CFP2000 Result

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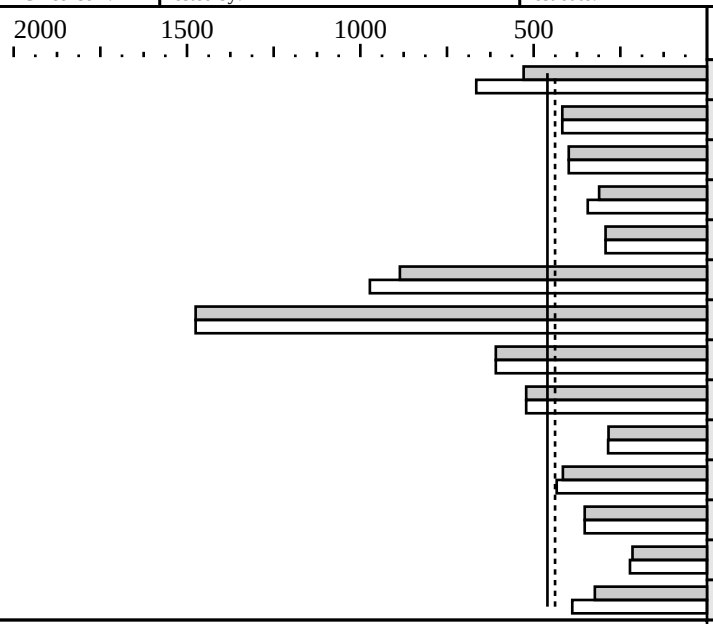
IBM Corporation

IBM eServer p5 570 (1900 MHz, 16 CPU)

SPECfp_rate2000 = 460

SPECfp_rate_base2000 = 438

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	32	112	529	32	89.2	666
171.swim	32	276	417	32	276	417
172.mgrid	32	168	399	32	168	399
173.applu	32	251	311	16	113	344
177.mesa	32	178	293	32	178	293
178.galgel	32	122	886	32	111	972
179.art	32	65.4	1475	32	65.4	1475
183.equake	32	79.2	609	32	79.2	609
187.facerec	32	135	522	32	135	522
188.ammp	32	288	284	32	286	285
189.lucas	32	179	416	16	85.6	434
191.fma3d	32	221	353	32	221	353
200.sixtrack	32	190	215	32	184	222
301.apsi	32	298	324	32	248	389

Hardware

CPU:	POWER5
CPU MHz:	1900
FPU:	Integrated
CPU(s) enabled:	16 cores, 8 chips, 2 cores/chip (SMT on)
CPU(s) orderable:	2,4,8,12,16
Parallel:	No
Primary Cache:	64KBI+32KBD (on chip)/core
Secondary Cache:	1920KB unified (on chip)/chip
L3 Cache:	36MB unified (off chip)/DCM, 8 DCM/SUT
Other Cache:	none
Memory:	64x1 GB DDR2
Disk Subsystem:	1x36GB SCSI, 15K RPM
Other Hardware:	

Software

Operating System:	AIX 5L V5.3
Compiler:	XL C/C++ Enterprise Edition Version 7.0 for AIX XL Fortran Enterprise Edition V9.1 for AIX Other Software: IBM Engineering and Scientific Subroutine Library for AIX, Version 4 Release 2
File System:	AIX/JFS2
System State:	Multi-User

Notes/Tuning Information

```
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


Base Optimization Flags:
  C:        -qpdf1/pdf2 -O5 -blpdata -qalign=natural
  Fortran:  -qpdf1/pdf2 -O5 -blpdata -lmass

Peak Optimization Flags
  168.wupwise:  -O5 -qarch=pwr3 -qtune=pwr3 -blpdata -lmass
                F77 = xlf
  171.swim:     basepeak = 1
  172.mgrid:    basepeak = 1
                users = 16
```

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Notes/Tuning Information (Continued)

```
  173.applu:    -O5 -blpdata -lmass
                users = 16
  177.mesa:     basepeak = 1
  178.galgel:   -O5 -blpdata -qessl -lessl
  179.art:      basepeak = 1
  183.equake:   basepeak = 1
                users = 16
  187.facerec:  basepeak = 1
  188.ammp:     -qpdf1/pdf2
                -O5 -blpdata -qalign=natural -D_ILS_MACROS
  189.lucas:    -O5 -blpdata -lmass
                users = 16
  191.fma3d:    basepeak = 1
  200.sixtrack: fdpr -quiet -R3
                -O3 -qhot -qarch=pwr5 -qtune=pwr5
  301.apsi:     -O5 -lmass -qessl -lessl -blpdata -qsave

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"

Users 0-15 were assigned to virtual CPUs 0-30 (even) and users 16-31 were assigned to
virtual CPUs 1-31 (odd) using the "bindprocessor $$ <cpu>" command.

ulimits set to unlimited.
Large page mode and memory affinity were set as follows:
   vmo -r -o lgpg_regions=1600 -o lgpg_size=16777216 -o memory_affinity=1
   chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
   reboot -q
   export MEMORY_AFFINITY=MCM
```