



CFP2000 Result

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Hewlett-Packard Company
HP Integrity rx7620 (1500 MHz Itanium 2)

SPECfp_rate2000 = 58.9
SPECfp_rate_base2000 = 53.5

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	4	157	47.4	4	157	47.4
171.swim	4	282	51.1	4	282	51.1
172.mgrid	4	208	40.1	4	192	43.6
173.applu	4	255	38.3	4	240	40.6
177.mesa	4	127	51.1	4	124	52.5
178.galgel	4	75.4	178	4	42.6	316
179.art	4	64.9	186	4	64.9	186
183.equake	4	194	31.1	4	139	43.4
187.facerec	4	171	51.5	4	155	56.8
188.amp	4	153	66.7	4	153	66.7
189.lucas	4	260	35.6	4	225	41.2
191.fma3d	4	322	30.2	4	310	31.5
200.sixtrack	4	79.9	63.9	4	79.9	63.9
301.apsi	4	356	33.9	4	356	33.9

Hardware

CPU: Intel Itanium 2
 CPU MHz: 1500
 FPU: Integrated
 CPU(s) enabled: 4 cores, 4 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: 6.0MB (on chip) per CPU
 Other Cache: N/A
 Memory: 8GB (16 * 512MB DIMMs)
 Disk Subsystem: 1x36GB 10K rpm SCSI
 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 configured as a single partition with 1 cell and 4 processors per cell

Filesystem used for spec runs mounted "tmplog"