CFP2000 Result

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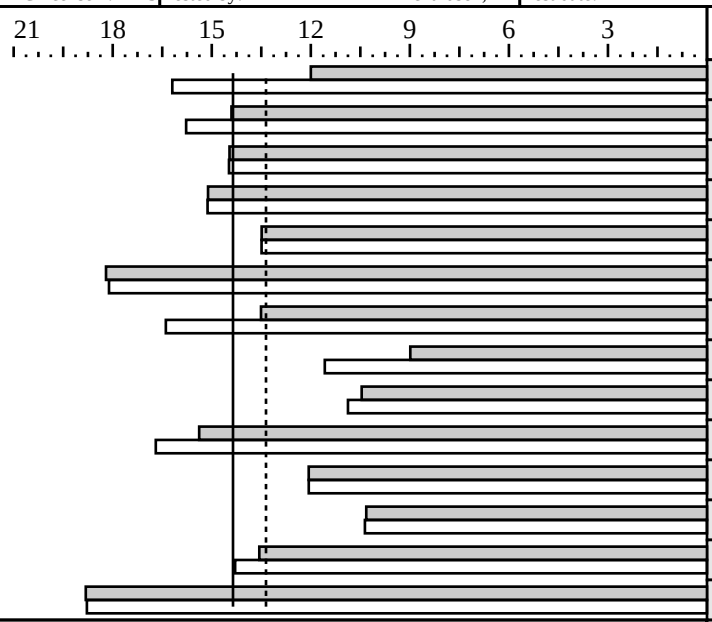
Hewlett-Packard Company
HP 9000 Model N4000

SPECfp_rate2000 = 14.4

SPECfp_rate_base2000 = 13.4

SPEC license #: 3 | Tested by: HP Richardson, TX | Test date: Mar-2000 | Hardware Avail: Apr-2000 | Software Avail: Apr-2000



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	619	12.0	4	458	16.2
171.swim	4	999	14.4	4	912	15.8
172.mgrid	4	578	14.5	4	577	14.5
173.applu	4	645	15.1	4	644	15.1
177.mesa	4	482	13.5	4	481	13.5
178.galgel	4	739	18.2	4	743	18.1
179.art	4	893	13.5	4	736	16.4
183.equake	4	671	8.99	4	521	11.6
187.facerec	4	843	10.5	4	811	10.9
188.ammp	4	664	15.4	4	611	16.7
189.lucas	4	769	12.1	4	769	12.1
191.fma3d	4	944	10.3	4	940	10.4
200.sixtrack	4	376	13.6	4	357	14.3
301.apsi	4	641	18.8	4	642	18.8

Hardware

CPU:	552 MHz PA-RISC 8600
CPU MHz:	552
FPU:	Integrated
CPU(s) enabled:	4 cores, 4 chips, 1 core/chip
CPU(s) orderable:	1-8
Parallel:	--
Primary Cache:	512KBI+1MBD (on chip)
Secondary Cache:	None
L3 Cache:	None
Other Cache:	None
Memory:	8GB
Disk Subsystem:	1x9GB FC 10,000 rpm
Other Hardware:	--

Software

Operating System:	HP-UX B.11.00
Compiler:	HP92453-01 A.11.01.02 HP C Compiler HP-UX f90 19990722 (140507) B.11.01.08 HP-UX f77 971027 (162928) B.11.00.01
File System:	HP-UX VxFS
System State:	Multi-user

Notes/Tuning Information

```
Portability flags:
cc: -Ae
168.wupwise: -K
178.galgel: +source=fixed

Base Flags:
f90: +O3   +Onofltacc -Wl,-a,archive -Wl,+FPD
cc: +Oall +Odataprefetch -Wl,-a,archive +I/+P

Peak flags:
168.wupwise: f77 +DA2.0 +DS2.0 +O4 +Odataprefetch +Onofltacc
171.swim: f77 +DA2.0 +DS2.0 +O4 +Odataprefetch +Ocachepadcommon +Oloop_unroll
172.mgrid: +O3 +Odataprefetch +Onofltacc -Wl,+FPD -Wl,-a,archive
173.applu: +O3 +Odataprefetch +Onofltacc -Wl,+FPD -Wl,-a,archive
177.mesa: +I/+P +Oall +Odataprefetch -Wl,+FPD -Wl,-a,archive
178.galgel: +O3 +Odataprefetch +Onofltacc -Wl,+FPD -Wl,-a,archive
179.art: +Oall +Odataprefetch +Onofltacc +Optrs_strongly_typed -Wl,+FPD -Wl,-a,archive +I/+P
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Notes/Tuning Information (Continued)

```
183.equake: +Oall +Odataprefetch +Optrs_strongly_typed
187.facerec: +O2 +Ofastaccess +Omultiprocessor -Wl,+FPD -Wl,-a,archive -Wl,/opt/langtools/lib/fastmem.o
188.ammp: +Oall +Odataprefetch +Optrs_strongly_typed +I/+P
189.lucas: +O3 +Odataprefetch +Onofltacc +Omultiprocessor
191.fma3d: +O3 +Odataprefetch +Onofltacc -Wl,+FPD -Wl,-a,archive
200.sixtrack: f90 +Oall +Ofastaccess +Oloop_block +Omultiprocessor +Onofltacc
              LIBS = -Wl,+FPD -Wl,-a,archive -Wl,/opt/langtools/lib/fastmem.o
301.apsi: +O3 +Odataprefetch +Onofltacc -Wl,+FPD -Wl,-a,archive
Kernel Tunables:
vps_pagesize=256, vps_ceiling=256
```