



CINT2000 Result

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Bull
Escala PL1650R+ (2200 MHz, 1 CPU)

SPECint2000 = 1764
SPECint_base2000 = 1740

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	139	1009	136	1029	
175.vpr	1400	90.1	1554	90.1	1554	
176.gcc	1100	55.2	1992	55.2	1992	
181.mcf	1800	49.1	3664	49.1	3664	
186.crafty	1000	71.9	1391	71.9	1391	
197.parser	1800	118	1528	118	1528	
252.eon	1300	69.4	1873	68.2	1907	
253.perlbnk	1800	146	1236	140	1284	
254.gap	1100	70.3	1565	70.8	1553	
255.vortex	1900	67.3	2823	67.3	2823	
256.bzip2	1500	93.0	1613	87.6	1713	
300.twolf	3000	156	1925	151	1991	

Hardware

CPU: POWER5+
 CPU MHz: 2200
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 2 cores/chip (SMT off)
 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:

```
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 -qfdpr -blpdata
          fdpr -q -O3
175.vpr: basepeak=yes
176.gcc: basepeak=yes
```



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Notes/Tuning Information (Continued)

```

181.mcf:      basepeak=yes
186.crafty:   basepeak=yes
197.parser:   basepeak=yes
              -O4 -qfdpr -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 -lhm
254.gap:      -qpdf1/pdf2
              -O4 -qarch=pwr4 -qtune=pwr4 -qalign=natural -blpdata
255.vortex:   basepeak=yes
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
```

15 cores were deconfigured and SMT disabled using the AIX commands

```

smtctl -m off -w boot
bosboot -aD
shutdown -rF
drmgr -r -c cpu (15 times)

```