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WEB 335 Introduction to NoSQL

Discussion 8.1 Replication

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Replication means the process of being able to synchronize data across multiple data servers. This process of replication helps increase data availability by having multiple copies of data across different database servers. Replication also helps protect against loss of a singular server since data spans across multiple different servers. Replication helps to keep the data safe, provide 24/7 availibity of the data, and read scaling (Replication). Replica sets in MongoDB are a “group of mondog processes that maintain the same data set” (Replication). Replica set members replicate data by being connected to the primary node. The already running MongoDB server should be shut down and then restart the MongoDB server by specifying “-- replSet” option. The syntax would be: mongod --port "PORT" --dbpath "YOUR\_DB\_DATA\_PATH" --replSet "REPLICA\_SET\_INSTANCE\_NAME" (Replication). Then the command “rs.initiate()” will initiate new replica sets (Replication). Failover is a backup operational mode where functions of a system component are taken over by the secondary component if and when the primary becomes unavailable (2023). Failover helps a system become more fault tolerant and helps keep the system running if the primary server fails. Rollbacks in databases are the operations for being able to restore a database to a previous state by canceling a transaction set or specific transaction (Rouse, 2012). MongoDB does not limit the amount of data you can roll back. To control whether or not rollback filesd are creating during a rollback, the “createRollbackDataFiles” parameter is used (Rollbacks During Replica Set Failover). The collection where its data is rolled back has the files located in the <dbpath>/rollback/<collectionUUID> directory and have filenames with the form of: removed.<timestamp>.bson (Rollbacks During Replica Set Failover). To be able to start a failover test for the specified cluster using the CLI, this command should be run: atlas clusters failover <clusterName> [options].

Reference

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