



CFP2000 Result

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IBM Corporation

IBM eServer pSeries 630 Model 6C4 (1200 MHz, 1 CPU)

SPECfp2000 = 1014

SPECfp_base2000 = 961

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
168.wupwise	1600	123	1298	125	1277	
171.swim	3100	268	1156	270	1148	
172.mgrid	1800	272	662	239	752	
173.applu	2100	281	748	270	777	
177.mesa	1400	230	610	192	730	
178.galgel	2900	109	2672	86.3	3359	
179.art	2600	162	1609	157	1656	
183.earthquake	1300	125	1044	125	1044	
187.facerec	1900	147	1297	143	1328	
188.amp	2200	300	733	300	733	
189.lucas	2000	191	1045	179	1120	
191.fma3d	2100	300	701	286	734	
200.sixtrack	1100	214	513	211	522	
301.apsi	2600	328	793	326	797	

Hardware

CPU: POWER4+
 CPU MHz: 1200
 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 PTF 2
 Compiler: IBM C for AIX, Version 6.0
 IBM XL FORTRAN for AIX, Version 8.1.0.3
 Other Software: ESSL 3.3, 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)

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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.
The 1-way pSeries 630 machine contains 1 CPU board.

```

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

```