



CINT2000 Result

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IBM Corporation
IBM System p5 520 (1650 MHz, 2 CPU)

SPECint_rate2000 = 34.8
SPECint_rate_base2000 = 34.4

SPEC license #: 11 | Tested by: IBM | Test date: Dec-2005 | Hardware Avail: Feb-2006 | Software Avail: Feb-2006

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	4	278	23.3	4	276	23.5
175.vpr	4	221	29.4	4	219	29.6
176.gcc	4	139	36.7	4	136	37.4
181.mcf	4	171	48.9	4	197	42.4
186.crafty	4	172	26.9	4	145	32.1
197.parser	4	250	33.4	4	252	33.1
252.eon	4	149	40.5	4	149	40.6
253.perlbnk	4	315	26.5	4	297	28.2
254.gap	4	152	33.5	4	151	33.7
255.vortex	4	158	55.7	4	151	58.5
256.bzip2	4	189	36.8	4	183	38.0
300.twolf	4	418	33.3	4	436	31.9

Hardware

CPU: POWER5+
 CPU MHz: 1650
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip (SMT on)
 CPU(s) orderable: 1,2
 Parallel: No
 Primary Cache: 64KBI+32KBD (on chip)/core
 Secondary Cache: 1920KB unified, shared (on chip)/chip
 L3 Cache: 36MB unified (off-chip)/DCM, 1 DCM/SUT
 Other Cache: None
 Memory: 8x2GB
 Disk Subsystem: 2x73GB SCSI, 15K RPM
 Other Hardware: None

Software

Operating System: AIX 5L V5.3
 Compiler: XL C/C++ Enterprise Edition Version 8.0 for AIX
 File System: AIX/JFS2
 System State: Multi-user

Notes/Tuning Information

Portability Flags:

```
176.gcc: -ma -DHOST_WORDS_BIG_ENDIAN
186.crafty: -DAIX
253.perlbnk: -DSPEC_CPU2000_AIX
254.gap: -DSYS_IS_BSD -DSYS_STRING_H
          -DSYS_HAS_MALLOC_PROTO -DSYS_HAS_CALLOC_PROTO
300.twolf: -DHAVE_SIGNED_CHAR
```

Base Optimization Flags:

```
C: -qpdf1/pdf2
   -O5 -blpdata -D_ILS_MACROS
C++: -qpdf1/pdf2
      -O4 -qalign=natural
```

Peak Optimization Flags

```
164.gzip: -qpdf1/pdf2
          -O4 -qfdpr -blpdata
          fdpr -q -O3
175.vpr: -qpdf1/pdf2
         -O5 -qfdpr -blpdata
```



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Notes/Tuning Information (Continued)

```

176.gcc:      fdpr -q -O3
              -qpdf1/pdf2
              -O4 -qarch=pwr4 -qtune=pwr4 -qalign=natural -blpdata
181.mcf:      -qpdf1/pdf2
              -O4 -qalign=natural -blpdata
186.crafty:   -qpdf1/pdf2
              -O4 -qalign=natural -q64 -lhm -blpdata
197.parser:   -qpdf1/pdf2
              -O4 -qfdpr -D_ILS_MACROS -blpdata
              fdpr -q -O3
252.eon:      -qpdf1/pdf2
              -O4 -qalign=natural
253.perlbnk:  -qpdf1/pdf2
              -O4 -qarch=pwr4 -qtune=pwr4 -qalign=natural -blpdata -lhm
254.gap:      -qpdf1/pdf2
              -O4 -qarch=pwr4 -qtune=pwr4 -qalign=natural -blpdata
255.vortex:   -qpdf1/pdf2
              -O4 -qfdpr -lhm -blpdata
              fdpr -q -O3
256.bzip2:    -qpdf1/pdf2
              -O5 -qfdpr -blpdata
              fdpr -q -O3
300.twolf:    -O5 -qfdpr -blpdata
              fdpr -q -O3

```

The installed OS level is AIX 5L for POWER version 5.3 with the 5300-04 Recommended Technology Level.

SMT: Acronym for "Simultaneous Multi-Threading". A processor technology that allows the simultaneous execution of multiple thread contexts within a single processor core. (Enabled by default)

DCM: Acronym for "Dual-Chip Module" (one dual-core processor chip + one L3-cache chip)

SUT: Acronym for "System Under Test"

Extended C: IBM XL C for AIX invoked as cc
C++: IBM XL C for AIX invoked as xlc

ulimits set to unlimited.

Large page mode and memory affinity were set as follows:

```

vmo -r -o lpgg_regions=400 -o lpgg_size=16777216
chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
shutdown -rF
export MEMORY_AFFINITY=MCM

```

The following config-file entry was used to assign each benchmark process to a core:

```
submit = bindprocessor \$$ \$$SPECUSERNUM; $command
```

The "bindprocessor" AIX command binds a process to a CPU core.