CINT2000 Result

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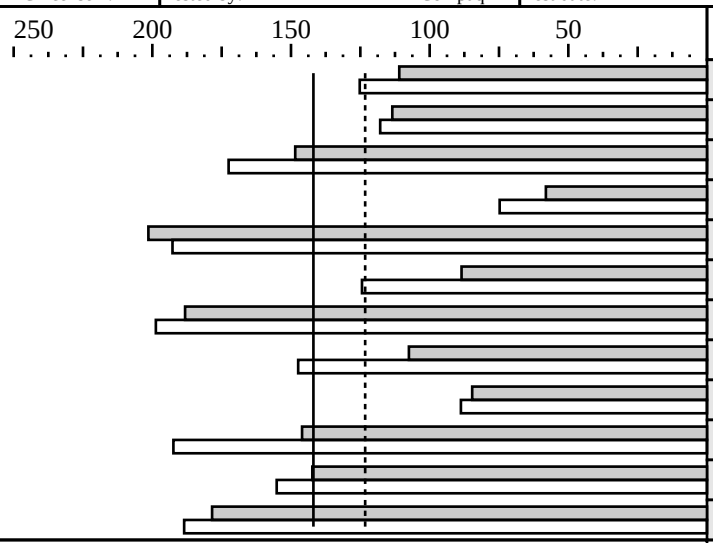
Compaq Computer Corporation
AlphaServer GS320 Model 6/731

SPECint_rate2000 = 142

SPECint_rate_base2000 = 123

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	32	468	111	32	415	125
175.vpr	32	458	113	32	441	118
176.gcc	32	275	148	32	237	172
181.mcf	32	1150	58.1	32	894	74.8
186.crafty	32	184	201	32	193	193
197.parser	32	755	88.5	32	537	124
252.eon	32	256	188	32	243	199
253.perlbmk	32	622	107	32	453	147
254.gap	32	482	84.7	32	460	88.7
255.vortex	32	483	146	32	367	192
256.bzip2	32	391	142	32	359	155
300.twolf	32	624	178	32	591	189

Hardware

CPU:	Alpha 21264A
CPU MHz:	731
FPU:	Integrated
CPU(s) enabled:	32 cores, 32 chips, 1 core/chip
CPU(s) orderable:	Up to 32
Parallel:	No
Primary Cache:	64KB(I)+64KB(D) on chip
Secondary Cache:	4MB off chip per CPU
L3 Cache:	None
Other Cache:	None
Memory:	64GB (8x8GB)
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.
```