

COMP 513

Presented by
Akshay
Gopalakrish-
nan

Introduction

Setup

Experiments

Conclusion

COMP 513

Sushmit Sarkar, Peter Sewell, Jade Alglave, Luc Maranget,
Derek Williams

Presented by
Akshay Gopalakrishnan

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Overview

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Project Description

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Rolis: A software approach to efficiently replicating multi-core transactions

- Proposes a new consensus algorithm to improve throughput.
- Idea is to use multiple threads per leader/follower to process transactions.
- The proposed algorithm also performs well upon failure recovery using watermarks to ensure synchronization when necessary.

Choice of Experiments

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- Throughput
 - vs Silo - Algorithm is built by modifying Silo.
 - vs Calvin - Existing state of the art.
- Latency - On different batch sizes.

System Configuration

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Choice of system

How we ran it

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- Security Groups
-
- Start EC2 instances.
- Setup IP addresses via (link to environment setup) guide given by the paper.
- ...
- Run one-click.sh.

Differences

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Differs from original system

- CPU
- RAM
- NETWORK
- OS

- CPU
- RAM
- NETWORK
- OS

Choice

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■ Reasons

Throughput Rolis vs Silo

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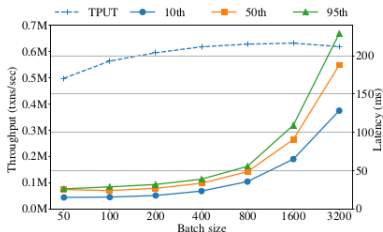
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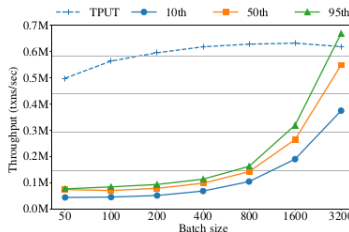
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(a) Image A



(b) Image B

Figure: This is a figure with two subfigures

Discuss

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TBD

Throughput Rolis vs Calvin

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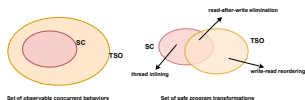
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(a) Image A



(b) Image B

Figure: This is a figure with two subfigures

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Batch

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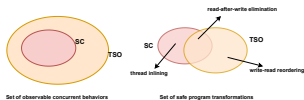
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(a) Image A



(b) Image B

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Thoughts

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