

* Azure without SQL

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SQL Azure

Maximum size 50 GB

Not scalable

Flat fee pricing

Server features

Storage services

Maximum size 100 TB

Scalable

Consumption-based pricing

Resources only

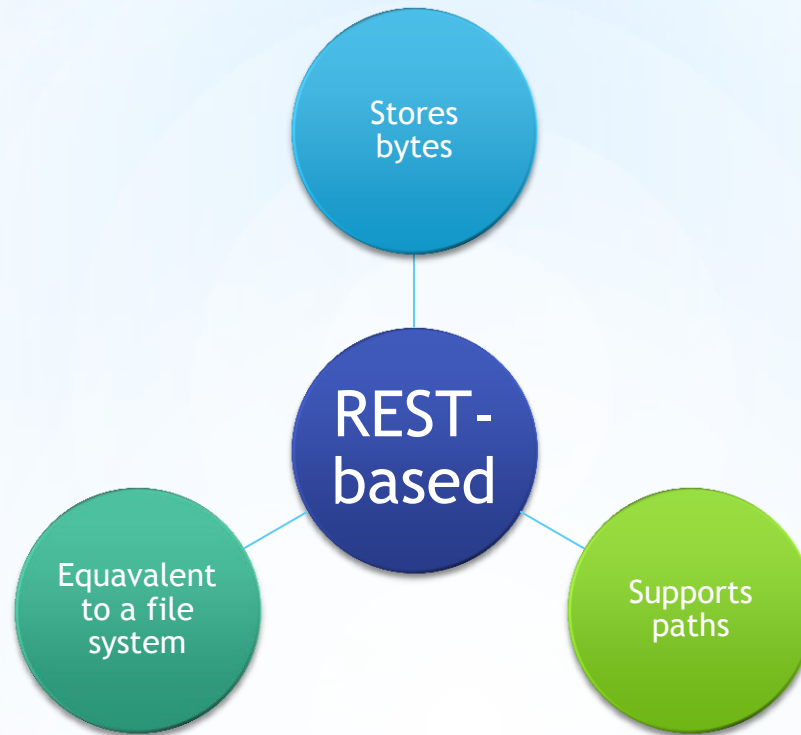
*Storage Services vs
SQL Azure

Blob

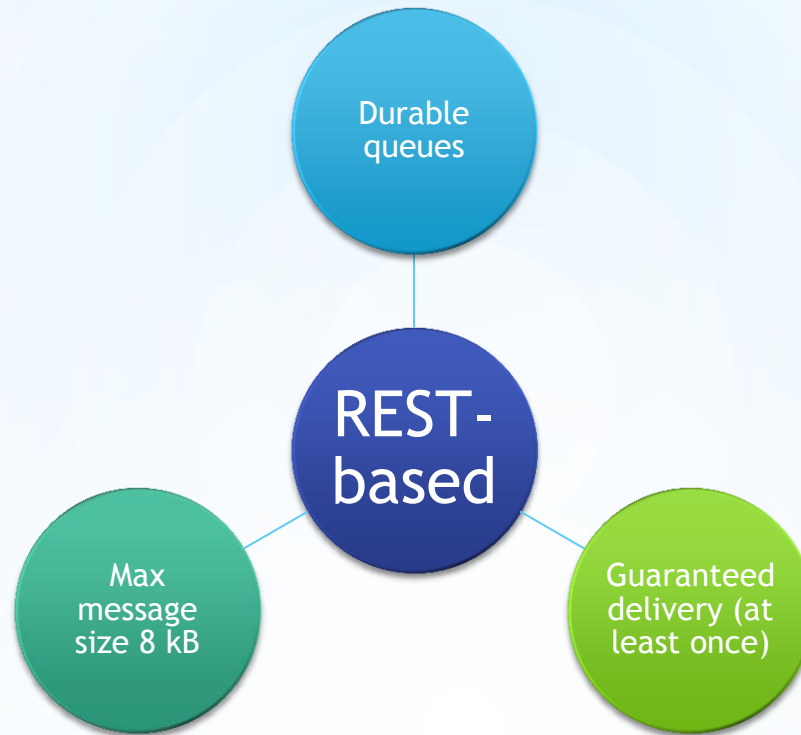
Queue

Table

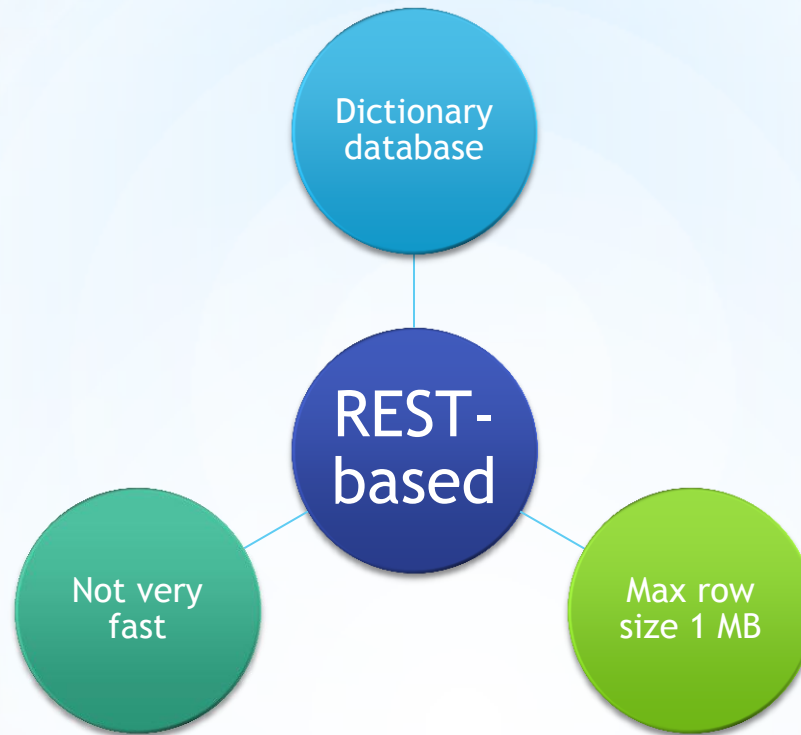
* Azure Storage Services



