



CINT2000 Result

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Bull
Escala PL450R+ (2100 MHz, 1 CPU)

SPECint2000 = 1737
SPECint_base2000 = 1664

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	146	961	143	981	
175.vpr	1400	93.8	1493	93.8	1493	
176.gcc	1100	57.8	1903	57.8	1903	
181.mcf	1800	51.1	3524	47.8	3764	
186.crafty	1000	75.2	1329	62.6	1598	
197.parser	1800	123	1463	121	1489	
252.eon	1300	72.6	1790	71.4	1822	
253.perlbnk	1800	153	1180	146	1233	
254.gap	1100	74.4	1479	74.8	1471	
255.vortex	1900	70.1	2709	64.9	2930	
256.bzip2	1500	96.9	1547	91.2	1644	
300.twolf	3000	163	1838	158	1902	

Hardware

CPU: POWER5+
 CPU MHz: 2100
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 2 cores/chip (SMT off)
 CPU(s) orderable: 1, 2 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: 32 GB (8x4GB)
 Disk Subsystem: 2x73GB 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:

```
176.gcc: -ma -DHOST_WORDS_BIG_ENDIAN
186.crafty: -DAIX
253.perlbnk: -DSPEC_CPU2000_AIX
254.gap: -DSYS_IS_BSD -DSYS_STRING_H
          -DSYS_HAS_MALLOC_PROTO -DSYS_HAS_CALLOC_PROTO
300.twolf: -DHAVE_SIGNED_CHAR
```

Base Optimization Flags:

```
C: -qpdf1/pdf2
   -O5 -blpdata -D_ILS_MACROS
C++: -qpdf1/pdf2
      -O4 -qalign=natural
```

Peak Optimization Flags

```
164.gzip: -qpdf1/pdf2
          -O4 -qfopr -blpdata
          fdpr -q -O3
175.vpr: basepeak=yes
176.gcc: basepeak=yes
```



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Notes/Tuning Information (Continued)

```

181.mcf:      -qpdf1/pdf2
              -O5 -blpdata -qalign=natural -qhot=arraypad -qfpr -Q -qmaxmem=-1
              fdpr -q -O3
186.crafty:  -qpdf1/pdf2
              -O4 -qalign=natural -q64 -lhmu -blpdata
197.parser:  -qpdf1/pdf2
              -O4 -qfpr -D_ILS_MACROS -blpdata
              fdpr -q -O3
252.eon:     -qpdf1/pdf2
              -O4 -qalign=natural
253.perlbnk: -qpdf1/pdf2
              -O4 -qarch=pwr4 -qtune=pwr4 -qalign=natural -blpdata -lhmu
254.gap:     -qpdf1/pdf2
              -O4 -qarch=pwr4 -qtune=pwr4 -qalign=natural -blpdata
255.vortex:  -qpdf1/pdf2
              -O4 -qfpr -lhmu -blpdata
              fdpr -q -O3
256.bzip2:   -qpdf1/pdf2
              -O5 -qfpr -blpdata
              fdpr -q -O3
300.twolf:   -O5 -qfpr -blpdata
              fdpr -q -O3

```

The installed OS level is AIX 5L for POWER version 5.3 with the 5300-05 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
```

3 cores were deconfigured and SMT disabled using the AIX commands

```
smtctl -m off -w boot
```

```
bosboot -aD
```

```
shutdown -rF
```

```
drmgr -r -c cpu
```

```
drmgr -r -c cpu
```

```
drmgr -r -c cpu
```