

CS 451 Project

Implementation of Cassandra

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We describe the functionality of the Cassandra system and indicate the subsets of feature we will implement, along with.

There are four modules that make up the Cassandra process on a single machine : Partitioning module, cluster membership, failure detection module and storage engine module.

Event driven substrate SEDA architecture

Read/Write Requests : 1. Identify the node(s) that own the data for the key 2. Route the requests to the nodes and wait on the responses to arrive 3. If timeout, fail the request and return to client 4. Schedule a repair of the data at any replica if needed Features - Implement Asynchronous writes, Synchronous writes (Optional)