



Título: SmartLTM: Larger-Than-Memory Database Storage for Hybrid Database Systems

Data: 11/09/2018 Horário: 10:00h Local: Sala de Seminários – Bloco 952

Resumo:

Random access memory (RAM) is a valuable resource in computer systems, but as time passes, computer systems allow for more memory and it is becoming more affordable. Main-memory DBMS can offer hybrid and evolving storage architectures, instead of the traditional row or column storage layouts. In spite of affordability, RAM is still a limited resource concerning available storage space in comparison to conventional storage devices. Due to this space restriction, techniques that leverage a trade-off between storage space and query performance were developed and, consequently, they should be applied to data that is not frequently accessed or updated. This work proposes a data eviction mechanism that considers the decisions previously taken by the DBMS in optimizing data storage according to query workload. We discuss how to migrate data, access it and the main differences between our approach and a row-based one. We also analyze the behavior of our solution in different storage media. Experiments show that cold data access with our approach incurs an acceptable 17% of throughput loss, against 26% of the row-based one, while retrieving only half of the data in average to answer queries.

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Escrito por Secretaria MDCC

Seg, 10 de Setembro de 2018 00:00

Banca:

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