



# CINT2000 Result

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IBM Corporation  
IBM eServer p5 570 (1900 MHz, 1 CPU)

SPECint2000 = 1452  
SPECint\_base2000 = 1398

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	166	843	163	861	
175.vpr	1400	114	1230	114	1230	
176.gcc	1100	71.5	1538	71.5	1538	
181.mcf	1800	69.9	2574	66.7	2697	
186.crafty	1000	85.6	1169	68.9	1452	
197.parser	1800	145	1244	144	1254	
252.eon	1300	81.5	1596	81.5	1596	
253.perlbnk	1800	183	986	168	1074	
254.gap	1100	84.7	1298	84.7	1298	
255.vortex	1900	86.7	2191	81.6	2329	
256.bzip2	1500	113	1330	113	1330	
300.twolf	3000	191	1567	188	1598	

### Hardware

CPU: POWER5  
 CPU MHz: 1900  
 FPU: Integrated  
 CPU(s) enabled: 1 core, 1 chip, 2 cores/chip (SMT off)  
 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)

```

-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 -D_ILS_MACROS
186.crafty: -qpdf1/pdf2
fdpr -quiet -R3
-04 -q64 -qfdpr -qarch=pwr3 -qtune=pwr3 -D_ILS_MACROS
197.parser: -qpdf1/pdf2
fdpr -quiet -R3
-05 -blpdata -D_ILS_MACROS -qfdpr
252.eon: basepeak = 1
253.perlbnk: -qpdf1/pdf2
-05 -D_ILS_MACROS -lhmu -qalign=natural
254.gap: basepeak = 1
255.vortex: -qpdf1/pdf2
-05 -lhmu -qalign=natural -D_ILS_MACROS -blpdata
256.bzip2: basepeak = 1
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

```

Three cores were deconfigured and SMT disabled at the open-firmware prompt, using the command

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