OptimusCloud: Heterogeneous Configuration Optimization for Distributed Databases in the Cloud

OptimusCloud is an online reconfiguration tool designed for cloud database optimization that intelligently adjusts both virtual machine and database management system settings to maximize performance and minimize operational costs.

Researchers at Purdue University have developed a new online reconfiguration tool for cloud database optimization known as OptimusCloud. OptimusCloud jointly tunes VM and DBMS levels to optimize database performance while minimizing the cost. Current cloud technologies using automated decision making, often only working for short and repeat tasks and workloads. Purdue researchers have created an optimal configuration to handle long running workloads. Purdue has achieved 74% better performance, 40% higher throughput, 33% lower cost, and 4.5X lower 99th percentile latency in testing with single server and clusters on three different workloads when compared to currently used systems.

Advantages:

-Cost-effective

-High throughput

-Dynamic

Potential Applications:

-Cloud databases

-Computer technology

TRL: 7

Intellectual Property:

Technology ID

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Category

Artificial Intelligence & Machine Learning/AI Model Optimization & Acceleration Tools

Authors

Saurabh Bagchi

Somali Chaterji

Ashraf Mahgoub

Further information

Matt Halladay

MRHalladay@prf.org

Erinn Frank

EEFrank@prf.org

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