

# A Multi-variant Execution Environment for In-memory Databases

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- Problem: Memory space overhead
  - Modern in-memory DBs utilize huge amount of memory (hundreds of GB order)
  - Fail to launch multiple in-memory DB variant
- Solution: Share the same content pages among variants
  - Allow us to run multiple in-memory DB variants
  - No modification of in-memory DB source code
  - Mitigate runtime overhead of variant synchronization
- Current Result:
  - Reduced the memory utilization of in-memory DB variants