



CINT2000 Result

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IBM Corporation
IBM eServer pSeries 640 (4 MB L2)

SPECint2000 = 262
SPECint_base2000 = 239

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	
164.gzip	1400	701	200	612	229	
175.vpr	1400	597	235	534	262	
176.gcc	1100	371	297	367	300	
181.mcf	1800	481	374	500	360	
186.crafty	1000	389	257	411	243	
197.parser	1800	1263	142	976	184	
252.eon	1300	557	233	557	234	
253.perlbmk	1800	1000	180	906	199	
254.gap	1100	498	221	468	235	
255.vortex	1900	724	262	662	287	
256.bzip2	1500	698	215	543	276	
300.twolf	3000	841	357	711	422	

Hardware

CPU: IBM Power3-II
 CPU MHz: 375
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 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
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