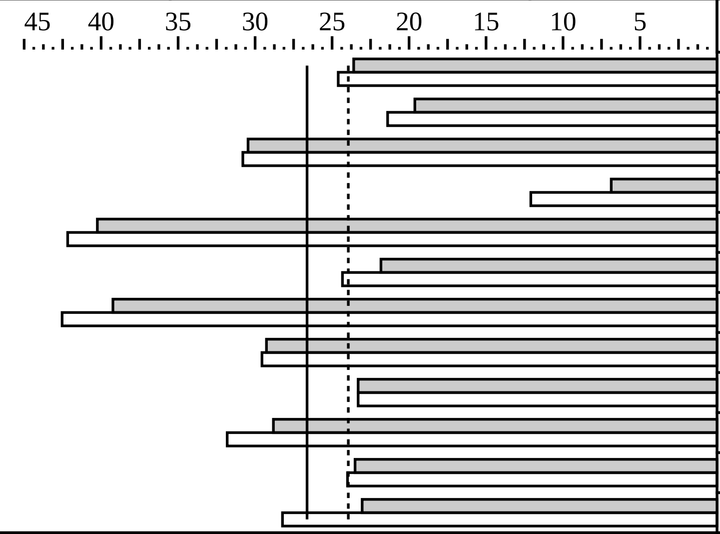
CINT2000 Result

IBM

eServer 325, 2.0 GHz Opteron, gcc, 64-bit SuSE SLES8 Linux

SPECint_rate2000 = 26.6
SPECint_rate_base2000 = 23.9

SPEC license #: 11	Tested by: IBM, Research Triangle Park, NC	Test date: Aug-2003	Hardware Avail: Oct-2003	Software Avail: Jul-2003



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	2	138	23.6	2	132	24.6
175.vpr	2	166	19.6	2	152	21.4
176.gcc	2	83.8	30.5	2	82.9	30.8
181.mcf	2	608	6.87	2	345	12.1
186.crafty	2	57.6	40.2	2	55.0	42.2
197.parser	2	191	21.8	2	172	24.3
252.eon	2	76.9	39.2	2	70.9	42.5
253.perlbmk	2	143	29.3	2	141	29.6
254.gap	2	109	23.3	2	109	23.3
255.vortex	2	153	28.8	2	139	31.8
256.bzip2	2	148	23.5	2	145	24.0
300.twolf	2	302	23.0	2	247	28.2

Hardware

CPU:	AMD Opteron 246
CPU MHz:	2000
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:	2x512MB + 2x512MB PC2700 Reg ECC DDR SDRAM CL2.5
Disk Subsystem:	1 x 36GB 10Krpm SCSI
Other Hardware:	None

Software

Operating System:	SuSE Linux 8.0 SLES 64 bit Kernel 2.4.19-249 (SP2)
Compiler:	SuSE gcc33 optional compiler (from SLES8 SP2)
File System:	Linux/reiserfs
System State:	Multi-user SuSE Run level 5

Notes/Tuning Information

```
Tested by IBM Corporation
  gcc is the SuSE optional gcc33 package C compiler (from SLES8 SP2)
  +FDO: PASS1=-fprofile-arcs PASS2=-fbranch-probabilities
  ONESTEP is used for all base runs
  Portability:      PORTABILITY=-DSPEC_CPU2000_LP64 is applied to all benchmarks
  (affecting only 176.gcc, 252.eon, 253.perlbmk, 254.gap, and 255.vortex).
    176.gcc:        Approved src.alt is used
    186.crafty:     CPORTABILITY=-DLINUX_i386
    252.eon:        CXXPORTABILITY=-DHAS_ERRLIST -DFMAX_IS_DOUBLE
                    Approved src.alt is used
    253.perlbmk:    CPORTABILITY=-DSPEC_CPU2000_LINUX_I386 -DSPEC_CPU2000_NEED_BOOL
                                 -DSPEC_CPU2000_GLIBC22
    254.gap:        CPORTABILITY=-DSYS_IS_USG -DSYS_HAS_IOCTL_PROTO
                                 -DSYS_HAS_TIME_PROTO -DSYS_HAS_SIGNAL_PROTO
                                 -DSYS_HAS_ANSI -DSYS_HAS_CALLOC_PROTO
  Baseline C:       gcc -O3 -funroll-all-loops +FDO
  Baseline C++:     g++ -O3 -funroll-all-loops +FDO
  Peak tuning:
    164.gzip:       -O3 -funroll-all-loops -finline-limit=900 -freduce-all-givs +FDO
    175.vpr:        -O3 -funroll-loops -finline-limit=1000 +FDO
```

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Notes/Tuning Information (Continued)

```
  176.gcc:        -O3 -funroll-all-loops -finline-limit=900 +FDO
  181.mcf:        -O3 -funroll-all-loops -m32 +FDO
                  ONESTEP=yes
  186.crafty:     -O3 -funroll-loops -fprefetch-loop-arrays
  197.parser:     -O3 -funroll-all-loops -m32 +FDO
                  ONESTEP=yes
  252.eon:        -O3 -funroll-all-loops -ffast-math -finline-limit=3000 +FDO
  253.perlbmk:    -O3 -funroll-all-loops -finline-limit=1800 +FDO
  254.gap:        basepeak=true
  255.vortex:     -O3 -funroll-all-loops -finline-limit=1000 +FDO
  256.bzip2:      -O3 -funroll-all-loops -freduce-all-givs -finline-limit=2700 +FDO
  300.twolf:      -O3 -funroll-all-loops -static -finline-limit=2000 -m32 +FDO
Set the following BIOS parameters:
  DRAM Interleave = AUTO
  Node Interleave = Disabled
  ACPI SRAT       = Enabled
```