CFP2000 Result

IBM Corporation

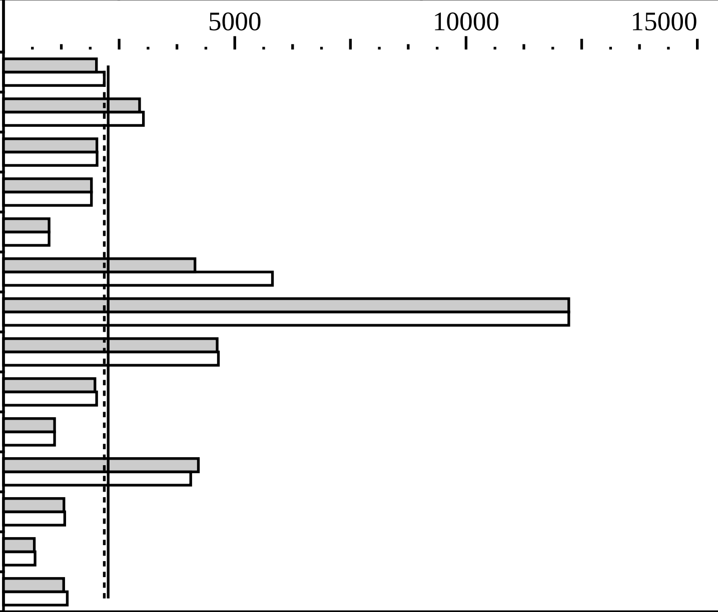
IBM System p5 550Q (1500 MHz, 1 CPU)

SPECfp2000 = 2263

SPECfp_base2000 = 2179

SPEC license #: 11	Tested by: IBM	Test date: Sep-2005	Hardware Avail: Oct-2005	Software Avail: Oct-2005

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	79.6	2009	73.4	2179
171.swim	3100	105	2942	102	3025
172.mgrid	1800	89.1	2019	89.0	2023
173.applu	2100	110	1901	110	1901
177.mesa	1400	142	985	142	985
178.galgel	2900	70.1	4140	49.9	5815
179.art	2600	21.3	12221	21.3	12221
183.equake	1300	28.1	4620	28.0	4646
187.facerec	1900	96.1	1977	94.4	2013
188.ammp	2200	199	1104	199	1104
189.lucas	2000	47.5	4213	49.4	4048
191.fma3d	2100	161	1307	159	1324
200.sixtrack	1100	165	666	161	682
301.apsi	2600	200	1301	189	1379



Hardware

CPU:	POWER5+
CPU MHz:	1500
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 2 cores/chip (SMT off)
CPU(s) orderable:	4,8
Parallel:	None
Primary Cache:	64KBI+32KBD (on chip)/core
Secondary Cache:	1920KB unified (on chip)/chip
L3 Cache:	2x36MB unified (off-chip)/QCM, 2 QCM/SUT
Other Cache:	None
Memory:	16x4GB
Disk Subsystem:	1x36GB 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 4.2.0.2
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:
  Fortran:    -O5 -lhmu -blpdata -lmass
  C:          -qpdf1/pdf2
              -O5 -blpdata -qalign=natural

Peak Optimization Flags
  168.wupwise:  -qpdf1/pdf2
                -O5 -blpdata -qfdpr -qalign=struct=natural
                fdpr -q -O3
  171.swim:     -O5 -qarch=pwr3 -qtune=pwr3 -blpdata -lmass
  172.mgrid:    -qpdf1/pdf2
                -q64 -O5 -blpdata -qalign=struct=natural
```

CFP2000 Result

IBM Corporation
IBM System p5 550Q (1500 MHz, 1 CPU)

SPECfp2000 = 2263
SPECfp_base2000 = 2179

SPEC license #: 11	Tested by: IBM	Test date: Sep-2005	Hardware Avail: Oct-2005	Software Avail: Oct-2005

Notes/Tuning Information (Continued)

```
173.applu:    -O5 -blpdata -lmass
177.mesa:     basepeak=1
178.galgel:   -O5 -blpdata -qessl -lessl
179.art:      basepeak=1
183.equake:   -O5 -blpdata -lessl
187.facerec:  -O5 -lmass -qessl -lessl -blpdata -qsave
188.ammp:     basepeak=1
189.lucas:    -O5 -blpdata -lmass
191.fma3d:    -qpdf1/pdf2
              -O5 -blpdata -qfdpr -qalign=struct=natural
              fdpr -q -O3
200.sixtrack: -qpdf1/pdf2
              -O5 -blpdata -qfdpr -qalign=struct=natural
              fdpr -q -O3
301.apsi:     -O5 -lmass -qessl -lessl -blpdata -qsave
```

The installed OS level is AIX 5L for POWER version 5.3 with the 5300-03 Recommended Maintenance package.

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)
QCM: Acronym for "Quad-Core Module" (two dual-core processor chips + two L3-cache chips)
SUT: Acronym for "System Under Test"
ESSL: Engineering and Scientific Subroutine Library

```
Extended C:     IBM XL C for AIX invoked as cc
ANSI C89:       IBM XL C for AIX invoked as xlc
Fortran 77:     IBM XL Fortran for AIX invoked as xlf90 unless explicitly reassigned
Fortran 90:     IBM XL Fortran for AIX invoked as xlf
```

ulimits set to unlimited.
Large page mode and memory affinity were set as follows:

```
    vmo -r -o lgpg_regions=1600 -o lgpg_size=16777216
    chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
    reboot -q
    export MEMORY_AFFINITY=MCM
```

The following config-file entry was used to assign each benchmark process to a core:

```
submit = let "MYCPU=2*$SPECUSERNUM"; if (("$MYCPU > 15")) then let "MYCPU-=15"; fi; bindprocessor $$ $MYCPU; $command
```

The "bindprocessor" AIX command binds a process to a CPU core.
Seven cores were deconfigured and SMT disabled at the open-firmware prompt, using the command

```
            boot -s cpu=1 -s smt_off
```

Use flags-description file IBM-20051013-AIX.txt.