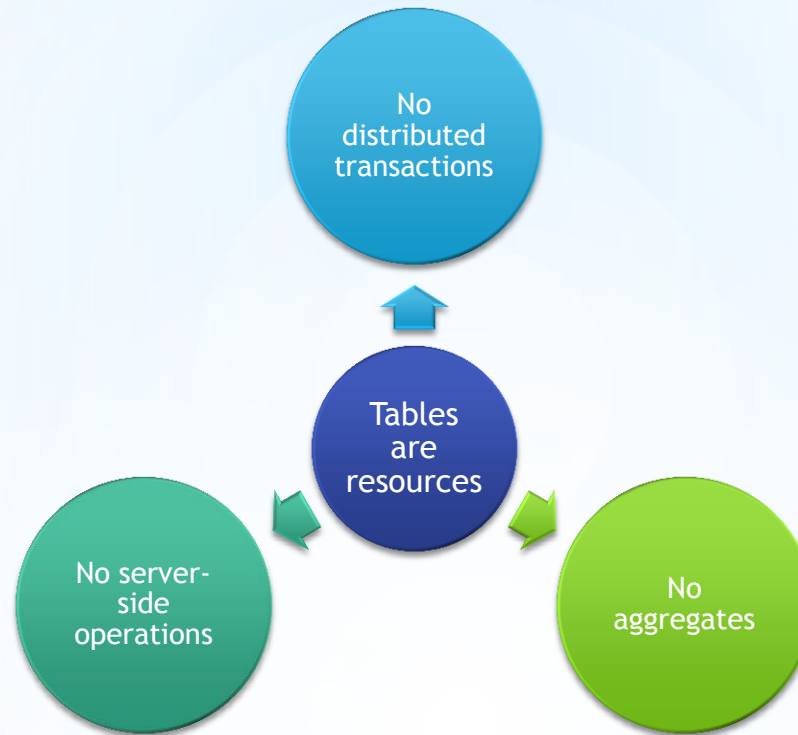
*Blob



*Queue



*Table



*Table vs Relational Data



Heavy
denormalization
is necessary

The application
layer must
guarantee
eventual
consistency

*Consequences



Demo

Booking application



Reservation
Table



Capacity
Blob



Event
Queue

*Denormalizing data



Reservation



Capacity



Event

*Updating Denormalized Data



Reservation
Update



Capacity



Event

