



# CFP2000 Result

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## IBM Corporation

IBM eServer pSeries 615 Model 6E3 (1200 MHz, 2 CPU)

SPECfp\_rate2000 = 18.0

SPECfp\_rate\_base2000 = 17.5

SPEC license #: 11 | Tested by: IBM, Austin, TX | Test date: May-2003 | Hardware Avail: Jun-2003 | Software Avail: May-2003

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	140	26.5	2	140	26.5
171.swim	2	395	18.2	2	394	18.2
172.mgrid	2	303	13.8	2	278	15.0
173.applu	2	369	13.2	2	367	13.3
177.mesa	2	236	13.8	2	199	16.3
178.galgel	2	143	47.0	2	130	51.6
179.art	2	325	18.5	2	339	17.8
183.equake	2	161	18.7	2	161	18.7
187.facerec	2	203	21.7	2	199	22.1
188.amp	2	390	13.1	2	390	13.1
189.lucas	2	281	16.5	2	277	16.7
191.fma3d	2	336	14.5	2	326	14.9
200.sixtrack	2	216	11.8	2	212	12.0
301.apsi	2	377	16.0	2	373	16.2

**Hardware**

CPU: POWER4+  
CPU MHz: 1200  
FPU: Integrated  
CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip, 1 processor chip/DCM  
CPU(s) orderable: 1,2 (order by # cores)  
Parallel: No  
Primary Cache: 64KBI+32KBD (on chip) per core  
Secondary Cache: 1536KB unified (on chip) per chip  
L3 Cache: 8MB unified (off-chip) per DCM, 1 DCM in SUT  
Other Cache: None  
Memory: 4 GB  
Disk Subsystem: 1x36GB SCSI, 10K RPM  
Other Hardware: None

**Software**

Operating System: AIX 5L V5.2  
Compiler: IBM C for AIX, Version 6.0  
IBM XL FORTRAN for AIX, Version 8.1.0.3  
Other Software: ESSL 3.3.0.5, MASS 3.0  
File System: AIX/JFS  
System State: Multi-User

## Notes/Tuning Information

### Portability Flags

-qfixed used in: 168.wupwise, 171.swim, 172.mgrid, 173.applu, 178.galgel, 200.sixtrack, 301.apsi  
-qsuffix=f=f90 used in: 178.galgel, 187.facerec, 189.lucas, 191.fma3d

### Base Optimization Flags:

C:  
-O5 -qalign=natural -blpdata -lmass  
Fortran:  
-O5 -qalign=natural -blpdata -lmass

### Floating Point Peak Flags

168.wupwise  
-O5 -qipa=partition=large  
171.swim  
-O4 -q64 -blpdata  
172.mgrid



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## Notes/Tuning Information (Continued)

```
-05 -qarch=pwr3 -qtune=pwr3 -blpdata
173.applu
-03 -qarch=pwr3 -qtune=pwr3 -lmass -qhot -blpdata
177.mesa
-qpdf1/pdf2
fdpr -v -R3
-03 -qarch=pwr3 -qtune=pwr3 -qipa=level=2 -qalign=natural -blpdata
178.galgel
-qpdf1/pdf2
fdpr -v -R3
-05 -qalign=natural -qessl -lessl -lmass -blpdata
179.art
-04 -lhmu
183.quake
BASEPEAK = 1
187.facerec
fdpr -v -R3
-05 -lmass -blpdata
188.amp
BASEPEAK = 1
189.lucas
-03 -q64 -blpdata
191.fma3d
-qpdf1/pdf2
-05 -qarch=pwr4 -qtune=pwr3 -lhmu -qalign=natural -blpdata
200.sixtrack
-qpdf1/pdf2
-05 -lmass
301.apsi
-05 -qarch=pwr4 -qtune=pwr3 -blpdata
```

DCM: Acronym for "Dual-Chip Module"  
SUT: Acronym for "System Under Test"

IBM eServer pSeries 615 Model 6C3 (rack-mount server) and pSeries 615 Model 6E3 (deskside server) are electronically equivalent.

fpdr: Feedback directed program restructuring tool  
/usr/spec2000 filesystem mounted with no JFS log file I/O.  
APAR IY 43549 was applied to AIX to enable new hardware support.  
ulimits set to unlimited.  
C: IBM VAC++ invoked as xlc  
Fortran 77 and 90: IBM XL Fortran for AIX invoked as xlf90.  
Large page mode and memory affinity were set as follows:  
vmo -r -o lpgg\_regions=64 -o lpgg\_size=16777216 -o memory\_affinity=1  
chuser capabilities=CAP\_BYPASS\_RAC\_VMM,CAP\_PROPAGATE \$USER  
shutdown -r  
export MEMORY\_AFFINITY=MCM