Comparison of NoSQL on the Cloud Software, Systems and Platforms

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Abstract

The software/systems chosen for comparison in this project are two different NoSQL database system. These systems will be deployed/run/operated in several different ways. These include *SaaS* implementations, *containerized* implementations, and *native installations*. The goal of the project is to understand the performance characteristics of each deployment method ***and*** to quantify the costs of each deployment method. These costs will be calculated based on the hourly cost to operate, the initial time & costs required for setup, and the maintenance requirement of a deployment. Additionally, performance of the systems and deployments will be measured using the time required to carry out various database operations, under a set of several different conditions, as well as the CPU, memory, and network loads imposed by the various deployments under the same set of conditions.

1 Platforms, Systems, & Deployment

We will be using two NoSQL database software packages. The first software package is **DynamoDB** from Amazon Web Services (*AWS*), while the second software package will be **Cassandra**, an open-source NoSQL database software package. Next, we will list the platforms and systems to be used for deployment of these software packages, as well as give and overview of these platforms and systems. This list of deployment platforms and systems will then allow us to detail how we plan to use

these platforms and systems to deploy each software package.

1.1 Platforms and Systems

The platforms we have chosen for our deployments are