CFP2000 Result

IBM Corporation

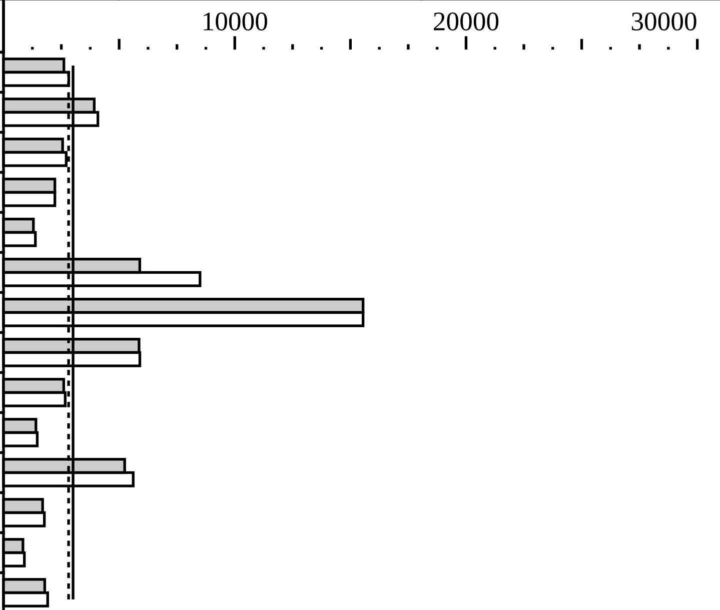
IBM System p5 550 (1900 MHz, 1 CPU)

SPECfp2000 = 3007

SPECfp_base2000 = 2815

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	61.3	2612	56.7	2821
171.swim	3100	79.0	3924	76.0	4081
172.mgrid	1800	70.4	2556	66.4	2711
173.applu	2100	94.5	2221	94.5	2221
177.mesa	1400	108	1293	102	1379
178.galgel	2900	49.2	5893	34.1	8497
179.art	2600	16.7	15547	16.7	15547
183.equake	1300	22.2	5861	22.1	5895
187.facerec	1900	73.0	2604	71.2	2667
188.ammp	2200	157	1402	151	1459
189.lucas	2000	38.2	5239	35.7	5608
191.fma3d	2100	124	1691	119	1767
200.sixtrack	1100	131	841	122	902
301.apsi	2600	146	1783	136	1910



Hardware

CPU:	POWER5+
CPU MHz:	1900
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 2 cores/chip (SMT off)
CPU(s) orderable:	2,4
Parallel:	None
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:	16x2GB
Disk Subsystem:	2x36GB 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
                fdpr -q -O3
  171.swim:     F77=xlf
                -O5 -qarch=pwr3 -qtune=pwr3 -blpdata -lmass
  172.mgrid:    -qpdf1/pdf2
```

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Notes/Tuning Information (Continued)

```
                 -q64 -O4 -blpdata
   173.applu:    -O5 -blpdata -lmass
   177.mesa:     -qpdf1/pdf2
                 -O4 -blpdata -qalign=natural -Dfloor=__floor
   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:     -O5 -blpdata -qalign=natural
   189.lucas:    -O3 -qarch=pwr5x -qtune=pwr5x -lhmu -blpdata -lmass
   191.fma3d:    -qpdf1/pdf2
                 -O4 -blpdata -qfdpr
                 fdpr -q -O3
   200.sixtrack: -qpdf1/pdf2
                 -O5 -blpdata -qfdpr
                 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)
DCM:  Acronym for "Dual-Chip Module" (one dual-core processor chip + one L3-cache chip)
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=800 -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 > 7")) then let "MYCPU-=7"; fi; bindprocessor $$ $MYCPU; $command
The "bindprocessor" AIX command binds a process to a CPU core.
Three 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.
```