CINT2000 Result

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IBM

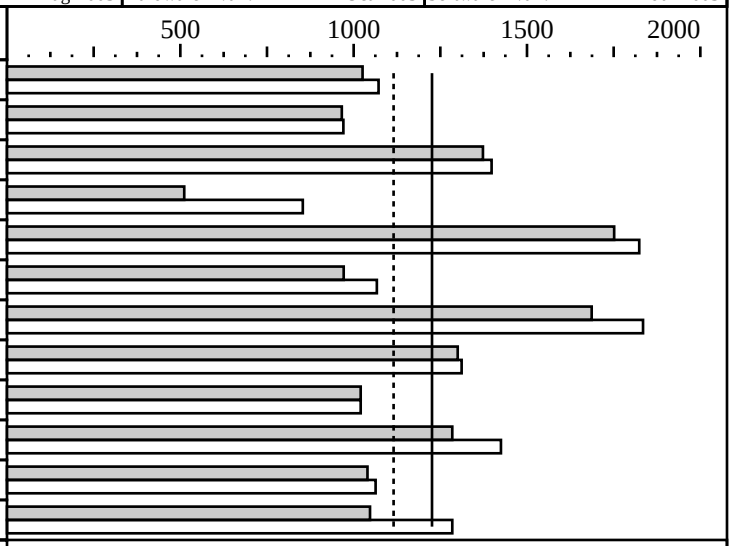
eServer 325, 2.0 GHz Opteron, gcc, 64-bit SuSE SLES8 Linux

SPECint2000 = 1226

SPECint_base2000 = 1115

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
164.gzip	1400	136	1026	131	1072
175.vpr	1400	145	966	144	970
176.gcc	1100	80.1	1373	78.7	1398
181.mcf	1800	352	511	211	853
186.crafty	1000	57.1	1751	54.8	1824
197.parser	1800	185	971	169	1067
252.eon	1300	77.1	1687	70.9	1835
253.perlbmk	1800	138	1300	137	1311
254.gap	1100	108	1020	108	1020
255.vortex	1900	148	1284	133	1425
256.bzip2	1500	144	1040	141	1063
300.twolf	3000	286	1047	234	1284



Hardware

CPU:	AMD Opteron 246
CPU MHz:	2000
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:	2 x 512MB 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

```
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  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 and peak 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 +FD0
  Baseline C++:     g++ -O3 -funroll-all-loops +FD0
  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       = Disabled
  Only 1 CPU installed in system
```