CFP2000 Result

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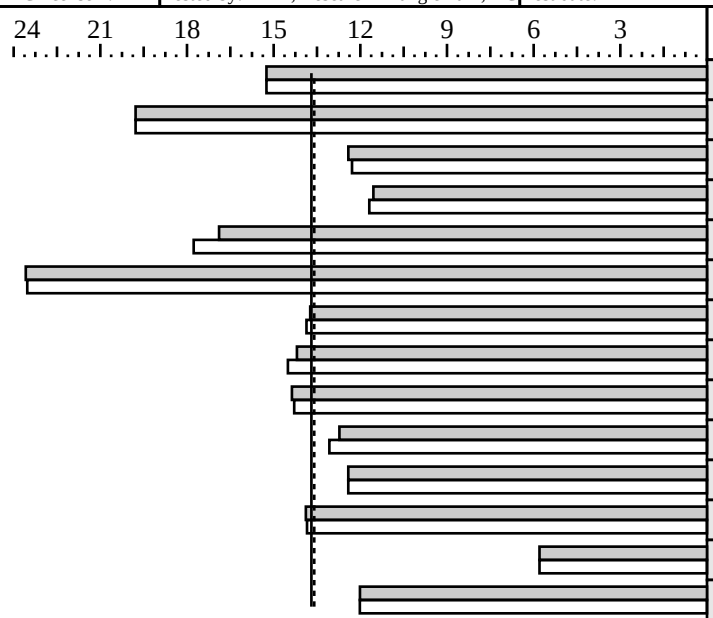
IBM Corporation

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

SPECfp_rate2000 = 13.7

SPECfp_rate_base2000 = 13.6

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	1	122	15.2	1	122	15.2
171.swim	1	182	19.8	1	182	19.8
172.mgrid	1	168	12.4	1	170	12.3
173.applu	1	211	11.5	1	208	11.7
177.mesa	1	96.2	16.9	1	91.4	17.8
178.galgel	1	143	23.6	1	143	23.5
179.art	1	220	13.7	1	218	13.9
183.equake	1	106	14.2	1	104	14.5
187.facerec	1	153	14.4	1	154	14.3
188.ammp	1	201	12.7	1	195	13.1
189.lucas	1	187	12.4	1	187	12.4
191.fma3d	1	175	13.9	1	176	13.8
200.sixtrack	1	220	5.80	1	220	5.80
301.apsi	1	251	12.0	1	251	12.0

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:	2 x 512MB PC2700 Reg ECC DDR SDRAM CL2.5
Disk Subsystem:	1 x 36GB 10Krpm SCSI
Other Hardware:	None

Software

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

Notes/Tuning Information

```
+FDO: PASS1=-fprofile-arcs PASS2=-fbranch-probabilities
fdo_pre0 = rm -f *.da *.life analyz_prbrob.out
pgf90 is the PGI Fortran compiler
gcc is the SuSE optional gcc33 package C compiler (from SLES8 SP2)
Portability:
  178.galgel:     -Mfixed
Baseline: C       -O3 -funroll-all-loops +FD0
Baseline: Fortran pgf90 -fastsse  -Mipa=fast
Peak tuning:
  168.wupwise:    basepeak=true
  171.swim:       basepeak=true
  172.mgrid:      pgf90 -fast -Mipa=fast
  173.applu:      pgf90 -fast -Mipa=fast
  177.mesa:       gcc -O3 -finline-limit=2000 -funroll-all-loops +FDO
  178.galgel:     pgf90 -fastsse -Mipa=fast,align
  179.art:        gcc -O3 -funroll-all-loops -ffast-math -finline-limit=1500 +FDO
  183.equake:     gcc -O3 -funroll-all-loops -ffast-math -finline-limit=2000
```

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Notes/Tuning Information (Continued)

```
    187.facerec:    pgf90 -fastsse -Mipa=fast,align
    188.ammp:       gcc -O3 -funroll-all-loops -ffast-math -finline-limit=2000 +FDO
    189.lucas:      basepeak=true
    191.fma3d:      pgf90 -fastsse -Mipa=fast -Mnosmart
    200.sixtrack:   basepeak=true
    301.apsi:       pgf90 -fastsse -Mipa=fast -O3
  ONESTEP is used for all base and peak runs
  Only 1 CPU installed in system
  Set the following BIOS parameters
  BIOS: M1E108AUS 07/14/03
    DRAM Interleave = AUTO
    Node Interleave = AUTO
    ACPI SRAT       = Disabled
```