KubeCon CloudNativeCon

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A Global Transactional Database

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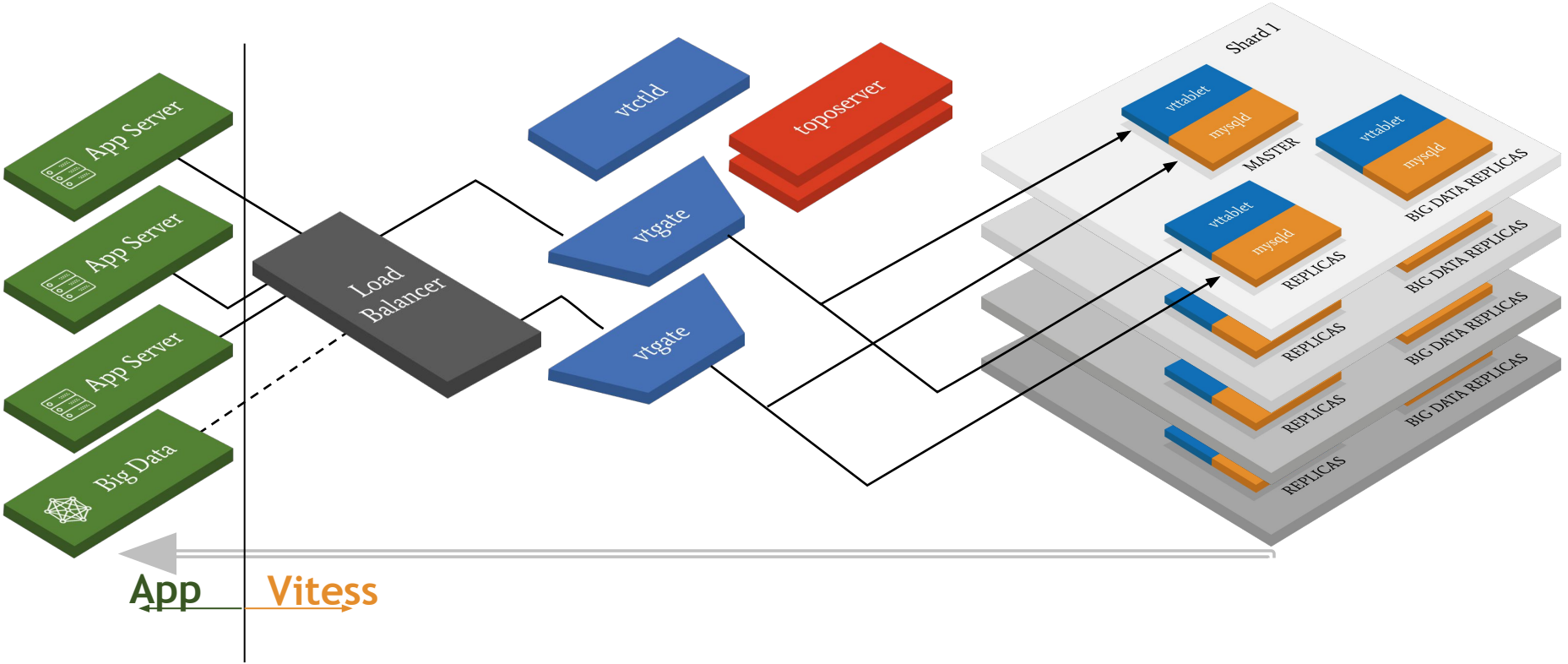
@vitessio

