CFP2000 Result

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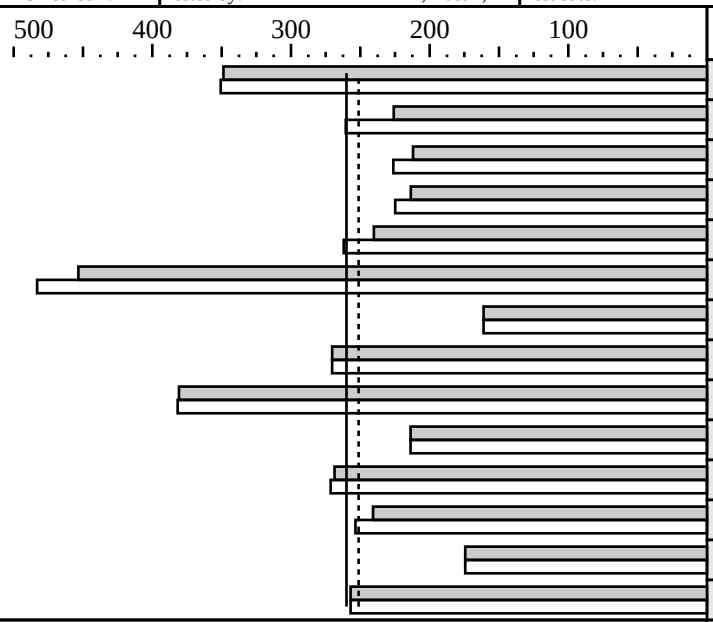
IBM Corporation

IBM eServer pSeries 690 Turbo (1300 MHz, 32 CPU)

SPECfp_rate2000 = 260

SPECfp_rate_base2000 = 251

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	32	170	349	32	169	351
171.swim	32	509	226	32	442	261
172.mgrid	32	315	212	32	295	226
173.applu	32	365	214	32	347	225
177.mesa	32	216	240	32	198	262
178.galgel	32	237	453	32	223	483
179.art	32	599	161	32	599	161
183.equake	32	179	270	32	179	270
187.facerec	32	185	381	32	185	382
188.ammp	32	382	214	32	382	214
189.lucas	32	276	269	32	274	271
191.fma3d	32	324	241	32	307	254
200.sixtrack	32	234	174	32	234	174
301.apsi	32	375	257	32	375	257

Hardware

CPU:	POWER4
CPU MHz:	1300
FPU:	Integrated
CPU(s) enabled:	32 cores, 16 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)/MCM, 4MCM in SUT
Other Cache:	None
Memory:	128GB
Disk Subsystem:	1x9.1GB, 1x18.2GB SCSI
Other Hardware:	None

Software

Operating System:	AIX 5L V5.1
Compiler:	IBM XL FORTRAN for AIX, Version 7.1.1.1 IBM VisualAge C++ for AIX, Version 6.0 BETA 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:
  Fortran: -O5 -qalign=natural -blpdata -lmass
  C:       -O5 -qalign=natural -blpdata -lmass
Peak Optization Flags:
  168.wupwise: -O5 -lmass -blpdata, fdpr -v -R3
  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
  177.mesa:    -O5 -lmass -lhmu -qalign=natural -q64
  178.galgel:  -O5 -qpdf1/pdf2 -lessl -lmass
               -qalign=natural -qessl -blpdata, fdpr -v -R3
  179.art:     basepeak=1
```

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Notes/Tuning Information (Continued)

```
183.equake:  basepeak=1
187.facerec: -O5 -lmass -blpdata, fdpr -v -R3
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/scratch/spec2000 filesystem mounted with no JFS log file I/O
APAR IY28102 was applied to AIX 5L V5.1 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 for Fortran 90 and as xlf for Fortran 77
C: IBM VAC++ invoked as xlc
The final version of the compiler will be available by Dec-2002.
Large page mode and memory affinity were set as follows:
vmtune -g 16777216 -L 1024 -y1.
SUT was operated in Standard Operation mode
```