Oracle Sharding supports read-only queries to any table and DML updates to temporary tables on Active Data Guard shards and full read-write access to all tables on Oracle GoldenGate shards.

Q: How does Oracle Sharding compare to NoSQL data stores?

A: NoSQL data stores are unable to provide application transparent scalability as Oracle can do for any application using Oracle RAC and Active Data Guard. Similar to Oracle Sharding, however, NoSQL data stores can also use a sharded architecture to achieve the combination of scalability and high availability. Customers who prefer to explicitly design their application for a sharded architecture may perceive that they have the option of using Oracle Sharding with Oracle Enterprise Edition or the alternative of using a NoSQL data store.

Customers will choose Oracle Sharding with Oracle Enterprise Edition for the following reasons:

- NoSQL data stores lack all of the capabilities of an enterprise RDBMS, including: relational schema, SQL, and other programmatic interfaces, support for complex data types, online schema changes, multi-core scalability, advanced security, compression, extensive high-availability features, ACID properties, consistent reads, the developer agility of JSON, and much more. For example, Oracle's inherent support for transactions means concurrent updates/reads never get inconsistent results; NoSQL data stores cannot do this. Oracle also extends read consistency to multi-shard operations as well using global consistent read, something that is not possible with NoSQL data stores.
- Oracle Sharding combines Oracle Enterprise Edition with a comprehensive solution for deploying a sharded architecture that includes automation to simplify many aspects of life-cycle management, advanced partitioning methods for increased flexibility, and intelligent data-dependent routing for superior run-time performance.

The combination of Oracle Sharding and the Oracle RDBMS provide customers with the best of both worlds: the ability to massively scale using a sharded database architecture without the compromises of a NoSQL data store.

Q: When would I use Oracle Sharding versus Oracle NoSQL?

A: Customers evaluating simple key-value NoSQL data stores should:

- Choose Oracle Sharding if they see value in the combination of Oracle Enterprise Edition and a comprehensive set of capabilities for deploying a sharded architecture for extreme scalability and availability.
- Choose Oracle NoSQL if they do not place value on the capabilities of Oracle Enterprise Edition and instead are seeking the lower cost of ownership of a NoSQL solution designed to provide highly reliable, scalable and available data storage across a configurable set of systems that function as storage nodes.

More Information

Q: Where can I find more information on Oracle Sharding?

A: For more information, please see the Oracle Sharding page on Oracle Technology Network - www.oracle.com/goto/oracle/sharding . A variety of helpful information is available online including white papers, cookbooks, customer presentations, end-user documentation, and links to blog sites etc.

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