Autonomic Storage Management at Scale

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ABSTRACT

Cloud data centers use enormous amounts of storage, and it is critical to monitor, manage, and optimize the storage autonomically. Optimally configuring storage is difficult because storage workloads are very diverse and change over time. Data centers measure running workloads, but this measurement data stream is itself quite large. We present some real world case studies in the use of big data techniques, sampling, and optimization to manage storage in data centers.

CCS Concepts/ACM Classifiers

• Information systems~Storage management   • Information systems~Data centers

Author Keywords

Data center management; Monitoring; Sampling

BIOGRAPHY

Arif Merchant is a Research Scientist at Google and leads the Storage Analytics group, which studies interactions between components of the storage stack. His interests include distributed storage systems, storage management, and stochastic modeling. He holds a B.Tech. from IIT Bombay and a Ph.D. in Computer Science from Stanford University. He is an ACM Distinguished Scientist.

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