



CINT2000 Result

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IBM Corporation
IBM BladeCenter JS21 (2700 MHz, 1 CPU)

SPECint2000 = 1706
SPECint_base2000 = 1623

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	122	1151	109	1281	
175.vpr	1400	122	1149	121	1158	
176.gcc	1100	59.5	1849	59.5	1849	
181.mcf	1800	101	1774	100.0	1800	
186.crafty	1000	66.9	1494	54.5	1836	
197.parser	1800	115	1564	114	1579	
252.eon	1300	56.6	2299	56.6	2299	
253.perlbmk	1800	128	1402	120	1496	
254.gap	1100	65.3	1686	64.8	1697	
255.vortex	1900	74.7	2544	67.7	2807	
256.bzip2	1500	110	1364	106	1422	
300.twolf	3000	172	1747	165	1819	

Hardware

CPU: IBM PowerPC 970MP
 CPU MHz: 2700
 FPU: Integrated
 CPU(s) enabled: 1 core, 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.perlbmk: -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 -lhm -qenablevmx
          fdpr -q -O3
175.vpr: -qpdf1/pdf2
          -O5 -qalign=natural -qfdpr -Q -qmaxmem=-1 -blpdata -lhm
```



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Notes/Tuning Information (Continued)

```

fdpr -q -O3
176.gcc: basepeak=1
181.mcf: -qpdf1/pdf2
        -O5 -qalign=natural -Q -blpdata
        fdpr -q -O3
186.crafty: -qpdf1/pdf2
           -O5 -qfdpr -q64 -lhmu
           fdpr -q -O3
197.parser: -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=100 -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.

One core was deconfigured at the open-firmware prompt, using the command

```
boot -s cpu=1
```