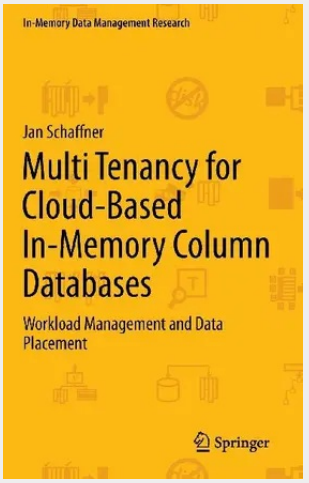
Schaffner

Multi Tenancy for Cloud-Based In-Memory Column Databases

Workload Management and Data Placement



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Specifically, the book addresses multi tenancy on the database level, focusing on in-memory column databases, which are the backbone of many important new enterprise applications. For efficiently implementing multi tenancy in a farm of databases, two fundamental challenges must be addressed, (i) workload modeling and (ii) data placement. The first involves estimating the (shared) resource consumption for multi tenancy on a single in-memory database server. The second consists in assigning tenants to servers in a way that minimizes the number of required servers (and thus costs) based on the assumed workload model. This step also entails replicating tenants for performance and high availability. This book presents novel solutions to both problems.

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