

Design of an Index for ZooDB

Jonas Nick & Bogdan Vancea

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Outline

- 1 What is...?
- 2 Challenges
- 3 The new Index Implementation
- 4 Benchmarks

ZooDB

- an open source object database in Java
- JDO standard
- 4 times faster than competitor db4o

Index

Example: insert

- node fills one page
- unique vs. non-unique
- node fills one page
- unique vs. non-unique

Optimizations

- runtime dominated by disk access
- should not change a node too often
- support different key-value sizes

Buffer Manager

Prefix Sharing

Fine grained

- insert, remove, write
- duration, number of nodes
- prefix-sharing vs. no prefix-sharing

Whole system

- test harness
- PolePosition benchmark