CFP2000 Result

IBM Corporation

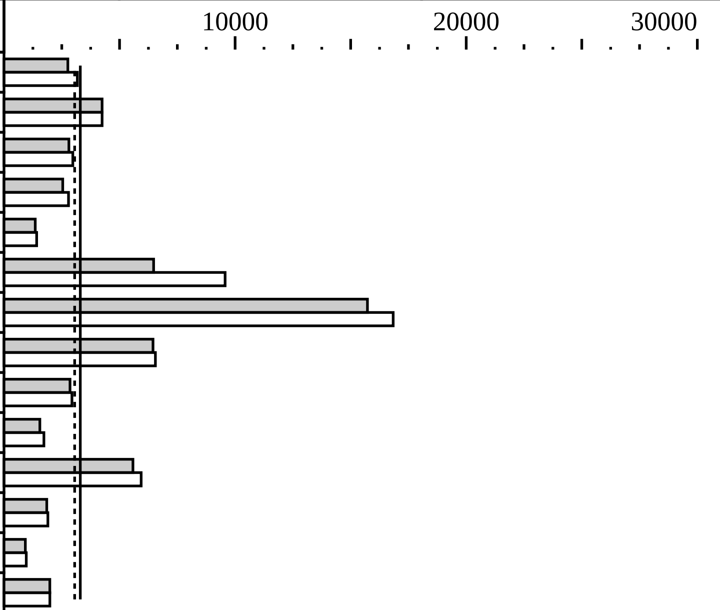
IBM System p5 505 (2100 MHz, 1 CPU)

SPECfp2000 = 3301

SPECfp_base2000 = 3057

SPEC license #: 11	Tested by: IBM Austin	Test date: Jun-2006	Hardware Avail: Aug-2006	Software Avail: Aug-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	57.9	2763	50.4	3174
171.swim	3100	73.0	4245	73.0	4245
172.mgrid	1800	64.1	2808	60.5	2978
173.applu	2100	82.6	2542	75.2	2791
177.mesa	1400	104	1352	99.1	1413
178.galgel	2900	44.8	6474	30.3	9567
179.art	2600	16.5	15726	15.4	16840
183.equake	1300	20.2	6448	19.8	6551
187.facerec	1900	66.5	2856	64.6	2940
188.ammp	2200	142	1552	127	1727
189.lucas	2000	35.8	5579	33.7	5935
191.fma3d	2100	113	1851	111	1898
200.sixtrack	1100	119	924	114	963
301.apsi	2600	131	1983	131	1984



Hardware

CPU:	POWER5+
CPU MHz:	2100
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 2 cores/chip (SMT off)
CPU(s) orderable:	2 core
Parallel:	No
Primary Cache:	64 KB I + 32 KB D on chip per core
Secondary Cache:	1920 KB I+D on chip per chip
L3 Cache:	36 MB I+D off chip per chip, 1 chip per SUT
Other Cache:	None
Memory:	16 GB (8x2 GB)
Disk Subsystem:	1x73GB SCSI, 15K RPM
Other Hardware:	None

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 -lmass
  171.swim:     basepeak=1
  172.mgrid:    -qpdf1/pdf2
                -O4 -qipa=partition=large -q64 -blpdata
  173.applu:    -O5 -qarch=pwr3 -qtune=pwr3 -qalign=struct=natural -qfdpr -q64 -blpdata
                 fdpr -q -O3
```

CFP2000 Result

IBM Corporation IBM System p5 505 (2100 MHz, 1 CPU)	SPECfp2000 = 3301 SPECfp_base2000 = 3057

SPEC license #: 11	Tested by: IBM Austin	Test date: Jun-2006	Hardware Avail: Aug-2006	Software Avail: Aug-2006

Notes/Tuning Information (Continued)

```
177.mesa:     -qpdf1/pdf2
               -O5 -qfdpr
               fdpr -q -O3
178.galgel:   -qpdf1/pdf2
              -O5 -qfdpr -qalign=struct=natural -lhmu -blpdata -lmass -qessl -lessl
              fdpr -q -O3
179.art:      -O5 -lhmu -blpdata
183.equake:   -qpdf1/pdf2
              -O3 -qarch=auto -qtune=auto -qipa=level=2 -blpdata
187.facerec:  -O5 -qsave -blpdata
188.ammp:     -O5 -qalign=natural -qfdpr -blpdata -lhmu
              fdpr -q -O3
189.lucas:    -O3 -qarch=auto -qtune=auto -qfdpr -blpdata -qessl -lessl
              fdpr -q -O3
191.fma3d:    -qpdf1/pdf2
              -O3 -qarch=auto -qtune=auto -qipa=level=2 -q64 -lhmu -blpdata -lmass
200.sixtrack: -O3 -qarch=auto -qtune=auto -qfdpr
              fdpr -q -O3
301.apsi:     -O5
```

The installed OS level is AIX 5L for POWER Version 5.3 with the 5300-05 Recommended Technology Level.
The installed C/C++ compiler is XL C/C++ Enterprise Edition Version 8.0 for AIX.
The installed Fortran copiler is XL Fortran Enterprise Edition Version 10.1 with the May 2006 AIX PTF.

```
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)
SUT:  Acronym for "System Under Test"
ESSL: Engineering and Scientific Subroutine Library
PTF:  IBM identifier for "Program Fix Level"

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=128 -o lgpg_size=16777216
    chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
    bosboot -aD
    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 and SMT disabled using the AIX commands
     smtctl -m off -w boot
     bosboot -aD
     shutdown -rF
     drmgr -r -c cpu
```

This result was measured on an IBM System p5 510. IBM System p5 505 and IBM System p5 510 (2-core version) are electronically equivalent.