



CFP2000 Result

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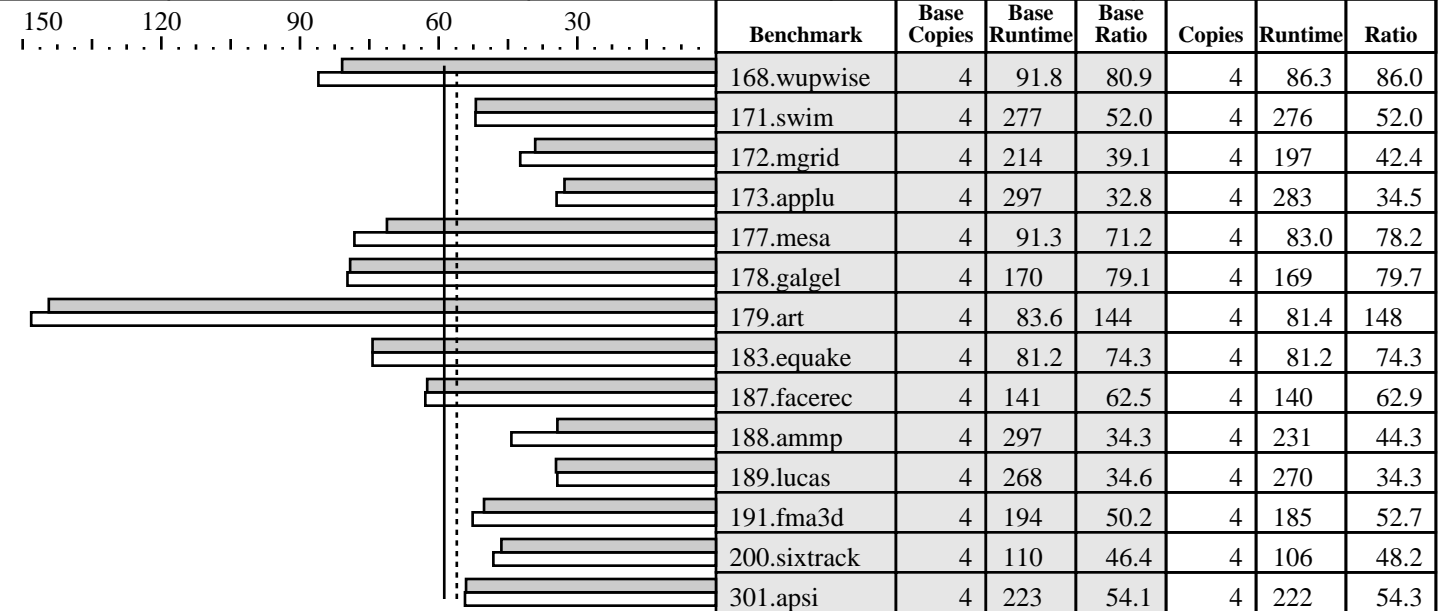
IBM Corporation

IBM BladeCenter JS21 (2500 MHz, 4 CPU)

SPECfp_rate2000 = 58.8

SPECfp_rate_base2000 = 56.1

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



Hardware

CPU: IBM PowerPC 970MP
 CPU MHz: 2500
 FPU: Integrated
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
 CPU(s) orderable: 4
 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 -lhm -blpdata -lmass
 C: -qpdf1/pdf2
 -O5 -blpdata -qalign=natural

Peak Optimization Flags

168.wupwise: -O5 -qsave -blpdata -lhm -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:  -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 lpgg_regions=200 -o lpgg_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.