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

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<tr>
<th>Benchmark</th>
<th>Base Copies</th>
<th>Base Runtime</th>
<th>Base Ratio</th>
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</table>

Hardware
- CPU: Intel Itanium 2
- CPU MHz: 1500
- 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: 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.aplpu   : +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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SPECfp_rate2000 = 118
SPECfp_rate_base2000 = 107

Notes/Tuning Information (Continued)

179. art
   RM_SOURCES = lapak.f90 LIBS = -llapack

183. equake
   +Oprofile=collect:all/+Oprofile=use +Ofaster +Onorecovery
   +Onoptrs_toGlobals +Otype_safety=strong -exec
   LIBS = -Bprotected /opt/langtools/lib/hpux32/effmem.o

187. facerc
   +Ofast +Onoptrs_toGlobals -minshared +O3 +Oloop_unroll=2

188. ammp
   basepeak=true

189. lucas
   +Ofast +Onoptrs_toGlobals -minshared +O3

191. fma3d
   +Oprofile=collect:all/+Oprofile=use +Ofast +Onoptrs_toGlobals
   -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"