



CINT2000 Result

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IBM Corporation
IBM BladeCenter JS21 (2700 MHz, 2 CPU)

SPECint_rate2000 = 38.5
SPECint_rate_base2000 = 36.6

SPEC license #: 11 | Tested by: IBM | Test date: Jan-2006 | Hardware Avail: Mar-2006 | Software Avail: Mar-2006

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	2	122	26.6	2	110	29.6
175.vpr	2	126	25.7	2	126	25.9
176.gcc	2	60.9	41.9	2	60.9	41.9
181.mcf	2	114	36.6	2	113	37.0
186.crafty	2	67.4	34.4	2	54.7	42.4
197.parser	2	116	35.9	2	115	36.2
252.eon	2	56.5	53.4	2	56.5	53.4
253.perlbnk	2	129	32.4	2	121	34.6
254.gap	2	68.4	37.3	2	67.9	37.6
255.vortex	2	75.7	58.3	2	68.5	64.3
256.bzip2	2	117	29.8	2	112	31.1
300.twolf	2	174	40.0	2	167	41.6

Hardware

CPU: IBM PowerPC 970MP
 CPU MHz: 2700
 FPU: Integrated
 CPU(s) enabled: 2 cores, 2 chips, 1 core/chip
 CPU(s) orderable: 2
 Parallel: No
 Primary Cache: 64KBI+32KBD (on chip)/core
 Secondary Cache: 1MB unified (on chip)/core
 L3 Cache: None
 Other Cache: None
 Memory: 4x2GB PC2-4200 533MHz ECC Chipkill DDR2
 Disk Subsystem: 2x 73GB 10,000 rpm 2.5" SFF Serial Attached SCSI
 Other Hardware: BladeCenter H

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
          -O5 -qalign=natural -qfdpr -Q -qmaxmem=-1 -q64 -blpdata -lhmu -qenablevmx
          fdpr -q -O3
175.vpr: -qpdf1/pdf2
          -O5 -qalign=natural -qfdpr -Q -qmaxmem=-1 -blpdata -lhmu
```



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Notes/Tuning Information (Continued)

```

fdpr -q -O3
176.gcc: basepeak=1
181.mcf: -qpdf1/pdf2
        -O5 -qalign=natural -qfdpr -Q -qmaxmem=-1 -blpdata
186.crafty: fdpr -q -O3
           -qpdf1/pdf2
           -O5 -qfdpr -q64 -lhmu
197.parser: fdpr -q -O3
           -qpdf1/pdf2
           -O4 -qfdpr -D_ILS_MACROS -blpdata
           fdpr -q -O3
252.eon: basepeak=1
253.perlbnk: -qpdf1/pdf2
            -O4 -qalign=natural -D_ILS_MACROS -blpdata -lhmu -qenablevmx
254.gap: -qpdf1/pdf2
         -O5 -D_ILS_MACROS -blpdata -lhmu -qenablevmx
255.vortex: -qpdf1/pdf2
            -O4 -qfdpr -blpdata -lhmu
            fdpr -q -O3
256.bzip2: -qpdf1/pdf2
           -O5 -qfdpr -blpdata
           fdpr -q -O3
300.twolf: -qpdf1/pdf2
           -O4 -qfdpr -qarch=pwr3 -qtune=pwr3 -blpdata
           fdpr -q -O3

```

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

```

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=200 -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.