

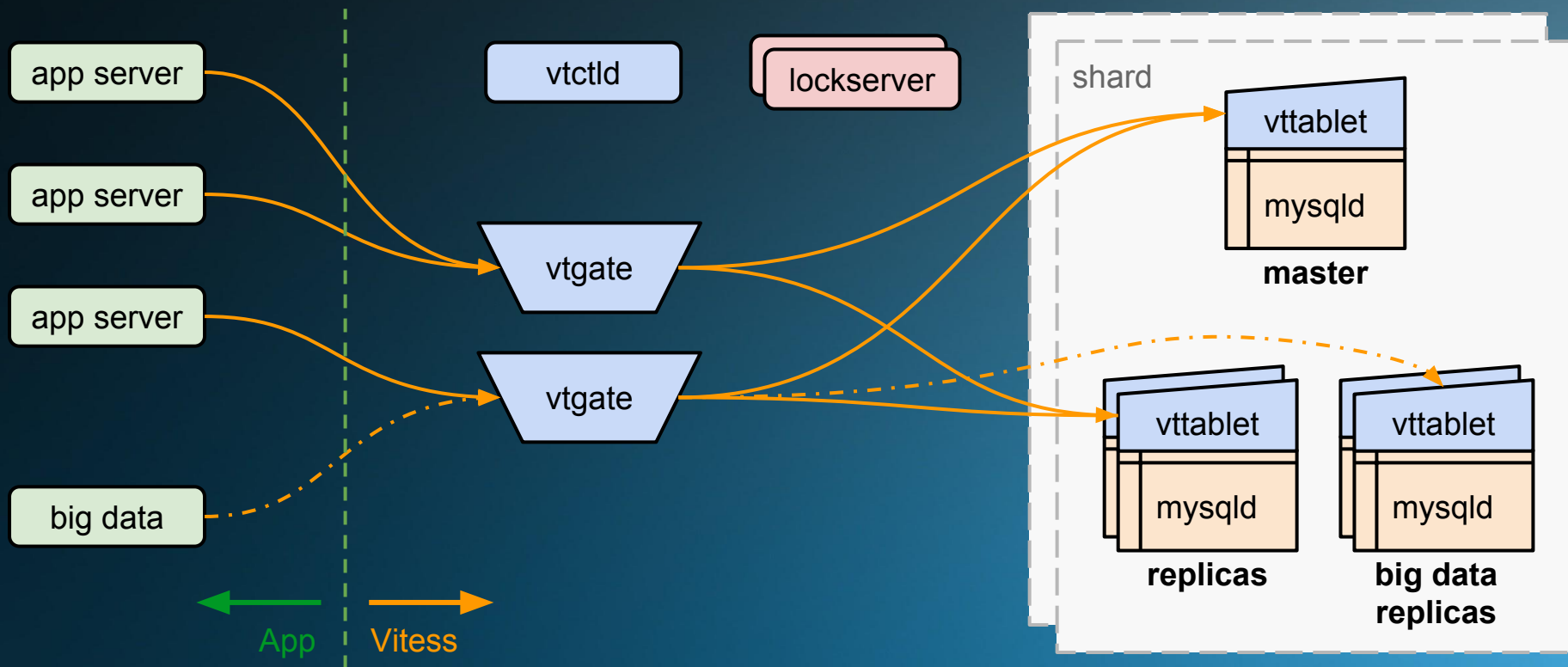
Vitess@Kubecon 2018

Sugu Sougoumarane
CTO, PlanetScale

Pain Points

- Scalability
- Cloud
- Happy DBAs

Architecture



DB Protection

- Connection pools
- Hot rows
- Damage control
 - Row-count limit
 - Time limit
 - Transaction time limits
- Blacklisting

Cloud

- Ephemeral instances
- Discovery
- Health checks
- Master tracking
- Replica load balancing
- Backups & Restores

Scalability

- Sharding
- Resharding
- Custom sharding
- Cross-shard indexes
- Sequences
- One Giant Database

Roadmap

- Full cross-shard SQL support
- VSchema-based resharding
- Paxos * Transactions * 2PC

Appendix

Sharding concepts

- Keyspace
- Keyspace ID
- Shard by Key Ranges

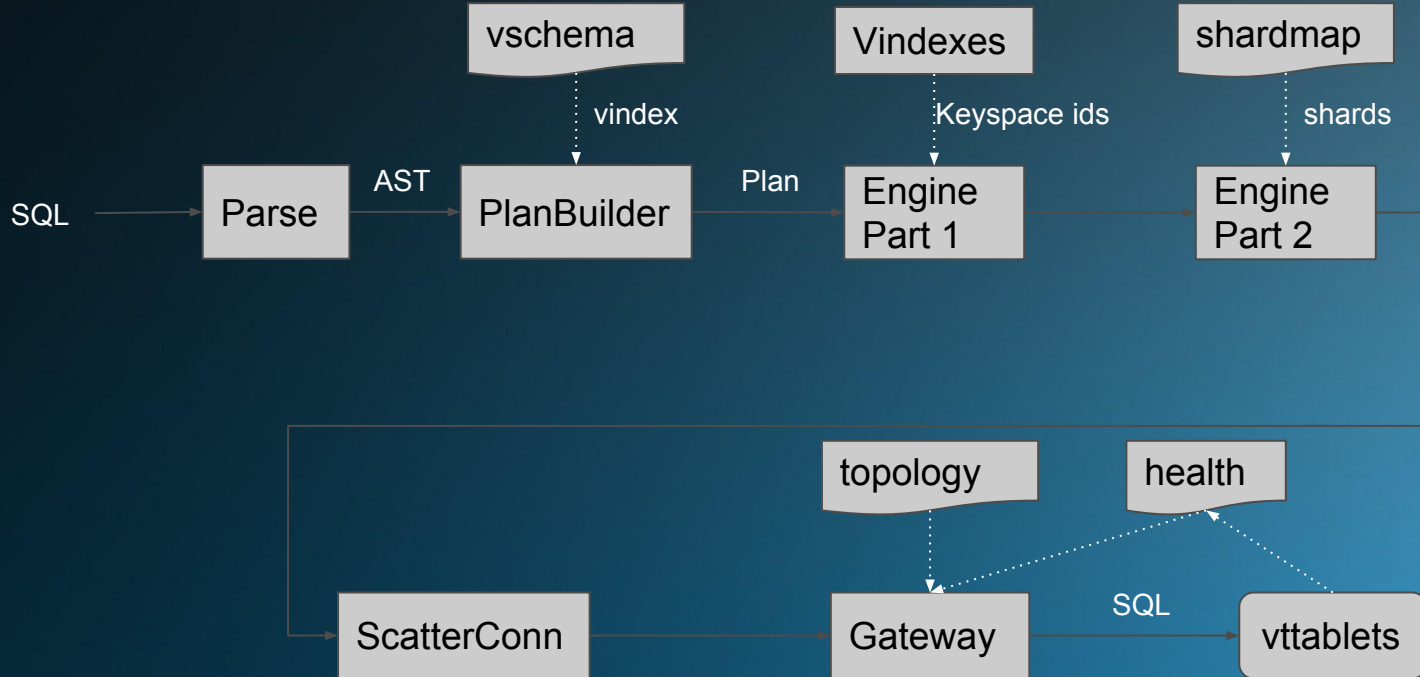
Sharding an RDBMS

- No Sharding Key
- Primary Vindex
 - Designated column
 - Mapping function

Secondary Vindexes

- Mapping function on a different column
- Shareable
- Foreign Key similarities

Life of a Query: VTGate



Life of a Query: VTablet

