



CINT2000 Result

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IBM Corporation

IBM eServer pSeries 655 Model 651 (1300 MHz, 4 CPU)

SPECint_rate2000 = 38.3

SPECint_rate_base2000 = 37.1

SPEC license #: 11 | Tested by: IBM, Austin, TX | Test date: Oct-2002 | Hardware Avail: Dec-2002 | Software Avail: Dec-2002

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	4	232	28.0	4	232	28.0
175.vpr	4	182	35.7	4	182	35.7
176.gcc	4	139	36.6	4	139	36.6
181.mcf	4	187	44.7	4	181	46.2
186.crafty	4	139	33.4	4	119	38.9
197.parser	4	396	21.1	4	397	21.0
252.eon	4	126	47.9	4	126	47.9
253.perlbnk	4	282	29.6	4	254	32.8
254.gap	4	130	39.3	4	130	39.3
255.vortex	4	152	57.9	4	151	58.5
256.bzip2	4	176	39.4	4	171	40.6
300.twolf	4	297	46.9	4	288	48.3

Hardware

CPU: POWER4
CPU MHz: 1300
FPU: Integrated
CPU(s) enabled: 4 cores, 4 chips, 1 core/chip, 4 chips/MCM
CPU(s) orderable: 1 (order by # MCM)
Parallel: No
Primary Cache: 64KBI+32KBD (on chip) per core
Secondary Cache: 1440KB unified (on chip) per chip
L3 Cache: 128MB unified (off-chip) per MCM, 1 MCM in SUT (4 chips per MCM)
Other Cache: None
Memory: 16 GB
Disk Subsystem: 1x18.2 GB SCSI
Other Hardware: None

Software

Operating System: AIX 5L V5.1
Compiler: IBM C for AIX, Version 6.0
IBM VisualAge C++ Professional for AIX, Version 6.0
File System: AIX/JFS
System State: Multi-User

Notes/Tuning Information

Integer Portability Flags:

```
gcc:      -ma -DHOST_WORDS_BIG_ENDIAN
crafty:   -DAIX
eon:      -DNEED_EXPLICIT_SPECIALIZATION
          -I. -DNDEBUG
perlbnk:  -DSPEC_CPU2000_AIX
gap:      -DSYS_IS_BSD -DSYS_STRING_H -DSYS_HAS_TIME_PROTO
          -DSYS_HAS_MALLOC_PROTO -DSYS_HAS_CALLOC_PROTO
twolf:    -DHAVE_SIGNED_CHAR
```

Base Optimization Flags:

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

Integer Peak Optimization Flags

164.gzip



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Notes/Tuning Information (Continued)

```
BASEPEAK = 1
"CC      = /usr/vac/bin/xlc"
175.vpr
BASEPEAK = 1
176.gcc
BASEPEAK = 1
181.mcf
fdpr -v -R3
-O5 -blpdata
186.crafty
-qpdf1/pdf2
fdpr -v -R3
-O3 -q64
197.parser
-O5 -blpdata
252.eon
BASEPEAK = 1
253.perlbmk
-qpdf1/pdf2
-O5 -lhmu -qalign=natural
254.gap
BASEPEAK = 1
255.vortex
-qpdf1/pdf2
-O5 -lhmu -qalign=natural
256.bzip2
-qpdf1/pdf2
-O5 -blpdata -qarch=pwr3 -qtune=pwr3
300.twolf
-qpdf1/pdf2
-O5 -lhmu -qalign=natural -blpdata
"CC      = /usr/vac/bin/xlc"
```

MCM: Acronym for "Multi-Chip Module"

SUT: Acronym for "System Under Test"

fpdr: Feedback directed program restructuring tool
/usr/spec2000 filesystem mounted with no JFS log file I/O.
APAR IY 35692 was applied to AIX to enable new hardware support.
ulimits set to unlimited.

C: IBM VAC++ invoked as cc except where noted as xlc

C++: IBM VAC++ invoked as xlc

Large page mode and memory affinity were set as follows:

```
vmtune64 -g 16777216 -L 128 -y1
chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
bosboot -a
shutdown -r
```