



# CFP2000 Result

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IBM Corporation  
IBM eServer pSeries 640 Model B80

SPECfp\_rate2000 = 14.1  
SPECfp\_rate\_base2000 = 14.0

SPEC license #: 11 | Tested by: IBM Corp. | Test date: Sep-2001 | Hardware Avail: Oct-2001 | Software Avail: Dec-2001

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	376	19.7	4	376	19.7
171.swim	4	1911	7.53	4	1911	7.53
172.mgrid	4	1005	8.31	4	1005	8.31
173.applu	4	1320	7.38	4	1320	7.38
177.mesa	4	435	14.9	4	424	15.3
178.galgel	4	309	43.5	4	309	43.5
179.art	4	267	45.2	4	266	45.4
183.quake	4	604	9.99	4	587	10.3
187.facerec	4	487	18.1	4	487	18.1
188.amp	4	618	16.5	4	604	16.9
189.lucas	4	1179	7.87	4	1171	7.92
191.fma3d	4	952	10.2	4	932	10.5
200.sixtrack	4	432	11.8	4	432	11.8
301.apsi	4	819	14.7	4	819	14.7

**Hardware**

CPU: POWER3-II  
CPU MHz: 450  
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 unified (off chip)  
L3 Cache: None  
Other Cache: None  
Memory: 2GB  
Disk Subsystem: 2x18GB 10000RPM  
Other Hardware: None

**Software**

Operating System: AIX 5L V5.1  
Compiler: Fortran 77 and 90: IBM xl Fortran 7.1.1.0 invoked as 'xlf90' for Fortran 90 and as xlf for Fortran 77  
C: IBM VAC++ 5.0.2.0 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

### Base Optimization Flags:

Fortran: -O5 -lmass  
C: -O5 -lmass

### Peak Optimization Flags

168.wupwise: (basepeak=1)  
171.swim: (basepeak=1)  
172.mgrid: (basepeak=1)  
173.applu: -O5 -lmass -qipa=partition=large  
177.mesa: -O5 -lmass -qipa=partition=large, fdpr -v -R3  
178.galgel: (basepeak=1)  
179.art: -O5 -lmass -qalign=natural  
183.quake: -O5 -lmass -lhmu -qinline  
187.facerec: (basepeak=1)  
188.amp: -O3 -qarch=pwr3



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## Notes/Tuning Information (Continued)

```
189.lucas:      -qpdf1/pdf2 -O3 -lmu -lmass
                -qipa=partition=large, fdpr -v -R3
191.fma3d:      -O4 -lmass -qipa=partition=large
200.sixtrack:   (basepeak=1)
301.apsi:       (basepeak=1)
fpdr: Feedback directed program restructuring tool
/usr/spec2000 filesystem mounted with no JFS log file I/O
APAR IY 21957 was applied to AIX 5L V5.1 to enable new hardware support
```