CFP2000 Result

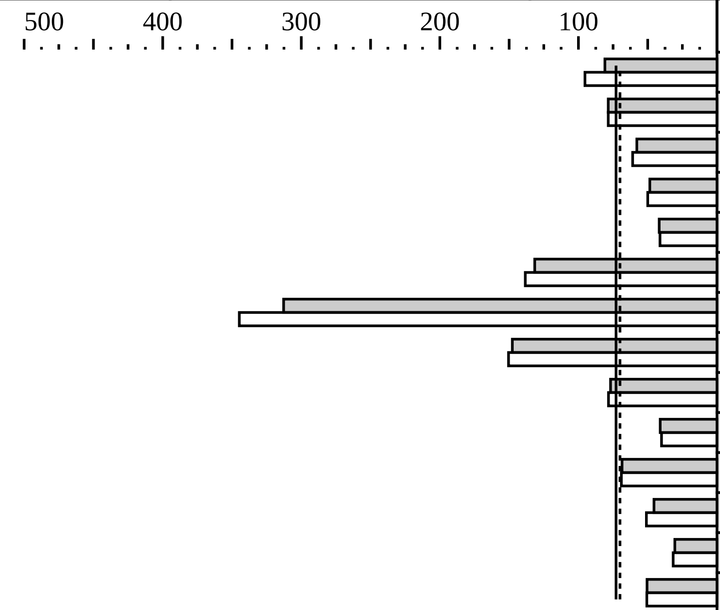
IBM Corporation

IBM IntelliStation POWER 285 Workstation (2100 MHz, 2 CPU)

SPECfp_rate2000 = 72.9

SPECfp_rate_base2000 = 70.0

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	4	91.8	80.9	4	77.9	95.3
171.swim	4	183	78.5	4	183	78.5
172.mgrid	4	144	57.9	4	137	60.9
173.applu	4	201	48.5	4	195	50.0
177.mesa	4	156	41.7	4	158	41.1
178.galgel	4	102	132	4	97.3	138
179.art	4	38.6	313	4	35.0	345
183.equake	4	40.8	148	4	40.1	150
187.facerec	4	115	76.8	4	113	78.3
188.ammp	4	249	41.0	4	255	40.0
189.lucas	4	135	68.5	4	134	69.0
191.fma3d	4	214	45.5	4	191	51.0
200.sixtrack	4	168	30.4	4	161	31.6
301.apsi	4	239	50.5	4	238	50.6

Hardware

CPU:	POWER5+
CPU MHz:	2100
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip (SMT on)
CPU(s) orderable:	1,2 core
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, 1 chip per SUT
Other Cache:	None
Memory:	4 GB (4x1 GB)
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 4.2.0.4
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
```

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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, memory affinity and MATMUL threading 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
    export XLFRTEOPTS=intrinthds=1

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.
```