



CFP2000 Result

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IBM Corporation
IBM eServer i5 520 (1650 MHz, 2 CPU)

SPECfp_rate2000 = 43.0
SPECfp_rate_base2000 = 41.5

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	141	52.8	4	120	62.0
171.swim	4	425	33.9	4	425	33.9
172.mgrid	4	255	32.8	4	255	32.8
173.applu	4	393	24.8	4	374	26.0
177.mesa	4	200	32.5	4	200	32.5
178.galgel	4	142	94.6	4	126	107
179.art	4	73.9	163	4	73.9	163
183.quake	4	91.3	66.1	4	91.3	66.1
187.facerec	4	199	44.3	4	199	44.3
188.amp	4	330	30.9	4	330	30.9
189.lucas	4	327	28.3	4	329	28.2
191.fma3d	4	332	29.4	4	332	29.4
200.sixtrack	4	215	23.8	4	209	24.4
301.apsi	4	351	34.4	4	302	40.0

Hardware

CPU: POWER5
CPU MHz: 1650
FPU: Integrated
CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip (SMT on)
CPU(s) orderable: 2
Parallel: No
Primary Cache: 64KBI+32KBD (on chip)/core
Secondary Cache: 1920KB unified (on chip)/chip
L3 Cache: 36MB unified (off chip)/DCM, 1 DCM/SUT
Other Cache: none
Memory: 8x4 GB
Disk Subsystem: 1x36GB SCSI, 15K RPM
Other Hardware:

Software

Operating System: AIX 5L V5.3
Compiler: XL C/C++ Enterprise Edition Version 7.0 for AIX
XL Fortran Enterprise Edition V9.1 for AIX
Other Software: IBM Engineering and Scientific Subroutine Library for AIX, Version 4 Release 2
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:

C: -qpdf1/pdf2 -O5 -blpdata -qalign=natural
Fortran: -qpdf1/pdf2 -O5 -blpdata -lmass

Peak Optimization Flags

168.wupwise: -O5 -qarch=pwr3 -qtune=pwr3 -blpdata -lmass
F77 = xlf
171.swim: basepeak = 1
172.mgrid: basepeak = 1
173.applu: -O5 -blpdata -lmass



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Notes/Tuning Information (Continued)

```
177.mesa:      basepeak = 1
178.galgel:    -O5 -blpdata -qessl -lessl
179.art:       basepeak = 1
183.quake:    basepeak = 1
187.facerec:  basepeak = 1
188.ammp:     -qpdf1/pdf2
              -O5 -blpdata -qalign=natural -D_ILS_MACROS
189.lucas:    -O5 -blpdata -lmass
191.fma3d:    basepeak = 1
200.sixtrack: fdpr -quiet -R3
              -O3 -qhot -qarch=pwr5 -qtune=pwr5 -qfdpr
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)

DCM: Acronym for "Dual-Chip Module" (one dual-core processor chip + one L3-cache chip)

SUT: Acronym for "System Under Test"

ulimits set to unlimited.

Large page mode and memory affinity were set as follows:

```
vm0 -r -o lpgg_regions=400 -o lpgg_size=16777216 -o memory_affinity=1
chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
reboot -q
export MEMORY_AFFINITY=MCM
```

This result was measured on model IBM eServer p5 520.

Model i5 520 and model p5 520 are electronically equivalent.