



CINT2000 Result

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IBM Corporation

IBM eServer pSeries 615 Model 6C3 (1200 MHz, 2 CPU)

SPECint_rate2000 = 16.9

SPECint_rate_base2000 = 15.2

SPEC license #: 11 | Tested by: IBM, Austin, TX | Test date: May-2003 | Hardware Avail: Jun-2003 | Software Avail: May-2003

| Benchmark | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|-------------|-------------|--------------|------------|--------|---------|-------|
| 164.gzip | 2 | 257 | 12.6 | 2 | 257 | 12.6 |
| 175.vpr | 2 | 239 | 13.6 | 2 | 239 | 13.6 |
| 176.gcc | 2 | 142 | 17.9 | 2 | 142 | 17.9 |
| 181.mcf | 2 | 254 | 16.4 | 2 | 246 | 17.0 |
| 186.crafty | 2 | 159 | 14.6 | 2 | 128 | 18.2 |
| 197.parser | 2 | 578 | 7.23 | 2 | 280 | 14.9 |
| 252.eon | 2 | 141 | 21.5 | 2 | 141 | 21.5 |
| 253.perlbnk | 2 | 316 | 13.2 | 2 | 286 | 14.6 |
| 254.gap | 2 | 170 | 15.1 | 2 | 157 | 16.2 |
| 255.vortex | 2 | 178 | 24.8 | 2 | 176 | 25.1 |
| 256.bzip2 | 2 | 217 | 16.0 | 2 | 211 | 16.5 |
| 300.twolf | 2 | 423 | 16.5 | 2 | 386 | 18.0 |

Hardware

CPU: POWER4+
CPU MHz: 1200
FPU: Integrated
CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip, 1 processor chip/DCM
CPU(s) orderable: 1,2 (order by # cores)
Parallel: No
Primary Cache: 64KBI+32KBD (on chip) per core
Secondary Cache: 1536KB unified (on chip) per chip
L3 Cache: 8MB unified (off-chip) per DCM, 1 DCM in SUT
Other Cache: None
Memory: 4 GB
Disk Subsystem: 1x36GB SCSI, 10K RPM
Other Hardware: None

Software

Operating System: AIX 5L V5.2
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:

```
176.gcc: -ma -DHOST_WORDS_BIG_ENDIAN
186.crafty: -DAIX
252.eon: srcalt=fmax_errno
-I. -DNDEBUG
253.perlbnk: -DSPEC_CPU2000_AIX
254.gap: -DSYS_IS_BSD -DSYS_STRING_H -DSYS_HAS_TIME_PROTO
-DSYS_HAS_MALLOC_PROTO -DSYS_HAS_CALLOC_PROTO
300.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 -D_ILS_MACROS
252.eon
BASEPEAK = 1
253.perlbnk
-qpdf1/pdf2
-O5 -lhmu -qalign=natural
254.gap
-qpdf1/pdf2
-O5 -lhmu -qalign=natural
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"

```

Approved alternate-source file 252.eon.fmax_errno.src.alt.tar.gz was used with 252.eon for POSIX-compatibility.

DCM: Acronym for "Dual-Chip Module"
SUT: Acronym for "System Under Test"

IBM eServer pSeries 615 Model 6C3 (rack-mount server) and pSeries 615 Model 6E3 (deskside server) are electronically equivalent.

```

fpdr: Feedback directed program restructuring tool
/usr/spec2000 filesystem mounted with no JFS log file I/O.
APAR IY 43549 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:
vmo -r -o lpgg_regions=64 -o lpgg_size=16777216 -o memory_affinity=1
chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
shutdown -r
export MEMORY_AFFINITY=MCM

```