



CINT2000 Result

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IBM Corporation
IBM eServer pSeries 655 (1700 MHz, 1 CPU)

SPECint2000 = 1103
SPECint_base2000 = 1069

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	175	801	175	801	
175.vpr	1400	134	1043	134	1043	
176.gcc	1100	96.3	1142	96.3	1142	
181.mcf	1800	108	1663	102	1759	
186.crafty	1000	106	945	90.7	1103	
197.parser	1800	398	452	393	458	
252.eon	1300	96.4	1348	96.4	1348	
253.perlbnk	1800	217	831	194	928	
254.gap	1100	98.0	1122	98.0	1122	
255.vortex	1900	115	1652	115	1655	
256.bzip2	1500	134	1118	130	1155	
300.twolf	3000	213	1408	210	1426	

Hardware

CPU: POWER4+
CPU MHz: 1700
FPU: Integrated
CPU(s) enabled: 1 core, 4 chips, 2 cores/chip, 4 chips/MCM
CPU(s) orderable: 4, 8 cores (order by # cores)
Parallel: No
Primary Cache: 64KBI+32KBD (on chip) per core
Secondary Cache: 1536KB unified (off chip) per chip
L3 Cache: 128MB unified (off-chip) per MCM, 1 MCM in SUT
Other Cache: None
Memory: 16 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: -DNEED_EXPLICIT_SPECIALIZATION
-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 -lhmu -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.perlbnk
-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"

3 processors were deconfigured through the configuration menu.

```

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=32 -o lpgg_size=16777216 -o memory_affinity=1
chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
shutdown -r
export MEMORY_AFFINITY=MCM

```