# CFP2000 Result



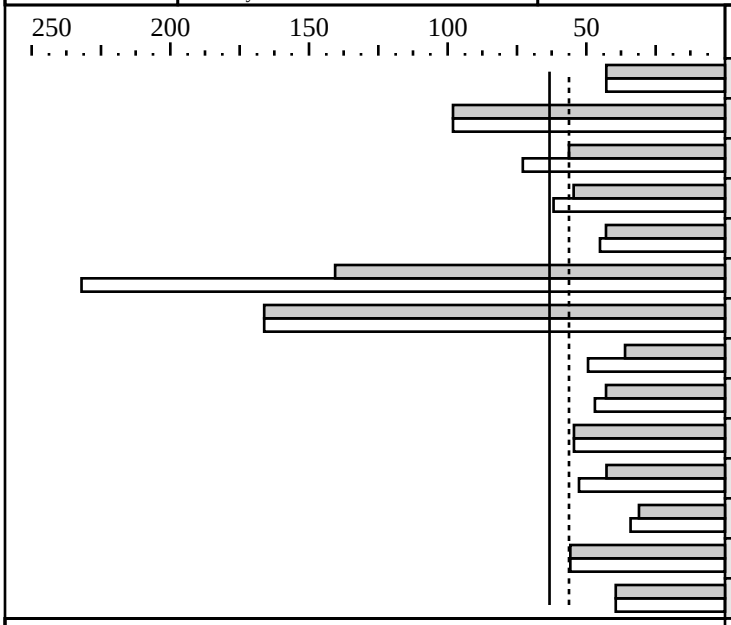
## Hewlett-Packard Company

## HP Integrity rx7620 (1300 MHz Itanium 2)

SPECfp_rate2000 = 63.2

SPECfp_rate_base2000 = 56.2

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 | 4 | 173 | 42.8 | 4 | 173 | 42.8 |
| 171.swim | 4 | 147 | 98.1 | 4 | 147 | 98.1 |
| 172.mgrid | 4 | 148 | 56.3 | 4 | 115 | 72.9 |
| 173.applu | 4 | 179 | 54.6 | 4 | 158 | 61.8 |
| 177.mesa | 4 | 151 | 42.9 | 4 | 144 | 45.1 |
| 178.galgel | 4 | 95.7 | 141 | 4 | 58.0 | 232 |
| 179.art | 4 | 72.6 | 166 | 4 | 72.6 | 166 |
| 183.equake | 4 | 167 | 36.0 | 4 | 122 | 49.4 |
| 187.facerec | 4 | 206 | 42.9 | 4 | 188 | 46.9 |
| 188.ammp | 4 | 187 | 54.5 | 4 | 187 | 54.5 |
| 189.lucas | 4 | 217 | 42.7 | 4 | 176 | 52.6 |
| 191.fma3d | 4 | 314 | 31.0 | 4 | 286 | 34.1 |
| 200.sixtrack | 4 | 91.5 | 55.8 | 4 | 91.5 | 55.8 |
| 301.apsi | 4 | 306 | 39.4 | 4 | 306 | 39.4 |

### Hardware

| | |
|---|---|
| CPU: | Intel Itanium 2 |
| CPU MHz: | 1300 |
| 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: | 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<br>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
```

## 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
      2 processors per cell (unused processors disabled
      prior to booting with firmware command "cpuconfig")

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

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