CFP2000 Result

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IBM Corporation

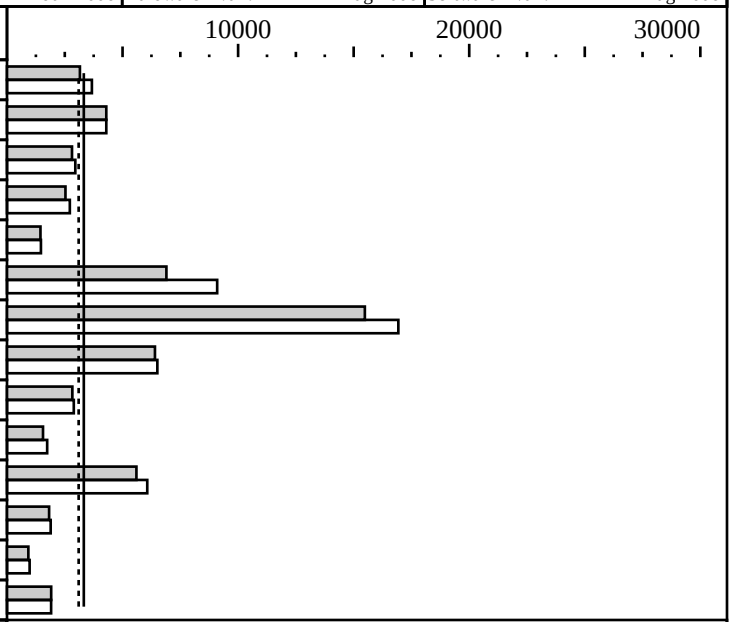
IBM IntelliStation POWER 285 Workstation (2100 MHz, 1 CPU)

SPECfp2000 = 3324

SPECfp_base2000 = 3100

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	50.7	3155	43.6	3673
171.swim	3100	72.2	4296	72.2	4296
172.mgrid	1800	64.0	2812	60.9	2956
173.applu	2100	83.0	2530	77.2	2719
177.mesa	1400	96.7	1448	95.4	1468
178.galgel	2900	42.0	6897	31.9	9094
179.art	2600	16.8	15484	15.4	16933
183.equake	1300	20.3	6402	20.0	6506
187.facerec	1900	67.2	2828	65.7	2890
188.ammp	2200	141	1558	127	1738
189.lucas	2000	35.7	5600	33.0	6069
191.fma3d	2100	115	1822	111	1890
200.sixtrack	1100	119	924	112	979
301.apsi	2600	136	1912	136	1909



Hardware

CPU:	POWER5+
CPU MHz:	2100
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 2 cores/chip (SMT off)
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 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.
 One core was deconfigured and SMT disabled using the AIX commands
      smtctl -m off -w boot
      bosboot -aD
      shutdown -rF
      drmgr -r -c cpu
```