



# CINT2000 Result

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**Bull**  
Escala PL250R+ (2100 MHz, 1 CPU)

SPECint2000 = 1699  
SPECint\_base2000 = 1663

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	
164.gzip	1400	146	962	143	981	
175.vpr	1400	94.0	1489	94.0	1489	
176.gcc	1100	57.8	1903	57.8	1903	
181.mcf	1800	51.5	3498	51.5	3498	
186.crafty	1000	75.4	1327	75.4	1327	
197.parser	1800	123	1462	121	1488	
252.eon	1300	72.7	1788	71.3	1824	
253.perlbmk	1800	152	1182	147	1222	
254.gap	1100	74.3	1480	74.7	1472	
255.vortex	1900	70.3	2704	65.0	2922	
256.bzip2	1500	96.6	1553	90.9	1651	
300.twolf	3000	163	1839	158	1901	

### 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:

```
176.gcc: -ma -DHOST_WORDS_BIG_ENDIAN
186.crafty: -DAIX
253.perlbmk: -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 -qfdpr -blpdata
          fdpr -q -O3
175.vpr: basepeak=1
176.gcc: basepeak=1
```



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## Notes/Tuning Information (Continued)

```

181.mcf:      basepeak=1
186.crafty:   basepeak=1
197.parser:   -qpdf1/pdf2
              -O4 -qfdpr -D_ILS_MACROS -blpdata
              fdpr -q -O3
252.eon:      -qpdf1/pdf2
              -O4 -qarch=pwr4 -qtune=pwr4 -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 -qfdpr -lhmu -blpdata
              fdpr -q -O3
256.bzip2:    -qpdf1/pdf2
              -O5 -qfdpr -blpdata
              fdpr -q -O3
300.twolf:    -O5 -qfdpr -blpdata
              fdpr -q -O3

```

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
```