



CFP2000 Result

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IBM Corporation

IBM eServer pSeries 655 Model 651 (1300 MHz, 1 CPU)

SPECfp2000 = 1281

SPECfp_base2000 = 1200

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	97.0	1650	93.9	1703	
171.swim	3100	161	1926	161	1930	
172.mgrid	1800	224	803	192	939	
173.applu	2100	200	1050	181	1158	
177.mesa	1400	214	653	179	781	
178.galgel	2900	108	2683	84.6	3427	
179.art	2600	148	1758	146	1776	
183.quake	1300	69.1	1881	69.1	1881	
187.facerec	1900	129	1473	126	1506	
188.amp	2200	284	774	284	774	
189.lucas	2000	144	1390	132	1520	
191.fma3d	2100	223	943	213	984	
200.sixtrack	1100	202	546	196	562	
301.apsi	2600	256	1015	256	1017	

Hardware

CPU: POWER4
 CPU MHz: 1300
 FPU: Integrated
 CPU(s) enabled: 1 core, 4 chips, 1 core/chip, 4 chips/MCM
 CPU(s) orderable: 1 MCM (order by # MCM)
 Parallel: No
 Primary Cache: 64KBI+32KBD (on chip) per core
 Secondary Cache: 1440KB unified (off chip) per chip
 L3 Cache: 128MB unified (off-chip) per MCM, 1 MCM in SUT (4 chips per MCM)
 Other Cache: None
 Memory: 16 GB
 Disk Subsystem: 1x18.2 GB SCSI
 Other Hardware: None

Software

Operating System: AIX 5L V5.1
 Compiler: IBM XL FORTRAN for AIX, Version 8.1.0.1
 IBM C for AIX, Version 6.0
 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.earthquake
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
```

MCM: Acronym for "Multi-Chip Module"

SUT: Acronym for "System Under Test"

3 processors were deconfigured through the configuration menu.

fpdr: Feedback directed program restructuring tool
/usr/spec2000 filesystem mounted with no JFS log file I/O.
APAR IY 35692 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:
vmtune64 -g 16777216 -L 32 -y1
chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE \$USER
bosboot -a
shutdown -r