CINT2000 Result

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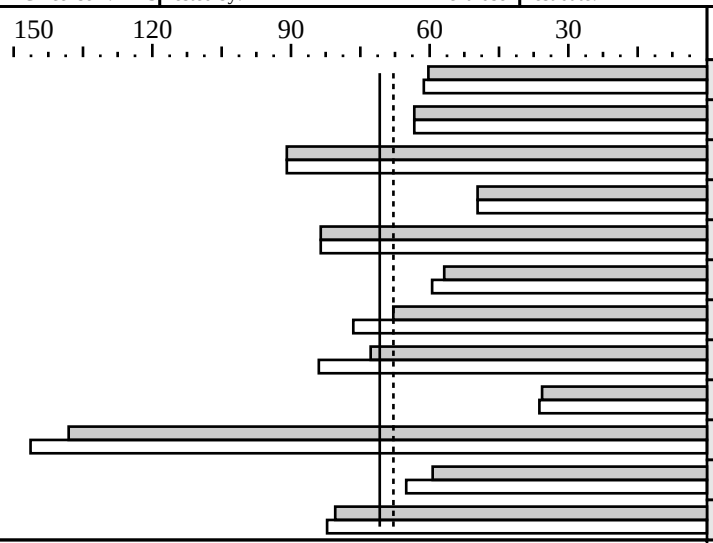
Hewlett-Packard Company

HP 9000 rp7420-16 (1000MHz PA-8800, 2 cells)

SPECint_rate2000 = 70.8

SPECint_rate_base2000 = 67.8

SPEC license #: 3 | Tested by: HP Richardson | Test date: Jan-2004 | Hardware Avail: Feb-2004 | Software Avail: Feb-2004



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	8	216	60.3	8	212	61.3
175.vpr	8	205	63.3	8	205	63.3
176.gcc	8	112	90.9	8	112	90.9
181.mcf	8	337	49.6	8	337	49.6
186.crafty	8	111	83.6	8	111	83.6
197.parser	8	294	56.8	8	281	59.5
252.eon	8	178	67.9	8	158	76.5
253.perlbmk	8	230	72.8	8	199	84.0
254.gap	8	286	35.7	8	282	36.3
255.vortex	8	128	138	8	120	146
256.bzip2	8	235	59.4	8	214	65.1
300.twolf	8	346	80.4	8	339	82.2

Hardware

CPU:	PA-8800
CPU MHz:	1000
FPU:	Integrated
CPU(s) enabled:	8 cores, 4 chips, 2 cores/chip
CPU(s) orderable:	4,8,12,16 (order by # cores)
Parallel:	no
Primary Cache:	0.75MBI + 0.75MBD (on chip) per core
Secondary Cache:	32MB (off chip) shared by 2 cores
L3 Cache:	N/A
Other Cache:	N/A
Memory:	32GB (32 * 1024MB DIMMs)
Disk Subsystem:	1x36GB 10K rpm SCSI
Other Hardware:	N/A

Software

Operating System:	HPUX11i-TCOE B.11.11.0312
Compiler:	HP aC++ Compiler A.03.52 HP C/ANSIC B.11.11.08
File System:	OnLineJFS
System State:	Multi-user

Notes/Tuning Information

```
Portability flags:
  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 +Oall +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

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

Other notes:

  The system under test had the HP-UX 11i v1 December 2003
  Technical Computing Operating Environment (version 11.11.0312)
  and DART63 (December 2003) compilers installed, with the
  following patches applied:

  GOLDAPPS11i Gold Applications Patches for HP-UX 11i v1, December 2003
  GOLDBASE11i Gold Base Patches for HP-UX 11i v1, December 2003
  HWEnable11i Hardware Enablement Patches for HP-UX 11i v1, December 2003
  HWETEST1111 Hardware Enablement Patches for PA-8800 (prerelease)
  PHSS_29483  aC++ compiler cumulative patch (A.03.52)
  PHSS_30002  Fortran90 cumulative patch (B.11.01.74)

  System was configured with all memory interleaved

  System configured as a single partition with 2 cells and
    2 PA-8800 modules (each with 2 processors) per cell
    (unused processors deconfigured with firmware command
     "cpuconfig <cell> <cpu> off" prior to booting)

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