



CFP2000 Result

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IBM Corporation

IBM eServer pSeries 630 Model 6E4 (1450 MHz, 1 CPU)

SPECfp2000 = 1158

SPECfp_base2000 = 1097

SPEC license #: 11 | Tested by: IBM, Austin, TX | Test date: Jan-2003 | Hardware Avail: Feb-2003 | Software Avail: Dec-2002

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
168.wupwise	1600	110	1455	109	1474	
171.swim	3100	253	1228	255	1216	
172.mgrid	1800	234	769	204	882	
173.applu	2100	259	810	246	852	
177.mesa	1400	193	724	161	870	
178.galgel	2900	91.4	3172	74.3	3904	
179.art	2600	137	1902	133	1951	
183.earthquake	1300	114	1144	114	1144	
187.facerec	1900	127	1492	125	1525	
188.ammmp	2200	253	870	253	870	
189.lucas	2000	174	1147	163	1225	
191.fma3d	2100	265	792	255	823	
200.sixtrack	1100	180	613	176	624	
301.apsi	2600	285	913	284	917	

Hardware

CPU: POWER4+
 CPU MHz: 1450
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 2 cores/chip, 1 chip/SCM
 CPU(s) orderable: 1,2,4 (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 SCM, 1 SCM in SUT
 Other Cache: None
 Memory: 8 GB
 Disk Subsystem: 1x36GB 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)

```

-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 38292 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=32 -o lpgg_size=16777216 -o memory_affinity=1
chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
shutdown -r
export MEMORY_AFFINITY=MCM

```