

Efficient Checkpointing in Byzantine Fault-Tolerant Systems

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Distributed Byzantine fault-tolerant systems require frequent checkpoints of the application state to perform periodic garbage collection and enable faulty replicas to recover efficiently. State-of-the-art checkpointing approaches for replicated systems either cause significant service disruption when the application state is large, or they are unable to produce checkpoints that are verifiable across replicas. To address these problems we developed and evaluated deterministic fuzzy checkpointing, a technique to create consistent and verifiable checkpoints in parallel with request execution.