*Updating Denormalized Data



Reservation
Update



Capacity
Failure



Event

*Updating Denormalized Data



Capacity

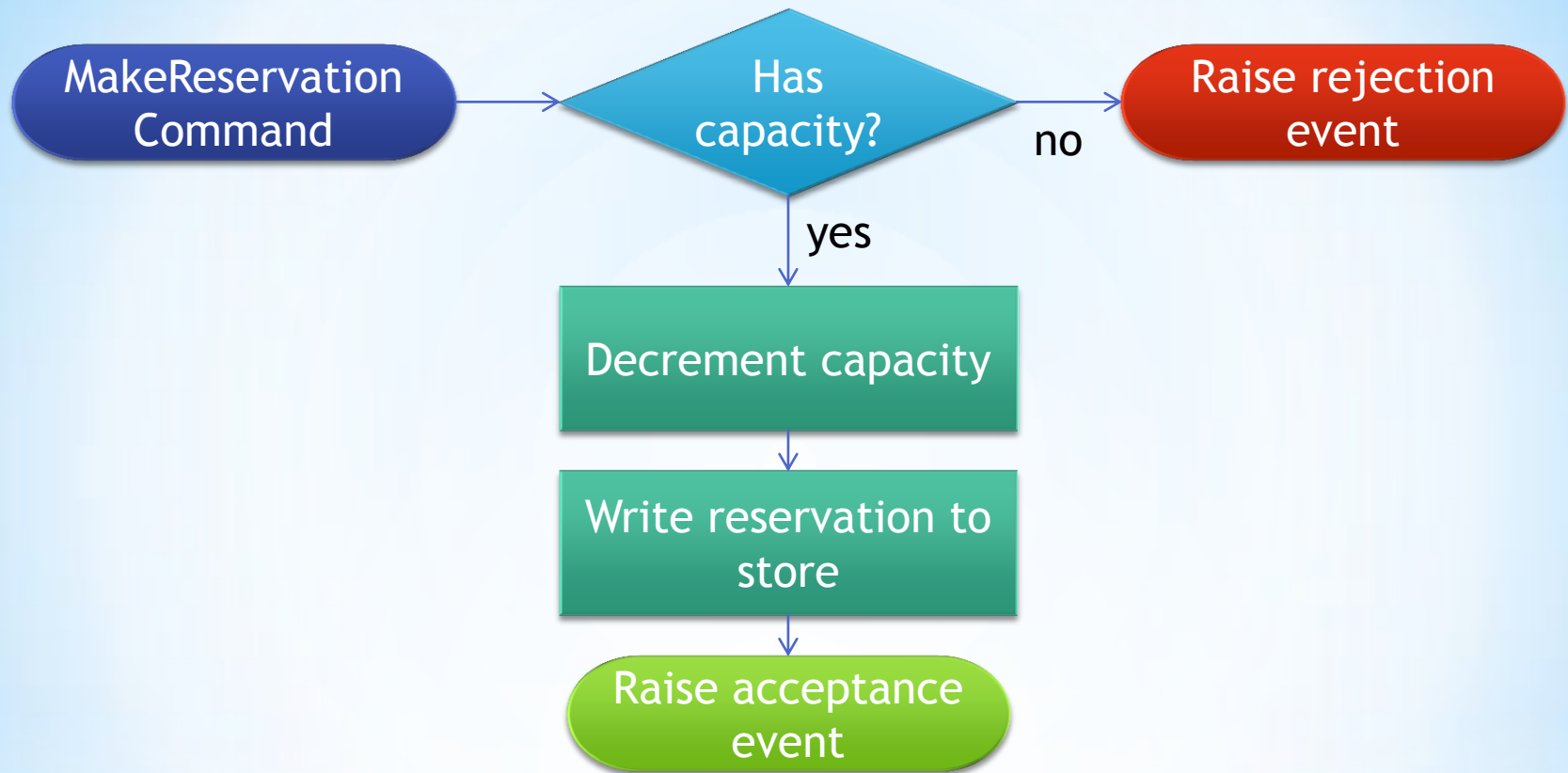


Reservation



Event

***Update order matters**



*Update workflow



*Ensuring Eventual Consistency



Demo

Consuming durable messages



Capacity
Update



Reservation
Failure



Event

*Updating Denormalized Data



Capacity
Update
Update



Reservation
Failure



Event

