CFP2000 Result

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IBM Corporation

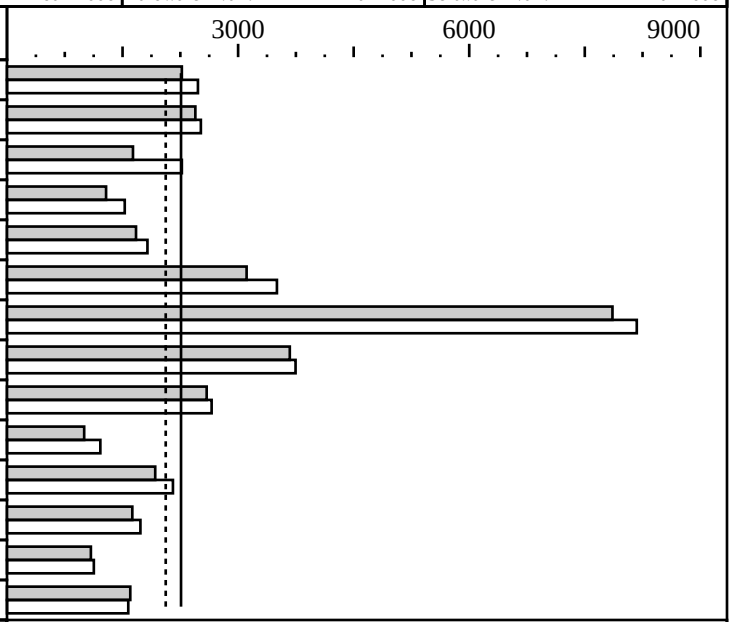
IBM BladeCenter JS21 (2700 MHz, 1 CPU)

SPECfp2000 = 2259

SPECfp_base2000 = 2060

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	70.5	2270	64.6	2479
171.swim	3100	127	2445	123	2517
172.mgrid	1800	110	1635	79.3	2270
173.applu	2100	163	1286	137	1528
177.mesa	1400	83.6	1675	76.8	1823
178.galgel	2900	93.2	3110	82.8	3504
179.art	2600	33.1	7859	31.8	8175
183.equake	1300	35.4	3671	34.7	3746
187.facerec	1900	73.3	2592	71.5	2656
188.ammp	2200	220	1002	182	1212
189.lucas	2000	104	1924	92.8	2154
191.fma3d	2100	129	1627	121	1732
200.sixtrack	1100	101	1089	97.6	1127
301.apsi	2600	162	1600	165	1574



Hardware

CPU:	IBM PowerPC 970MP
CPU MHz:	2700
FPU:	Integrated
CPU(s) enabled:	1 core, 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 -qarch=pwr3 -qtune=pwr3 -qalign=struct=natural -qfdpr -q64 -blpdata
                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:     -O5 -qhot=arraypad -Q -qalign=struct=natural -q64 -qenablevmx -lmass


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=100 -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.
One core was deconfigured at the open-firmware prompt, using the command
     boot -s cpu=1
```