CFP2000 Result

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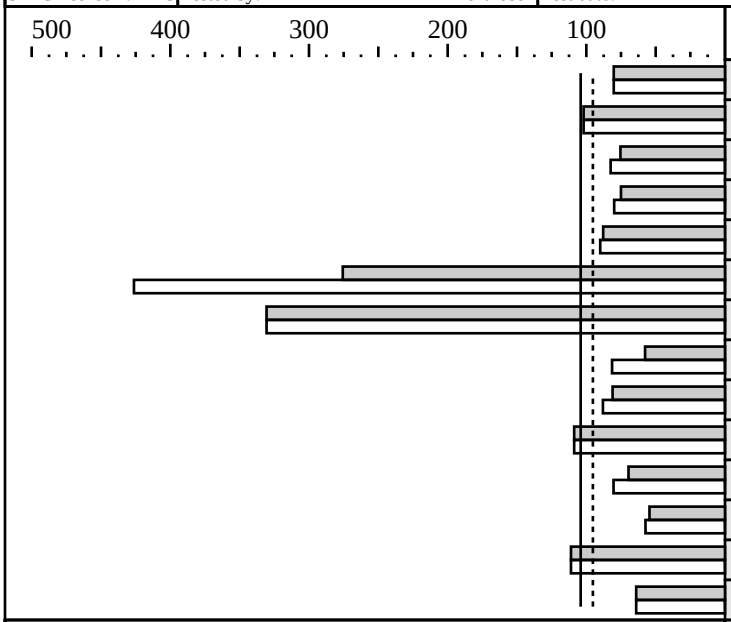
Hewlett-Packard Company

HP Integrity rx7620 (1300 MHz Itanium 2)

SPECfp_rate2000 = 104

SPECfp_rate_base2000 = 95.3

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	8	185	80.2	8	185	80.2
171.swim	8	282	102	8	282	102
172.mgrid	8	222	75.4	8	203	82.5
173.applu	8	260	75.0	8	244	79.9
177.mesa	8	148	87.8	8	144	90.0
178.galgel	8	97.6	276	8	63.1	426
179.art	8	73.0	331	8	73.0	331
183.equake	8	209	57.6	8	148	81.4
187.facerec	8	217	81.1	8	200	88.0
188.ammp	8	188	109	8	188	109
189.lucas	8	267	69.6	8	231	80.4
191.fma3d	8	358	54.5	8	340	57.3
200.sixtrack	8	91.9	111	8	91.9	111
301.apsi	8	377	64.0	8	377	64.0

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
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:	16GB (32 * 512MB DIMMs)
Disk Subsystem:	2x18GB 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 2 cells and
      4 processors per cell

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

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