*Updating Denormalized Data



Capacity
Update
Update



Reservation
Failure
Update



Event

*Updating Denormalized Data



Capacity
Update
Update



Reservation
Failure
Update



Event

Update

*Updating Denormalized Data

Idempotency
is essential

Etags used
to address
concurrency

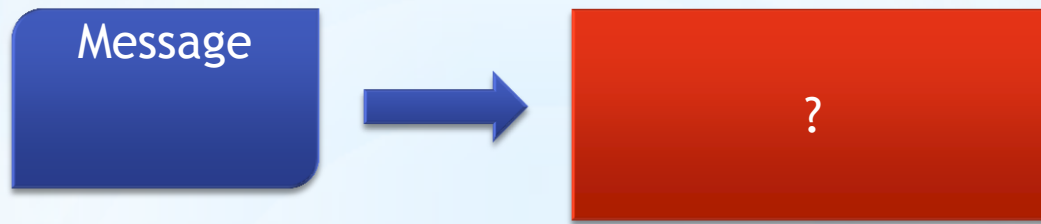
*Background Processing



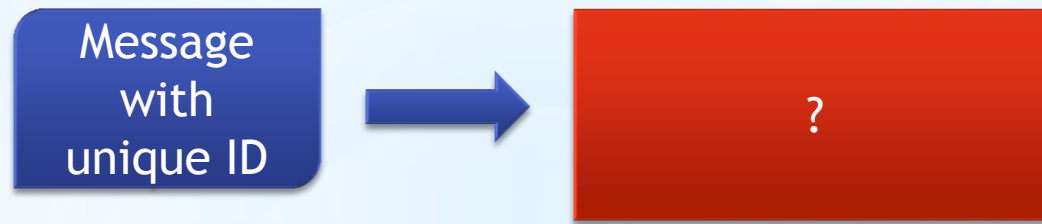
Some operations
are inherently
idempotent

