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- **Observations:** Paper proposes a key-value storage system for the Amazon that only provides the primary-key access to the data and such access is quite helpful for e-shopping and session-management services. Main theme of Dynamo is that it provides a high available system that always accepts writes and thus writes are never rejected. Dynamo divides the data over the set of nodes using the Partitioning algorithm, and nodes are arranged into the ring form. Data Replication: for providing the high data availability and durability data is replicated over multiple nodes. Data versioning: eventual consistency is provided by propagating the writes to the replicas asynchronously.
- **Limitations:** Constraint of supporting only key-value pairs may lead to the overhead. Due to node failures, number of the replicas may increase which in turn may result into more memory and bandwidth overhead. The proposed system is having more complexity and requires high computation power for the reassignment of node locations. Maintaining the full routing table for thousands of nodes is not trivial and may increase the system size.
- **Conclusions:** Dynamo, a fully distributed system, provides high scalability and availability and main focus of Dynamo is Master node failure. Its key feature "always available write" is the strength of paper. For providing the desired performance, durability and SLA's, Dynamo allows owners to customize their storage systems by allowing them to tune some parameters only. Dynamo gives high performance for the highly-available application in the most challenging application environment.
- **Future work:** For overcoming the overhead due to full-size table for large number of nodes, hierarchical-extensions may be introduced in future. Some more analysis can be done to pick right conflict resolution mechanisms for meeting the business case correctly. More applications can be designed to acknowledge the possibility of multiple versions of the same data to meet out the node failures.