



CINT2000 Result

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IBM Corporation

IBM System p5 550Q (1500 MHz, 8 CPU)

SPECint_rate2000 = 124

SPECint_rate_base2000 = 122

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	16	308	84.4	16	308	84.4
175.vpr	16	248	105	16	249	104
176.gcc	16	155	132	16	156	131
181.mcf	16	191	175	16	188	178
186.crafty	16	194	95.5	16	194	95.5
197.parser	16	278	120	16	279	120
252.eon	16	177	137	16	170	142
253.perlbnk	16	349	95.6	16	328	102
254.gap	16	171	119	16	174	118
255.vortex	16	189	186	16	166	212
256.bzip2	16	207	134	16	201	138
300.twolf	16	481	116	16	481	116

Hardware

CPU: POWER5+
CPU MHz: 1500
FPU: Integrated
CPU(s) enabled: 8 cores, 4 chips, 2 cores/chip (SMT on)
CPU(s) orderable: 4,8
Parallel: None
Primary Cache: 64KBI+32KBD (on chip)/core
Secondary Cache: 1920KB unified (on chip)/chip
L3 Cache: 2x36MB unified (off-chip)/QCM, 2 QCM/SUT
Other Cache: None
Memory: 16x4GB
Disk Subsystem: 1x36GB 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: basepeak=1
175.vpr: -qpdf1/pdf2
         -O5 -lhm -blpdata -D_ILS_MACROS
176.gcc: -qpdf1/pdf2
```



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Notes/Tuning Information (Continued)

```

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 -lhm -qalign=natural -blpdata -D_ILS_MACROS
254.gap:      -qpdf1/pdf2
              -O5 -qalign=natural -lhm -blpdata -qfdpr -Q
255.vortex:   -qpdf1/pdf2
              -O5 -lhm -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)

QCM: Acronym for "Quad-Core Module" (two dual-core processor chips + two L3-cache chips)

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=1600 -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 > 15")) then let "MYCPU=15"; fi; bindprocessor \\$ \\$ \\$MYCPU; \$command

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

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