CFP2000 Result

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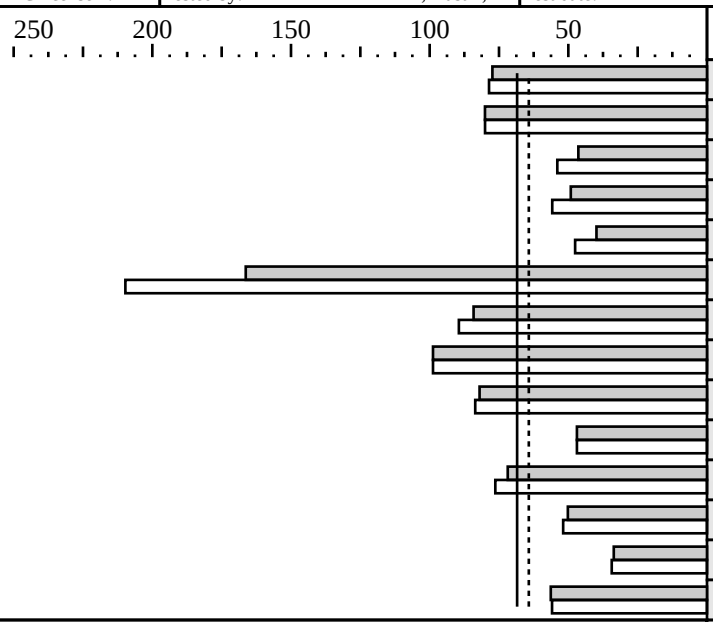
IBM Corporation

IBM eServer pSeries 655 (1700 MHz, 4 CPU)

SPECfp_rate2000 = 68.5

SPECfp_rate_base2000 = 64.2

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	95.9	77.4	4	94.5	78.6
171.swim	4	180	80.1	4	180	80.0
172.mgrid	4	180	46.4	4	155	54.0
173.applu	4	198	49.1	4	175	55.8
177.mesa	4	163	39.9	4	137	47.5
178.galgel	4	80.9	166	4	64.2	210
179.art	4	143	84.2	4	135	89.5
183.equake	4	61.1	98.8	4	61.1	98.8
187.facerec	4	108	82.0	4	105	83.6
188.ammp	4	218	46.9	4	218	46.9
189.lucas	4	129	71.8	4	122	76.3
191.fma3d	4	194	50.2	4	188	51.9
200.sixtrack	4	152	33.6	4	149	34.4
301.apsi	4	214	56.3	4	216	55.9

Hardware

CPU:	POWER4+
CPU MHz:	1700
FPU:	Integrated
CPU(s) enabled:	4 cores, 4 chips, 1 core/chip, 4 chips/MCM
CPU(s) orderable:	1 (order by # MCM)
Parallel:	No
Primary Cache:	64KBI+32KBD (on chip) per core
Secondary Cache:	1536KB unified (on 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:	1x36GB SCSI, 10K RPM
Other Hardware:	None

Software

Operating System:	AIX 5L V5.2
Compiler:	IBM C for AIX, Version 6.0 IBM XL FORTRAN for AIX, Version 8.1.0.3 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)

```
    -O5 -qarch=pwr3 -qtune=pwr3 -blpdata
  173.applu
    -O3 -qarch=pwr3 -qtune=pwr3 -lmass -qhot -blpdata
  177.mesa
    -qpdf1/pdf2
    fdpr -v -R3
    -O3 -qarch=pwr3 -qtune=pwr3 -qipa=level=2 -qalign=natural -blpdata
  178.galgel
    -qpdf1/pdf2
    fdpr -v -R3
    -O5 -qalign=natural -qessl -lessl -lmass -blpdata
  179.art
   -O4 -lhmu
  183.equake
    BASEPEAK = 1
  187.facerec
    fdpr -v -R3
    -O5 -lmass -blpdata
  188.ammp
    BASEPEAK = 1
  189.lucas
    -O3 -q64 -blpdata
  191.fma3d
    -qpdf1/pdf2
    -O5 -qarch=pwr4 -qtune=pwr3 -lhmu -qalign=natural -blpdata
  200.sixtrack
    -qpdf1/pdf2
    -O5 -lmass
  301.apsi
    -O5 -qarch=pwr4 -qtune=pwr3 -blpdata

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

    fpdr: Feedback directed program restructuring tool
    /usr/spec2000 filesystem mounted with no JFS log file I/O.
    APAR IY 43549 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 lgpg_regions=128 -o lgpg_size=16777216 -o memory_affinity=1
      chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
      shutdown -r
      export MEMORY_AFFINITY=MCM
```