Some operations
must be
explicitly made
idempotent

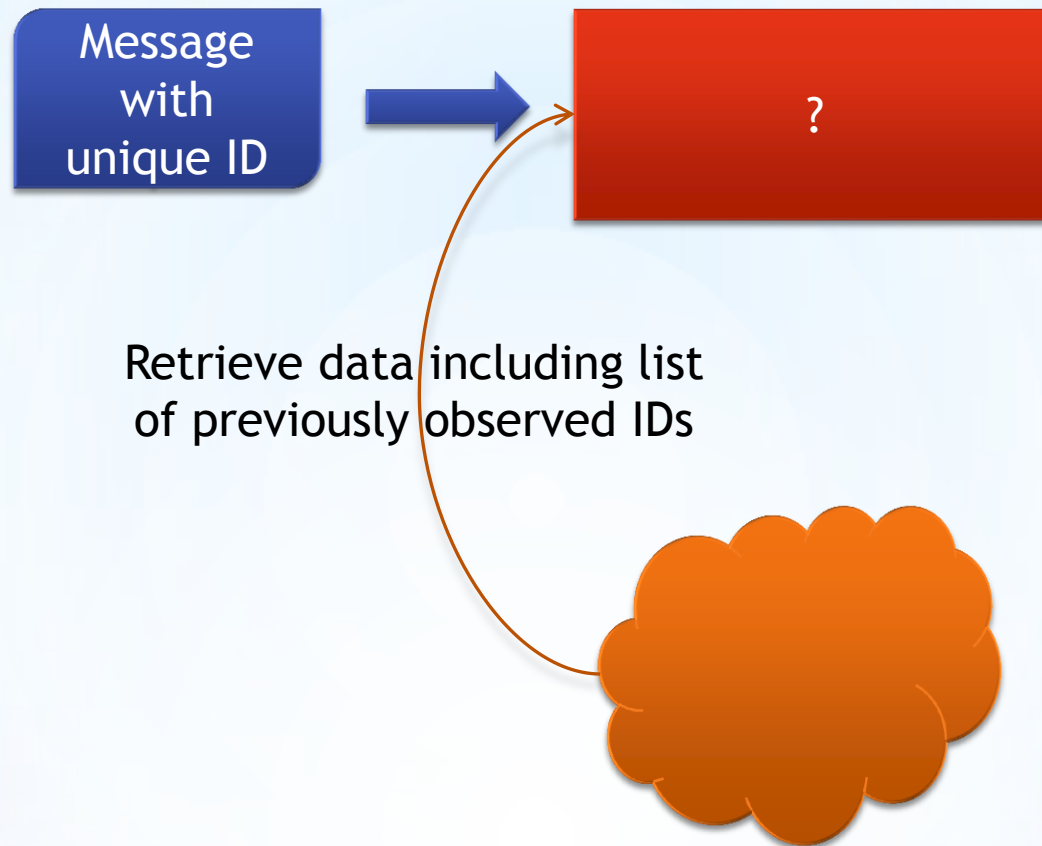
*Idempotency



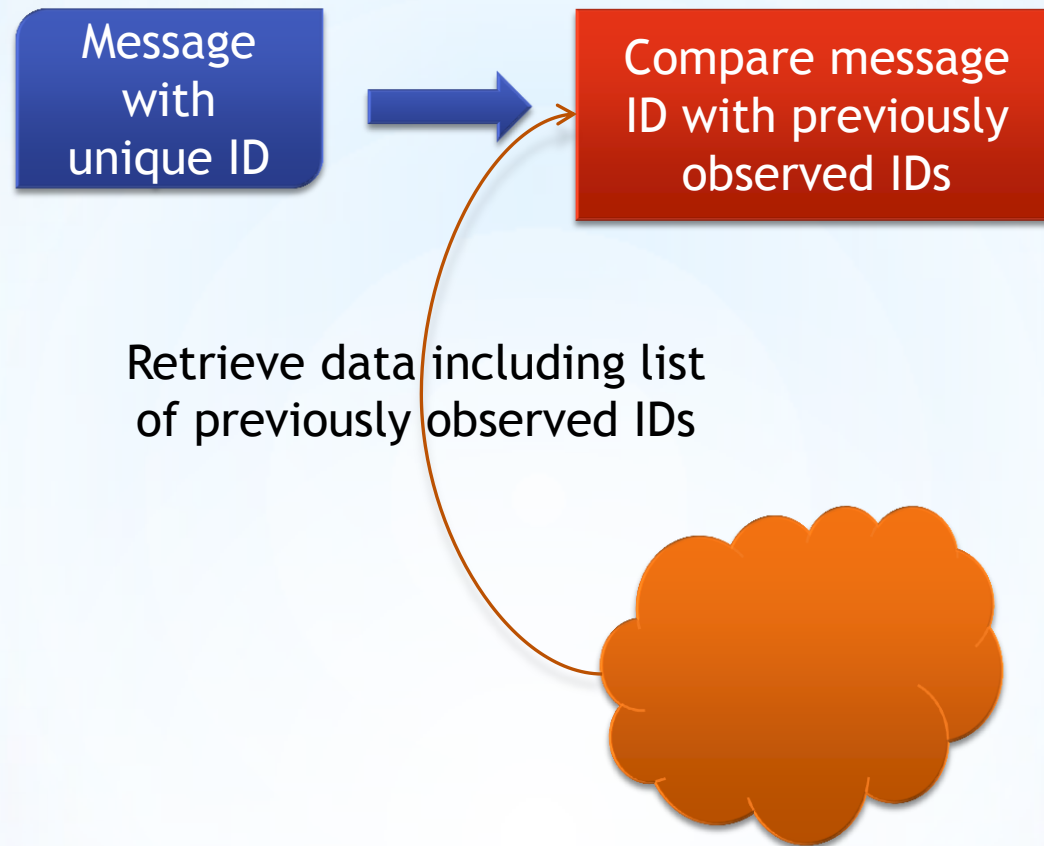
*** Making operations
idempotent**



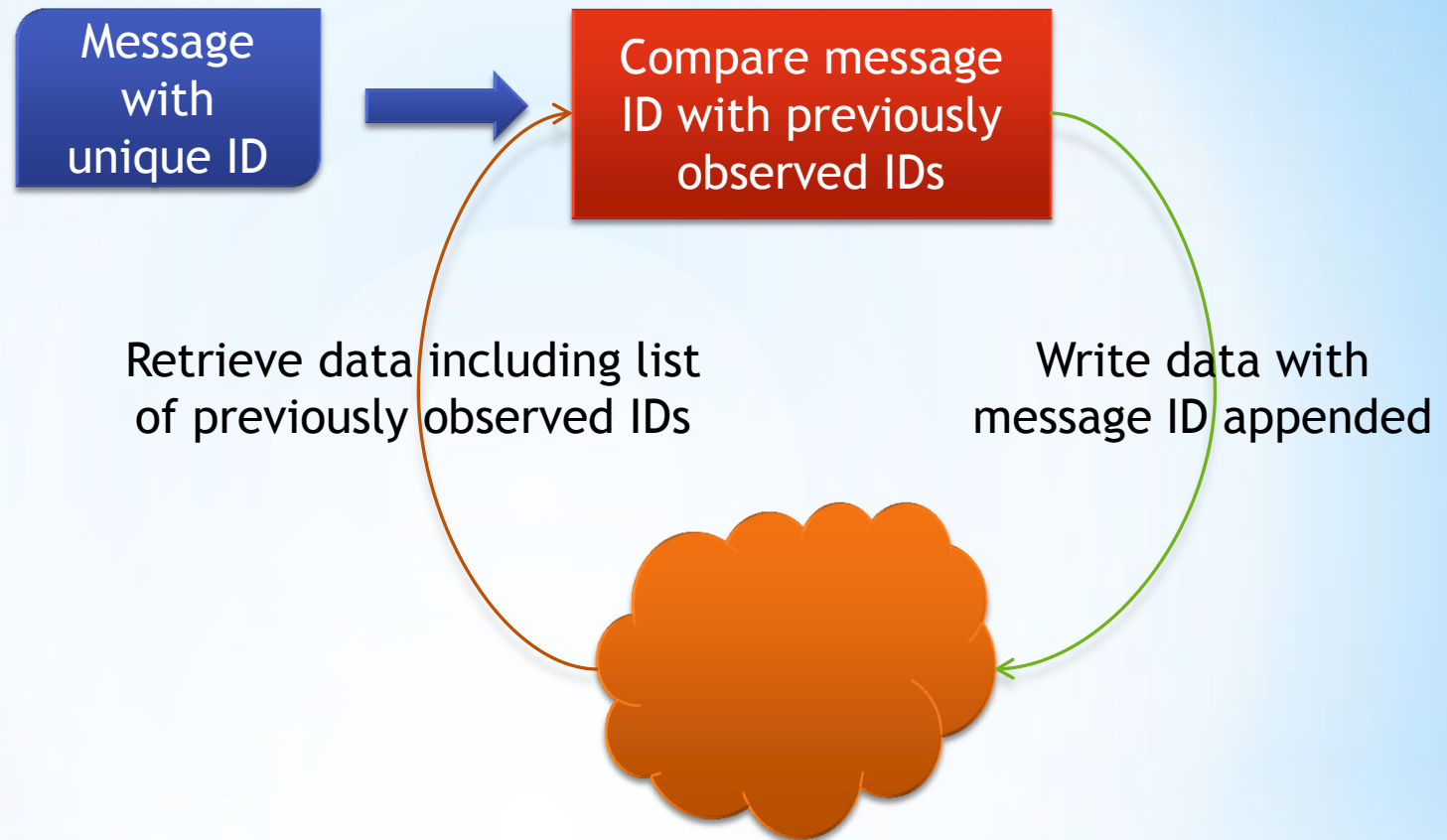
