



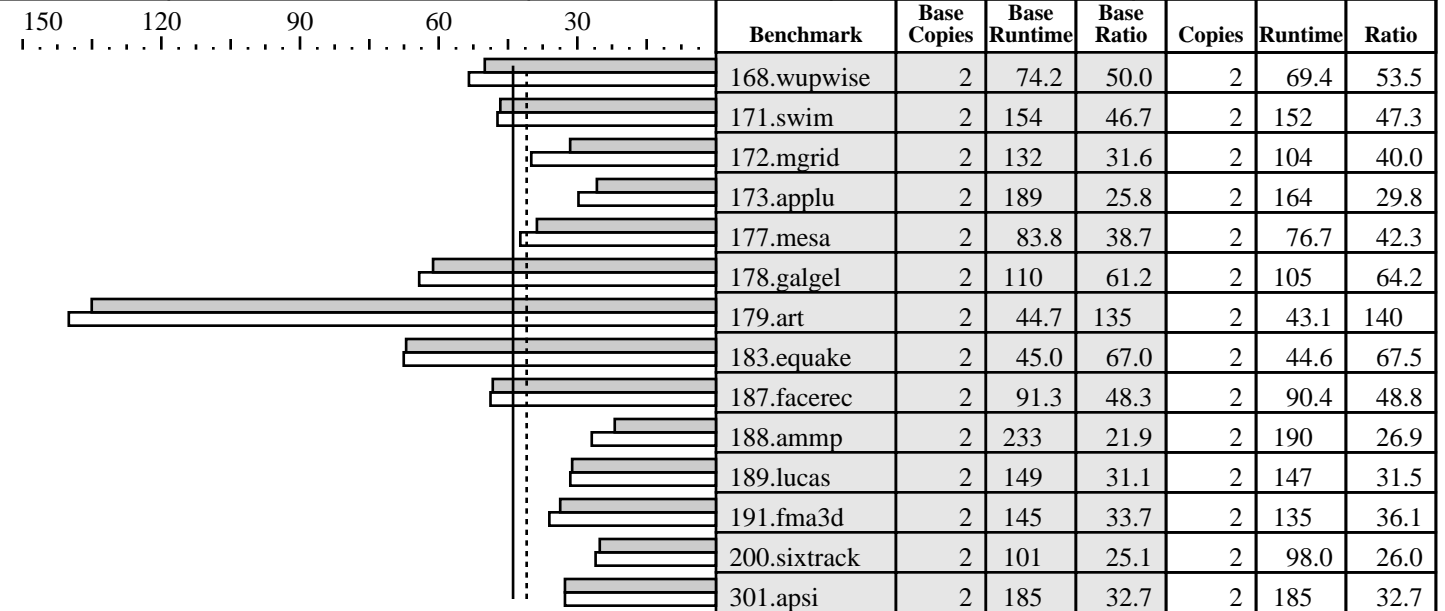
# CFP2000 Result

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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



**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 -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:  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 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.