



CINT2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

IBM Corporation

IBM System p5 520 (1900 MHz, 2 CPU)

SPECint_rate2000 = 39.6

SPECint_rate_base2000 = 38.9

SPEC license #: 11 | Tested by: IBM | Test date: Sep-2005 | Hardware Avail: Oct-2005 | Software Avail: Oct-2005

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	4	245	26.5	4	244	26.7
175.vpr	4	196	33.1	4	196	33.1
176.gcc	4	119	42.8	4	120	42.6
181.mcf	4	150	55.6	4	149	56.1
186.crafty	4	150	30.9	4	150	30.9
197.parser	4	219	38.1	4	221	37.8
252.eon	4	138	43.7	4	133	45.4
253.perlbnk	4	277	30.1	4	257	32.5
254.gap	4	136	37.6	4	136	37.6
255.vortex	4	140	62.9	4	131	67.3
256.bzip2	4	165	42.1	4	159	43.7
300.twolf	4	372	37.4	4	372	37.4

Hardware

CPU: POWER5+
CPU MHz: 1900
FPU: Integrated
CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip (SMT on)
CPU(s) orderable: 2
Parallel: None
Primary Cache: 64KBI+32KBD (on chip)/core
Secondary Cache: 1920KB unified (on chip)/chip
L3 Cache: 36MB unified (off-chip)/DCM, 1 DCM/SUT
Other Cache: None
Memory: 8x2GB
Disk Subsystem: 1x73GB 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
252.eon: srcalt=fmax_errno
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
      -O5 -lhm -qalign=natural
```

Peak Optimization Flags

```
164.gzip: -qpdf1/pdf2
          -O5 -qalign=natural -lhm -blpdata -qf DPR -Q
          fdpr -q -O3
175.vpr: -qpdf1/pdf2
```



CINT2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

IBM Corporation
IBM System p5 520 (1900 MHz, 2 CPU)

SPECint_rate2000 = 39.6
SPECint_rate_base2000 = 38.9

SPEC license #: 11 | Tested by: IBM | Test date: Sep-2005 | Hardware Avail: Oct-2005 | Software Avail: Oct-2005

Notes/Tuning Information (Continued)

```

176.gcc:      -O5 -lhma -blpdata -D_ILS_MACROS
              -qpdf1/pdf2
181.mcf:      -O5 -blpdata -qalign=natural -D_ILS_MACROS
              -O5 -blpdata -qfdpr
              fdpr -q -O3
186.crafty:   basepeak=1
197.parser:   -qpdf1/pdf2
              -O5 -blpdata -D_ILS_MACROS
252.eon:      -qpdf1/pdf2
              -O4 -qarch=pwr4 -qtune=pwr4 -qalign=natural -D_ILS_MACROS
253.perlbnk:  -qpdf1/pdf2
              -O5 -lhma -qalign=natural -blpdata -D_ILS_MACROS
254.gap:      basepeak=1
255.vortex:   -qpdf1/pdf2
              -O5 -lhma -blpdata
256.bzip2:    -O5 -blpdata -qfdpr -D_ILS_MACROS
              fdpr -q -O3
300.twolf:    basepeak=1

```

Approved alternate-source file 252.eon.fmax_errno.src.alt.tar.gz was used with 252.eon for POSIX-compatibility.

The installed OS level is AIX 5L for POWER version 5.3 with the 5300-03 Recommended Maintenance package.

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
ANSI C89:     IBM XL C for AIX invoked as xlc
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
reboot -q
export MEMORY_AFFINITY=MCM

```

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

```

submit = let "MYCPU=2*\$SPECUSERNUM"; if ((("\$MYCPU > 3")) then let "MYCPU=3"; fi; bindprocessor \$\$ \$MYCPU; $command

```

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

Use flags-description file IBM-20050919-AIX.txt.