CINT2000 Result

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

SPECint_rate2000 = 70.8
SPECint_rate_base2000 = 67.8

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
File System: OnLineJFS
System State: Multi-user

Notes/Tuning Information

Portability flags:
176.gcc: -DHOST_WORDS_BIG_ENDIAN
186.crafty: -DHPI
252.eon: -DPMAX_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_MALLOC_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
maxdsize=3221225472
maxssize=401604608
maxdsize_64bit=4396972761584
maxssize_64bit=1073741824
vpspagesize=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"