CFP2000 Result

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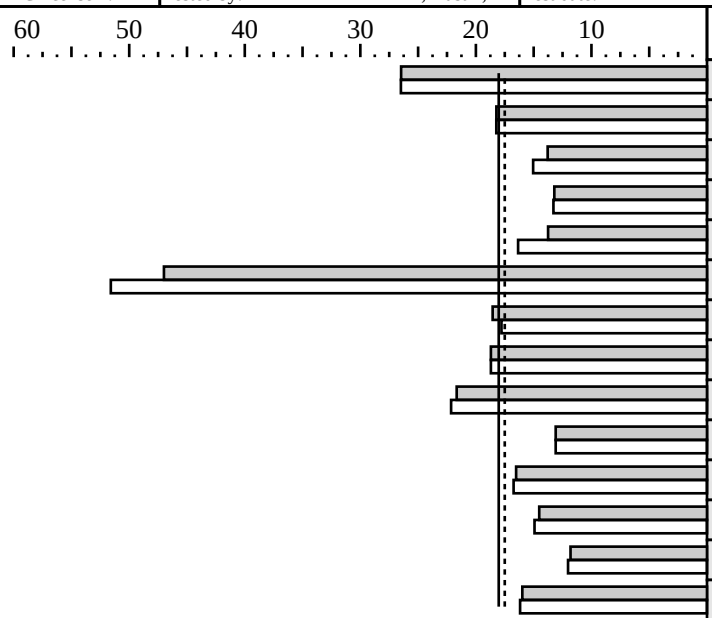
IBM Corporation

IBM eServer pSeries 615 Model 6E3 (1200 MHz, 2 CPU)

SPECfp_rate2000 = 18.0

SPECfp_rate_base2000 = 17.5

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	140	26.5	2	140	26.5
171.swim	2	395	18.2	2	394	18.2
172.mgrid	2	303	13.8	2	278	15.0
173.applu	2	369	13.2	2	367	13.3
177.mesa	2	236	13.8	2	199	16.3
178.galgel	2	143	47.0	2	130	51.6
179.art	2	325	18.5	2	339	17.8
183.equake	2	161	18.7	2	161	18.7
187.facerec	2	203	21.7	2	199	22.1
188.ammp	2	390	13.1	2	390	13.1
189.lucas	2	281	16.5	2	277	16.7
191.fma3d	2	336	14.5	2	326	14.9
200.sixtrack	2	216	11.8	2	212	12.0
301.apsi	2	377	16.0	2	373	16.2

Hardware

CPU:	POWER4+
CPU MHz:	1200
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip, 1 processor chip/DCM
CPU(s) orderable:	1,2 (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 DCM, 1 DCM in SUT
Other Cache:	None
Memory:	4 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 3.3.0.5, 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

    DCM: Acronym for "Dual-Chip Module"
    SUT: Acronym for "System Under Test"

    IBM eServer pSeries 615 Model 6C3 (rack-mount server) and pSeries
    615 Model 6E3 (deskside server) are electronically equivalent.

    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=64 -o lgpg_size=16777216 -o memory_affinity=1
      chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
      shutdown -r
      export MEMORY_AFFINITY=MCM
```