



hochschule mannheim

Understanding Eventual Consistency

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Introduction

„...the storage system guarantees that if no new updates are made to the object, eventually all accesses will return the last updated valuee“
–W. Vogels (2009)

„Zweites Zitat über Ev. Consistency “

The Problem

- The definitions are ambiguous
- Most big players claim to implement it
- Implementations can't be compared... scientifically

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Replicated Data Types

Mathdump

$S_{\text{ctr}}(\sigma \text{rd}) = k$; if $\text{wr}(0)\sigma = \sigma_1 \text{wr}(k)\sigma_2$ and
 σ_2 does not contain wr operations

$$\text{Op}_{\text{ctr}} = \{\text{rd}, \text{inc}\}$$
$$\text{Op}_{\text{intreg}} = \{\text{rd}, \text{wr}(k) | k \in \mathbb{Z}\}$$

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Conclusion

- Which problems does the techreport solve?
- What is not solved by it?
- What do **we** think about it?