CFP2000 Result

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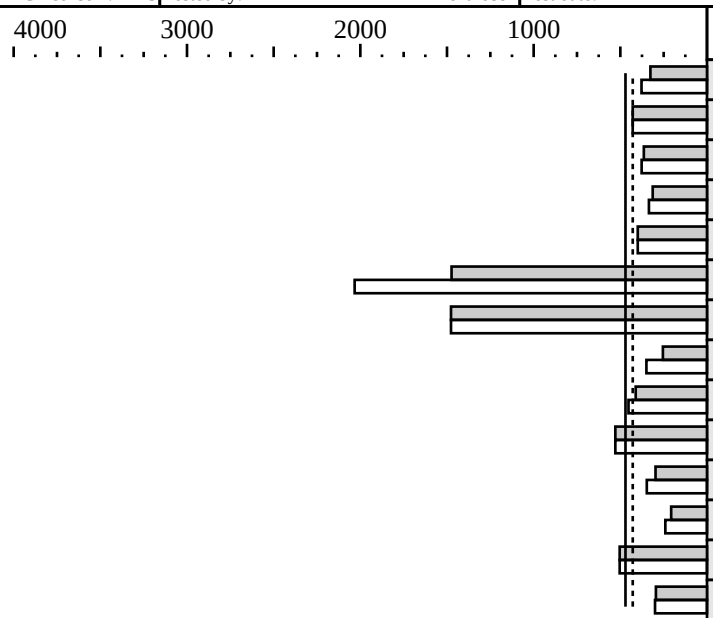
Hewlett-Packard Company

HP Integrity Superdome 32-way (1500 MHz Itanium 2)

SPECfp_rate2000 = 470

SPECfp_rate_base2000 = 428

SPEC license #: 3 | Tested by: HP Richardson | Test date: Sep-2003 | Hardware Avail: Oct-2003 | Software Avail: Sep-2003



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	32	182	327	32	157	378
171.swim	32	268	429	32	268	429
172.mgrid	32	183	364	32	177	377
173.applu	32	249	313	32	233	335
177.mesa	32	130	399	32	130	399
178.galgel	32	73.0	1474	32	53.0	2033
179.art	32	65.3	1477	32	65.3	1477
183.equake	32	190	254	32	138	350
187.facerec	32	171	411	32	156	453
188.ammp	32	154	529	32	154	529
189.lucas	32	250	297	32	214	347
191.fma3d	32	377	207	32	324	240
200.sixtrack	32	81.1	504	32	81.1	504
301.apsi	32	327	295	32	322	300

Hardware

CPU:	Intel Itanium 2
CPU MHz:	1500
FPU:	Integrated
CPU(s) enabled:	32 cores, 32 chips, 1 core/chip
CPU(s) orderable:	6 to 32 by 2
Parallel:	no
Primary Cache:	16KBI + 16KBD (on chip) per CPU
Secondary Cache:	256KB (on chip) per CPU
L3 Cache:	6.0MB (on chip) per CPU
Other Cache:	N/A
Memory:	128GB (256 * 512MB DIMMs)
Disk Subsystem:	10x36GB 10K RPM SCSI disk (striped)
Other Hardware:	N/A

Software

Operating System:	HPUX11i-TCOE B.11.23
Compiler:	HP C/ANSI C Compiler B.11.23
	HP Fortran90 Compiler B.11.23
File System:	vxfs
System State:	Multi-user

Notes/Tuning Information

```
C compiler invoked as:
  /opt/ansic/bin/cc -AOe

Portability Flags
  178.galgel: +source=fixed

Base Flags
  f90  : +Oprofile=collect:all/+Oprofile=use +Ofast +O3 -minshared
  C        : +Oprofile=collect:all/+Oprofile=use +Ofaster -exec

Peak Flags:

  168.wupwise   : +Ofast +Onoptrs_to_globals -minshared +O4 +Oinline_budget=50000
  171.swim      : basepeak=true
  172.mgrid     : +Ofast +O3 -minshared +DSblended +DD64
  173.applu     : +Ofast +O3 -minshared
  177.mesa      : basepeak=true
```

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Notes/Tuning Information (Continued)

```
    178.galgel    : +Ofast +Onoptrs_to_globals -minshared +O3 +Oloop_unroll=2 +DD64
                    RM_SOURCES = lapak.f90
                    LIBS = -llapack
    179.art       : basepeak=true
    183.equake    : +Oprofile=collect:all/+Oprofile=use +Ofaster +Onorecovery
                   +Onoptrs_to_globals +Otype_safety=strong -exec -Wl,-aarchive_shared
                    LIBS = -Bprotected /opt/langtools/lib/hpux32/effmem.o
    187.facerec   : +Ofast +Onoptrs_to_globals -minshared +O3 +Oloop_unroll=2
    188.ammp      : basepeak=true
    189.lucas     : +Ofast +Onoptrs_to_globals -minshared +O3 +Oinline_budget=100
    191.fma3d     : +Ofast +Onoptrs_to_globals -minshared +O3
    200.sixtrack  : basepeak=true
    301.apsi      : +Ofast +Onoptrs_to_globals -minshared +O3

  Kernel Tunables:
    dbc_max_pct=20
    dbc_min_pct=20
    maxdsiz=3221225472
    maxssiz=401604608
    maxdsiz_64bit=4396972769279
    maxssiz_64bit=1073741824
    vps_pagesize=4096
    vps_ceiling=16384

  Other notes:

    System was configured with 1/2 of memory interleaved and
      1/2 of memory local to each cell

    System configured as a single partition with 8 cells and
      4 processors per cell

    Processes were assigned to localities using the
      HP-UX mpsched utility

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