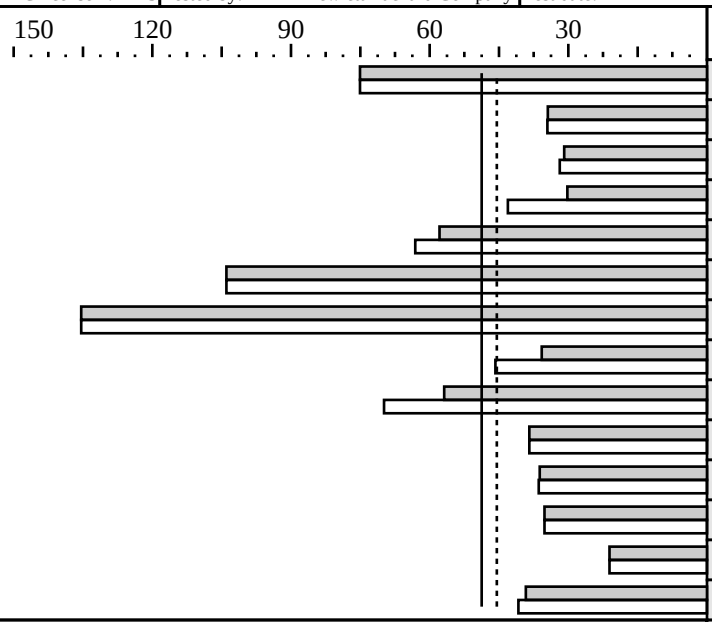
Hewlett-Packard Company

ProLiant ML310 G4 (2.4 GHz, Intel Xeon processor 3060)

SPECfp_rate2000 = 48.7

SPECfp_rate_base2000 = 45.5

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	49.4	75.1	2	49.4	75.1
171.swim	2	209	34.4	2	208	34.5
172.mgrid	2	135	30.9	2	131	31.9
173.applu	2	161	30.2	2	113	43.1
177.mesa	2	56.1	57.9	2	51.5	63.1
178.galgel	2	64.7	104	2	64.7	104
179.art	2	44.6	135	2	44.6	135
183.equake	2	84.4	35.8	2	65.9	45.8
187.facerec	2	77.5	56.9	2	63.1	69.9
188.ammp	2	133	38.4	2	133	38.4
189.lucas	2	128	36.2	2	127	36.4
191.fma3d	2	139	35.2	2	139	35.2
200.sixtrack	2	121	21.1	2	121	21.1
301.apsi	2	154	39.2	2	148	40.8

Hardware

CPU:	Intel Xeon processor 3060 (2.4GHz, 4MB L2 shared, 1066 MHz bus)
CPU MHz:	2400
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
CPU(s) orderable:	1 chip
Parallel:	No
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per chip
L3 Cache:	N/A
Other Cache:	N/A
Memory:	4 GB (2x2 GB PC2-5300E)
Disk Subsystem:	1x80 GB SATA150
Other Hardware:	

Software

Operating System:	RedHat Enterprise Linux 4.0 Advanced Server Update 3 Kernel 2.6.9-34.ELsmp
Compiler:	Intel C++ Compiler for EM64T-based applications, (Version 9.1 Build 20060323) Intel Fortran Compiler for EM64T-based applications, (Version 9.1 Build 20060323) PathScale EKOPath(TM) Compiler Suite, Release 2.4
File System:	ext2
System State:	Multi-user run level 3

Notes/Tuning Information

```
+FDO: PASS1= -prof_gen  PASS2=-prof_use (Intel Compiler)
+FDO: PASS1= -fb_create fbdata PASS2=-fb_opt fbdata (PathScale Compiler)
ifort is the Intel Fortran compiler, icc is the Intel C++ compiler; and
pathf95 is PathScale Fortran compiler, pathcc is the PathScale C compiler.
Base tuning for C programs:  icc -fast -auto_ilp32 +FDO
Base tuning for FORTRAN programs:  ifort -fast +FDO
Portability:
-DSPEC_CPU2000_LP64 applied to all benchmarks
178.galgel:   -FI
Peak tuning:
168.wupwise:  basepeak=1
171.swim:     pathf95 -Ofast -LNO:fusion=2:simd=0 -WOPT:val=0 -march=em64t
172.mgrid:    pathf95 -Ofast -CG:load_exe=0 -LNO:blocking=off:prefetch_ahead=5
              -OPT:ro=3:unroll_size=256 -WOPT:mem_opnds=on -march=em64t
173.applu:    pathf95 -O3 -ipa -CG:load_exe=0
              -LNO:fission=1:fusion=2:blocking=off:full_unroll_size=9000
              -OPT:IEEE_a=3:ro=3 -TENV:X=3 -march=em64t
```

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Notes/Tuning Information (Continued)

```
177.mesa:     pathcc -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on
              -GRA:optimize_boundary=on -march=em64t +FDO
178.galgel:   basepeak=1
179.art:      basepeak=1
183.equake:   icc -fast +FDO ONESTEP=yes -rcd -auto-ilp32
187.facerec:  pathf95 -Ofast -IPA:plimit=1500 -LNO:fusion=2 +FDO
              -OPT:IEEE_NaN_Inf=off:ro=3:unroll_size=0 -march=em64t +FDO
188.ammp:     basepeak=1
189.lucas:    ifort -fast ONESTEP=yes
191.fma3d:    basepeak=1
200.sixtrack: basepeak=1
301.apsi:     pathf95 -Ofast -CG:load_exe=0 -LNO:opt=0:prefetch=1 -march=em64t
  BIOS Configuration Notes
    Power Regulator set to Static High Performance Mode
```