



CFP2000 Result

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Hewlett-Packard Company
HP Integrity rx8620 (1300 MHz Itanium 2)

SPECfp_rate2000 = 104
SPECfp_rate_base2000 = 95.1

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	188	79.0	8	188	79.0
171.swim	8	282	102	8	282	102
172.mgrid	8	221	75.4	8	203	82.2
173.applu	8	262	74.4	8	244	79.9
177.mesa	8	148	87.5	8	145	89.5
178.galgel	8	97.9	275	8	63.0	427
179.art	8	72.9	331	8	72.9	331
183.equake	8	210	57.5	8	149	81.2
187.facerec	8	217	81.2	8	201	87.9
188.amp	8	188	109	8	188	109
189.lucas	8	267	69.4	8	231	80.4
191.fma3d	8	357	54.7	8	332	58.7
200.sixtrack	8	91.4	112	8	91.4	112
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: 2,4,6,8,10,12,14,16
 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: 16GB (32 * 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.earthquake : +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.ammpp    : 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"