CFP2000 Result

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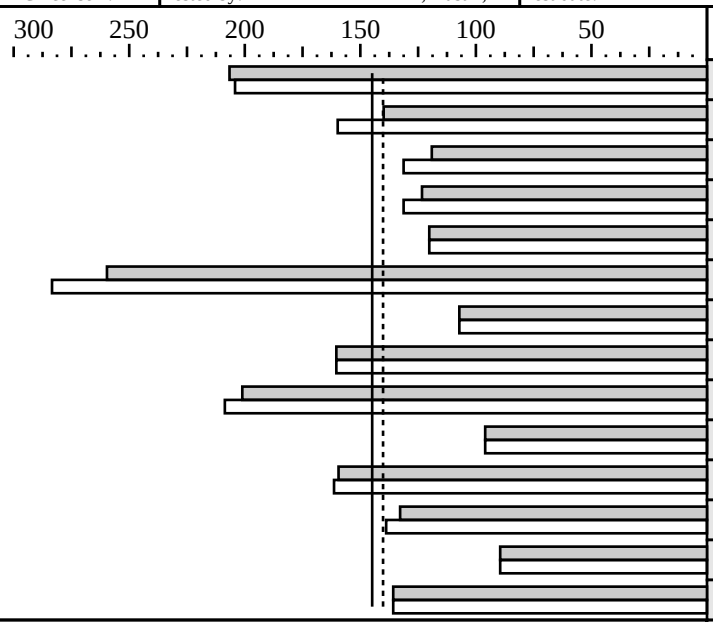
IBM Corporation

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

SPECfp_rate2000 = 145

SPECfp_rate_base2000 = 140

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	144	207	16	145	204
171.swim	16	411	140	16	360	160
172.mgrid	16	281	119	16	254	131
173.applu	16	316	123	16	297	131
177.mesa	16	216	120	16	216	120
178.galgel	16	207	260	16	190	283
179.art	16	450	107	16	450	107
183.equake	16	150	160	16	150	160
187.facerec	16	175	201	16	169	209
188.ammp	16	425	96.0	16	425	96.0
189.lucas	16	233	159	16	230	161
191.fma3d	16	294	133	16	281	139
200.sixtrack	16	228	89.5	16	228	89.5
301.apsi	16	355	136	16	355	136

Hardware

CPU:	POWER4
CPU MHz:	1300
FPU:	Integrated
CPU(s) enabled:	16 cores, 8 chips, 2 cores/chip, 4 chips/MCM
CPU(s) orderable:	1,2,3,4 (order by # MCM)
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, 2 MCMs in SUT (4 chips per MCM)
Other Cache:	None
Memory:	64 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
```