

2.1. Implement partitioning schemes

Enables horizontal scaling

Uses hash-based partitioning to spread logical partitions across physical partitions

JS based Transactions (in stored procedures or triggers) are allowed only against items in a single logical partition.

Partition key

Can't be changed after container creation

For logical divisions

Data associated with a partition key can't exceed 20 GB

Synthetic key methods

Concatenate multiple properties of an item

Use a partition key with a random suffix

Use a partition key with pre-calculated suffixes

Requirements

High cardinality

Even request distribution

Even storage distribution

Read heavy ——— partition key that appears frequently as a filter in your queries

Physical partition

20 GB size limit

Considerations

Avoid Hot partitions

Logical partitions

set of items that have the same partition key

Each logical partition can store up to 20GB of data

Physical partitions

one or more logical partitions are mapped to a single physical partition

each individual physical partition can store up to 50GB

each individual physical partition can provide a throughput of up to 10,000 request units per second

Replica set ——— Each replica set hosts an instance of the Azure Cosmos database engine