CFP2000 Result

Copyright ©1999-2004, Standard Performance Evaluation Corporation

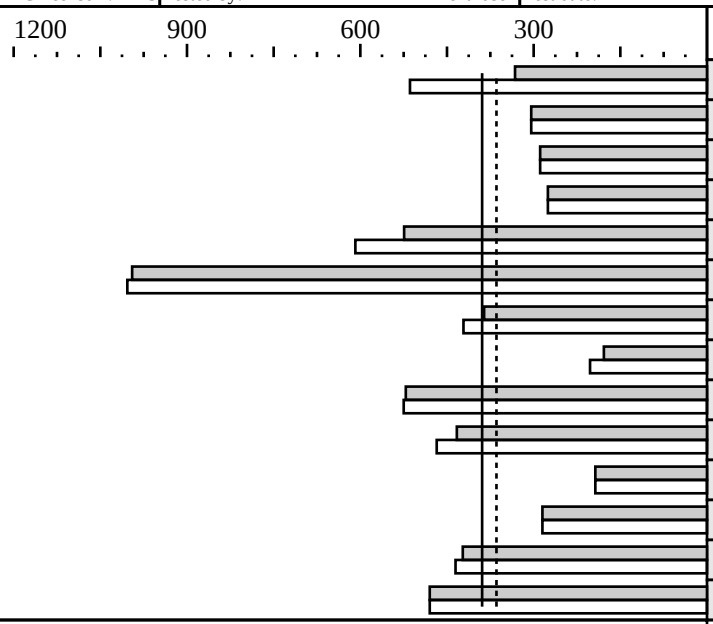
Hewlett-Packard Company

HP 9000 Superdome (1000MHz PA-8800, 16 cells)

SPECfp_rate2000 = 389

SPECfp_rate_base2000 = 364

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	64	358	332	64	231	514
171.swim	64	756	304	64	756	304
172.mgrid	64	463	289	64	463	289
173.applu	64	566	275	64	566	275
177.mesa	64	198	524	64	171	609
178.galgel	64	216	995	64	215	1003
179.art	64	500	386	64	458	421
183.equake	64	541	178	64	477	202
187.facerec	64	271	521	64	269	525
188.ammp	64	377	433	64	349	468
189.lucas	64	768	193	64	768	193
191.fma3d	64	547	285	64	547	285
200.sixtrack	64	193	423	64	188	435
301.apsi	64	402	480	64	402	480

Hardware

CPU:	PA-8800
CPU MHz:	1000
FPU:	Integrated
CPU(s) enabled:	64 cores, 32 chips, 2 cores/chip
CPU(s) orderable:	4-128 cores (up to 64/partition)
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:	256GB (512 * 512MB DIMMs)
Disk Subsystem:	10x36GB 10K rpm SCSI (striped)
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:	OnLineJFS
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
```

Copyright ©1999-2004, Standard Performance Evaluation Corporation

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=401604608
  maxdsiz_64bit=4396972761584
  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)

  System was configured with all memory interleaved

  System configured as a single partition with 16 cells and
    2 PA-8800 modules (each with 2 processors) per cell

  Filesystem used for spec runs mounted "tmplog"
```