CFP2000 Result

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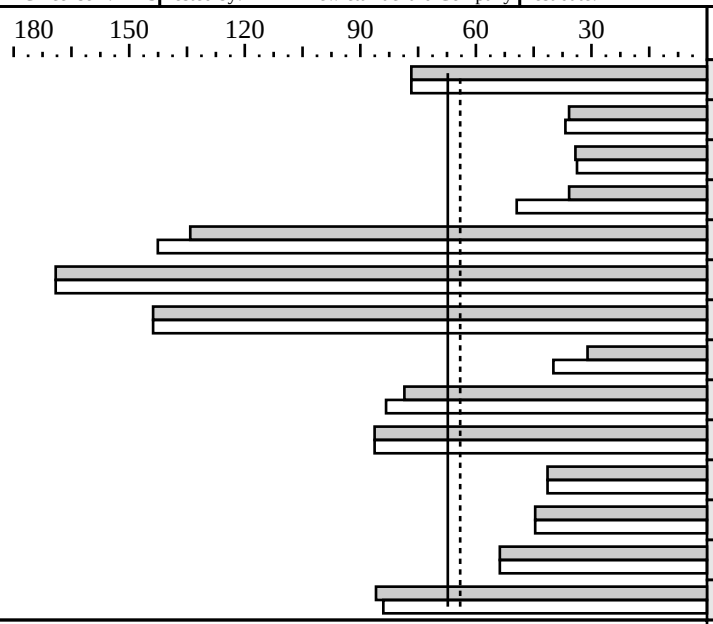
Hewlett-Packard Company

ProLiant ML570 G4 (3.0GHz, Intel Xeon processor 7041)

SPECfp_rate2000 = 67.3

SPECfp_rate_base2000 = 64.1

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	8	193	76.8	8	193	76.8
171.swim	8	803	35.8	8	783	36.8
172.mgrid	8	489	34.2	8	495	33.8
173.applu	8	544	35.8	8	394	49.4
177.mesa	8	96.8	134	8	91.1	143
178.galgel	8	159	169	8	159	169
179.art	8	168	144	8	168	144
183.equake	8	389	31.0	8	303	39.9
187.facerec	8	224	78.6	8	212	83.3
188.ammp	8	237	86.3	8	237	86.3
189.lucas	8	448	41.4	8	448	41.4
191.fma3d	8	437	44.6	8	437	44.6
200.sixtrack	8	190	53.8	8	190	53.8
301.apsi	8	281	85.9	8	287	84.0

Hardware

CPU:	Intel Xeon processor 7041 (3.0GHz, 2x2MB L2, 800MHz bus)
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	8 cores, 4 chips, 2 cores/chip (Hyper-Threading Technology disabled)
CPU(s) orderable:	1,2,4
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:	16x2048MB PC2-3200 ECC Dual-rank
Disk Subsystem:	1x36GB 10K SAS
Other Hardware:	

Software

Operating System:	SuSE Linux Enterprise Server 9 (x86_64) SP 3 SuSE kernel 2.6.5-7.244-smp
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
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
    Hyper-Threading Technology disabled
    Adjacent Sector Prefetch disabled
```