



# CINT2000 Result

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## Compaq Computer Corporation AlphaServer ES40 Model 6/833

SPECint\_rate2000 = 6.31  
SPECint\_rate\_base2000 = 6.00

SPEC license #: 2 | Tested by: Compaq NH | Test date: Oct-2000 | Hardware Avail: Jan-2001 | Software Avail: Nov-2000

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	1	358	4.54	1	357	4.55
175.vpr	1	309	5.25	1	307	5.29
176.gcc	1	178	7.16	1	160	7.97
181.mcf	1	408	5.12	1	340	6.14
186.crafty	1	144	8.06	1	157	7.39
197.parser	1	500	4.18	1	409	5.10
252.eon	1	202	7.48	1	202	7.47
253.perlbnk	1	342	6.10	1	332	6.29
254.gap	1	301	4.23	1	303	4.22
255.vortex	1	282	7.80	1	249	8.85
256.bzip2	1	268	6.50	1	264	6.59
300.twolf	1	456	7.63	1	451	7.72

### Hardware

CPU: Alpha 21264B  
CPU MHz: 833  
FPU: Integrated  
CPU(s) enabled: 1 core, 1 chip, 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 + Patch Kit 1 libc  
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/>