CFP2000 Result

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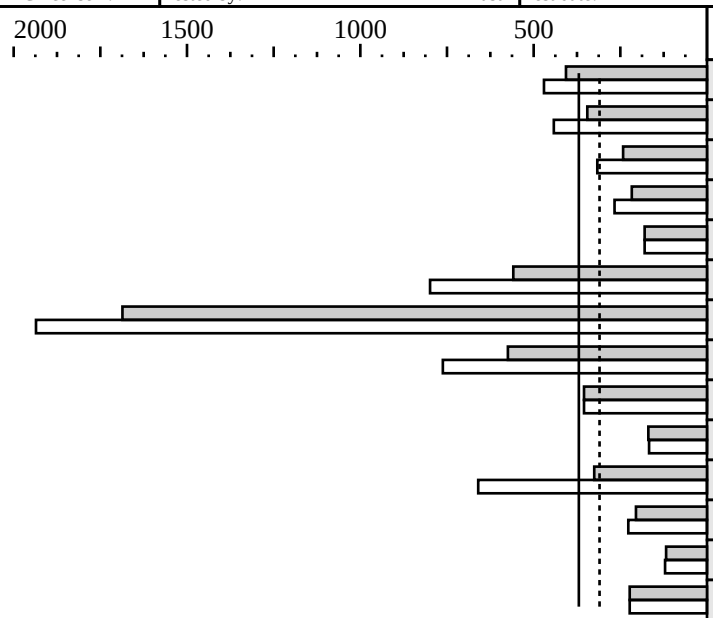
IBM Corporation

IBM System p5 575 (2200 Mhz, 8 CPU, SLES)

SPECfp_rate2000 = 370

SPECfp_rate_base2000 = 310

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	16	73.0	407	16	63.1	470
171.swim	16	167	345	16	130	442
172.mgrid	16	138	242	16	106	316
173.applu	16	180	217	16	146	267
177.mesa	16	144	180	16	144	180
178.galgel	16	96.3	559	16	67.4	799
179.art	16	28.6	1686	16	24.9	1936
183.equake	16	42.0	574	16	31.7	762
187.facerec	16	99.4	355	16	99.4	355
188.ammp	16	241	169	16	244	167
189.lucas	16	114	325	16	56.2	660
191.fma3d	16	190	205	16	172	227
200.sixtrack	16	173	118	16	169	121
301.apsi	16	216	223	16	216	223

Hardware

CPU:	POWER5+
CPU MHz:	2200
FPU:	Integrated
CPU(s) enabled:	8 cores, 8 chips, 1 core/chip (SMT on)
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
```

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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 480 > /proc/sys/vm/nr_hugepages
```

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Notes/Tuning Information (Continued)

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


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