CFP2000 Result

Copyright ©1999-2004, Standard Performance Evaluation Corporation

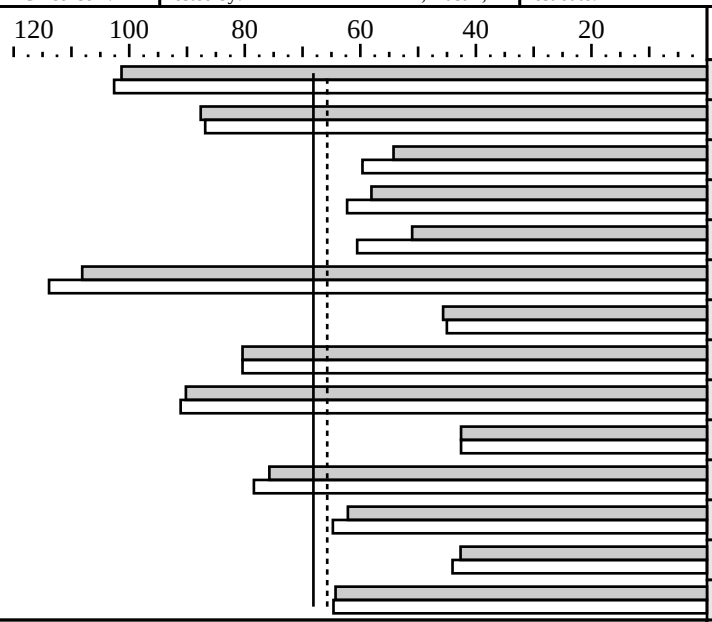
IBM Corporation

IBM eServer pSeries 655 Model 651 (1100 MHz, 8 CPU)

SPECfp_rate2000 = 68.1

SPECfp_rate_base2000 = 65.7

SPEC license #: 11 | Tested by: IBM, Austin, TX | Test date: Oct-2002 | Hardware Avail: Dec-2002 | Software Avail: Dec-2002



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	8	147	101	8	145	103
171.swim	8	328	87.6	8	331	86.8
172.mgrid	8	308	54.3	8	280	59.6
173.applu	8	336	58.1	8	313	62.3
177.mesa	8	255	51.0	8	215	60.5
178.galgel	8	249	108	8	236	114
179.art	8	528	45.7	8	536	45.0
183.equake	8	150	80.4	8	150	80.4
187.facerec	8	195	90.2	8	194	91.1
188.ammp	8	480	42.6	8	480	42.6
189.lucas	8	245	75.7	8	237	78.4
191.fma3d	8	314	62.2	8	301	64.8
200.sixtrack	8	239	42.7	8	232	44.0
301.apsi	8	375	64.3	8	373	64.6

Hardware

CPU:	POWER4
CPU MHz:	1100
FPU:	Integrated
CPU(s) enabled:	8 cores, 4 chips, 2 cores/chip, 4 chips/MCM
CPU(s) orderable:	1 (order by # MCM)
Parallel:	No
Primary Cache:	64KBI+32KBD (on chip) per core
Secondary Cache:	1440KB 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:	1x18.2 GB SCSI
Other Hardware:	None

Software

Operating System:	AIX 5L V5.1
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
```

Copyright ©1999-2004, Standard Performance Evaluation Corporation

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 35692 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:
      vmtune64 -g 16777216 -L 256 -y1
      chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
      bosboot -a
      shutdown -r
```