



CINT2000 Result

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IBM Corporation
IBM eServer pSeries 640 (4 MB L2)

SPECint_rate2000 = 11.7
SPECint_rate_base2000 = 10.7

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.gzip	4	716	9.08	4	620	10.5
175.vpr	4	614	10.6	4	553	11.7
176.gcc	4	376	13.6	4	371	13.8
181.mcf	4	648	12.9	4	639	13.1
186.crafty	4	389	11.9	4	411	11.3
197.parser	4	1269	6.58	4	979	8.53
252.eon	4	557	10.8	4	556	10.8
253.perlbnk	4	1002	8.34	4	908	9.20
254.gap	4	540	9.44	4	511	10.00
255.vortex	4	726	12.1	4	664	13.3
256.bzip2	4	716	9.72	4	558	12.5
300.twolf	4	854	16.3	4	725	19.2

Hardware

CPU: IBM Power3-II
CPU MHz: 375
FPU: Integrated
CPU(s) enabled: 4 cores, 4 chips, 1 core/chip
CPU(s) orderable: 1,2,3,4
Parallel: No
Primary Cache: 32KBI+64KBD (on chip)
Secondary Cache: 4MB (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 -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