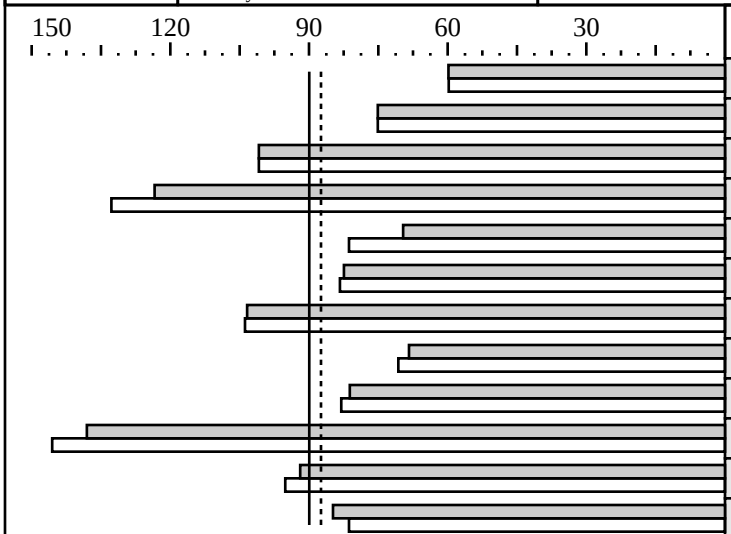
CINT2000 Result

Bull
Escala PL450R+ (2100 MHz, 4 CPU)

SPECint_rate2000 = 89.9

SPECint_rate_base2000 = 87.4

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	8	217	59.8	8	217	59.8
175.vpr	8	173	75.1	8	173	75.1
176.gcc	8	101	101	8	101	101
181.mcf	8	135	123	4	62.9	133
186.crafty	8	133	69.6	8	114	81.3
197.parser	8	203	82.4	8	200	83.3
252.eon	8	117	103	8	116	104
253.perlbmk	8	244	68.4	8	236	70.7
254.gap	8	126	81.1	8	123	83.0
255.vortex	8	128	138	8	121	146
256.bzip2	8	152	91.9	8	146	95.1
300.twolf	8	328	84.8	8	342	81.4

Hardware

CPU:	POWER5+
CPU MHz:	2100
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip (SMT on)
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.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:       -qpdf1/pdf2
                 -O5 -qfdpr -blpdata
```

Notes/Tuning Information (Continued)

```
                fdpr -q -O3
   176.gcc:     -qpdf1/pdf2
                -O4 -qarch=pwr4 -qtune=pwr4 -qalign=natural -blpdata
   181.mcf:     users=4
                -qpdf1/pdf2
                -O5 -blpdata -qalign=natural -qhot=arraypad -qfdpr -Q -qmaxmem=-1
                fdpr -q -O3
   186.crafty:  -qpdf1/pdf2
                -O4 -qalign=natural -q64 -lhmu -blpdata
   197.parser:  -qpdf1/pdf2
                -O4 -qfdpr -D_ILS_MACROS -blpdata
                fdpr -q -O3
   252.eon:     -qpdf1/pdf2
                -O4 -qalign=natural
   253.perlbmk: -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 5300-05 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=800 -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 > 7")) notes450= then let "MYCPU-=7"; fi; bindprocessor \$\$ \$MYCPU; $command
```

The "bindprocessor" AIX command binds a process to a CPU core.