



CFP2000 Result

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

SPECfp_rate2000 = 71.4
SPECfp_rate_base2000 = 63.0

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	147	50.4	4	147	50.4
171.swim	4	146	98.4	4	146	98.4
172.mgrid	4	140	59.7	4	108	77.4
173.applu	4	172	56.8	4	152	64.2
177.mesa	4	130	49.9	4	124	52.5
178.galgel	4	77.8	173	4	42.6	316
179.art	4	64.5	187	4	64.5	187
183.equake	4	155	39.0	4	110	54.7
187.facerec	4	162	54.4	4	147	60.0
188.amp	4	153	66.6	4	153	66.6
189.lucas	4	210	44.2	4	171	54.2
191.fma3d	4	284	34.3	4	265	36.7
200.sixtrack	4	79.4	64.3	4	79.4	64.3
301.apsi	4	291	41.4	4	291	41.4

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: 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.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.ammmp    : 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 2 processors per cell
(unused processors disabled by firmware comand cpuconfig)

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

Filesystem used for spec runs mounted "tmplog"