



CFP2000 Result

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Hewlett-Packard Company
HP 9000 rp3440-4 (1000MHz PA-8800)

SPECfp_rate2000 = 32.6
SPECfp_rate_base2000 = 30.2

SPEC license #: 3 Tested by: HP Richardson Test date: Jan-2004 Hardware Avail: Feb-2004 Software Avail: Feb-2004

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	262	28.3	4	163	45.6
171.swim	4	497	29.0	4	497	29.0
172.mgrid	4	278	30.0	4	278	30.0
173.applu	4	338	28.8	4	338	28.8
177.mesa	4	192	33.9	4	164	39.5
178.galgel	4	203	66.4	4	199	67.6
179.art	4	479	25.2	4	443	27.3
183.equake	4	251	24.1	4	203	29.7
187.facerec	4	256	34.5	4	252	35.0
188.amp	4	368	27.7	4	340	30.0
189.lucas	4	435	21.4	4	435	21.4
191.fma3d	4	340	28.6	4	340	28.6
200.sixtrack	4	188	27.1	4	182	28.0
301.apsi	4	353	34.2	4	353	34.2

Hardware

CPU: PA-8800
CPU MHz: 1000
FPU: Integrated
CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
CPU(s) orderable: 2,4 (order by # cores)
Parallel: no
Primary Cache: 0.75MBI + 0.75MBD (on chip) per core
Secondary Cache: 32MB (off chip) shared by 2 cores
L3 Cache: N/A
Other Cache: N/A
Memory: 6GB (12 * 512MB DIMMs)
Disk Subsystem: 1x73GB 15K rpm SCSI
Other Hardware: N/A

Software

Operating System: HPUX11i-TCOE B.11.11.0312
Compiler: HP C/ANSI C B.11.11.08
HP Fortran90 Compiler B.11.01.74
File System: VxFS
System State: Multi-user

Notes/Tuning Information

Portability flags:

178.galgel: +source=fixed

Baseline compile flags:

Fortran: +Ofaster -Wl,-a,archive
C : +I/+P +Oall +Odataprefetch -Wl,-a,archive

Peak compile flags:

168.wupwise: (ONESTEP) +cat +Ofaster -Wl,-a,archive
171.swim: basepeak=true
172.mgrid: basepeak=true
173.applu: basepeak=true
177.mesa: +I/+P +O4 +Odataprefetch -Wl,-a,archive
178.galgel: +Ofaster +Oloop_unroll=6 -Wl,-a,archive
179.art: +I/+P +Oall +Optrs_strongly_typed +Opromote_indirect_calls -Wl,-a,archive
183.equake: +O4 +Olibcalls +Odataprefetch +Optrs_strongly_typed



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Notes/Tuning Information (Continued)

```
+Opromote_indirect_calls -Wl,+FPD -Wl,-a,archive
187.facerec: (ONESTEP) +cat +Ofaster +Ofastaccess -Wl,-a,archive
188.ammp: +I/+P +Oall +Odataprefetch +Optrs_strongly_typed
+Opromote_indirect_calls -Wl,-a,archive
189.lucas: basepeak=true
191.fma3d: basepeak=true
200.sixtrack: (ONESTEP) +cat +O3 +Onolibcalls +Onolimit +Onoinline
+Onodataprefetch -Wl,+FPD -Wl,-a,archive
301.apsi: basepeak=true
```

Kernel Tunables:

```
dbc_max_pct=20
dbc_min_pct=20
maxssiz=268435456
vps_pagesize=4096
vps_ceiling=16384
```

Other notes:

The system under test had the HP-UX 11i v1 December 2003
Technical Computing Operating Environment (version 11.11.0312)
and DART63 (December 2003) compilers installed, with the
following patches applied:

```
GOLDAPPS11i Gold Applications Patches for HP-UX 11i v1, December 2003
GOLDBASE11i Gold Base Patches for HP-UX 11i v1, December 2003
HWEnable11i Hardware Enablement Patches for HP-UX 11i v1, December 2003
HWETEST1111 Hardware Enablement Patches for PA-8800 (prerelease)
PHSS_29483 aC++ compiler cumulative patch (A.03.52)
PHSS_30002 Fortran90 cumulative patch (B.11.01.74)
```

BCH shell utility command 'co cpu' (configure cpu)
used to deconfigure processors if necessary.