CINT2000 Result
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Hewlett-Packard Company hp AlphaServer ES45 68/1250	SPECint_rate2000 =	NC
	SPECint_rate_base2000 =	NC

SPEC has determined that this result was not in compliance with the SPEC CPU2000 run and reporting rules. Specifically, the submitter has reported that the 3 month availability requirement in the SPEC CPU2000 run rules will not be met due to a change in availablility date for the operating system.

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	4	NC	NC	4	NC	NC
175.vpr	4	NC	NC	4	NC	NC
176.gcc	4	NC	NC	4	NC	NC
181.mcf	4	NC	NC	4	NC	NC
186.crafty	4	NC	NC	4	NC	NC
197.parser	4	NC	NC	4	NC	NC
252.eon	4	NC	NC	4	NC	NC
253.perlbmk	4	NC	NC	4	NC	NC
254.gap	4	NC	NC	4	NC	NC
255.vortex	4	NC	NC	4	NC	NC
256.bzip2	4	NC	NC	4	NC	NC
300.twolf	4	NC	NC	4	NC	NC

Hardware
CPU:	Alpha 21264C
CPU MHz:	1250
FPU:	Integrated
CPU(s) enabled:	4 cores, 4 chips, 1 core/chip
CPU(s) orderable:	1 to 4
Parallel:	No
Primary Cache:	64KB(I)+64KB(D) on chip
Secondary Cache:	16MB off chip per CPU
L3 Cache:	None
Other Cache:	None
Memory:	16GB
Disk Subsystem:	9 GB SCSI
Other Hardware:	None

Software
Operating System:	Tru64 UNIX T5.1B
Compiler:	Compaq C V6.5-011-48C5K
	Spike V5.2 (506 48C5K)
	Compaq C++ V6.5-028
File System:	ufs
System State:	Multi-user

Notes/Tuning Information
```
   Baseline C : cc  -arch ev6 -fast +CFB ONESTEP
          C++: cxx -arch ev6 -O2       ONESTEP

   Peak:
     All but 252.eon: cc -g3 -arch ev6 ONESTEP
        164.gzip: -fast -O4 -non_shared +CFB
         175.vpr: -fast -O4 -assume restricted_pointers +CFB
         176.gcc: -fast -O4 -xtaso_short -all -ldensemalloc -none
                  +CFB +IFB
```

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SPEC license #: 2 Tested by: HP NH Test date: Jul-2002 Hardware Avail: Aug-2002 Software Avail: Nov-2002

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Notes/Tuning Information (Continued)

```
    181.mcf: -fast -xtaso_short +CFB +IFB +PFB
 186.crafty: same as base
 197.parser: -fast -O4 -xtaso_short -non_shared +CFB
    252.eon: cxx -arch ev6 -O2 -all -ldensemalloc -none
 253.perlbmk: -fast -non_shared +CFB +IFB
    254.gap: -fast -O4 -non_shared +CFB +IFB +PFB
 255.vortex: -fast -non_shared +CFB +IFB
  256.bzip2: -fast -O4 -non_shared +CFB
  300.twolf: -fast -O4
             -ldensemalloc -non_shared +CFB +IFB
```

```
Most benchmarks are built using one or more types of
profile-driven feedback.  The types used are designated
by abbreviations in the notes:

+CFB: Code generation is optimized by the compiler, using
      feedback from a training run.  These commands are
      done before the first compile (in phase "fdo_pre0"):

           mkdir /tmp/pp
           rm -f /tmp/pp/${baseexe}*

      and these flags are added to the first and second compiles:

           PASS1_CFLAGS = -prof_gen_noopt -prof_dir /tmp/pp
           PASS2_CFLAGS = -prof_use       -prof_dir /tmp/pp

      (Peak builds use /tmp/pp above; base builds use /tmp/pb.)

+IFB: Icache usage is improved by the post-link-time optimizer
      Spike, using feedback from a training run.  These commands
      are used (in phase "fdo_postN"):

           mv ${baseexe} oldexe
           spike oldexe -feedback oldexe -o ${baseexe}

+PFB: Prefetches are improved by the post-link-time optimizer
      Spike, using feedback from a training run.  These
      commands are used (in phase "fdo_post_makeN"):

           rm -f *Counts*
           mv ${baseexe} oldexe
           pixie -stats dstride oldexe 1>pixie.out 2>pixie.err
           mv oldexe.pixie ${baseexe}
```

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Notes/Tuning Information (Continued)

```
    A training run is carried out (in phase "fdo_runN"), and
    then this command (in phase "fdo_postN"):

        spike oldexe -fb oldexe -stride_prefetch -o ${baseexe}

When Spike is used for both Icache and Prefetch improvements,
only one spike command is actually issued, with the Icache
options followed by the Prefetch options.

vm:
        vm_bigpg_enabled = 1
        vm_bigpg_thresh=16
        vm_swap_eager = 0

proc:
        max_per_proc_address_space = 0x40000000000
        max_per_proc_data_size = 0x40000000000
        max_per_proc_stack_size = 0x40000000000
        max_proc_per_user = 2048
        max_threads_per_user = 0
        maxusers = 16384
        per_proc_address_space = 0x40000000000
        per_proc_data_size = 0x40000000000
        per_proc_stack_size = 0x40000000000


 Portability: gcc: -Dalloca=__builtin_alloca; crafty: -DALPHA
 perlbmk: -DSPEC_CPU2000_DUNIX; vortex: -DSPEC_CPU2000_LP64
 gap: -DSYS_HAS_CALLOC_PROTO -DSYS_IS_BSD -DSYS_HAS_IOCTL_PROTO
     -DSPEC_CPU2000_LP64

Submitted_by: "Craig, Steve" <Steve.Craig@hp.com>
Submitted: Thu Aug  1 16:06:41 2002
Submission: cpu2000-20020801-01516.sub
```