



CINT2000 Result

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IBM Corporation
IBM eServer pSeries 640 (8 MB L2)

SPECint_rate2000 = 12.4
SPECint_rate_base2000 = 11.2

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.zip	4	720	9.02	4	615	10.6
175.vpr	4	568	11.4	4	501	13.0
176.gcc	4	373	13.7	4	367	13.9
181.mcf	4	416	20.1	4	405	20.6
186.crafty	4	389	11.9	4	412	11.3
197.parser	4	1253	6.66	4	967	8.64
252.eon	4	558	10.8	4	556	10.8
253.perlbnk	4	1006	8.31	4	898	9.30
254.gap	4	544	9.38	4	508	10.0
255.vortex	4	714	12.4	4	665	13.3
256.bzip2	4	688	10.1	4	531	13.1
300.twolf	4	847	16.4	4	714	19.5

Hardware

CPU: IBM Power3-II
 CPU MHz: 375
 FPU: Integrated
 CPU(s) enabled: 4 cores, 4 chips, 1 core/chip
 CPU(s) orderable: 2,4
 Parallel: No
 Primary Cache: 32KBI+64KBD (on chip)
 Secondary Cache: 8MB (I+D) (off chip)
 L3 Cache: None
 Other Cache: None
 Memory: 4GB
 Disk Subsystem: 1x9.1GB IBM Ultra-2 SCSI, 10000RPM
 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
perlbnk: -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 -lhm -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 -lhm -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