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Choose a Lesson

- Cloud Datastore Overview
- Data Organization
- Queries and Indexing
- Data Consistency

Cloud Datastore Overview

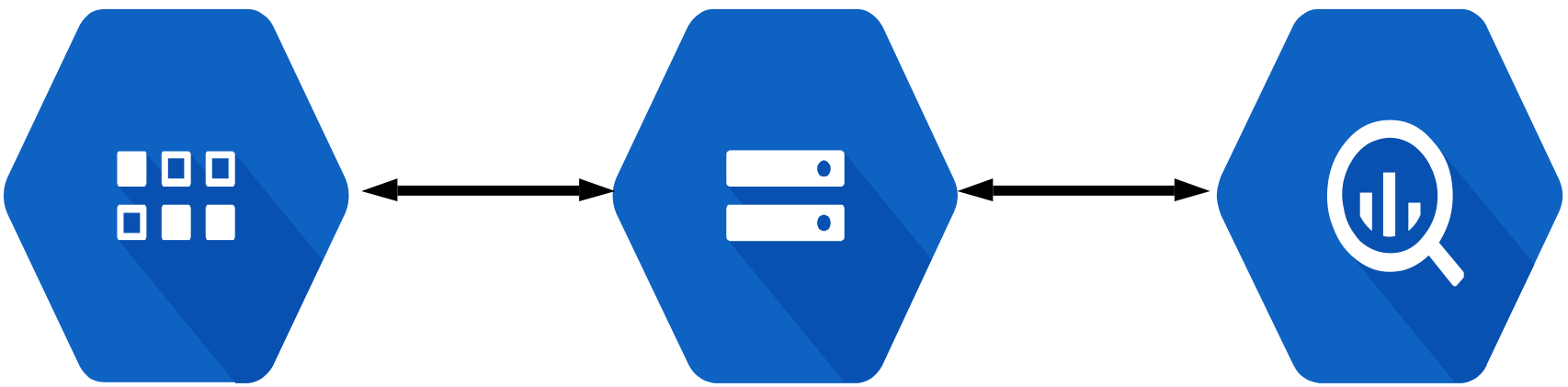
Previous

Other important facts:

- Single Datastore database per project (exam topic)
- Multi-regional for wide access, single region for lower latency and for single location
- Datastore is a transactional database } Non-relational
- Bigtable is an analytical database
- IAM roles: (exam topic)
  - Primitive and predefined
  - Owner, user, viewer, import/export admin, index admin

Backup/Export/Import/Analyze

Managed export/import service



staging

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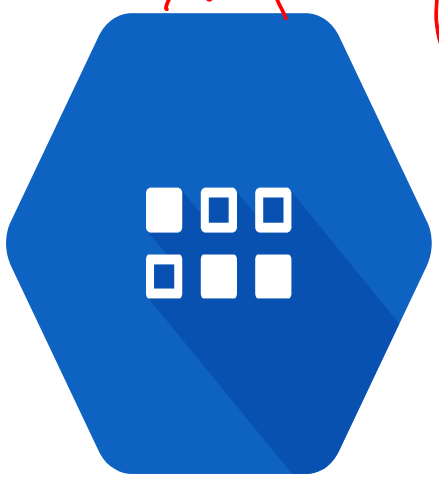

Cloud Datastore

Cloud Datastore Overview

Next

What is Cloud Datastore?

- No Ops:
  - No provisioning of instances, compute, storage, etc.
  - Compute layer is abstracted away
- Highly scalable:
  - Multi-region access available
  - Sharding/replication handled automatically
- NoSQL/non-relational database:
  - Flexible structure/relationship between objects

Use Datastore for:

- Applications that need highly available structured data, at scale
- Product catalogs - real-time inventory
- User profiles - mobile apps
- Game save states
- ACID transactions - e.g., transferring funds between accounts

Do not use Datastore for:

- Analytics (full SQL semantics):
  - Use BigQuery/Cloud Spanner
- Extreme scale (10M+ read/writes per second):
  - Use Bigtable
- Don't need ACID transactions/data not highly structured:
  - Use Bigtable
- Lift and shift (existing MySQL):
  - Use Cloud SQL
- Near zero latency (sub-10ms):
  - Use in-memory database (Redis)