CINT2000 Result

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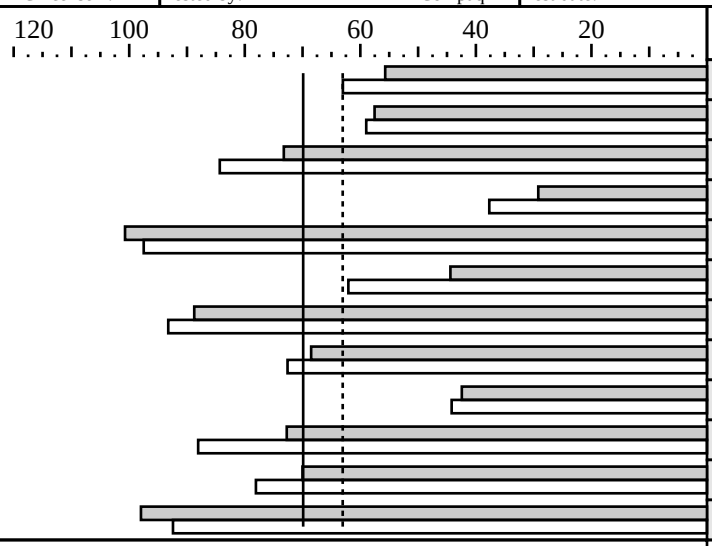
Compaq Computer Corporation
AlphaServer GS160 Model 6/731

SPECint_rate2000 = 69.9

SPECint_rate_base2000 = 63.1

SPEC license #: 2 | Tested by: Compaq NH | Test date: Apr-2000 | Hardware Avail: Jun-2000 | Software Avail: Jul-2000



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	16	467	55.7	16	412	63.0
175.vpr	16	452	57.5	16	441	59.0
176.gcc	16	279	73.2	16	242	84.3
181.mcf	16	1144	29.2	16	887	37.7
186.crafty	16	184	101	16	190	97.5
197.parser	16	752	44.4	16	538	62.1
252.eon	16	272	88.7	16	259	93.2
253.perlbmk	16	488	68.5	16	460	72.6
254.gap	16	481	42.4	16	462	44.2
255.vortex	16	485	72.7	16	400	88.1
256.bzip2	16	398	70.0	16	357	78.1
300.twolf	16	568	98.0	16	602	92.4

Hardware

CPU:	Alpha 21264A
CPU MHz:	731
FPU:	Integrated
CPU(s) enabled:	16 cores, 16 chips, 1 core/chip
CPU(s) orderable:	Up to 16
Parallel:	No
Primary Cache:	64KB(I)+64KB(D) on chip
Secondary Cache:	4MB off chip per CPU
L3 Cache:	None
Other Cache:	None
Memory:	32GB (4x8GB)
Disk Subsystem:	mfs (Memory File System)
Other Hardware:	Ethernet

Software

Operating System:	Tru64 Unix V5.1 (Release for GS160,GS320)
Compiler:	Compaq C T6.3-120-44A2I DIGITAL C++ V6.1-029-408B6
File System:	mfs
System State:	Multi-user

Notes/Tuning Information

```
Baseline C  : cc  -arch ev6 -fast GEMFB -non_shared
         C++: cxx -arch ev6 -O2 ONESTEP

GEMFB: fdo_pre0     = mkdir /tmp/pb; rm -f /tmp/pb/${baseexe}*
       PASS1_CFLAGS = -prof_gen_noopt    -prof_dir /tmp/pb
       PASS2_CFLAGS = -prof_use_feedback -prof_dir /tmp/pb
       (base uses directory /tmp/pb; peak uses /tmp/pp)

Peak: cc [except eon: cxx] -v -arch ev6 ONESTEP plus:
     164.gzip: -g3 -fast -O4 +GEMFB
      175.vpr: -g3 -fast -O4 +GEMFB
      176.gcc: -g3 -fast -O4 -xtaso_short +GEMFB
      181.mcf: -g3 -fast -xtaso_short +GEMFB
   186.crafty: -g3 -fast -O4 -inline speed
   197.parser: -g3 -fast -O4 -xtaso_short +GEMFB
      252.eon: -O2
  253.perlbmk: -g3 -fast +GEMFB -non_shared
      254.gap: -g3 -fast -O4 +GEMFB
   255.vortex: -g3 -fast +GEMFB
    256.bzip2: -g3 -fast -O4 +GEMFB
```

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Notes/Tuning Information (Continued)

```
      300.twolf: -g3 -fast -O4 +GEMFB

 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

 Compaq C T6.3 is posted at http://www.unix.digital.com/dtk/
 It has been available as an ADK (Advanced Developers' Kit)
 since February, 2000; the final version will be posted
 in July, 2000.
 The SPEC CPU2000 binaries were compiled under Unix V4.0F.
 submit = runon <cpu #> $command
 sysconfigtab settings:
            max_proc_per_user = 4096
          max_threads_per_user = 4096
        per_proc_data_size     = 21474836480
    max_per_proc_data_size     = 21474836480
        per_proc_address_space = 21474836480
    max_per_proc_address_space = 21474836480
Tru64 Unix V5.1 will ship in Jul-2000 for use on the GS160, GS320 platforms;
the final version will ship Sep-2000.
```