



CFP2000 Result

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IBM Corporation

IBM eServer pSeries 650 Model 6M2 (1450 MHz, 1 CPU)

SPECfp2000 = 1295

SPECfp_base2000 = 1221

SPEC license #: 11 | Tested by: IBM, Austin, TX | Test date: Oct-2002 | Hardware Avail: Dec-2002 | Software Avail: Dec-2002

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
168.wupwise	1600	104	1532	104	1546	
171.swim	3100	219	1417	220	1409	
172.mgrid	1800	212	850	183	985	
173.applu	2100	215	979	197	1064	
177.mesa	1400	190	737	159	883	
178.galgel	2900	91.0	3186	73.2	3964	
179.art	2600	140	1864	134	1940	
183.earthquake	1300	62.0	2098	62.0	2098	
187.facerec	1900	125	1515	123	1550	
188.amp	2200	238	923	238	923	
189.lucas	2000	153	1306	143	1400	
191.fma3d	2100	234	898	225	933	
200.sixtrack	1100	177	621	174	633	
301.apsi	2600	269	966	267	972	

Hardware

CPU: POWER4+
 CPU MHz: 1450
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 2 cores/chip, 1 chip/SCM
 CPU(s) orderable: 1,2,3,4 (order by # SCM)
 Parallel: No
 Primary Cache: 64KBI+32KBD (on chip) per core
 Secondary Cache: 1536KB unified (on chip) per chip
 L3 Cache: 32MB unified (off-chip) per SCM, 1 SCM in SUT
 Other Cache: None
 Memory: 8 GB
 Disk Subsystem: 1x18.2 GB SCSI
 Other Hardware: None

Software

Operating System: AIX 5L V5.2
 Compiler: IBM C for AIX, Version 6.0
 IBM XL FORTRAN for AIX, Version 8.1.0.1
 Other Software: ESSL 3.3, MASS 3.0
 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:

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)

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-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

```

SCM: Acronym for "Single-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 35693 was applied to AIX to enable new hardware support.
ulimits set to unlimited.
Fortran 77 and 90: IBM XL Fortran for AIX invoked as xlf90.
C: IBM VAC++ invoked as xlc
Large page mode and memory affinity were set as follows:
vmo -r -o lpgg_regions=32 -o lpgg_size=16777216 -o memory_affinity=1
chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
shutdown -r
export MEMORY_AFFINITY=MCM

```