*** Making operations
idempotent**



* Making operations
idempotent



*** Making operations
idempotent**



*** Making operations
idempotent**



*Concurrency



Demo

Using Etags



Capacity
Update
Update

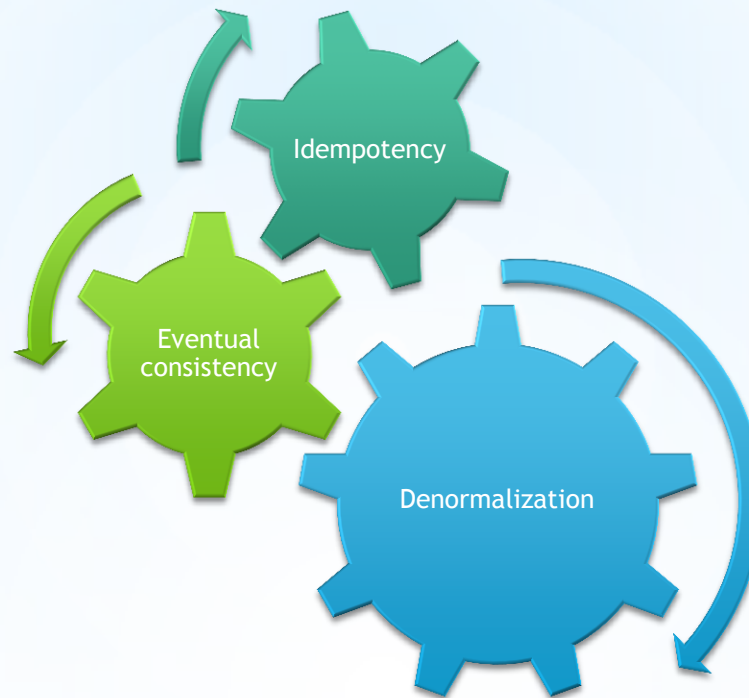


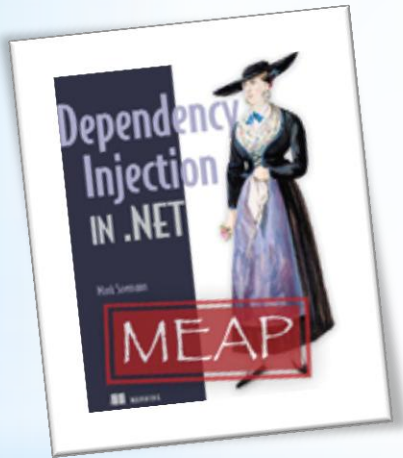
Reservation
Failure
Update



Event
Update

*Eventual Consistency





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