



# CINT2000 Result

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IBM Corporation  
IBM eServer p5 570 (1900 MHz, 4 CPU)

SPECint\_rate2000 = 76.3  
SPECint\_rate\_base2000 = 74.4

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	8	238	54.6	8	240	54.1
175.vpr	8	209	62.2	8	209	62.2
176.gcc	8	123	82.7	8	123	82.7
181.mcf	8	175	95.3	8	170	98.0
186.crafty	8	154	60.4	8	125	74.0
197.parser	8	234	71.3	8	232	71.9
252.eon	8	136	88.9	8	136	88.9
253.perlbnk	8	292	57.2	8	274	61.0
254.gap	8	136	75.0	8	136	75.0
255.vortex	8	158	111	8	153	115
256.bzip2	8	172	80.7	8	172	80.7
300.twolf	8	385	72.4	8	390	71.3

**Hardware**

CPU: POWER5  
 CPU MHz: 1900  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip (SMT on)  
 CPU(s) orderable: 2,4,8,12,16  
 Parallel: No  
 Primary Cache: 64KBI+32KBD (on chip)/core  
 Secondary Cache: 1920KB unified (on chip)/chip  
 L3 Cache: 36MB unified (off chip)/DCM, 2 DCM/SUT  
 Other Cache: none  
 Memory: 16x1 GB DDR2  
 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 -D_ILS_MACROS
C++: -qpdf1/pdf2
      -O5 -lhm -qalign=natural
```

### Peak Optimization Flags

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



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## Notes/Tuning Information (Continued)

```
-O4 -qarch=pwr4 -qtune=pwr4 -qalign=natural -D_ILS_MACROS
"CC=xlc"
175.vpr:      basepeak = 1
176.gcc:      basepeak = 1
181.mcf:      fdpr -quiet -R3
              -O5 -blpdata -qfdpr -D_ILS_MACROS
186.crafty:   -qpdf1/pdf2
              fdpr -quiet -R3
              -O4 -q64 -qfdpr -qarch=pwr3 -qtune=pwr3 -D_ILS_MACROS
197.parser:   -qpdf1/pdf2
              fdpr -quiet -R3
              -O5 -blpdata -D_ILS_MACROS -qfdpr
252.eon:      basepeak = 1
253.perlbnk:  -qpdf1/pdf2
              -O5 -D_ILS_MACROS -lhmu -qalign=natural
254.gap:      basepeak = 1
255.vortex:   -qpdf1/pdf2
              -O5 -lhmu -qalign=natural -D_ILS_MACROS -blpdata
256.bzip2:    basepeak = 1
300.twolf:    -O5 -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
```