CINT2000 Result

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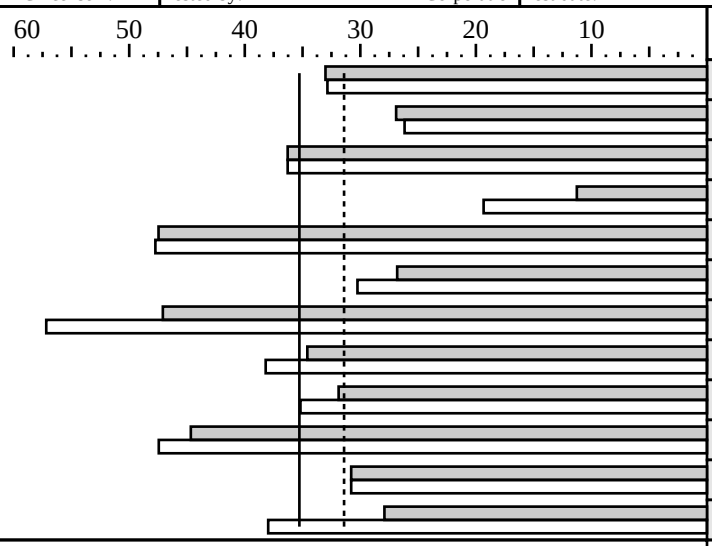
IBM
eServer 326, 2.4 GHz AMD Opteron (TM)

SPECint_rate2000 = 35.3

SPECint_rate_base2000 = 31.4

SPEC license #: 11 | Tested by: IBM Corporation | Test date: Oct-2004 | Hardware Avail: Oct-2004 | Software Avail: Oct-2004



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	2	98.4	33.0	2	98.9	32.8
175.vpr	2	121	26.9	2	124	26.2
176.gcc	2	70.3	36.3	2	70.3	36.3
181.mcf	2	371	11.3	2	216	19.3
186.crafty	2	48.9	47.5	2	48.6	47.7
197.parser	2	156	26.8	2	138	30.2
252.eon	2	64.0	47.1	2	52.7	57.2
253.perlbmk	2	121	34.6	2	109	38.2
254.gap	2	80.1	31.9	2	72.5	35.2
255.vortex	2	98.7	44.7	2	92.9	47.4
256.bzip2	2	113	30.8	2	113	30.8
300.twolf	2	249	27.9	2	183	38.0

Hardware

CPU:	AMD Opteron 250
CPU MHz:	2400
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:	8x512MB, DDR400
Disk Subsystem:	SCSI, 36GB 10K RPM
Other Hardware:	None

Software

Operating System:	SuSE Linux 8.0 SLES 64 bit Kernel 2.4.21-143-smp (SP3)
Compiler:	PathScale EKO Compiler Suite, Release 1.4
File System:	Linux/reiserfs
System State:	Multi-user, run level 3

Notes/Tuning Information

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Tested by IBM Corporation

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

 Baseline optimization flags:
   C programs:       -O3 -ipa +FDO
   C++ programs:     -Ofast +FDO

 Portability Flags:
   175.vpr:     -DSPEC_CPU2000
   181.mcf:     -DWANT_STDC_PROTO
   186.crafty:  -DLINUX_i386 -DSPEC_CPU2000
   252.eon:     -DHAS_ERRLIST -DFMAX_IS_DOUBLE -DSPEC_CPU2000_LP64
   253.perlbmk: -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_SIGNAL_PROTO  -DSYS_HAS_ANSI
                -DSYS_HAS_CALLOC_PROTO -DSPEC_CPU2000_LP64
   255.vortex:  -DSPEC_CPU2000_LP64
   300.twolf:   -DSPEC_CPU2000 -DHAVE_SIGNED_CHAR
```

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Notes/Tuning Information (Continued)

```
Peak Tuning:
  164.gzip:     -Ofast +FDO
  175.vpr:      -O2 -ipa -OPT:alias=disjoint
                -CG:p2align_freq=500000 -INLINE:aggressive=on
                -IPA:space=300:plimit=10000:callee_limit=5000:linear=on
                +FDO
  176.gcc:      basepeak = true
  181.mcf:      -O3 -ipa -IPA:field_reorder=on -m32
  186.crafty:   -Ofast +FDO
  197.parser:   -O3 -ipa -m32 -IPA:ctype=on +FDO
  252.eon:      -Ofast -CG:gcm=off:p2align_freq=1:prefetch=off
                -OPT:treeheight=on -TENV:X=4:frame_pointer=off
                -fno-exceptions -LNO:fu=10:full_unroll_outer=on
                +FDO -IPA:plimit=4000:pu_reorder=1
  253.perlbmk:  -O3 -ipa +FDO -IPA:plimit=10000
  254.gap:      -O3 -ipa -OPT:transform_to_memlib=on +FDO
  255.vortex:   -Ofast -IPA:space=70:plimit=3000
                -OPT:goto=off:unroll_analysis=off:unroll_size=0:unroll_times_max=8
                -LNO:opt=0 -TENV:X=4 +FDO
  256.bzip2:    basepeak=TRUE
  300.twolf:    -O2 -OPT:unroll_times=8:unroll_size=256:alias=disjoint:Ofast
                -CG:gcm=off:p2align_freq=100000 -WOPT:mem_opnds=on -m32 +FDO

BIOS Settings:
  ChipKill was DISABLED

Compiler Flags File:
  IBM-PathScale-20041025
```