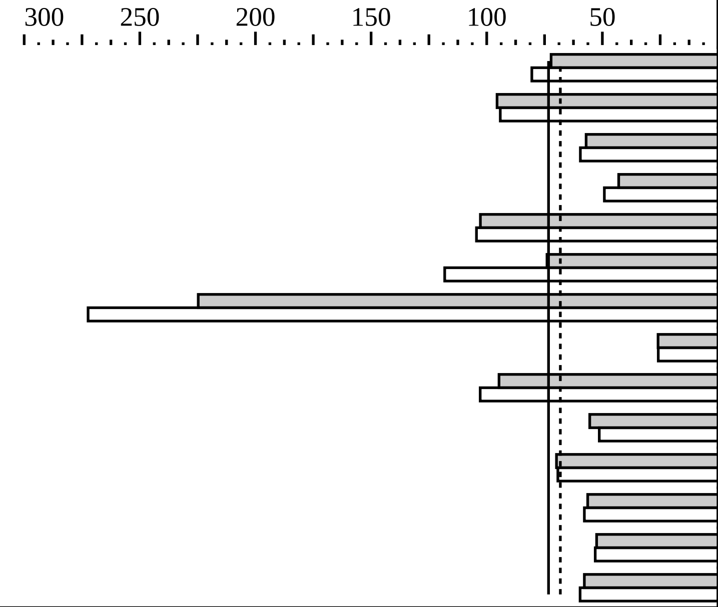
CFP2000 Result

Compaq Computer Corporation
AlphaServer GS160 Model 6/731

SPECfp_rate2000 = 73.3
SPECfp_rate_base2000 = 68.2

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	16	411	72.2	16	369	80.5
171.swim	16	602	95.5	16	611	94.1
172.mgrid	16	586	57.0	16	561	59.5
173.applu	16	908	42.9	16	793	49.1
177.mesa	16	253	103	16	249	104
178.galgel	16	728	73.9	16	455	118
179.art	16	215	225	16	177	272
183.equake	16	931	25.9	16	934	25.8
187.facerec	16	372	94.7	16	343	103
188.ammp	16	736	55.5	16	795	51.3
189.lucas	16	531	69.8	16	536	69.2
191.fma3d	16	692	56.3	16	675	57.8
200.sixtrack	16	389	52.5	16	385	53.1
301.apsi	16	835	57.8	16	809	59.6

Hardware

CPU:	Alpha 21264A
CPU MHz:	731
FPU:	Integrated
CPU(s) enabled:	16 cores, 16 chips, 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:	32GB (4x8GB)
Disk Subsystem:	mfs (Memory File System)
Other Hardware:	Ethernet

Software

Operating System:	Tru64 Unix V5.1 (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.
   submit = runon <cpu #> $command
   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.
```