CFP2000 Result

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IBM Corporation

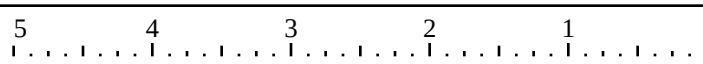
IBM eServer p5 550 Express (1500 MHz, 4 CPU)

SPECfp_rate2000 = NC

SPECfp_rate_base2000 = NC

SPEC license #: 11 | Tested by: IBM | Test date: Sep-2004 | Hardware Avail: Oct-2004 | Software Avail: Oct-2004

SPEC has determined that this result was not in compliance with the SPEC CPU2000 run and reporting rules. Specifically, the submitter has reported that measurements on a production system were not, as required by the SPEC CPU2000 Run Rules, within the 1.75% lower bound of the preproduction system.



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	8	NC	NC	8	NC	NC
171.swim	8	NC	NC	8	NC	NC
172.mgrid	8	NC	NC	8	NC	NC
173.applu	8	NC	NC	8	NC	NC
177.mesa	8	NC	NC	8	NC	NC
178.galgel	8	NC	NC	8	NC	NC
179.art	8	NC	NC	8	NC	NC
183.equake	8	NC	NC	8	NC	NC
187.facerec	8	NC	NC	8	NC	NC
188.ammp	8	NC	NC	8	NC	NC
189.lucas	8	NC	NC	8	NC	NC
191.fma3d	8	NC	NC	8	NC	NC
200.sixtrack	8	NC	NC	8	NC	NC
301.apsi	8	NC	NC	8	NC	NC

Hardware

CPU:	POWER5
CPU MHz:	1500
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip (SMT on)
CPU(s) orderable:	2,4
Parallel:	No
Primary Cache:	64KBI+32KBD (on chip)/core
Secondary Cache:	1920KB unified (on chip)/chip
L3 Cache:	36MB unified (off chip)/DCM, 2 DCM/SUT
Other Cache:	None
Memory:	16x2 GB
Disk Subsystem:	2x36GB SCSI, 15K RPM
Other Hardware:	

Software

Operating System:	AIX 5L V5.3
Compiler:	XL C/C++ Enterprise Edition V7.0 for AIX XL Fortran Enterprise Edition V9.1 for AIX Other Software: IBM ESSL for AIX V4.2
File System:	AIX/JFS2
System State:	Multi-user

Notes/Tuning Information

```
Tested by IBM
  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:
```


Non-Compliant

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Non-Compliant

Notes/Tuning Information (Continued)

```
  C:          -qpdf1/pdf2
              -O5 -blpdata -lmass
  Fortran:    -qpdf1/pdf2
              -O5 -blpdata -lmass

Peak Optimization Flags:
   168.wupwise:    -O5 -qarch=pwr3 -qtune=pwr3 -blpdata -lmass
                   F77=xlf
   171.swim:       -O5 -qarch=pwr3 -qtune=pwr3 -blpdata -lmass
                   F77=xlf
   172.mgrid:      -qpdf1/pdf2
                   -O5 -blpdata -lmass
   173.applu:      -O5 -qarch=pwr3 -qtune=pwr3 -blpdata -lmass
                   F77=xlf
   177.mesa:       -qpdf1/pdf2
                   -O5
   178.galgel:     -O5 -blpdata -qessl -lessl
   179.art:        basepeak=1
   183.equake:     -qpdf1/pdf2
                   -O5 -blpdata -lmass
   187.facerec:    -qpdf1/pdf2
                   -O5 -blpdata -lmass
   188.ammp:       -qpdf1/pdf2
                   -O5 -blpdata -qalign=natural -D_ILS_MACROS
   189.lucas:      basepeak=1
   191.fma3d:      -qpdf1/pdf2
                   -O5 -blpdata -qalign=natural -qhot=arraypad -Q
   200.sixtrack:   -O3 -qhot -qarch=pwr5 -qtune=pwr5 -qfdpr
                   fdpr -R3
   301.apsi:       -O5 -lmass -qessl -lessl -blpdata -qsave


 SMT:  Acronym for "Simultaneous Multi-Threading". A processor technology that allows
       the simultaneous execution of multiple thread contexts within a single processor
       core. (Enabled by default)
 ESSL: Engineering and Scientific Subroutine Library
 DCM:  Acronym for "Dual-Chip Module" (one dual-core processor chip + one L3-cache chip)
 SUT:  Acronym for "System Under Test"

 C:       IBM XL C for AIX invoked as xlc
 Fortran: IBM XL Fortran for AIX invoked as xlf90

 APAR IY 62534 was applied to AIX to enable new hardware support.
 ulimits set to unlimited.
 Large page mode and memory affinity were set as follows:
    vmo -r -o lgpg_regions=800 -o lgpg_size=16777216 -o memory_affinity=1
```

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Notes/Tuning Information (Continued)

```
chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
shutdown -r
export MEMORY_AFFINITY=MCM
```

Non-Compliant