CFP2000 Result

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IBM Corporation

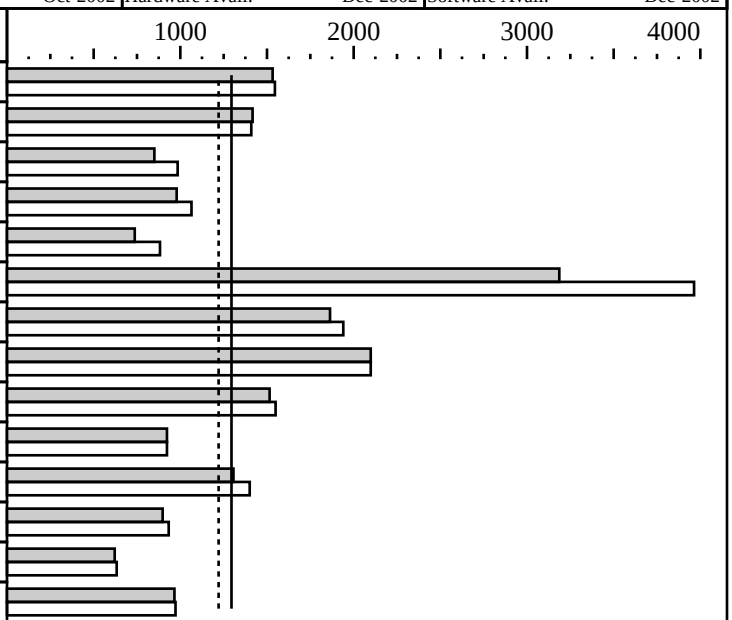
IBM eServer pSeries 650 Model 6M2 (1450 MHz, 1 CPU)

SPECfp2000 = 1295

SPECfp_base2000 = 1221

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	104	1532	104	1546
171.swim	3100	219	1417	220	1409
172.mgrid	1800	212	850	183	985
173.applu	2100	215	979	197	1064
177.mesa	1400	190	737	159	883
178.galgel	2900	91.0	3186	73.2	3964
179.art	2600	140	1864	134	1940
183.equake	1300	62.0	2098	62.0	2098
187.facerec	1900	125	1515	123	1550
188.ammp	2200	238	923	238	923
189.lucas	2000	153	1306	143	1400
191.fma3d	2100	234	898	225	933
200.sixtrack	1100	177	621	174	633
301.apsi	2600	269	966	267	972



Hardware

CPU:	POWER4+
CPU MHz:	1450
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 2 cores/chip, 1 chip/SCM
CPU(s) orderable:	1,2,3,4 (order by # SCM)
Parallel:	No
Primary Cache:	64KBI+32KBD (on chip) per core
Secondary Cache:	1536KB unified (on chip) per chip
L3 Cache:	32MB unified (off-chip) per SCM, 1 SCM in SUT
Other Cache:	None
Memory:	8 GB
Disk Subsystem:	1x18.2 GB 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)

```
    -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

    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 35693 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:
      vmo -r -o lgpg_regions=32 -o lgpg_size=16777216 -o memory_affinity=1
      chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
      shutdown -r
      export MEMORY_AFFINITY=MCM
```