CFP2000 Result

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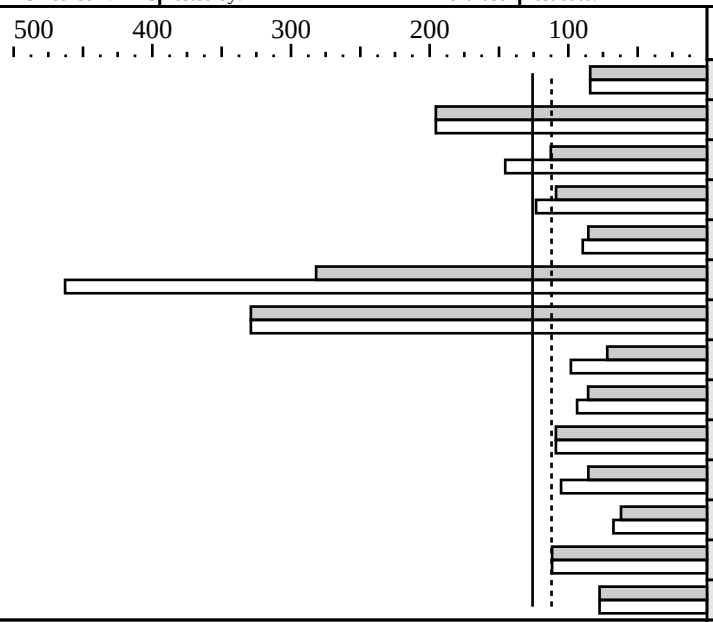
Hewlett-Packard Company

HP Integrity rx8620 (1300 MHz Itanium 2)

SPECfp_rate2000 = 126

SPECfp_rate_base2000 = 112

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	8	176	84.2	8	176	84.2
171.swim	8	147	196	8	147	196
172.mgrid	8	148	113	8	115	146
173.applu	8	179	109	8	158	123
177.mesa	8	152	85.6	8	145	89.6
178.galgel	8	95.5	282	8	58.1	463
179.art	8	73.4	329	8	73.4	329
183.equake	8	168	71.9	8	123	98.2
187.facerec	8	206	85.7	8	188	93.7
188.ammp	8	187	109	8	187	109
189.lucas	8	217	85.6	8	176	105
191.fma3d	8	314	62.0	8	289	67.4
200.sixtrack	8	91.4	112	8	91.4	112
301.apsi	8	311	77.5	8	311	77.5

Hardware

CPU:	Intel Itanium 2
CPU MHz:	1300
FPU:	Integrated
CPU(s) enabled:	8 cores, 8 chips, 1 core/chip
CPU(s) orderable:	2,4,6,8,10,12,14,16
Parallel:	no
Primary Cache:	16KBI + 16KBD (on chip) per CPU
Secondary Cache:	256KB (on chip) per CPU
L3 Cache:	3.0MB (on chip) per CPU
Other Cache:	N/A
Memory:	32GB (64 * 512MB DIMMs)
Disk Subsystem:	10x36GB 10K rpm SCSI (striped)
Other Hardware:	N/A

Software

Operating System:	HPUX11i-TCOE B.11.23
Compiler:	HP C/ANSI C Compiler A.05.52 HP Fortran90 Compiler B.11.23
File System:	vxfs
System State:	Multi-user

Notes/Tuning Information

```
Portability Flags
  178.galgel: +source=fixed

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

Peak Flags:

  168.wupwise   : basepeak=true
  171.swim      : basepeak=true
  172.mgrid     : +Ofaster -minshared +Oprefetch_latency=1280
  173.applu     : +Ofast +O3 -minshared
  177.mesa      : +Oprofile=collect:all/+Oprofile=use +Ofaster +Otype_safety=ansi
                  -exec +Oprefetch_latency=1280
  178.galgel    : +Oprofile=collect:all/+Oprofile=use +Ofast +Onoptrs_to_globals
                  -minshared +O3 +Oloop_unroll=11 +DD64
```

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Notes/Tuning Information (Continued)

```
                  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
                    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
    191.fma3d     : +Oprofile=collect:all/+Oprofile=use +Ofast +Onoptrs_to_globals
                    -minshared +O3
    200.sixtrack  : basepeak=true
    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

  The system under test had the HP-UX 11i v2 (version 11.23)
    Technical Computing Operating Environment and compilers
    installed, with the following patches applied:

    PHSS_29655  aC++ compiler (A.05.52)
    PHSS_29656  HP C Compiler (A.05.52)
    PHSS_29657  u2comp/be/plugin library Patch
    PHSS_29663  Fortran Product Patch, v2.7 to v2.7.2

  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 4 cells and
      2 processors per cell (unused processors disabled
      prior to booting with firmware command "cpuconfig")

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

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