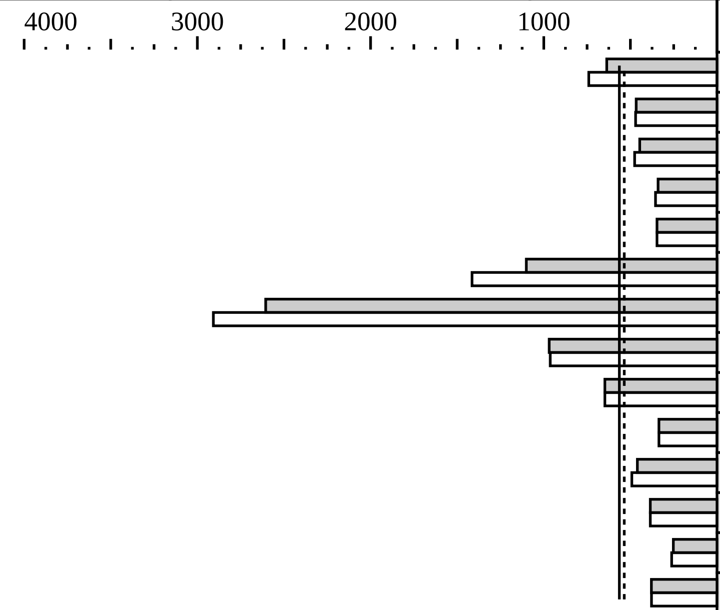
CFP2000 Result

Bull
Escala PL1650R+ (2200 MHz, 16 CPU)

SPECfp_rate2000 = 564
SPECfp_rate_base2000 = 535

SPEC license #: 20	Tested by: Bull	Test date: Feb-2007	Hardware Avail: Feb-2006	Software Avail: Dec-2006



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	32	93.3	637	32	80.2	740
171.swim	32	247	467	32	245	470
172.mgrid	32	150	446	16	70.3	476
173.applu	32	229	340	32	220	355
177.mesa	32	150	346	32	150	346
178.galgel	32	97.8	1101	16	38.1	1414
179.art	32	37.0	2605	32	33.2	2908
183.equake	32	49.8	969	32	50.1	963
187.facerec	32	109	647	32	109	647
188.ammp	32	244	335	32	244	335
189.lucas	32	161	460	16	75.5	492
191.fma3d	32	202	385	32	202	385
200.sixtrack	32	162	252	32	156	262
301.apsi	32	255	379	32	255	378

Hardware

CPU:	POWER5+
CPU MHz:	2200
FPU:	Integrated
CPU(s) enabled:	16 cores, 8 chips, 2 cores/chip (SMT on)
CPU(s) orderable:	2, 4, 6, 8 chips
Parallel:	no
Primary Cache:	64KBI+32KBD (on chip)per core
Secondary Cache:	1920KB unified (on chip) per chip
L3 Cache:	36MB unified off chip per chip
Other Cache:	None
Memory:	128 GB (32x4 GB)
Disk Subsystem:	1x73GB SCSI, 15K RPM
Other Hardware:	None

Software

Operating System:	AIX 5L V5.3
Compiler:	XL C/C++ Enterprise Edition Version 8.0 for AIX with the December 2006 PTF XL Fortran Enterprise Edition Version 10.1 for AIX with the November 2006 PTF
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:
  Fortran:    -O5 -lhmu -blpdata -lmass
  C:          -qpdf1/pdf2
              -O5 -blpdata -qalign=natural

Peak Optimization Flags
  168.wupwise:  -O5 -qsave -blpdata -lhmu -lmass
  171.swim:     -q64 -O5 -blpdata
  172.mgrid:    users=16
                -qpdf1/pdf2
                -O4 -qipa=partition=large -q64 -blpdata
  173.applu:    -qpdf1/pdf2
```

Bull Escala PL1650R+ (2200 MHz, 16 CPU)	SPECfp_rate2000 = 564 SPECfp_rate_base2000 = 535

SPEC license #: 20	Tested by: Bull	Test date: Feb-2007	Hardware Avail: Feb-2006	Software Avail: Dec-2006

Notes/Tuning Information (Continued)

```
                   -O5 -qarch=pwr3 -qtune=pwr3 -qalign=struct=natural -q64 -blpdata
                    fdpr -q -O3
      177.mesa:     basepeak=yes
      178.galgel:   users=16
                   -qpdf1/pdf2
                   -O4 -qfdpr -lhmu -blpdata -lmass -qessl -lessl
                   fdpr -q -O3
      179.art:     -O5 -lhmu -blpdata
      183.equake:  -qpdf1/pdf2
                   -O3 -qarch=auto -qtune=auto -qipa=level=2 -blpdata
      187.facerec:  basepeak=yes
      188.ammp:     basepeak=yes
      189.lucas:    users=16
                   -O3 -qarch=auto -qtune=auto -qfdpr -blpdata -qessl -lessl
                   fdpr -q -O3
      191.fma3d:    basepeak=yes
      200.sixtrack: -qpdf1/pdf2
                   -O5 -qfdpr -qalign=struct=natural
                   fdpr -q -O3
      301.apsi:    -O5
```

The installed OS level is AIX 5L for POWER version 5.3 with the 5300-04 Recommended Maintenence package.

```
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"

Extended C:     IBM XL C for AIX invoked as cc
ANSI C89:       IBM XL C for AIX invoked as xlc
C++:            IBM XL C for AIX invoked as xlC
Fortran 77:     IBM XL Fortran for AIX invoked as xlf90 unless explicitly reassigned
Fortran 90:     IBM XL Fortran for AIX invoked as xlf

ulimits set to unlimited.
Large page mode was set as follows:
    vmo -r -o lgpg_regions=3200 -o lgpg_size=16777216
    bosboot -aD
    shutdown -rF

The following config-file entry was used to assign each benchmark process to a core:
submit = let "MYCPU=2*$SPECUSERNUM"; if (("$MYCPU > 31"))
then let "MYCPU-=31"; fi; bindprocessor $$ $MYCPU; $command
The "bindprocessor" AIX command binds a process to a CPU core.
```