CFP2000 Result

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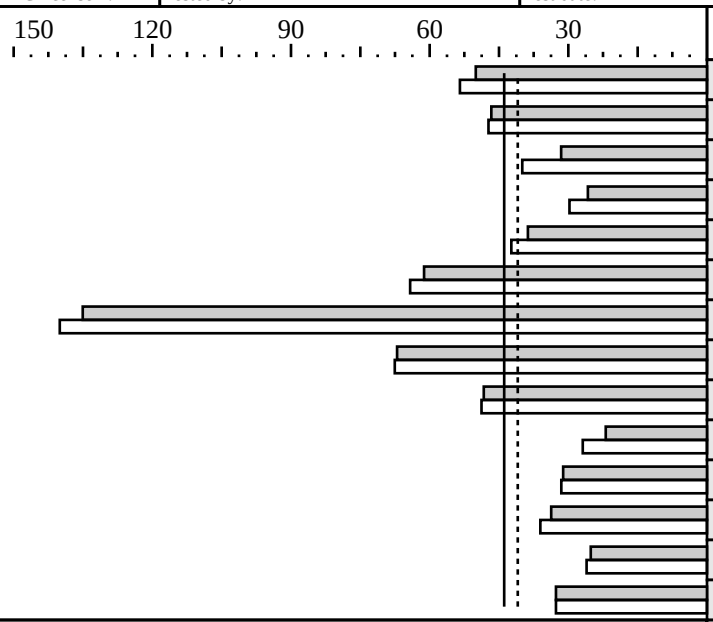
IBM Corporation

IBM BladeCenter JS21 (2700 MHz, 2 CPU)

SPECfp_rate2000 = 43.9

SPECfp_rate_base2000 = 40.9

SPEC license #: 11 | Tested by: IBM | Test date: Jan-2006 | Hardware Avail: Mar-2006 | Software Avail: Mar-2006



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	74.2	50.0	2	69.4	53.5
171.swim	2	154	46.7	2	152	47.3
172.mgrid	2	132	31.6	2	104	40.0
173.applu	2	189	25.8	2	164	29.8
177.mesa	2	83.8	38.7	2	76.7	42.3
178.galgel	2	110	61.2	2	105	64.2
179.art	2	44.7	135	2	43.1	140
183.equake	2	45.0	67.0	2	44.6	67.5
187.facerec	2	91.3	48.3	2	90.4	48.8
188.ammp	2	233	21.9	2	190	26.9
189.lucas	2	149	31.1	2	147	31.5
191.fma3d	2	145	33.7	2	135	36.1
200.sixtrack	2	101	25.1	2	98.0	26.0
301.apsi	2	185	32.7	2	185	32.7

Hardware

CPU:	IBM PowerPC 970MP
CPU MHz:	2700
FPU:	Integrated
CPU(s) enabled:	2 cores, 2 chips, 1 core/chip
CPU(s) orderable:	2
Parallel:	No
Primary Cache:	64KBI+32KBD (on chip)/core
Secondary Cache:	1MB unified (on chip)/core
L3 Cache:	None
Other Cache:	None
Memory:	4x2GB PC2-4200 533MHz ECC Chipkill DDR2
Disk Subsystem:	2x 73GB 10,000 rpm 2.5" SFF Serial Attached SCSI
Other Hardware:	BladeCenter H

Software

Operating System:	AIX 5L V5.3
Compiler:	XL C/C++ Enterprise Edition Version 8.0 for AIX XL Fortran Enterprise Edition Version 10.1 for AIX Other Software: ESSL 4.2.0.4
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:
  Fortran:    -O5 -lhmu -blpdata -lmass
  C:          -qpdf1/pdf2
              -O5 -blpdata -qalign=natural

Peak Optimization Flags
  168.wupwise:  -O5 -qsave -blpdata -lhmu -qenablevmx -lmass
  171.swim:     -qpdf1/pdf2
                -O4 -qfdpr -blpdata
                fdpr -q -O3
  172.mgrid:    -qpdf1/pdf2
                -O4 -q64 -blpdata
```

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Notes/Tuning Information (Continued)

```
  173.applu:    -O5 -qalign=struct=natural -qfdpr -q64 -blpdata -qenablevmx
                fdpr -q -O3
  177.mesa:     -qpdf1/pdf2
                 -O5 -qfdpr
                 fdpr -q -O3
  178.galgel:   -qpdf1/pdf2
              -O5 -qfdpr -qalign=struct=natural -q64 -blpdata -qenablevmx -lmass -qessl -lessl
                fdpr -q -O3
  179.art:      -O5 -blpdata -lhmu
  183.equake:   -qpdf1/pdf2
                -O3 -qarch=auto -qtune=auto -qipa=level=2 -blpdata
  187.facerec:  -O5 -qfdpr -blpdata -qenablevmx -lmass -qessl -lessl
                fdpr -q -O3
  188.ammp:     -O5 -qalign=natural -blpdata -lhmu -qenablevmx -lmass
  189.lucas:    -O3 -qarch=auto -qtune=auto -qfdpr -blpdata
                 fdpr -q -O3
  191.fma3d:    -O5 -qarch=pwr3 -qtune=pwr3 -qalign=struct=natural -qfdpr -blpdata
                fdpr -q -O3
  200.sixtrack: -O3 -qarch=auto -qtune=auto -qfdpr -q64 -qenablevmx -lmass
                fdpr -q -O3
  301.apsi:     basepeak=1


The installed OS level is AIX 5L for POWER version 5.3 with the 5300-04 Recommended Technology Level.

ESSL: Engineering and Scientific Subroutine Library

ANSI C89:       IBM XL C for AIX invoked as xlc
Fortran 77:     IBM XL Fortran for AIX invoked as xlf90
Fortran 90:     IBM XL Fortran for AIX invoked as xlf90

ulimits set to unlimited.
Large page mode and memory affinity were set as follows:
    vmo -r -o lgpg_regions=200 -o lgpg_size=16777216
    chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
    shutdown -rF
    export MEMORY_AFFINITY=MCM

The following config-file entry was used to assign each benchmark process to a core:
     submit = bindprocessor $$ $SPECUSERNUM; $command
The "bindprocessor" AIX command binds a process to a CPU core.
```