CINT2000 Result

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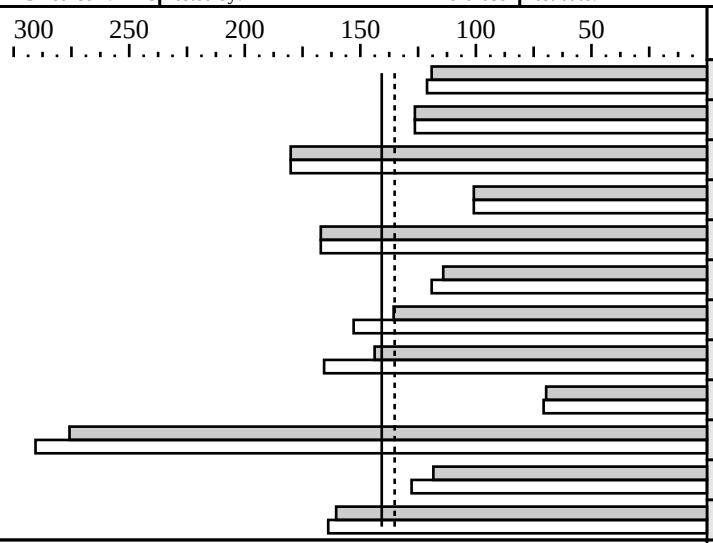
Hewlett-Packard Company

HP 9000 rp7420-16 (1000MHz PA-8800, 2 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	218	119	16	214	121
175.vpr	16	206	126	16	206	126
176.gcc	16	113	180	16	113	180
181.mcf	16	331	101	16	331	101
186.crafty	16	111	167	16	111	167
197.parser	16	293	114	16	280	119
252.eon	16	178	136	16	158	153
253.perlbmk	16	232	144	16	202	166
254.gap	16	293	69.6	16	289	70.7
255.vortex	16	128	276	16	121	291
256.bzip2	16	235	118	16	218	128
300.twolf	16	347	160	16	340	164

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 (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

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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
    4 PA-8800 modules (each with 2 processors) per cell

  Filesystem used for spec runs mounted "tmplog"
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