# CINT2000 Result

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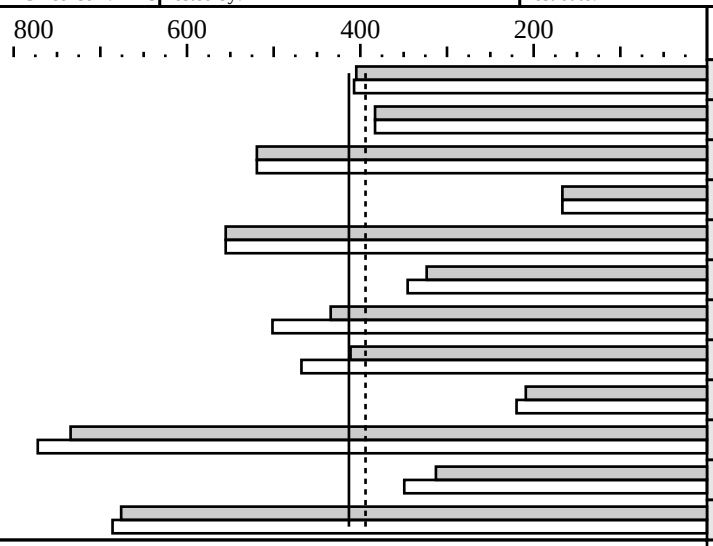
## Hewlett-Packard Company

HP Superdome 64-way (875MHz PA-8700+)

SPECint_rate2000 = 413

SPECint_rate_base2000 = 394

SPEC license #: 3 | Tested by: HP | Test date: Jun-2002 | Hardware Avail: Jul-2002 | Software Avail: Jun-2002




| Benchmark | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|---|---|---|---|---|---|---|
| 164.gzip | 64 | 257 | 405 | 64 | 255 | 407 |
| 175.vpr | 64 | 271 | 383 | 64 | 271 | 383 |
| 176.gcc | 64 | 157 | 519 | 64 | 157 | 519 |
| 181.mcf | 64 | 801 | 167 | 64 | 801 | 167 |
| 186.crafty | 64 | 134 | 555 | 64 | 134 | 555 |
| 197.parser | 64 | 413 | 323 | 64 | 387 | 345 |
| 252.eon | 64 | 222 | 434 | 64 | 192 | 501 |
| 253.perlbmk | 64 | 325 | 411 | 64 | 286 | 468 |
| 254.gap | 64 | 391 | 209 | 64 | 372 | 220 |
| 255.vortex | 64 | 192 | 734 | 64 | 183 | 772 |
| 256.bzip2 | 64 | 356 | 313 | 64 | 319 | 349 |
| 300.twolf | 64 | 329 | 676 | 64 | 325 | 686 |

### Hardware

| | |
|---|---|
| CPU: | PA-8700+ |
| CPU MHz: | 875 |
| FPU: | Integrated |
| CPU(s) enabled: | 64 cores, 64 chips, 1 core/chip |
| CPU(s) orderable: | 8 to 64 |
| Parallel: | No |
| Primary Cache: | 0.75MB(I) + 1.5MB(D) on chip |
| Secondary Cache: | None |
| L3 Cache: | None |
| Other Cache: | None |
| Memory: | 256GB (512x512MB DIMMs total) |
| Disk Subsystem: | 5x9GB Fibrechannel (striped) |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | HP-UX 11i TCOE B.11.11.0206.5 |
| Compiler: | HP ANSI C compiler B.11.11.04<br>HP aC++ compiler C.03.33.01<br>PHCO_24402 libc cumulative header file patch<br>PHCO_26124 libc cumulative patch<br>PHSS_24207 libm patch<br>PHSS_25719 libCL patch<br>PHSS_26263 ld(1) and linker tools cumulative patch<br>PHSS_26264 linker startup code / SLLIC ELF support<br>PHSS_26792 Ansi C compiler cumulative patch<br>PHSS_26793 +O4/PBO optimizer cumulative patch<br>PHSS_26229 aC++ cumulative patch (A.03.34) |
| File System: | OnLine JFS |
| System State: | Single-user |

## Notes/Tuning Information

```
Portability:
  176.gcc: -DHOST_WORDS_BIG_ENDIAN
  186.crafty: -DHP
  252.eon: -DFMAX_IS_DOUBLE
  253.perlbmk: -DSPEC_CPU2000_HP
  254.gap: -DSPEC_CPU2000_HP -DSYS_IS_USG -DSYS_HAS_IOCTL_PROTO
           -DSYS_HAS_TIME_PROTO -DSYS_HAS_CALLOC_PROTO

Baseline compile flags:
  C      : +I/+P +Oall +Ostatic_prediction -Wl,-a,archive
  C++    : +I/+P +O3 +Ostatic_prediction -Wl,-a,archive

Peak compile flags:
     164.gzip: +I/+P +Oall +Optrs_strongly_typed +Oinline_budget=800
               -Wl,-a,archive +Ostatic_prediction
      175.vpr: basepeak=true
      176.gcc: basepeak=true
      181.mcf: basepeak=true
   186.crafty: basepeak=true
```

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## Notes/Tuning Information (Continued)

```
     197.parser: +I/+P +Oall +Odataprefetch +ESfic +Oinline_budget=400
                 +Owhole_program_mode -Wl,-a,archive +Ostatic_prediction
        252.eon: +I/+P +noeh +O4 +Optrs_strongly_typed +Olibcalls +Oentrysched
                 +A +ESfic -Wl,-a,archive +Ostatic_prediction
    253.perlbmk: +I/+P +Oall +ESlit +ESfic +Optrs_strongly_typed
                 +Opromote_indirect_calls -Wl,-a,archive +Ostatic_prediction
                 linked with /opt/langtools/lib/fastmem.o
        254.gap: +I/+P +Oall +ESlit +ESfic +Optrs_strongly_typed
                 +Opromote_indirect_calls -Wl,-a,archive +Ostatic_prediction
     255.vortex: +I/+P +Oall +Oinline_budget=800 +Optrs_strongly_typed
                 -Wl,-a,archive +Ostatic_prediction
      256.bzip2: +I/+P +Oall +Odataprefetch +Optrs_strongly_typed +Owhole_program_mode
                +Onoptrs_to_globals +Oinline_budget=80 -Wl,-a,archive +Ostatic_prediction
     300.twolf: +I/+P +Oall +Optrs_strongly_typed -Wl,-a,archive +Ostatic_prediction

Hardware configuration notes:

  System was configured as a single partition with 16 cells
  boot time firmware tunable DataPrefetch enabled (default)

Operating system configuration notes:

  PHKL_25778 LVM cumulative patch
  PHKL_25886 Filesystem buffercache performance fix
  PHKL_26230 VxFS cumulative patch

  vps_pagesize 4096, vps_ceiling 16384
  dbc_min_pct=10, dbc_max_pct=10
  maxssiz=0x10000000

  filesystem used for spec runs mounted tmplog,mincache=tmpcache
```