CFP2000 Result

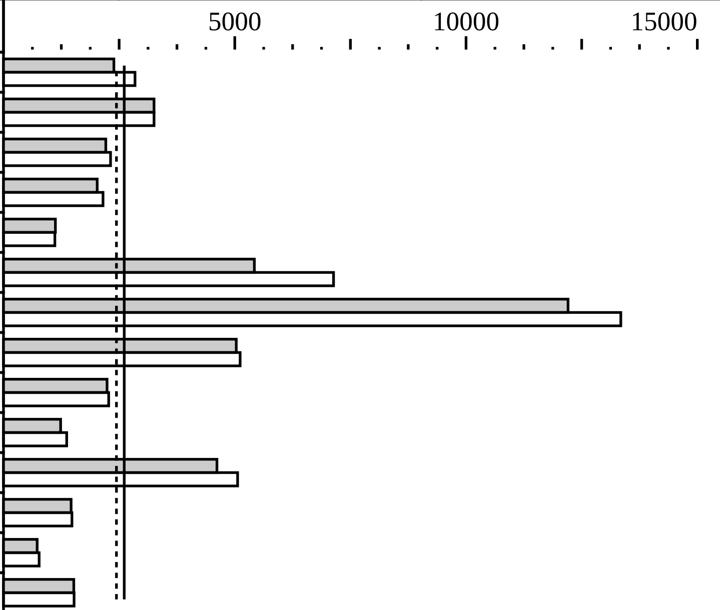
IBM Corporation

IBM System p5 505Q (1650 MHz, 1 CPU)

SPECfp2000 =	2610
SPECfp_base2000 =	2442

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	67.0	2386	56.3	2843
171.swim	3100	95.3	3254	95.3	3254
172.mgrid	1800	81.4	2212	77.8	2314
173.applu	2100	104	2026	97.6	2151
177.mesa	1400	125	1122	126	1110
178.galgel	2900	53.5	5423	40.6	7136
179.art	2600	21.3	12206	19.5	13346
183.equake	1300	25.8	5032	25.4	5116
187.facerec	1900	84.9	2239	83.6	2274
188.ammp	2200	178	1235	161	1366
189.lucas	2000	43.3	4614	39.5	5061
191.fma3d	2100	144	1462	142	1479
200.sixtrack	1100	151	728	143	770
301.apsi	2600	171	1519	170	1526



Hardware

CPU:	POWER5+
CPU MHz:	1650
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 2 cores/chip (SMT off)
CPU(s) orderable:	4 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
Other Cache:	None
Memory:	16 GB (8x2 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:     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 505Q (1650 MHz, 1 CPU)

SPECfp2000 = 2610

SPECfp_base2000 = 2442

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 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 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.
Three cores were deconfigured and SMT disabled using the AIX commands
     smtctl -m off -w boot
     bosboot -aD
     shutdown -rF
     drmgr -r -c cpu
     drmgr -r -c cpu
     drmgr -r -c cpu
```