



# CFP2000 Result

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## IBM Corporation

IBM IntelliStation POWER 275 Workstation (1450 MHz, 1 CPU)

SPECfp2000 = 1180

SPECfp\_base2000 = 1129

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
168.wupwise	1600	114	1409	115	1394	
171.swim	3100	212	1461	210	1475	
172.mgrid	1800	215	837	212	851	
173.applu	2100	261	805	236	889	
177.mesa	1400	199	705	159	878	
178.galgel	2900	93.8	3093	73.1	3965	
179.art	2600	132	1971	129	2017	
183.quake	1300	113	1150	113	1150	
187.facerec	1900	130	1457	130	1457	
188.amp	2200	249	882	249	882	
189.lucas	2000	149	1339	150	1334	
191.fma3d	2100	249	844	245	856	
200.sixtrack	1100	181	607	184	597	
301.apsi	2600	286	910	281	926	

### Hardware

CPU: POWER4+  
CPU MHz: 1450  
FPU: Integrated  
CPU(s) enabled: 1 core, 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: 8 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 8.1.1.0  
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.ammp
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"

1 processor was deconfigured through the configuration menu.

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 lgpg_regions=400 -o lgpg_size=16777216 -o memory_affinity=1
chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
shutdown -r
export MEMORY_AFFINITY=MCM
```