CFP2000 Result

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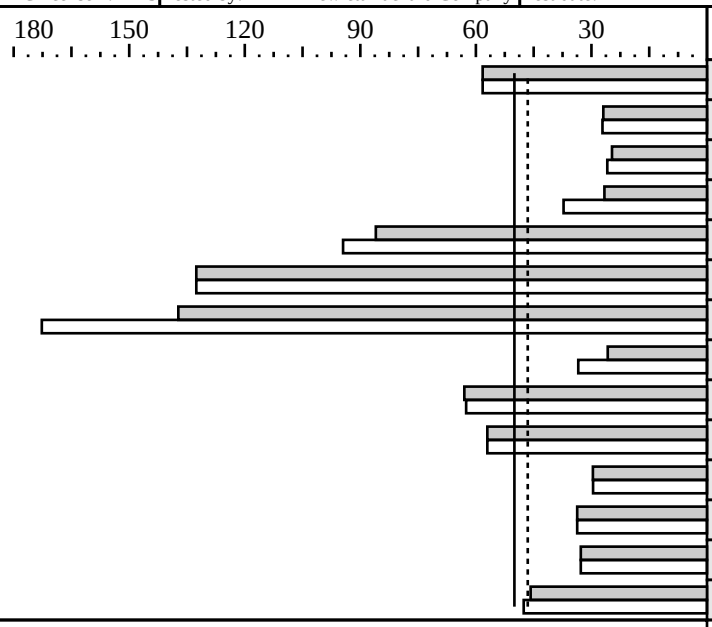
Hewlett-Packard Company

ProLiant ML350 G5 (1.86 GHz, Intel Xeon processor E5320)

SPECfp_rate2000 = 50.0

SPECfp_rate_base2000 = 46.5

SPEC license #: 3 | Tested by: Hewlett-Packard Company | Test date: Feb-2007 | Hardware Avail: Nov-2006 | Software Avail: Nov-2006



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	127	58.2	4	127	58.2
171.swim	4	534	26.9	4	530	27.1
172.mgrid	4	339	24.7	2	161	25.9
173.applu	4	366	26.6	4	262	37.2
177.mesa	4	75.6	86.0	4	68.8	94.5
178.galgel	4	101	133	4	101	133
179.art	4	87.9	137	2	34.9	173
183.equake	4	234	25.8	4	180	33.4
187.facerec	4	140	63.0	2	70.5	62.5
188.ammp	4	179	57.0	4	179	57.0
189.lucas	4	313	29.6	4	314	29.6
191.fma3d	4	289	33.7	4	289	33.7
200.sixtrack	4	156	32.8	4	156	32.8
301.apsi	4	263	45.8	4	254	47.6

Hardware

CPU:	Intel Xeon processor E5320 (1.86 GHz, 2x4 MB L2 shared, 1066 MHz bus)
CPU MHz:	1860
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 cores/chip
CPU(s) orderable:	1,2 chips
Parallel:	No
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	8 MB I+D on chip per chip (4 MB shared per 2 cores)
L3 Cache:	N/A
Other Cache:	N/A
Memory:	8 GB (4x2 GB PC2-5300F CL5)
Disk Subsystem:	4x36 GB 10 K SAS
Other Hardware:	

Software

Operating System:	SuSE Linux Enterprise Server 10 (x86_64) Kernel 2.6.16.21-0.8-smp
Compiler:	Intel C++ Compiler for EM64T-based applications, (Version 9.1 Build 20061101) Intel Fortran Compiler for EM64T-based applications, (Version 9.1 Build 20061101) PathScale EKOPath(TM) Compiler Suite, Release 2.5
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
 users=2
  173.applu:    pathf95 -O3 -ipa -CG:load_exe=0
                -LNO:fission=1:fusion=2:blocking=off:full_unroll_size=9000
```

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Notes/Tuning Information (Continued)

```
                -OPT:IEEE_a=3:ro=3 -TENV:X=3 -march=em64t
    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:    icc -fast -auto_ilp32 +FDO users=2
    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
                users=2
    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
  Adjacent Sector Prefetch disabled
Other Configuration Notes
  Taskset utility used to bind process to CPU(s)
  "ulimit -s unlimited" set
```