CFP2000 Result

IBM Corporation

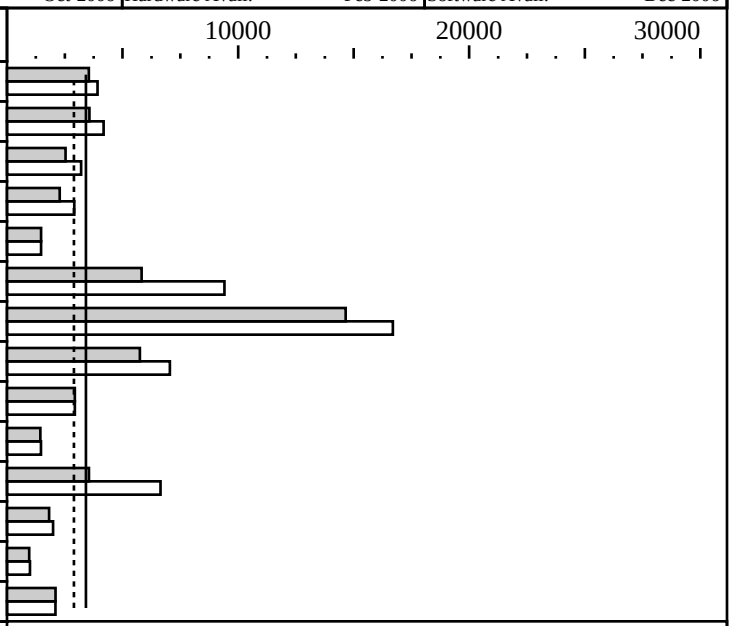
IBM System p5 575 (2200 Mhz, 1 CPU, SLES)

SPECfp2000 = 3418

SPECfp_base2000 = 2896

SPEC license #: 11 | Tested by: IBM Austin | Test date: Oct-2006 | Hardware Avail: Feb-2006 | Software Avail: Dec-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	45.2	3542	40.8	3918
171.swim	3100	86.9	3567	74.2	4180
172.mgrid	1800	71.0	2534	56.1	3208
173.applu	2100	92.0	2281	72.1	2911
177.mesa	1400	95.0	1474	95.0	1474
178.galgel	2900	49.8	5824	30.8	9408
179.art	2600	17.7	14652	15.6	16697
183.equake	1300	22.6	5749	18.4	7048
187.facerec	1900	64.7	2935	64.7	2935
188.ammp	2200	152	1444	150	1470
189.lucas	2000	56.4	3545	30.1	6643
191.fma3d	2100	115	1822	105	1994
200.sixtrack	1100	115	961	111	994
301.apsi	2600	124	2100	124	2096



Hardware

CPU:	POWER5+
CPU MHz:	2200
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 1 core/chip (SMT off)
CPU(s) orderable:	8,16 core
Parallel:	No
Primary Cache:	64 KB I + 32 KB D on chip per core
Secondary Cache:	1920 KB I+D on chip per chip
L3 Cache:	36 MB unified off chip per chip
Other Cache:	None
Memory:	64 GB (32x2GB)
Disk Subsystem:	1x73GB SCSI, 15K RPM
Other Hardware:	

Software

Operating System:	SLES SUSE Linux Enterprise Server 10 (ppc) VERSION = 10 w/2.6.16.21-0.8-ppc64 Linux kernel
Compiler:	IBM XL C/C++ Advanced Edition V8.0.1 for Linux IBM XL Fortran Advanced Edition V10.1.1 for Linux
	Other software: - IBM Engineering and Scientific Subroutine Library (ESSL) for Linux - Version 4.2.5
File System:	reiserfs
System State:	Multi-User

Notes/Tuning Information

```
+FDO
    Feedback directed optimization enabled by:  PASS1=-qpdf1  PASS2=-qpdf2

FP compilers
   C: invoked as xlc
   Fortran 77 and Fortran 90: invoked as xlf90, except as noted below

FP Portability Flags
  -qfixed used in:        168.wupwise, 171.swim, 172.mgrid, 173.applu,
                          178.galgel, 200.sixtrack, 301.apsi
  -qsuffix=f=f90 used in: 178.galgel, 187.facerec, 189.lucas, 191.fma3d

FP Base Optimization Flags:
  C:       +FDO -O5
  Fortran: +FDO -O5
```

Notes/Tuning Information (Continued)

```
Floating Point Peak Flags

168.wupwise
    +FDO -O5 -qsave -lmass
    -B/usr/share/libhugetlbfs/ -tl -Wl,--hugetlbfs-link=BDT
171.swim
    +FDO -O5
    -B/usr/share/libhugetlbfs/ -tl -Wl,--hugetlbfs-link=BDT
172.mgrid
    +FDO -O4 -q64
    -B/usr/share/libhugetlbfs/ -tl -Wl,--hugetlbfs-link=BDT
173.applu
    +FDO -O5 -q64
    -B/usr/share/libhugetlbfs/ -tl -Wl,--hugetlbfs-link=BDT
177.mesa
    basepeak=1
178.galgel
    Fortran invoked as xlf90_r
    +FDO -O5 -qessl -lessl -lmass
    -B/usr/share/libhugetlbfs/ -tl -Wl,--hugetlbfs-link=BDT
179.art
    +FDO -O5
    -B/usr/share/libhugetlbfs/ -tl -Wl,--hugetlbfs-link=BDT
183.equake
    +FDO -O5
    -B/usr/share/libhugetlbfs/ -tl -Wl,--hugetlbfs-link=BDT
187.facerec
    basepeak=1
188.ammp
    +FDO -O3 -qalign=linuxppc
189.lucas
    +FDO -O3 -qarch=auto -qtune=auto
    -B/usr/share/libhugetlbfs/ -tl -Wl,--hugetlbfs-link=BDT
191.fma3d
    +FDO -O5
    -B/usr/share/libhugetlbfs/ -tl -Wl,--hugetlbfs-link=BDT
200.sixtrack
    +FDO -O3 -qarch=auto -qtune=auto
    -B/usr/share/libhugetlbfs/ -tl -Wl,--hugetlbfs-link=BDT
301.apsi
    Fortran invoked as xlf90_r
    +FDO -O5 -qessl
    -B/usr/share/libhugetlbfs/ -tl -Wl,--hugetlbfs-link=BDT
    extra_libs = -lessl


System Settings:
-- ulimit stack size set to unlimited


SMT: Acronym for 'Simultaneous Multi-Threading'.  A processor technology that allows
     the simultaneous execution of multiple thread contexts within a single processor
     core. SMT is enabled by default.

Large pages reserved as follows by root user:
    echo 30 > /proc/sys/vm/nr_hugepages
```

Notes/Tuning Information (Continued)

```
System configured with libhugetlbfs library for application access to large pages
Environment variables set as follows:
    export HUGETLB_MORECORE=yes

Linux booted with the options:
       maxcpus=1 smt-enabled=off

Each process was bound to a cpu using submit= with the taskset command
   submit = taskset -p -c \$SPECUSERNUM \$\$ >/dev/null ; $command
```