SYS: TBD

Paper #XXX

Abstract

SYS

1 Introduction

intro... - rise of multicore - locks are everywhere - locks are critical scalability, performance, resource management - pessimistic concurrency control - mutex - rwlock - optimistic concurrency control - lock-free - 2pl - problems with pcc - problems with occ - version lock - concurrency model - why is it good? - contributions - verision lock idea - version lock implementation in c++ - YCSB evaluation and code open source

2 Introduction

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3 Backgorund

- pessimistic concurrency control - mutex and how it works - rw lock and how it works - spinlock and its flavours - pros and cons of pcc - OCC - lock-free programming - how it works - what are atomic instructions - pros and cons

4 Design

- version lock design - atomic counter for version - concurrency model - version lock APIs - version lock pseudocode - version lock hash table example - correctness