



CFP2000 Result

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Hewlett-Packard Company
HP 9000 rp4440-8 (1000MHz PA-8800)

SPECfp_rate2000 = 55.4
SPECfp_rate_base2000 = 51.9

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	8	269	55.2	8	176	84.6
171.swim	8	800	36.0	8	800	36.0
172.mgrid	8	446	37.4	8	446	37.4
173.applu	8	562	34.7	8	562	34.7
177.mesa	8	193	67.5	8	165	78.8
178.galgel	8	205	132	8	205	131
179.art	8	487	49.5	8	446	54.1
183.equake	8	271	44.6	8	240	50.3
187.facerec	8	260	67.9	8	257	68.7
188.amp	8	369	55.3	8	341	60.0
189.lucas	8	560	33.1	8	560	33.1
191.fma3d	8	413	47.2	8	413	47.2
200.sixtrack	8	193	53.0	8	186	54.8
301.apsi	8	373	64.8	8	373	64.8

Hardware

CPU: PA-8800
CPU MHz: 1000
FPU: Integrated
CPU(s) enabled: 8 cores, 4 chips, 2 cores/chip
CPU(s) orderable: 2,4,6,8 (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: 64GB (32 * 2GB DIMMs)
Disk Subsystem: 1x73GB 15K rpm SCSI
Other Hardware: N/A

Software

Operating System: HPUNIX11i-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
maxdsiz=3221225472
maxssiz=268435456
maxdsiz_64bit=274877906944
maxssiz_64bit=1073741824
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.