



# CINT2000 Result

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IBM Corporation  
IBM eServer i5 520 (1650 MHz, 2 CPU)

SPECint\_rate2000 = 32.9  
SPECint\_rate\_base2000 = 30.3

SPEC license #: 11 | Tested by: IBM | Test date: Jun-2004 | Hardware Avail: Aug-2004 | Software Avail: Aug-2004

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	4	273	23.8	4	272	23.9
175.vpr	4	243	26.7	4	243	26.7
176.gcc	4	143	35.7	4	143	35.7
181.mcf	4	206	40.5	4	202	41.4
186.crafty	4	191	24.2	4	140	33.2
197.parser	4	445	18.8	4	286	29.2
252.eon	4	157	38.4	4	157	38.4
253.perlbnk	4	341	24.5	4	311	26.9
254.gap	4	185	27.6	4	173	29.4
255.vortex	4	175	50.5	4	165	53.3
256.bzip2	4	201	34.7	4	197	35.2
300.twolf	4	441	31.6	4	448	31.0

### Hardware

CPU: POWER5  
 CPU MHz: 1650  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip (SMT on)  
 CPU(s) orderable: 2  
 Parallel: No  
 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: 8x4 GB  
 Disk Subsystem: 1x36GB SCSI, 15K RPM  
 Other Hardware:

### Software

Operating System: AIX 5L V5.3  
 Compiler: XL C/C++ Enterprise Edition Version 7.0 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
        -I. -DNDEBUG
253.perlbnk: -DSPEC_CPU2000_AIX
254.gap: -DSYS_IS_BSD -DSYS_STRING_H -DSYS_HAS_TIME_PROTO
        -DSYS_HAS_MALLOC_PROTO -DSYS_HAS_CALLOC_PROTO
300.twolf: -DHAVE_SIGNED_CHAR
```

### Base Optimization Flags:

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

### Peak Optimization Flags

```
164.gzip: -qpdf1/pdf2
```



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## Notes/Tuning Information (Continued)

```

-04 -qarch=pwr4 -qtune=pwr4 -qalign=natural -D_ILS_MACROS
"CC=xlc"
175.vpr: basepeak = 1
176.gcc: basepeak = 1
181.mcf: fdpr -quiet -R3
-05 -blpdata -qfdpr
186.crafty: -qpdf1/pdf2
fdpr -quiet -R3
-04 -q64 -qfdpr -qarch=pwr3 -qtune=pwr3 -D_ILS_MACROS
197.parser: -qpdf1/pdf2
fdpr -quiet -R3
-04 -blpdata -D_ILS_MACROS -qfdpr -qarch=pwr3 -qtune=pwr3
252.eon: basepeak = 1
253.perlbnk: -qpdf1/pdf2
-05 -D_ILS_MACROS -lhmu -qalign=natural
254.gap: -qpdf1/pdf2
-04 -qarch=pwr4 -qtune=pwr4 -D_ILS_MACROS -lhmu -qalign=natural
255.vortex: -qpdf1/pdf2
-05 -lhmu -qalign=natural -D_ILS_MACROS -blpdata
256.bzip2: -qpdf1/pdf2
-05 -blpdata -qarch=pwr3 -qtune=pwr3 -qalign=natural
300.twolf: -05 -lhmu -blpdata -qalign=natural
"CC = xlc"

```

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

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"

ulimits set to unlimited.

Large page mode and memory affinity were set as follows:

```

vmo -r -o lpgg_regions=400 -o lpgg_size=16777216 -o memory_affinity=1
chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
reboot -q
export MEMORY_AFFINITY=MCM

```

This result was measured on model IBM eServer p5 520.

Model i5 520 and model p5 520 are electronically equivalent.