



CINT2000 Result

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Compaq Computer Corporation
AlphaServer ES40 Model 6/667

SPECint_rate2000 = 10.3
SPECint_rate_base2000 = 9.74

SPEC license #: 2 | Tested by: Compaq NH | Test date: Oct-2000 | Hardware Avail: Feb-2000 | Software Avail: Nov-2000

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	2	447	7.27	2	446	7.29
175.vpr	2	382	8.49	2	379	8.56
176.gcc	2	223	11.4	2	199	12.8
181.mcf	2	465	8.99	2	393	10.6
186.crafty	2	181	12.8	2	193	12.0
197.parser	2	621	6.73	2	507	8.24
252.eon	2	252	12.0	2	252	12.0
253.perlbnk	2	430	9.72	2	414	10.1
254.gap	2	352	7.24	2	353	7.22
255.vortex	2	358	12.3	2	307	14.4
256.bzip2	2	330	10.6	2	325	10.7
300.twolf	2	568	12.3	2	562	12.4

Hardware

CPU: Alpha 21264A
CPU MHz: 667
FPU: Integrated
CPU(s) enabled: 2 cores, 2 chips, 1 core/chip
CPU(s) orderable: 1 to 4
Parallel: No
Primary Cache: 64KB(I)+64KB(D) on chip
Secondary Cache: 8MB off chip
L3 Cache: None
Other Cache: None
Memory: 16GB
Disk Subsystem: 1x8GB BD0096349A
Other Hardware: Ethernet

Software

Operating System: Tru64 UNIX V5.1
Libc from UNIX V5.1 Patch Kit 1
Compiler: Compaq C V6.3-129-44A8I
Compaq C++ V6.2-033-4298H
File System: AdvFS
System State: Multi-user

Notes/Tuning Information

Baseline C : cc -arch ev6 -fast GEMFB ONESTEP
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)

SPIKEFB: fdo_post2 = spike -feedback \${baseexe} -o tmp \${baseexe};
mv tmp \${baseexe}

Peak: cc [except eon: cxx] -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 +SPIKEFB
254.gap: -g3 -fast -O4 +GEMFB



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Notes/Tuning Information (Continued)

```
255.vortex: -g3 -fast +GEMFB +SPIKEFB
256.bzip2: -g3 -fast -O4 +GEMFB
300.twolf: -g3 -fast -O4 +GEMFB
```

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

Information on UNIX V5.1 Patches can be found at
<http://ftpl.service.digital.com/public/unix/v5.1/>