CFP2000 Result

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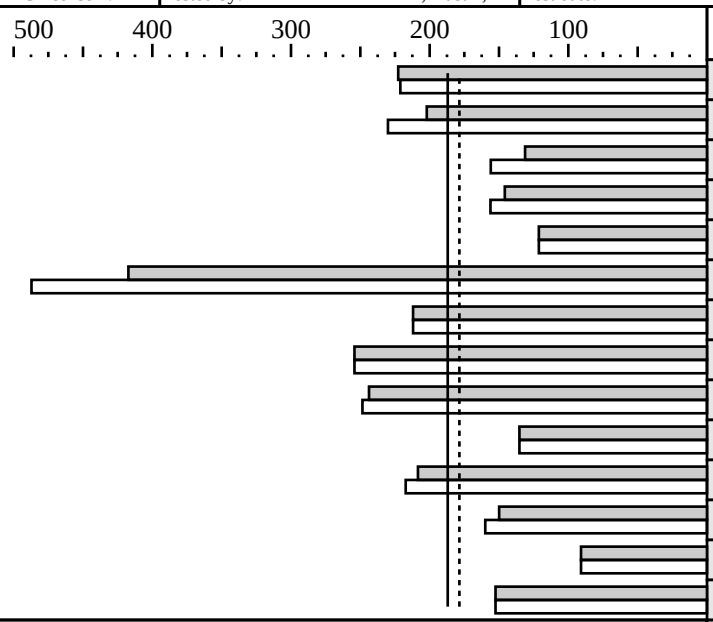
IBM Corporation

IBM eServer pSeries 690 HPC (1300 MHz, 16 CPU)

SPECfp_rate2000 = 187

SPECfp_rate_base2000 = 179

SPEC license #: 11 | Tested by: IBM, Austin, TX | Test date: Jun-2002 | Hardware Avail: Dec-2001 | Software Avail: Sep-2002



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	16	133	223	16	134	221
171.swim	16	285	202	16	250	230
172.mgrid	16	255	131	16	214	156
173.applu	16	267	146	16	250	156
177.mesa	16	214	121	16	214	121
178.galgel	16	129	417	16	110	487
179.art	16	228	212	16	228	212
183.equake	16	94.9	254	16	94.9	254
187.facerec	16	145	244	16	142	248
188.ammp	16	302	135	16	302	135
189.lucas	16	178	208	16	171	217
191.fma3d	16	260	150	16	244	160
200.sixtrack	16	225	90.8	16	225	90.8
301.apsi	16	316	153	16	316	153

Hardware

CPU:	POWER4
CPU MHz:	1300
FPU:	Integrated
CPU(s) enabled:	16 cores, 16 chips, 1 core/chip, 4 chips/MCM
CPU(s) orderable:	8,16 (order by # cores)
Parallel:	No
Primary Cache:	64KBI+32KBD (on chip) per core
Secondary Cache:	1440KB unified (on chip) per chip
L3 Cache:	128MB unified (off-chip) per MCM, 4 MCMs in SUT (4 chips per MCM)
Other Cache:	None
Memory:	128 GB
Disk Subsystem:	1X16GB 1X8GB
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
```

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Notes/Tuning Information (Continued)

```
172.mgrid
  -O3 -qarch=pwr3 -qtune=pwr3 -lmass -qhot -qalign=natural -blpdata
173.applu
  -O3 -qarch=pwr3 -qtune=pwr3 -lmass -qhot -blpdata
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

  fpdr: Feedback directed program restructuring tool.
  /usr/spec2000 filesystem mounted with no JFS log file I/O.
  APAR IY 28102 was applied to AIX to enable new hardware support.
  ulimits set to unlimited.
  Fortran 77 and 90: IBM XL Fortran 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 1024 -y1

MCM = Multi-chip Module
SUT = System under Test
```