



# CINT2000 Result

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IBM Corporation  
RS/6000 44P-170 (450 MHz)

SPECint2000 = 316  
SPECint\_base2000 = 286

SPEC license #: 11 | Tested by: IBM, Austin, TX | Test date: Aug-2000 | Hardware Avail: Oct-2000 | Software Avail: Oct-2000

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	100 200 300 400 500 600					
164.gzip	1400	608	230	524	267	[Bar chart showing ratio 267]					
175.vpr	1400	492	285	434	323	[Bar chart showing ratio 323]					
176.gcc	1100	314	350	306	359	[Bar chart showing ratio 359]					
181.mcf	1800	362	498	357	504	[Bar chart showing ratio 504]					
186.crafty	1000	329	304	348	287	[Bar chart showing ratio 287]					
197.parser	1800	1054	171	816	221	[Bar chart showing ratio 221]					
252.eon	1300	464	280	463	281	[Bar chart showing ratio 281]					
253.perlbmk	1800	838	215	756	238	[Bar chart showing ratio 238]					
254.gap	1100	429	256	401	275	[Bar chart showing ratio 275]					
255.vortex	1900	608	312	556	342	[Bar chart showing ratio 342]					
256.bzip2	1500	582	258	448	335	[Bar chart showing ratio 335]					
300.twolf	3000	724	414	620	484	[Bar chart showing ratio 484]					

### Hardware

CPU: IBM Power3-II  
 CPU MHz: 450  
 FPU: Integrated  
 CPU(s) enabled: 1 core, 1 chip, 1 core/chip  
 CPU(s) orderable: 1  
 Parallel: No  
 Primary Cache: 32KBI+64KBD (on chip)  
 Secondary Cache: 8MB (I+D) (off chip)  
 L3 Cache: None  
 Other Cache: None  
 Memory: 512MB  
 Disk Subsystem: 1X9.1GB IBM Ultra-2 SCSI, 7200 RPM  
 Other Hardware: None

### Software

Operating System: AIX 4.3.3 + beta of APAR IY12051  
 Compiler: C: IBM VAC 5.0.1 invoked as 'cc' except where noted as 'xlc'  
 C++: IBM C++ 3.6.6.0 invoked as 'xlc'  
 File System: AIX/JFS  
 System State: Multi-user

## Notes/Tuning Information

### Portability Flags:

```
gcc: -ma -qlanglvl=ansi -DHOST_WORDS_BIG_ENDIAN
crafty: -DAIX
eon: -DNEED_EXPLICIT_SPECIALIZATION
perlbmk: -DSPEC_CPU2000_AIX
gap: -DSYS_IS_BSD -DSYS_STRING_H -DSYS_HAS_TIME_PROTO -DSYS_HAS_MALLOC_PROTO -D SYS_HAS_CALLOC_PROTO
twolf: -DHAVE_SIGNED_CHAR
```

NOTE: The flag combination 'qpdf1/qpdf2' indicates a 2 step compilation process, the exact process is as follows:

```
fdo_pre0 = rm -rf ${PDFDIR}; mkdir -p ${PDFDIR}
PASS1_FLAGS  = --qpdf1 {optimization flags}
PASS1_LDFLAGS = {libraries} -L{pdf library location} -lpdf
PASS2_FLAGS  = --qpdf2 {optimization flags}
PASS2_LDFLAGS = --{libraries}
```

### Base Optimization Flags:

```
C: -qpdf1/pdf2 -O3 -lhma -qarch=pwr3
C++: -qpdf1/pdf2 -O3 -qarch=ppc -qtune=pwr3
```

### Peak Optimization Flags

```
175.vpr: CC=xlc, -O4 -qarch=ppc, -bnso -bI:/lib/syscalls.exp
176.gcc: -qpdf1/pdf2 -O3 -lhma -qarch=pwr3, fdpr -v -R3
```



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## Notes/Tuning Information (Continued)

181.mcf: -O4  
186.crafty: -O4, fdpr -v -R3  
197.parser: CC=xlc, -qpdf1/pdf2 -O4 -bnso -bI:/lib/syscalls.exp, fdpr -v -R3  
252.eon: -qpdf1/pdf2 -O3 -lhmu -qarch=ppc -qtune=pwr3, fdpr -v -R3  
253.perlbnk: -qpdf1/pdf2 -O3 -lhmu -qarch=pwr3 -qdatalocal -qunroll=8, fdpr -v -R3  
254.gap: -O4 -qarch=pwr3, fdpr -v -R3  
255.vortex: -qpdf1/pdf2 -O5 -lhmu -Q=500  
256.bzip2: -O5 -qunroll=8, fdpr -v -R3  
300.twolf: CC=xlc, -qpdf1/pdf2 -O5, fdpr -v -R3