CFP2000 Result

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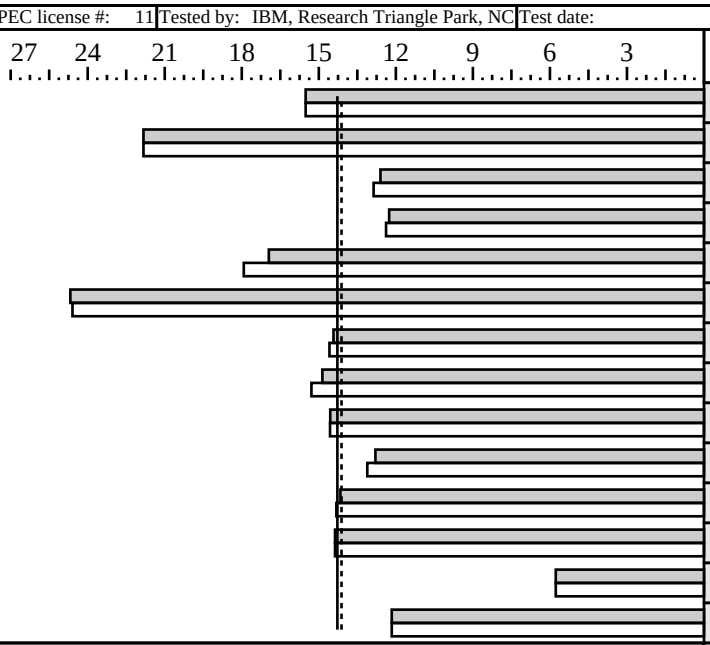
IBM

eServer 325, 2.0 GHz Opteron, 64-bit pgi, SuSE SLES8 Linux

SPECfp_rate2000 = 14.3

SPECfp_rate_base2000 = 14.1

SPEC license #: 11 | Tested by: IBM, Research Triangle Park, NC | Test date: Sep-2003 | Hardware Avail: Oct-2003 | Software Avail: Jul-2003



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	1	120	15.5	1	120	15.5
171.swim	1	165	21.8	1	165	21.8
172.mgrid	1	166	12.6	1	162	12.9
173.applu	1	199	12.3	1	197	12.4
177.mesa	1	95.8	16.9	1	90.6	17.9
178.galgel	1	136	24.7	1	137	24.6
179.art	1	209	14.4	1	207	14.6
183.equake	1	101	14.9	1	98.6	15.3
187.facerec	1	151	14.6	1	151	14.6
188.ammp	1	199	12.8	1	195	13.1
189.lucas	1	164	14.2	1	162	14.3
191.fma3d	1	170	14.4	1	170	14.4
200.sixtrack	1	221	5.77	1	221	5.77
301.apsi	1	248	12.2	1	248	12.2

Hardware

CPU:	AMD Opteron 246
CPU MHz:	2000
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 1 core/chip
CPU(s) orderable:	1,2
Parallel:	No
Primary Cache:	64KBI + 64KBD on chip
Secondary Cache:	1024KB(I+D) on chip
L3 Cache:	N/A
Other Cache:	N/A
Memory:	4x512MB PC2700 Reg ECC DDR SDRAM CL2.5
Disk Subsystem:	1 x 40GB IDE
Other Hardware:	None

Software

Operating System:	SuSE Linux 8.0 SLES 64 bit Kernel 2.4.19-249 (SP2)
Compiler:	PGI Fortran 5.0-1 and SuSE gcc33 optional compiler (from SLES8 SP2)
File System:	Linux/reiserfs
System State:	Multi-user SuSE Run level 5

Notes/Tuning Information

```
Tested by IBM Corporation
  pgf90 is the PGI Fortran compiler
  gcc is the SuSE optional gcc33 package C compiler (from SLES8 SP2)
  +FDO: PASS1=-fprofile-arcs PASS2=-fbranch-probabilities
  ONESTEP is used for all base and peak runs
  Portability:
    178.galgel:     -Mfixed
  Baseline Fortran: pgf90 -fastsse -Mipa=fast
  Baseline C:       gcc -O3 -funroll-all-loops +FD0
  Peak tuning:
    168.wupwise:    basepeak=true
    171.swim:       basepeak=true
    172.mgrid:      -fast -Mipa=fast
    173.applu:      -fast -Mipa=fast
    177.mesa:       -O3 -funroll-all-loops -finline-limit=2000 +FDO
    178.galgel:     -fastsse -Mipa=fast -O3
    179.art:        -O3 -funroll-all-loops -ffast-math -finline-limit=1500 +FDO
```

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Notes/Tuning Information (Continued)

```
    183.equake:     -O3 -funroll-all-loops -ffast-math -finline-limit=2000
    187.facerec:    -fastsse -Mipa=fast -O3
    188.ammp:       -O3 -funroll-all-loops -ffast-math -finline-limit=2000 +FDO
    189.lucas:      -fastsse -Mipa=fast -Mnosmart
    191.fma3d:      basepeak=true
    200.sixtrack:   basepeak=true
    301.apsi:       basepeak=true
  Set the following BIOS parameters:
    DRAM Interleave = AUTO
```