Distributed Systems and Algorithms CSCI-4963/6963

Project 2

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description of your project design, including how you handle network configuration, initialization, failures, and recovery.

**Introduction**

This project is the implementation of a highly available distributed service in Python for synchronizing access to small files. In a system of N processes, each process enables a user to perform four operations on a given file: create, delete, read, and append. The project design is based on ZooKeeper, a distributed coordination service that is part of the Apache Hadoop project.

**Project Design**

We have used Zookeeper Atomic Broadcast (zab) to update the state at all servers.

3 kinds of roles in ZooKeeper:

Server:

1. Leader
2. Learner: Follower

Client

1. Client

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In order to simulate a system of distributed applications, we used the Amazon EC2 service. N (Amazon Linux AMI / Ubuntu) t2.micro-instances were created in separate regions: \*\*\*\*\*\*\*\*\*\*\*\*\*.

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