

Parameterized and Runtime-tunable Snapshot Isolation in Distributed Transactional Key-value Stores

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Parameterized and Runtime-tunable Snapshot Isolation

RVSI: Relaxed Version Snapshot Isolation

- 1 Motivation for RVSI
- 2 Definition of RVSI
- 3 CHAMELEON Prototype and RVSI Protocol
- 4 Experimental Evaluation
- 5 Related Work
- 6 Conclusion

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Distributed key-value stores

`put(K key, V val)`

`get(K key)`

Transactional semantics

Distributed transactional key-value stores

Transactional consistency models

Snapshot isolation (SI):

- ▶ **Read** from the latest consistent snapshot of all data items
- ▶ No **write** conflicts among concurrent transactions

Costs of SI

Relaxed variants of SI

Drawbacks

A motivating example

Our contributions

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Inspired by

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