



CINT2000 Result

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Compaq Computer Corporation
AlphaServer GS320 Model 6/731

SPECint2000 = 397
SPECint_base2000 = 352

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	100 200 300 400 500 600					
164.gzip	1400	460	305	405	346	[Bar chart showing ratio 346]					
175.vpr	1400	444	315	426	329	[Bar chart showing ratio 329]					
176.gcc	1100	267	412	216	509	[Bar chart showing ratio 509]					
181.mcf	1800	1092	165	844	213	[Bar chart showing ratio 213]					
186.crafty	1000	182	548	186	538	[Bar chart showing ratio 538]					
197.parser	1800	745	242	534	337	[Bar chart showing ratio 337]					
252.eon	1300	237	549	241	540	[Bar chart showing ratio 540]					
253.perlbnk	1800	476	378	432	416	[Bar chart showing ratio 416]					
254.gap	1100	453	243	429	256	[Bar chart showing ratio 256]					
255.vortex	1900	459	414	365	521	[Bar chart showing ratio 521]					
256.bzip2	1500	391	384	348	431	[Bar chart showing ratio 431]					
300.twolf	3000	565	531	563	533	[Bar chart showing ratio 533]					

Hardware

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

Software

Operating System: Tru64 Unix T5.1-9 (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.perlbnk: -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.
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.

Submitted_by: henning@perfom.zko.dec.com
Submitted: Thu May 11 19:23:54 2000
Submission: cpu2000-20000511-00103.sub