



CINT2000 Result

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IBM
eServer 326, 2.4 GHz AMD Opteron (TM)

SPECint2000 = **1584**
SPECint_base2000 = **1416**

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	98.0	1429	98.0	1429	
175.vpr	1400	119	1180	115	1212	
176.gcc	1100	69.5	1583	69.5	1583	
181.mcf	1800	266	676	162	1111	
186.crafty	1000	48.4	2067	48.1	2077	
197.parser	1800	155	1159	138	1308	
252.eon	1300	63.9	2033	52.7	2466	
253.perlbnk	1800	119	1515	109	1651	
254.gap	1100	75.3	1460	72.0	1529	
255.vortex	1900	96.6	1967	90.4	2101	
256.bzip2	1500	113	1332	113	1332	
300.twolf	3000	236	1271	173	1735	

Hardware

CPU: AMD Opteron 250
 CPU MHz: 2400
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 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

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.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_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:c_type=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.perlbnk: -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