Vitess Architecture



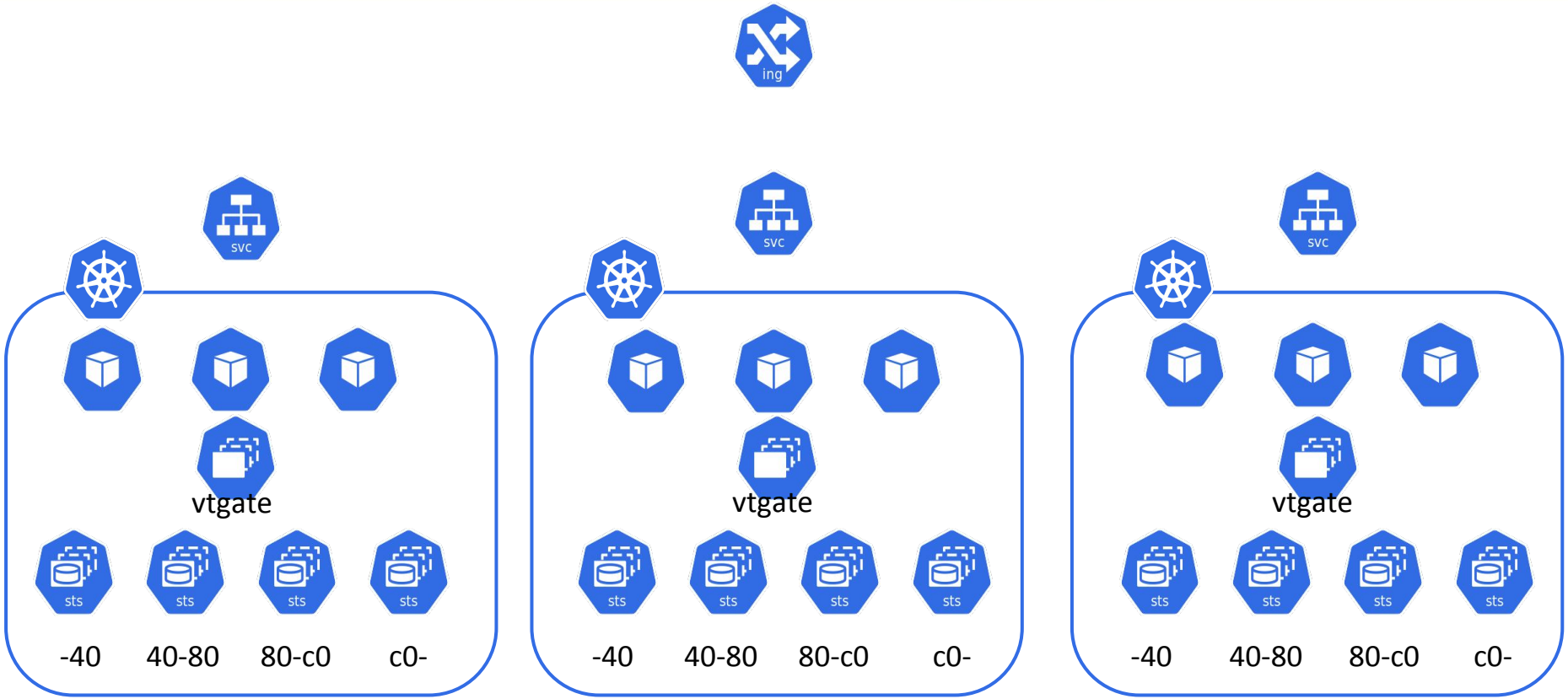
Why Vitess

- Separation of Components
  - Stateless Entrypoint to allow scaling
  - MySQL minder to abstract backing database
  - Native Backup/Restore
  - Health Checks
- Push State to the Edges
  - Into the Application Client
  - Into the Database

A Global Stateful K8s Application

- Multiple Cloud Regions
  - Availability and Locality
  - Multiple Kubernetes Clusters
- Multiple Shards
  - Possibility to Geo-Locate Data
  - Increased Performance

A Global Stateful K8s Application



A Global Stateful K8s Application

doggo.planetscalelabs.com

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Common Availability Problems

- Backup and Restore From Backup
  - Native Backup Integration
- Components Being Updated
  - Planned Reparent
- Pods Being Restarted
  - Planned Reparent
  - Cordon Node
  - Restart Tablets

Less Common Problems

- Tablet Evicted (if on k8s)
- Disk Full
- Backing Disk Store Problem

Unplanned Node Failure

Multi-Region Datacenter Outage

Join the Vitess Community

Vitess.io
https://vitess.slack.com
https://github.com/vitessio/vitess

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