CFP2000 Result

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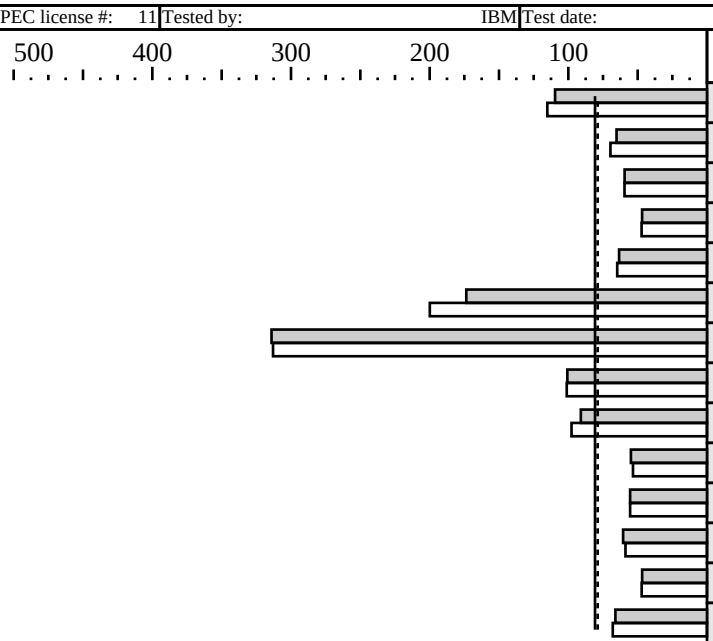
IBM Corporation

IBM eServer OpenPower 720 (1650 MHz, 4CPU, Linux)

SPECfp_rate2000 = 80.8

SPECfp_rate_base2000 = 78.8

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	8	136	110	8	129	115
171.swim	8	441	65.2	8	413	69.6
172.mgrid	8	281	59.4	8	281	59.5
173.applu	8	416	46.8	8	413	47.2
177.mesa	8	205	63.4	8	201	64.7
178.galgel	8	155	174	8	135	200
179.art	8	76.8	314	8	77.1	313
183.equake	8	120	101	8	119	101
187.facerec	8	194	91.0	8	180	97.7
188.ammp	8	372	54.9	8	383	53.4
189.lucas	8	335	55.4	8	335	55.4
191.fma3d	8	322	60.5	8	331	58.8
200.sixtrack	8	218	46.8	8	217	47.1
301.apsi	8	365	66.1	8	355	68.0

Hardware

CPU:	POWER5
CPU MHz:	1650
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip (SMT on)
CPU(s) orderable:	2,4
Parallel:	No
Primary Cache:	64KBI+32KBD (on chip)/core
Secondary Cache:	1920KB unified (on chip)/chip
L3 Cache:	36MB unified (off chip)/DCM, 2 DCM/SUT
Other Cache:	None
Memory:	16x1 GB
Disk Subsystem:	1X72GB 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, Version 4 Release 2
File System:	ReiserFS
System State:	Single-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:
  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 -q64 -qarch=pwr4 -qtune=pwr4
    177.mesa:  -qpdf1/pdf2
    -O4 -qarch=pwr4 -qtune=pwr4
    178.galgel
    -O5 -qessl -lessl
    "FC 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"

    C: invoked as cc except where noted 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"
    Stack size set to unlimited using the command "ulimit -s unlimited"

  Submitted_by: Kevin Lu <kevinlu@us.ibm.com>
  Submitted: Mon Oct 18 22:24:01 2004
  Submission: cpu2000-20041018-03449.sub
```