CFP2000 Result

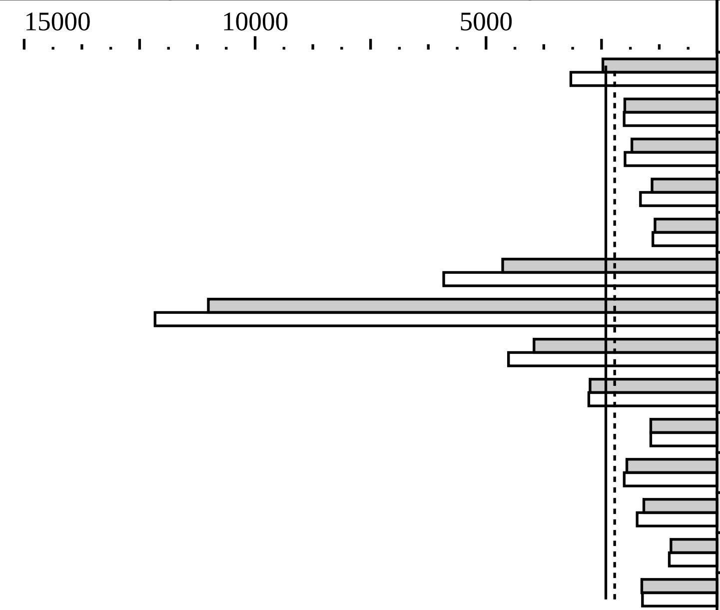
IBM Corporation

IBM System p5 595 (2300 MHz, 64 CPU)

SPECfp_rate2000 = 2406

SPECfp_rate_base2000 = 2215

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	128	96.2	2470	128	75.1	3164
171.swim	128	231	1996	128	229	2011
172.mgrid	128	145	1843	64	67.1	1991
173.applu	128	222	1406	64	94.1	1657
177.mesa	128	155	1342	128	150	1388
178.galgel	128	92.8	4640	64	36.4	5917
179.art	128	35.1	11012	128	31.7	12167
183.equake	128	48.7	3962	64	21.4	4514
187.facerec	128	103	2748	128	102	2775
188.ammp	128	228	1434	128	228	1434
189.lucas	128	152	1952	64	73.9	2009
191.fma3d	128	197	1584	128	180	1729
200.sixtrack	128	164	997	128	158	1033
301.apsi	128	237	1628	128	239	1614

Hardware

CPU:	POWER5+
CPU MHz:	2300
FPU:	Integrated
CPU(s) enabled:	64 cores, 32 chips, 2 cores/chip (SMT on)
CPU(s) orderable:	16,32,48,64 cores
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, 32 chips per SUT
Other Cache:	None
Memory:	256 GB (64x4 GB)
Disk Subsystem:	2x73GB 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:     -q64 -blpdata -O5 -qhot=arraypad -qipa=noobject -qmaxmem=-1
  172.mgrid:    users=64
                -qpdf1/pdf2
                -O4 -qipa=partition=large -q64 -blpdata
  173.applu:    users=64
```

Notes/Tuning Information (Continued)

```
                    -qpdf1/pdf2
                    -O4 -q64 -blpdata
    177.mesa:       -qpdf1/pdf2
                    -O4 -qalign=natural
    178.galgel:     users=64
                    -qpdf1/pdf2
                   -O5 -qfdpr -qalign=struct=natural -lhmu -blpdata -lmass -qessl -lessl
                    fdpr -q -O3
    179.art:        -O5 -lhmu -blpdata
    183.equake:     users=64
                    -qpdf1/pdf2
                    -O3 -qarch=auto -qtune=auto -qipa=level=2 -blpdata
    187.facerec:    -O5 -qsave -blpdata
    188.ammp:       basepeak=1
    189.lucas:      users=64
                    -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 -qhot=arraypad -Q -qalign=struct=natural


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 with the March 2006 PTF.
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, memory affinity and MATMUL threading were set as follows:
    vmo -r -o lgpg_regions=8192 -o lgpg_size=16777216
    chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
    bosboot -aD
    shutdown -rF
    export MEMORY_AFFINITY=MCM
    export XLFRTEOPTS=intrinthds=1

The following config-file entry was used to assign each benchmark process to a core:
    submit = let "MYCPU=2*$SPECUSERNUM"; if (("$MYCPU > 127")) then let "MYCPU-=127"; fi; bindprocessor $$ $MYCPU; $command
The "bindprocessor" AIX command binds a process to a CPU core.
```