

Comparison of NoSQL on the Cloud

Software, Systems and Platforms

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Abstract

The systems chosen for comparison in this project are AWS's NoSQL database system, **DynamoDB**, and the **Cassandra** open-source NoSQL database system. These systems will be deployed/run/operated in several, different ways. These include using *SaaS* implementations, using containerized implementations, and using native implementations on AWS's EC2 VMs. The goal of the project is to understand the performance characteristics of different methods of deployment *and* to quantify the cost of each deployment method. Costs for each deployment method will be calculated based on both the hourly cost

to operate, the initial time & costs required for setup, and the maintenance requirement of a deployment. The system and deployments will be measured using two metrics. Measurements of the time required to carry out various database operations, under several different conditions, will constitute the first metric. The second metric will be the CPU, memory, and network loads imposed by the various deployments under the same set of conditions used in the first metric.

1 Software, Platforms, and Systems