



CINT2000 Result

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Fujitsu Siemens Computers
CELSIUS V830, Opteron (TM) 254, Linux 64-bit

SPECint_rate2000 = **45.1**
SPECint_rate_base2000 = **40.4**

SPEC license #: 22 | Tested by: Fujitsu Siemens Computers | Test date: Jan-2006 | Hardware Avail: Sep-2005 | Software Avail: Dec-2005

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	2	82.3	39.5	2	82.0	39.6
175.vpr	2	103	31.6	2	99.8	32.6
176.gcc	2	57.5	44.4	2	57.5	44.4
181.mcf	2	234	17.8	2	146	28.6
186.crafty	2	40.0	58.1	2	38.9	59.7
197.parser	2	139	30.0	2	110	37.9
252.eon	2	44.6	67.6	2	38.6	78.2
253.perlbnk	2	94.2	44.3	2	84.3	49.6
254.gap	2	59.4	42.9	2	58.7	43.5
255.vortex	2	67.3	65.5	2	63.0	70.0
256.bzip2	2	95.6	36.4	2	95.6	36.4
300.twolf	2	195	35.7	2	154	45.2

Hardware

CPU: AMD Opteron 254
 CPU MHz: 2800
 FPU: Integrated
 CPU(s) enabled: 2 cores, 2 chips, 1 core/chip
 CPU(s) orderable: 1,2
 Parallel: No
 Primary Cache: 64KBI + 64KBD (on chip)
 Secondary Cache: 1024KB(I+D) (on chip)
 L3 Cache: N/A
 Other Cache: N/A
 Memory: 8 x 512 MB PC3200 CL3-3-3 DDR SDRAM
 Disk Subsystem: SCSI U320
 Other Hardware: None

Software

Operating System: SLES 9 with SP3 (AMD64) - kernel 2.6.5-7.244-smp
 Compiler: PathScale EKOPath(TM) Compiler Suite, Release 2.3 (for C and C++)
 File System: Linux/ReiserFS
 System State: Multi-User SuSE Run Level 3

Notes/Tuning Information

Portability flags:

```
186.crafty: -DLINUX_i386
252.eon: -DHAS_ERRLIST -DSPEC_CPU2000_LP64
253.perlbnk: -DSPEC_CPU2000_LINUX_I386 -DSPEC_CPU2000_NEED_BOOL
            -DSPEC_CPU2000_GLIBC22 -DSPEC_CPU2000_LP64
254.gap: -DSYS_IS_USG -DSYS_HAS_IOCTL_PROTO -DSYS_HAS_TIME_PROTO
          -DSYS_HAS_CALLOC_PROTO -DSPEC_CPU2000_LP64
255.vortex: -DSPEC_CPU2000_LP64
```

Feedback Optimization:

```
+FDO: PASS1=-fb_create fbdata PASS2=-fb_opt fbdata
```

Baseline Optimization Flags:

```
C programs: -Ofast +FDO
C++ programs: -Ofast +FDO
```

Peak Tuning Flags:

```
164.gzip: -O3 -ipa -WOPT:val=0 -OPT:unroll_size=0 +FDO
175.vpr: -O3 -ipa -m32 +FDO
176.gcc: -O3 -IPA:plimit=10000 -LNO:opt=0 -OPT:goto=off +FDO
```



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Notes/Tuning Information (Continued)

```
181.mcf:      -O3 -ipa -IPA:field_reorder=on -m32 +FDO
186.crafty:   -Ofast -CG:local_fwd_sched=on -LNO:opt=0 -WOPT:val=0 +FDO
197.parser:   -O3 -ipa -m32 -IPA:ctype=on +FDO
252.eon:      -Ofast -CG:gcm=off:p2align_freq=1:prefetch=off -IPA:plimit=4000
              -OPT:treeheight=on -TENV:X=4:frame_pointer=off -fno-exceptions
              -LNO:fu=10:full_unroll_outer=on -GRA:optimize_boundary=on +FDO
253.perlbnk:  -O2 -ipa -OPT:Ofast:transform_to_memlib=off
              -fno-math-errno -IPA:plimit=10000 +FDO
254.gap:      -Ofast -IPA:min_hotness=5 -OPT:alias=disjoint -CG:movnti=1 +FDO
255.vortex:   -Ofast -OPT:goto=off +FDO
256.bzip2:    basepeak = true
300.twolf:    -O2 -CG:gcm=off:p2align_freq=100000
              -OPT:Ofast:unroll_times_max=8:unroll_size=256:alias=disjoint
              -WOPT:mem_opnds=on -m32 +FDO
```

BIOS default settings with
Node memory interleave disabled, SRAT enabled
taskset has been used to bind processes to CPUs

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