CFP2000 Result

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IBM Corporation

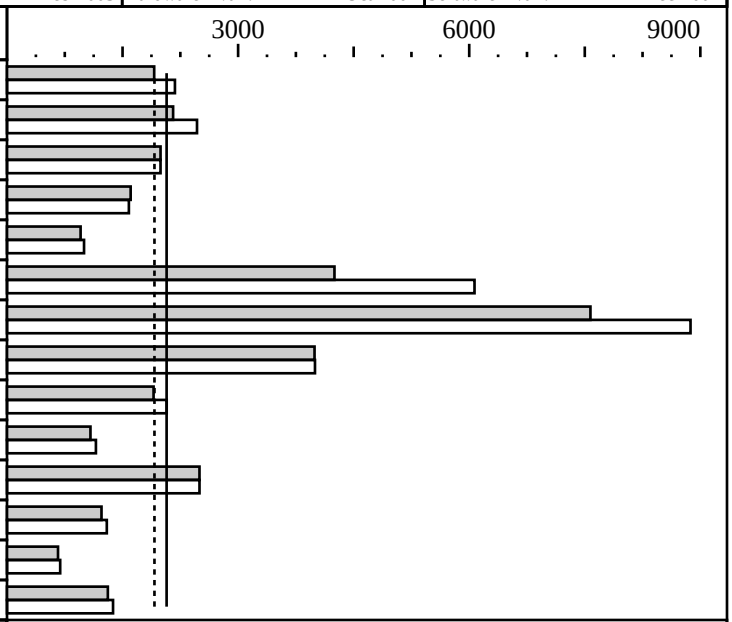
IBM eServer p5 550 Express (1500 MHz, 1 CPU)

SPECfp2000 = 2072

SPECfp_base2000 = 1914

SPEC license #: 11 | Tested by: IBM | Test date: Feb-2005 | Hardware Avail: Oct-2004 | Software Avail: Dec-2004

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	83.7	1911	73.4	2180
171.swim	3100	144	2156	126	2466
172.mgrid	1800	90.3	1993	90.3	1993
173.applu	2100	131	1605	133	1582
177.mesa	1400	147	955	140	1000
178.galgel	2900	68.2	4251	47.8	6069
179.art	2600	34.3	7573	29.3	8873
183.equake	1300	32.6	3992	32.5	3998
187.facerec	1900	99.9	1903	91.7	2073
188.ammp	2200	203	1083	191	1154
189.lucas	2000	80.0	2499	80.0	2499
191.fma3d	2100	171	1227	162	1296
200.sixtrack	1100	166	662	159	690
301.apsi	2600	199	1309	189	1377



Hardware

CPU:	POWER5
CPU MHz:	1500
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 2 cores/chip (SMT off)
CPU(s) orderable:	2,4
Parallel:	No
Primary Cache:	64KBI+32KBD (on-chip)
Secondary Cache:	1920KB unified (on-chip)
L3 Cache:	36MB unified (off-chip)/DCM, 2 DCM/SUT
Other Cache:	None
Memory:	16x2GB
Disk Subsystem:	1x73GB SCSI, 15K RPM
Other Hardware:	None

Software

Operating System:	AIX 5L V5.3
Compiler:	XL C/C++ Enterprise Edition V7.0 for AIX XL Fortran Enterprise Edition V9.1 for AIX Other Software: ESSL V4.2 for AIX
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 -blpdata -lmass
  C:          -qpdf1/pdf2
              -O5 -blpdata -qalign=natural

Peak Optimization Flags
  168.wupwise:  -q64 -O5 -blpdata -lmass -qalign=struct=natural -qfdpr
                fdpr -q -O3
  171.swim:     F77=xlf
              -q64 -O5 -qarch=pwr3 -qtune=pwr3 -blpdata -lmass -qalign=struct=natural -qfdpr
                fdpr -q -O3
  172.mgrid:    basepeak=1
```

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Notes/Tuning Information (Continued)

```
  173.applu:    F77=xlf
                -q64 -O5 -blpdata -qalign=struct=natural -qfdpr
                fdpr -q -O3
  177.mesa:     -qpdf1/pdf2
                -O3 -qarch=auto -qtune=auto -qipa=level=2
  178.galgel:   -O5 -blpdata -lmass -qessl -lessl -qfdpr
                fdpr -q -O3
  179.art:      -O5 -lhmu -blpdata -lmass
  183.equake:   -qpdf1/pdf2
                -O5 -blpdata -lmass -qipa=partition=large -qmaxmem=-1
  187.facerec:  -O5 -blpdata -lmass -qfdpr
                fdpr -q -O3
  188.ammp:     -qpdf1/pdf2
                -q64 -O5 -blpdata -qalign=natural
  189.lucas:    -O5 -blpdata -lmass
  191.fma3d:    -O5 -blpdata -qfdpr -qalign=struct=natural
                fdpr -q -O3
  200.sixtrack: -O5 -blpdata -lmass -qfdpr
                fdpr -q -O3
  301.apsi:     -O5 -blpdata -lmass -qessl -lessl -qsave

APAR IY62267 was applied to AIX 5L V5.3 to achieve Mantainence Level 1.
November 2004 PTF was applied to XL C/C++ Enterprise Edition V7.0.
November 2004 PTF was applied to XL Fortran Enterprise Edition V9.1.

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.

C:           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 xlf90

ulimits set to unlimited.
Large page mode and memory affinity were set as follows:
    vmo -r -o lgpg_regions=800 -o lgpg_size=16777216 -o memory_affinity=1
    chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
    reboot -q
    export MEMORY_AFFINITY=MCM
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-20050208-AIX.txt.
```