CFP2000 Result

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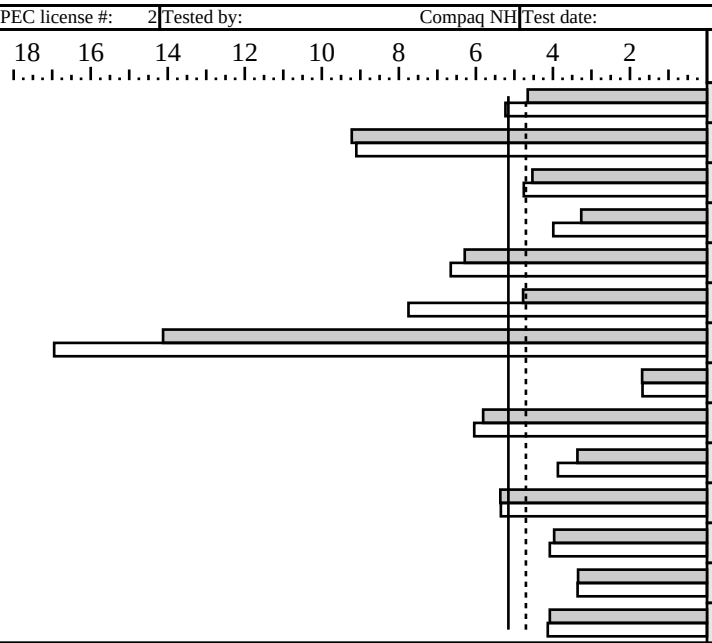
Compaq Computer Corporation
AlphaServer GS160 Model 6/731

SPECfp_rate2000 = 5.16

SPECfp_rate_base2000 = 4.70

SPEC license #: 2 | Tested by: Compaq NH | Test date: Apr-2000 | Hardware Avail: Jun-2000 | Software Avail: Jul-2000



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	1	399	4.65	1	355	5.23
171.swim	1	390	9.22	1	395	9.10
172.mgrid	1	461	4.53	1	439	4.76
173.applu	1	746	3.26	1	610	3.99
177.mesa	1	258	6.29	1	244	6.65
178.galgel	1	705	4.77	1	434	7.75
179.art	1	214	14.1	1	178	16.9
183.equake	1	896	1.68	1	901	1.67
187.facerec	1	379	5.81	1	365	6.04
188.ammp	1	759	3.36	1	659	3.87
189.lucas	1	432	5.37	1	434	5.35
191.fma3d	1	614	3.97	1	597	4.08
200.sixtrack	1	381	3.35	1	380	3.36
301.apsi	1	739	4.08	1	730	4.13

Hardware

CPU:	Alpha 21264A
CPU MHz:	731
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 1 core/chip
CPU(s) orderable:	Up to 16
Parallel:	No
Primary Cache:	64KB(I)+64KB(D) on chip
Secondary Cache:	4MB off chip per CPU
L3 Cache:	None
Other Cache:	None
Memory:	4GB
Disk Subsystem:	mfs
Other Hardware:	Ethernet

Software

Operating System:	Tru64 UNIX T5.1-9 (Release for GS160,GS320)
Compiler:	Compaq C T6.3-120-44A2I Compaq Fortran V5.3 /usr/bin/f77: fort (not fort90) KAP Fortran V4.2 KAP C 4.0
File System:	mfs
System State:	Multi-user

Notes/Tuning Information

```
Baseline   C: cc   -arch ev6 -fast -O4 ONESTEP
     Fortran: kf90 -arch ev6 -O5 -fkapargs='-ur=-1' ONESTEP

Peak: -v -g3 -arch ev6 -non_shared ONESTEP plus:
   168.wupwise: f77 -fast -O4 -pipeline -unroll 2
      171.swim: f90 -fast -O5 -transform_loops
     172.mgrid: kf77 -O5 -transform_loops -tune ev6 -unroll 8
     173.applu: f77 -fast -O5 -transform_loops -unroll 14
      177.mesa: cc -fast -O4
    178.galgel: kf90 -O4 -unroll 2 -ldxml
                RM_SOURCES = lapak.f90
       179.art: kcc -fast -O4 -ckapargs='-arl=4 -ur=4' -unroll 10
    183.equake: kcc -fast -ckapargs='-arl=4' -xtaso_short
   187.facerec: f90 -fast -O4
      188.ammp: cc -fast -O4 -xtaso_short
     189.lucas: kf90 -fast -O5 -fkapargs='-ur=1' -unroll 1
     191.fma3d: kf90 -O4
```

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Notes/Tuning Information (Continued)

```
  200.sixtrack: f90 -fast -O5 -transform_loops
      301.apsi: kf90 -O5 -transform_loops -unroll 8 -fkapargs='-ur=1'

Portability: galgel: -fixed

Compaq C T6.3 is posted at http://www.unix.digital.com/dtk/
It has been available as an ADK (Advanced Developers' Kit)
since February, 2000; the final version will be posted
in July, 2000.
The SPEC CPU2000 binaries were compiled under Unix V4.0F.
sysconfigtab settings:
           max_proc_per_user = 4096
        max_threads_per_user = 4096
      per_proc_data_size     = 21474836480
   max_per_proc_data_size    = 21474836480
      per_proc_address_space = 21474836480
   max_per_proc_address_space = 21474836480
Tru64 Unix V5.1 will ship in Jul-2000 for use on the GS160,
GS320 platforms; the final version will ship Sep-2000
```