CFP2000 Result

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IBM Corporation

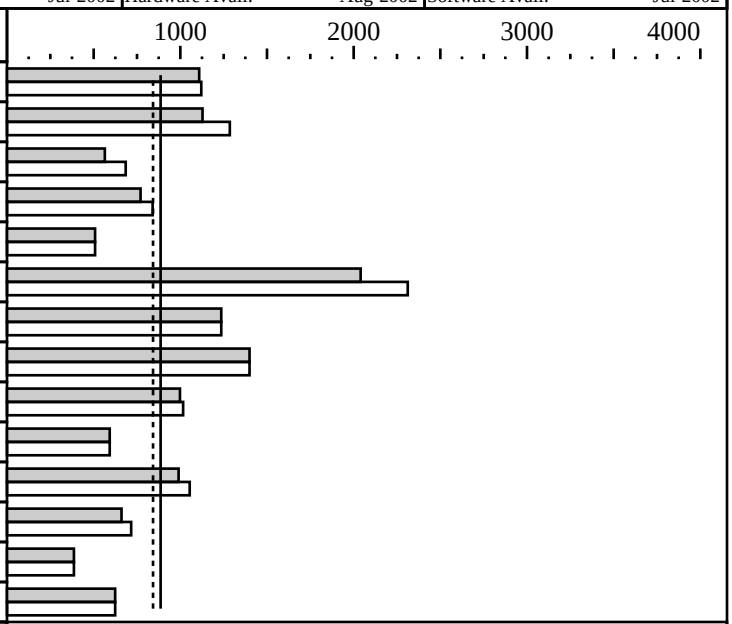
IBM eServer pSeries 630 Model 6E4 (1000 MHz, 1 CPU)

SPECfp2000 = 886

SPECfp_base2000 = 843

SPEC license #: 11 | Tested by: IBM, Austin, TX | Test date: Jul-2002 | Hardware Avail: Aug-2002 | Software Avail: Jul-2002

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	144	1109	143	1121
171.swim	3100	275	1128	241	1285
172.mgrid	1800	319	564	263	685
173.applu	2100	273	771	250	840
177.mesa	1400	276	508	276	508
178.galgel	2900	142	2040	125	2312
179.art	2600	210	1236	210	1236
183.equake	1300	92.9	1399	92.9	1399
187.facerec	1900	190	998	187	1016
188.ammp	2200	371	593	371	593
189.lucas	2000	202	990	190	1054
191.fma3d	2100	318	661	293	716
200.sixtrack	1100	285	386	285	386
301.apsi	2600	417	624	417	624



Hardware

CPU:	POWER4
CPU MHz:	1000
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 2 cores/chip, 1 chip/SCM
CPU(s) orderable:	1,2,4 (order by # cores)
Parallel:	No
Primary Cache:	64KBI+32KBD (on chip) per core
Secondary Cache:	1440KB unified (on chip) per chip
L3 Cache:	32MB unified (off chip)/SCM, 1SCM in SUT
Other Cache:	None
Memory:	4GB
Disk Subsystem:	1x18.2GB SCSI
Other Hardware:	None

Software

Operating System:	AIX 5L V5.1
Compiler:	IBM VisualAge C++ for AIX, Version 6.0 IBM XL FORTRAN for AIX, Version 7.1.1.1 Other Software: ESSL 3.3, MASS 2.7
File System:	AIX/JFS
System State:	Multi-user

Notes/Tuning Information

```
Portability Flags:
  -qfixed used in: wupwise, swim, mgrid, applu, galgel,
   sixtrack, apsi
  -qsuffix=f=f90 used in: galgel, facerec, lucas, fma3d
Base Optimization Flags:
  C:       -O5 -qalign=natural -blpdata -lmass
  Fortran: -O5 -qalign=natural -blpdata -lmass
Floating Point Peak Flags:
168.wupwise
  fdpr -v -R3
  -O5 -lmass -blpdata
171.swim
  -O4 -q64 -blpdata
172.mgrid
  -O3 -qarch=pwr3 -qtune=pwr3 -lmass -qhot -qalign=natural -blpdata
173.applu
  -O3 -qarch=pwr3 -qtune=pwr3 -lmass -qhot -blpdata
```

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Notes/Tuning Information (Continued)

```
177.mesa
  BASEPEAK = 1
178.galgel
  -qpdf1/pdf2
  fdpr -v -R3
  -O5 -qalign=natural -qessl -lessl -lmass -blpdata
  PDFDIR          = /tmp/pdfdirtwo
179.art
  BASEPEAK = 1
183.equake
  BASEPEAK = 1
187.facerec
  fdpr -v -R3
  -O5 -lmass -blpdata
188.ammp
  BASEPEAK = 1
189.lucas
  -O3 -q64 -blpdata
191.fma3d
  -O4 -qarch=pwr3 -qtune=pwr3 -lmass -qipa=partition=large -qalign=natural -blpdata
200.sixtrack
  BASEPEAK = 1
301.apsi
  BASEPEAK = 1

  SCM: Acronym for "Single-Chip Module"
  SUT: Acronym for "System Under Test"

  fpdr: Feedback directed program restructuring tool.
  /usr/spec2000 filesystem mounted with no JFS log file I/O.
  APAR IY31315 was applied to AIX to enable new hardware support.
  ulimits set to unlimited.
  Fortran 77 and 90: IBM XL Fortran 7.1.1.1 for AIX invoked as xlf90.
  C: IBM VAC++ invoked as xlc.
  Large page mode and memory affinity were set as follows:
  vmtune -g 16777216 -L 200 -y1
  chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
```