CFP2000 Result

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IBM Corporation

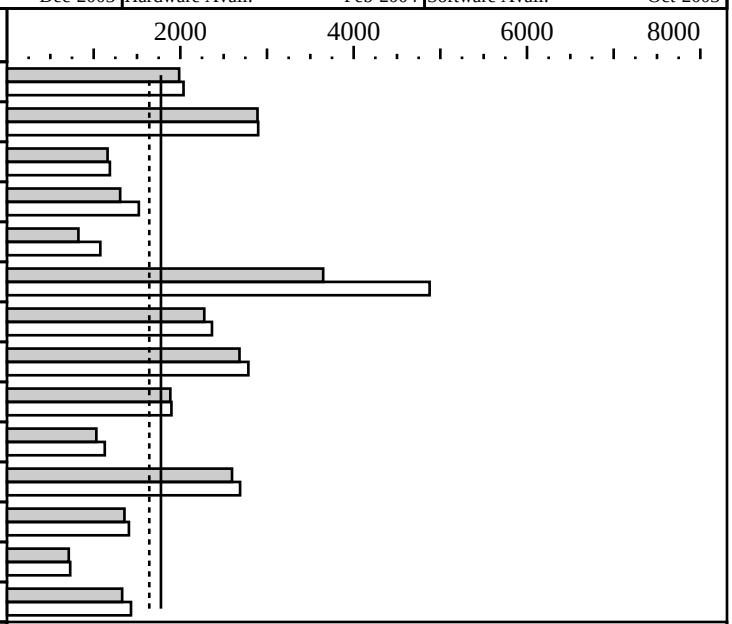
IBM eServer pSeries 655 (1700 MHz, 1 CPU)

SPECfp2000 = 1776

SPECfp_base2000 = 1642

SPEC license #: 11 | Tested by: IBM Austin | Test date: Dec-2003 | Hardware Avail: Feb-2004 | Software Avail: Oct-2003

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	80.5	1987	78.6	2037
171.swim	3100	107	2890	107	2898
172.mgrid	1800	155	1160	152	1187
173.applu	2100	161	1306	138	1521
177.mesa	1400	170	824	130	1077
178.galgel	2900	79.5	3648	59.5	4876
179.art	2600	114	2276	110	2365
183.equake	1300	48.5	2683	46.7	2785
187.facerec	1900	101	1885	100	1897
188.ammp	2200	213	1031	195	1128
189.lucas	2000	77.0	2596	74.4	2689
191.fma3d	2100	155	1355	149	1407
200.sixtrack	1100	154	713	151	729
301.apsi	2600	196	1329	182	1431



Hardware

CPU:	POWER4+
CPU MHz:	1700
FPU:	Integrated
CPU(s) enabled:	1 core, 4 chips, 2 cores/chip, 4 chips/MCM
CPU(s) orderable:	1 MCM (order by # MCM)
Parallel:	No
Primary Cache:	64KBI+32KBD (on chip) per core
Secondary Cache:	1536KB unified (off chip) per chip
L3 Cache:	128MB unified (off-chip) per MCM, 1 MCM in SUT
Other Cache:	None
Memory:	32 GB
Disk Subsystem:	2x36GB SCSI, 10K RPM
Other Hardware:	None

Software

Operating System:	AIX 5L V5.2 5765-E62 (05/2003)
Compiler:	IBM C for AIX, Version 6.0 IBM XL FORTRAN for AIX, Version 8.1.1.0 Other Software: ESSL 4.1.0.0, MASS 3.2.1
File System:	AIX/JFS2
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 -D_ILS_MACROS
  Fortran:  -O5 -qalign=natural -blpdata -lmass

Peak Optimization Flags
  168.wupwise:  -O5 -qipa=partition=large -q64 -qarch=pwr4 -qtune=pwr4
  171.swim:     -qpdf1/qpdf2 -O4 -blpdata -qarch=pwr4 -qtune=pwr4
  172.mgrid:    fdpr -v -R3
                -O5 -qarch=pwr3 -qtune=pwr3 -blpdata -qalign=natural
  173.applu:    -O4 -qarch=pwr3 -qtune=pwr3 -blpdata
```

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Notes/Tuning Information (Continued)

```
  177.mesa:      -qpdf1/pdf2
                 fdpr -v -R3
                 -O3 -blpdata -qipa=level=2 -qalign=natural -qarch=pwr3 -qtune=pwr3
  178.galgel:    -qpdf1/pdf2
                 -O5 -blpdata -qessl -lessl -qarch=pwr4 -qtune=pwr4
  179.art:       -O5 -qalign=natural -D_ILS_MACROS -qarch=pwr4 -qtune=pwr4
  183.equake:    fdpr -v -R3
                 -O5 -blpdata -qalign=natural -qarch=pwr4 -qtune=pwr4 -qfdpr
  187.facerec:   -qpdf1/pdf2
                 fdpr -v -R3
                 -O5 -qarch=pwr3 -qtune=pwr3 -lmass -blpdata
  188.ammp:      -qpdf1/pdf2 -L/usr/vac/lib
                 fdpr -v -R3
                -O5 -blpdata -qalign=natural -qipa=partition=large -qarch=pwr4 -qtune=pwr4
  189.lucas:     -O3 -qarch=pwr3 -qtune=pwr3 -blpdata -qipa=level=2 -qalign=natural
  191.fma3d:    -O3 -lhmu -qarch=pwr3 -qtune=pwr3 -blpdata -qipa=level=2 -qalign=natural
  200.sixtrack: -O3 -qhot -qarch=pwr4 -qtune=pwr4
  301.apsi:      fdpr -v -R3
                 -O5 -lmass -qalign=natural -qessl -lessl -blpdata -qfdpr
                 -qarch=pwr4 -qtune=pwr4 -qsave


C:                  IBM VAC++ invoked as xlc
Fortran 77 and 90: IBM XL Fortran for AIX invoked as xlf90.

fpdr: Feedback directed program restructuring tool
ulimits set to unlimited.
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

MCM: Acronym for "Multi-Chip Module"
SUT: Acronym for "System Under Test"

7 processors were deconfigured through the configuration menu.
```