CINT2000 Result

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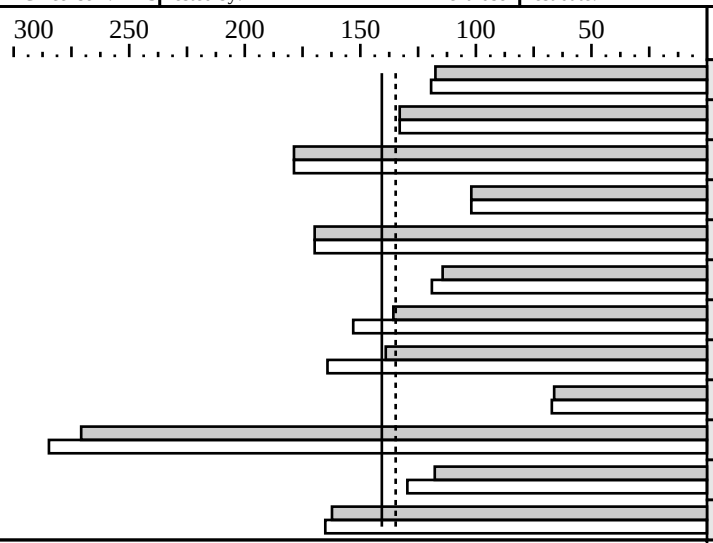
Hewlett-Packard Company

HP 9000 rp8420-32 (1000MHz PA-8800, 4 cells)

SPECint_rate2000 = 141

SPECint_rate_base2000 = 135

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	16	221	118	16	218	119
175.vpr	16	195	133	16	195	133
176.gcc	16	114	179	16	114	179
181.mcf	16	328	102	16	328	102
186.crafty	16	109	170	16	109	170
197.parser	16	292	114	16	281	119
252.eon	16	178	136	16	158	153
253.perlbmk	16	240	139	16	203	164
254.gap	16	309	66.1	16	304	67.1
255.vortex	16	130	271	16	124	285
256.bzip2	16	236	118	16	215	130
300.twolf	16	343	162	16	337	165

Hardware

CPU:	PA-8800
CPU MHz:	1000
FPU:	Integrated
CPU(s) enabled:	16 cores, 8 chips, 2 cores/chip
CPU(s) orderable:	4,8,12,16,20,24,28,32 (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 (64 * 512MB DIMMs)
Disk Subsystem:	10x36GB 10K rpm SCSI (striped)
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 4 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"
```