CFP2000 Result

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IBM Corporation

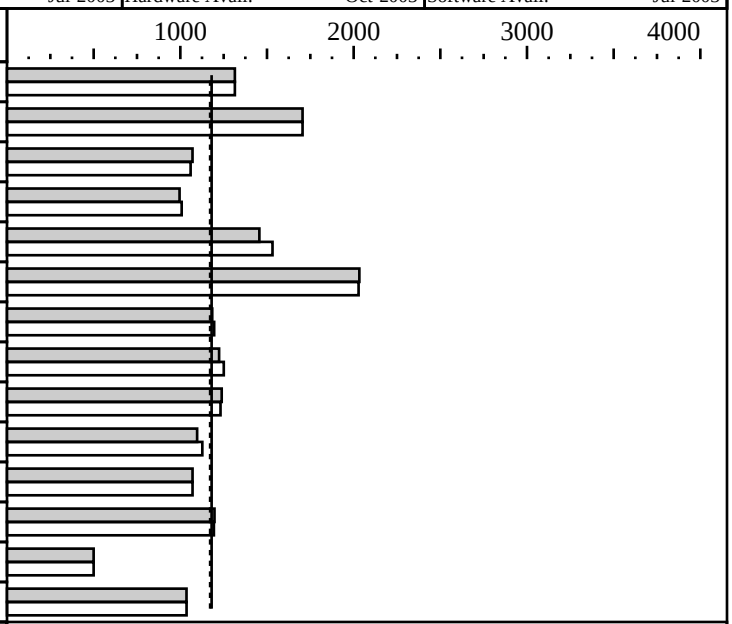
eServer 325, 2.0 GHz Opteron, 64-bit PGI, SuSE SLES8 Linux

SPECfp2000 = 1180

SPECfp_base2000 = 1172

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	122	1315	122	1315
171.swim	3100	182	1705	182	1705
172.mgrid	1800	168	1070	170	1059
173.applu	2100	211	996	208	1008
177.mesa	1400	96.2	1456	91.4	1532
178.galgel	2900	143	2033	143	2028
179.art	2600	220	1184	218	1195
183.equake	1300	106	1224	104	1251
187.facerec	1900	153	1239	154	1232
188.ammp	2200	201	1097	195	1127
189.lucas	2000	187	1070	187	1070
191.fma3d	2100	175	1197	176	1194
200.sixtrack	1100	220	500	220	500
301.apsi	2600	251	1036	251	1036



Hardware

CPU:	AMD Opteron (TM)
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 38GB 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
```