CFP2000 Result

IBM Corporation

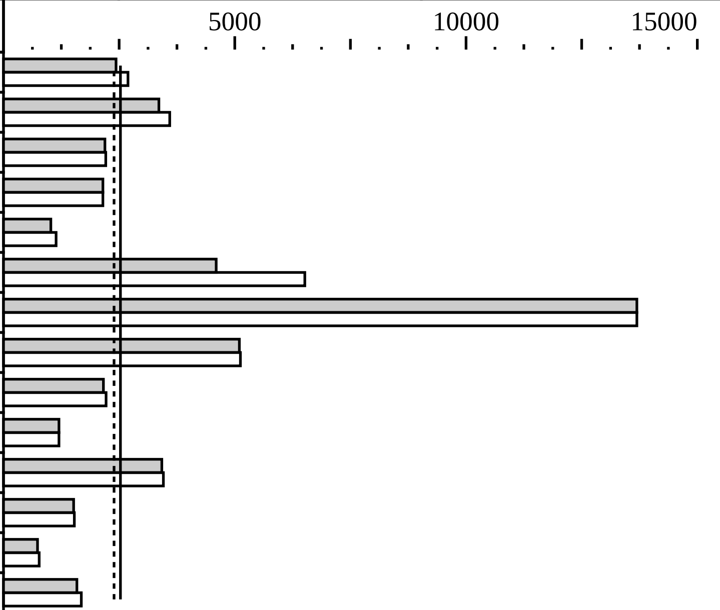
IBM System p5 505 (1650 MHz, 1 CPU)

SPECfp2000 = 2528

SPECfp_base2000 = 2390

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	65.8	2433	59.5	2691
171.swim	3100	92.3	3359	86.3	3594
172.mgrid	1800	82.1	2193	81.4	2211
173.applu	2100	97.7	2149	97.7	2149
177.mesa	1400	137	1023	123	1137
178.galgel	2900	63.1	4598	44.5	6514
179.art	2600	19.0	13693	19.0	13693
183.equake	1300	25.5	5099	25.4	5122
187.facerec	1900	87.9	2160	85.7	2218
188.ammp	2200	183	1199	183	1199
189.lucas	2000	58.4	3423	57.9	3457
191.fma3d	2100	138	1516	137	1531
200.sixtrack	1100	150	735	143	771
301.apsi	2600	164	1587	155	1682



Hardware

CPU:	POWER5
CPU MHz:	1650
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 2 cores/chip (SMT off)
CPU(s) orderable:	2
Parallel:	None
Primary Cache:	64KBI+32KBD (on chip)/core
Secondary Cache:	1920KB unified (on chip)/chip
L3 Cache:	36MB unified (off-chip)/DCM, 1 DCM/SUT
Other Cache:	None
Memory:	8x2GB
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 4.2.0.2
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:     F77=xlf
                -O5 -qarch=pwr3 -qtune=pwr3 -blpdata -lmass
  172.mgrid:    -qpdf1/pdf2
```

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Notes/Tuning Information (Continued)

```
                 -q64 -O5 -blpdata -qalign=struct=natural
   173.applu:    -O5 -blpdata -lmass
   177.mesa:     -qpdf1/pdf2
                 -O5 -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:     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)
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=400 -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 > 3")) then let "MYCPU-=3"; fi; bindprocessor $$ $MYCPU; $command
The "bindprocessor" AIX command binds a process to a CPU core.
One core was 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.
```