CFP2000 Result

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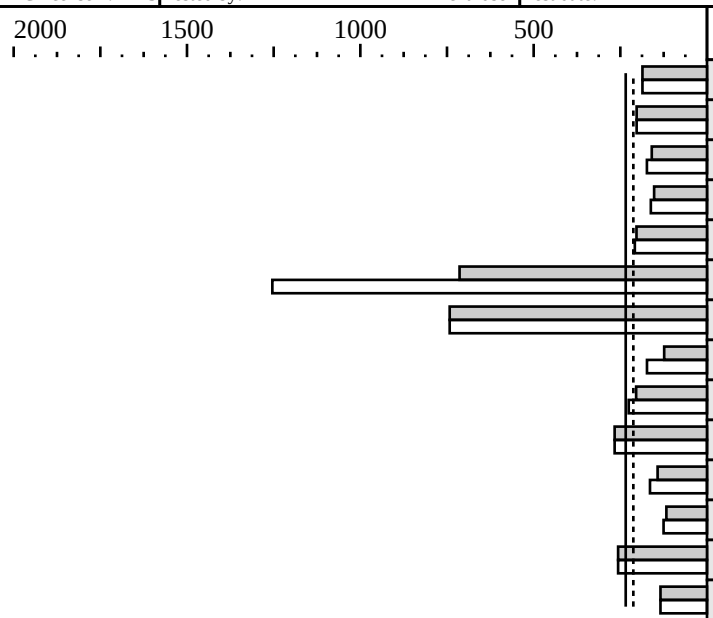
Hewlett-Packard Company

HP Integrity rx8620 (1500 MHz Itanium 2)

SPECfp_rate2000 = 234

SPECfp_rate_base2000 = 212

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	16	159	186	16	159	186
171.swim	16	283	203	16	283	203
172.mgrid	16	210	159	16	193	173
173.applu	16	256	153	16	241	162
177.mesa	16	128	203	16	125	208
178.galgel	16	75.4	714	16	42.9	1254
179.art	16	65.0	742	16	65.0	742
183.equake	16	195	124	16	139	173
187.facerec	16	173	204	16	156	226
188.ammp	16	153	266	16	153	266
189.lucas	16	260	142	16	226	164
191.fma3d	16	333	117	16	311	125
200.sixtrack	16	79.6	256	16	79.6	256
301.apsi	16	360	134	16	360	134

Hardware

CPU:	Intel Itanium 2
CPU MHz:	1500
FPU:	Integrated
CPU(s) enabled:	16 cores, 16 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:	6.0MB (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
      4 processors per cell

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

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