CFP2000 Result

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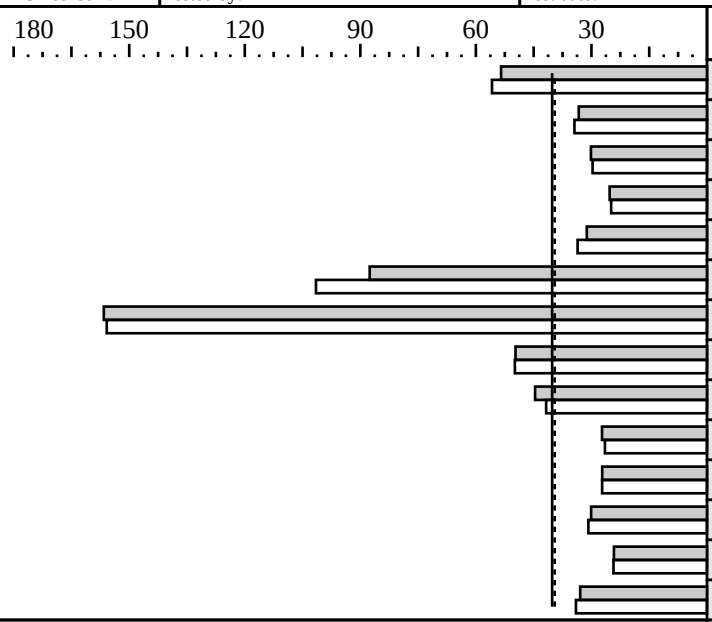
IBM Corporation

IBM eServer OpenPower 710 (1650MHz, 2 CPU, Linux)

SPECfp_rate2000 = 40.2

SPECfp_rate_base2000 = 39.5

SPEC license #: 11 | Tested by: IBM | Test date: Jan-2005 | Hardware Avail: Feb-2005 | Software Avail: Oct-2004



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	139	53.5	4	133	55.8
171.swim	4	432	33.3	4	418	34.4
172.mgrid	4	277	30.1	4	281	29.7
173.applu	4	386	25.3	4	392	24.9
177.mesa	4	208	31.2	4	193	33.6
178.galgel	4	154	87.6	4	133	102
179.art	4	77.0	157	4	77.4	156
183.equake	4	121	49.7	4	121	49.9
187.facerec	4	198	44.6	4	211	41.8
188.ammp	4	374	27.3	4	385	26.5
189.lucas	4	341	27.2	4	341	27.2
191.fma3d	4	324	30.1	4	316	30.8
200.sixtrack	4	211	24.2	4	210	24.3
301.apsi	4	366	32.9	4	355	34.0

Hardware

CPU:	POWER5
CPU MHz:	1650
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip (SMT on)
CPU(s) orderable:	1,2
Parallel:	No
Primary Cache:	64KBI+32KBD (on chip)/core
Secondary Cache:	1920KB unified (on chip)/chip
L3 Cache:	36MB unified (off-chip)/DCM, 1 DCM/SUT
Other Cache:	none
Memory:	8x4 GB
Disk Subsystem:	1X73GB SCSI, 15K RPM
Other Hardware:	none

Software

Operating System:	SUSE LINUX Enterprise Server 9 for IBM POWER
Compiler:	XL Fortran Enterprise Edition Version 9.1 for Linux XL C/C++ Enterprise Edition Version 7.0 for Linux
Other Software:	IBM ESSL for Linux on Power, Version 4 Release 2
File System:	ext2
System State:	Multi-user, run level 3

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 -qpdf1/pdf2
  Fortran:
  -O5 -qpdf1/pdf2

Floating Point Peak Flags
168.wupwise
-O5 -qarch=pwr3 -qtune=pwr3
171.swim
-O3 -qarch=pwr5 -qtune=pwr5 -qhot
172.mgrid
```

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Notes/Tuning Information (Continued)

```
    -O4 -qarch=pwr4 -qtune=pwr4
    173.applu
    -O5 -qarch=pwr5 -qtune=pwr5
    177.mesa:  -qpdf1/pdf2
     -O4 -qarch=pwr4 -qtune=pwr4
    178.galgel
    -O5 -qessl -lessl
   "F77 invoked as xlf_r"
    179.art:
    -O5 -qarch=pwr5 -qtune=pwr5
    183.equake
    -O5 -qarch=pwr5 -qtune=pwr5
    187.facerec:  -qpdf1/pdf2
    -O3 -qarch=pwr5 -qtune=pwr5 -qhot
    188.ammp
    -O3 -qarch=pwr4 -qtune=pwr4
    189.lucas
    -O3 -qarch=pwr5 -qtune=pwr5
    191.fma3d:  -qpdf1/pdf2
    -O4 -qarch=pwr5 -qtune=pwr5
    200.sixtrack
    -O3 -qarch=pwr5 -qtune=pwr5
    301.apsi
    -O5 -qarch=pwr5 -qtune=pwr5 -qessl -lessl
         "F77 invoked as xlf_r"

    Stack size set to unlimited using the command "ulimit -s unlimited"
    cleanpdf used with -qpdf1/pdf2 to erase the information in the PDF directory if any
         exists to ensure no feedback information is reused between compilations.
    C: invoked as xlc
    Fortran 77 and 90: Fortran for Linux invoked as xlf90
    ESSL: Engineering and Scientific Subroutine Library
    SMT: Acronym for "Simultaneous Multi-Threading". A processor technology that allows
         the simultaneous execution of multiple thread contexts within a single processor
         core. (Enabled by default)
    DCM: Acronym for "Dual-Chip Module" (one dual-core processor chip + one L3-cache chip)
    SUT: Acronym for "System Under Test"
    Flag file: IBM-20040817-Linux.txt
```