CFP2000 Result

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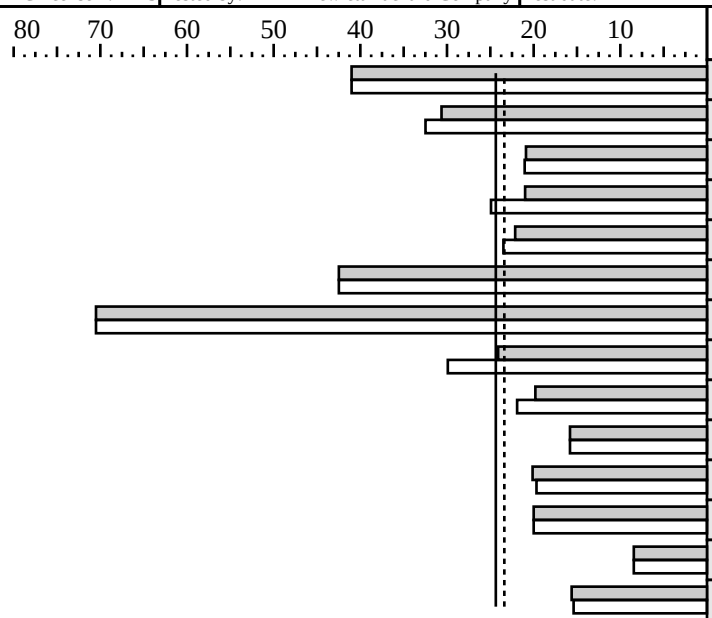
Hewlett-Packard Company

ProLiant BL20p G4 (3.73GHz, Intel Xeon processor 5080)

SPECfp_rate2000 = 24.4

SPECfp_rate_base2000 = 23.4

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	1	45.3	41.0	1	45.3	41.0
171.swim	1	117	30.6	1	111	32.5
172.mgrid	1	100.0	20.9	1	99.3	21.0
173.applu	1	116	21.0	1	97.7	24.9
177.mesa	1	73.4	22.1	1	69.1	23.5
178.galgel	1	79.2	42.5	1	79.2	42.5
179.art	1	42.8	70.5	1	42.8	70.5
183.equake	1	62.6	24.1	1	50.4	29.9
187.facerec	1	111	19.8	1	101	21.9
188.ammp	1	161	15.8	1	161	15.8
189.lucas	1	115	20.1	1	118	19.7
191.fma3d	1	122	20.0	1	122	20.0
200.sixtrack	1	151	8.45	1	151	8.45
301.apsi	1	193	15.6	1	196	15.4

Hardware

CPU:	Intel Xeon processor 5080 (3.73GHz, 2x2MB L2, 1066MHz bus)
CPU MHz:	3730
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip (Hyper-Threading Technology disabled)
CPU(s) orderable:	1,2 chips
Parallel:	No
Primary Cache:	12K micro-ops I + 16KBD (on chip) per core
Secondary Cache:	2048KB(I+D) (on chip) per core
L3 Cache:	N/A
Other Cache:	N/A
Memory:	8x1024MB PC2-5300F
Disk Subsystem:	1x36GB 10K SAS
Other Hardware:	

Software

Operating System:	RedHat Enterprise Linux 4.0 Advanced Server for AMD/EM64T, Update 3 Kernel 2.6.9-34.EL
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
                  -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
      Hyper-Threading Technology disabled
    Other Configuration Notes
      Single processor kernel used
```