CFP2000 Result

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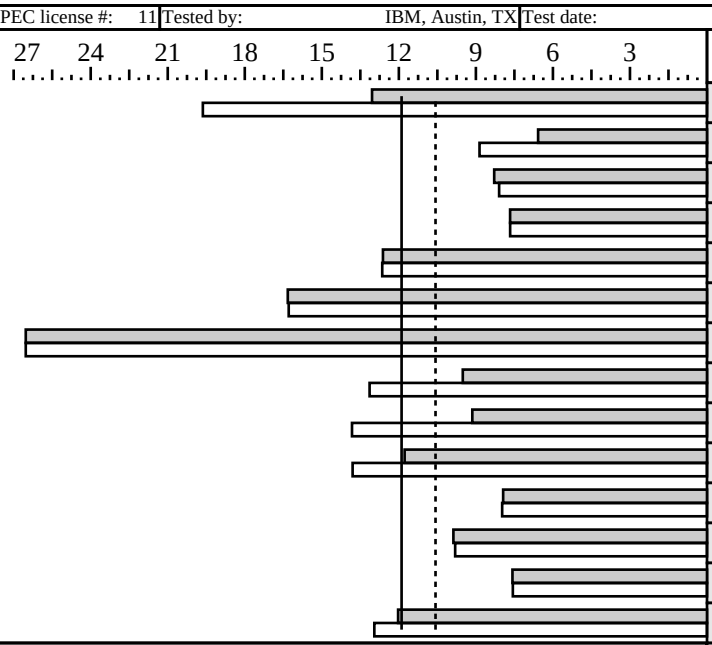
IBM Corporation
IBM eServer pSeries 640 (4 MB L2)

SPECfp_rate2000 = 11.9

SPECfp_rate_base2000 = 10.6

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
168.wupwise	4	569	13.0	4	378	19.6
171.swim	4	2187	6.58	4	1624	8.86
172.mgrid	4	1008	8.29	4	1032	8.10
173.applu	4	1271	7.67	4	1271	7.67
177.mesa	4	515	12.6	4	514	12.6
178.galgel	4	824	16.3	4	826	16.3
179.art	4	455	26.5	4	455	26.5
183.equake	4	634	9.51	4	459	13.1
187.facerec	4	965	9.14	4	638	13.8
188.ammp	4	867	11.8	4	740	13.8
189.lucas	4	1169	7.94	4	1163	7.98
191.fma3d	4	987	9.88	4	994	9.81
200.sixtrack	4	674	7.58	4	675	7.56
301.apsi	4	1003	12.0	4	931	13.0

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:	Fortran 77 and 90: IBM xl Fortran 6.1 invoked as 'xlf90' C: IBM VAC 5.0 invoked as 'xlc'
File System:	AIX/JFS
System State:	Multi-user

Notes/Tuning Information

```
Portability Flags
  -qfixed used in: wupwise, swim, mgrid, applu, galgel, sixtrack, apsi
  -qsuffix=f=f90 used in: galgel, facerec, lucas, fma3d
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:
  Fortran: -qpdf1/pdf2 -O3 -qarch=pwr3 -lmass
  C: -O5 -lmass
Peak Optimization Flags:
  168.wupwise: -qpdf1/pdf2 -O4 -qipa=level=2 -lmass
  171.swim: -qpdf1/pdf2 -O4 -qipa=level=2 -qhot -lmass
  172.mgrid:-O3 -qarch=pwr3 -qhot
```

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Notes/Tuning Information (Continued)

```
173.applu: -qpdf1/pdf2 -O3 -qarch=pwr3 -lmass
177.mesa: -O5 -lmass
178.galgel: -O4 -qipa=level=2 -qhot -lmass
179.art: -O5 -lmass
183.equake: -O5 -lmass -lhmu
187.facerec: -O3 -qarch=pwr3 -qhot -lmass
188.ammp: -O3 -qarch=pwr3 -bnso -bI:/lib/syscalls.exp
189.lucas: -qpdf1/pdf2 -O3 -qarch=pwr3 -lmass
191.fma3d: -O4  -qipa=level=2 -qhot -lmass
200.sixtrack: -O3 -qarch=pwr3
301.apsi: -O4 -qipa=level=2 -qhot -lmass -bnso -bI:/lib/syscalls.exp
```