



CFP2000 Result

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Bull
Escala PL250R+ (2100 MHz, 1 CPU)

SPECfp2000 = 3301
SPECfp_base2000 = 3108

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

| Benchmark | Reference Time | Base Runtime | Base Ratio | Runtime | Ratio |
|--------------|----------------|--------------|------------|---------|-------|
| 168.wupwise | 1600 | 51.1 | 3129 | 46.3 | 3454 |
| 171.swim | 3100 | 74.4 | 4164 | 74.4 | 4164 |
| 172.mgrid | 1800 | 60.1 | 2996 | 58.1 | 3098 |
| 173.applu | 2100 | 83.9 | 2503 | 79.5 | 2641 |
| 177.mesa | 1400 | 103 | 1356 | 100 | 1394 |
| 178.galgel | 2900 | 42.8 | 6772 | 31.8 | 9128 |
| 179.art | 2600 | 17.1 | 15209 | 15.2 | 17092 |
| 183.quake | 1300 | 19.8 | 6582 | 19.5 | 6679 |
| 187.facerec | 1900 | 64.0 | 2971 | 64.0 | 2971 |
| 188.amp | 2200 | 143 | 1537 | 131 | 1685 |
| 189.lucas | 2000 | 37.7 | 5308 | 34.7 | 5761 |
| 191.fma3d | 2100 | 113 | 1861 | 116 | 1804 |
| 200.sixtrack | 1100 | 118 | 936 | 111 | 993 |
| 301.apsi | 2600 | 126 | 2067 | 126 | 2067 |

Hardware

CPU: POWER5+
 CPU MHz: 2100
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 2 cores/chip (SMT off)
 CPU(s) orderable: 1 chip
 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: 32 GB (8x4 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: basepeak=1
 172.mgrid: -qpdf1/pdf2
 -O4 -qipa=partition=large -q64 -blpdata
 173.applu: -qpdf1/pdf2
 -O5 -qfdpr -qalign=struct=natural -q64 -blpdata



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Notes/Tuning Information (Continued)

```

177.mesa:      fdpr -q -O3
               -qpdf1/pdf2
               -O5 -qalign=natural
178.galgel:    -qpdf1/pdf2
               -O5 -qfdpr -qalign=struct=natural -lhmu -blpdata -lmass -qessl -lessl
               fdpr -q -O3
179.art:       -O5 -lhmu -blpdata
183.earthquake: -qpdf1/pdf2
               -O3 -qarch=auto -qtune=auto -qipa=level=2 -blpdata
187.facerec:   basepeak=yes
188.amm:       -O5 -qalign=natural -qfdpr -blpdata -lhmu
               fdpr -q -O3
189.lucas:     -O3 -qarch=auto -qtune=auto -qfdpr -blpdata -qessl -lessl
               fdpr -q -O3
191.fma3d:     -qpdf1/pdf2
               -O3 -qarch=auto -qtune=auto -qipa=level=2 -q64 -lhmu -blpdata -lmass
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 Maintenance 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 lpgg_regions=800 -o lpgg_size=16777216
```

1 core was deconfigured and SMT disabled using the AIX commands

```

smtctl -m off -w boot
bosboot -aD
shutdown -rF
drmgr -r -c cpu

```