# **Sharded MySQL on Kubernetes**

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What is Vitess?

### Sharded MySQL

### Massively Scalable

HA



VITESS.IO

### Cloud-Native

# Vitess Stats

# Started 2010

Marquee Adopters

16,000

Commits





VITESS.IO

1000+

# Slack Members

BIOIO Stars Forks

# Key Adopters

40% Migrated to Vitess

Square
Cash App
fully runs
on Vitess



VITESS.IO

Pinterest
Powers all
advertising
campaign
manageme
nt

# Key Adopters

## YouTube

**Pinterest** 

slack

HubSpot





### BetterCloud

# Square GitHub nozzle

**stitch**labs

AXON



# VILESS on Kubernetes





Product updates, customer sto

#### Scaling MySQL in

Friday, March 20, 2015

Your new website is grow scaling to meet this unexp

| July 21, 2015  | kubernetes     | 7 |
|--|----------------|---|
| Kubernetes / Initial release dates   |                |   |
| About 6,630,000 results (0.49 seconds)   |                |   |
| All News Images Videos Shopping More   | Settings Tools |   |
| kubernetes release date  | I Q            |   |
| ring exponentially. After a few rounds of high fives, you start pected demand. While you can always add more front-end |                |   |
| the cloud with Vitess and Kubernetes   |                |   |
| ries, and tips and tricks on Google Cloud Platform   |                |   |
| gle Cloud Platform Blog  |                |   |
|  |                |   |

# 2015



### **Production Workloads**



Oldest, since 2016



10,000+ Tablets

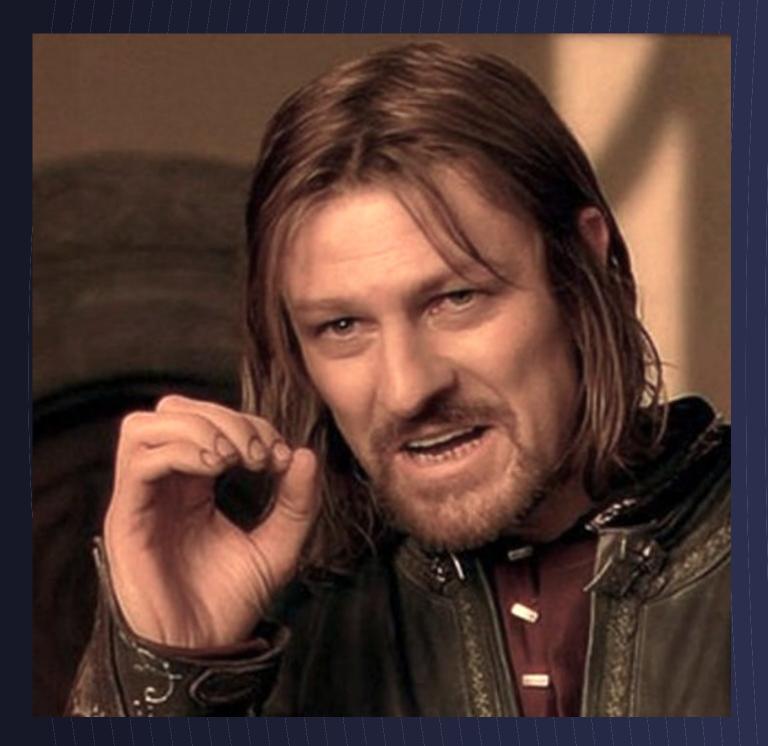


VITESS.IO

### HubSpot

### Hundreds of keyspaces

### Migrate from cloud to nozzle cloud MySQL 8.0

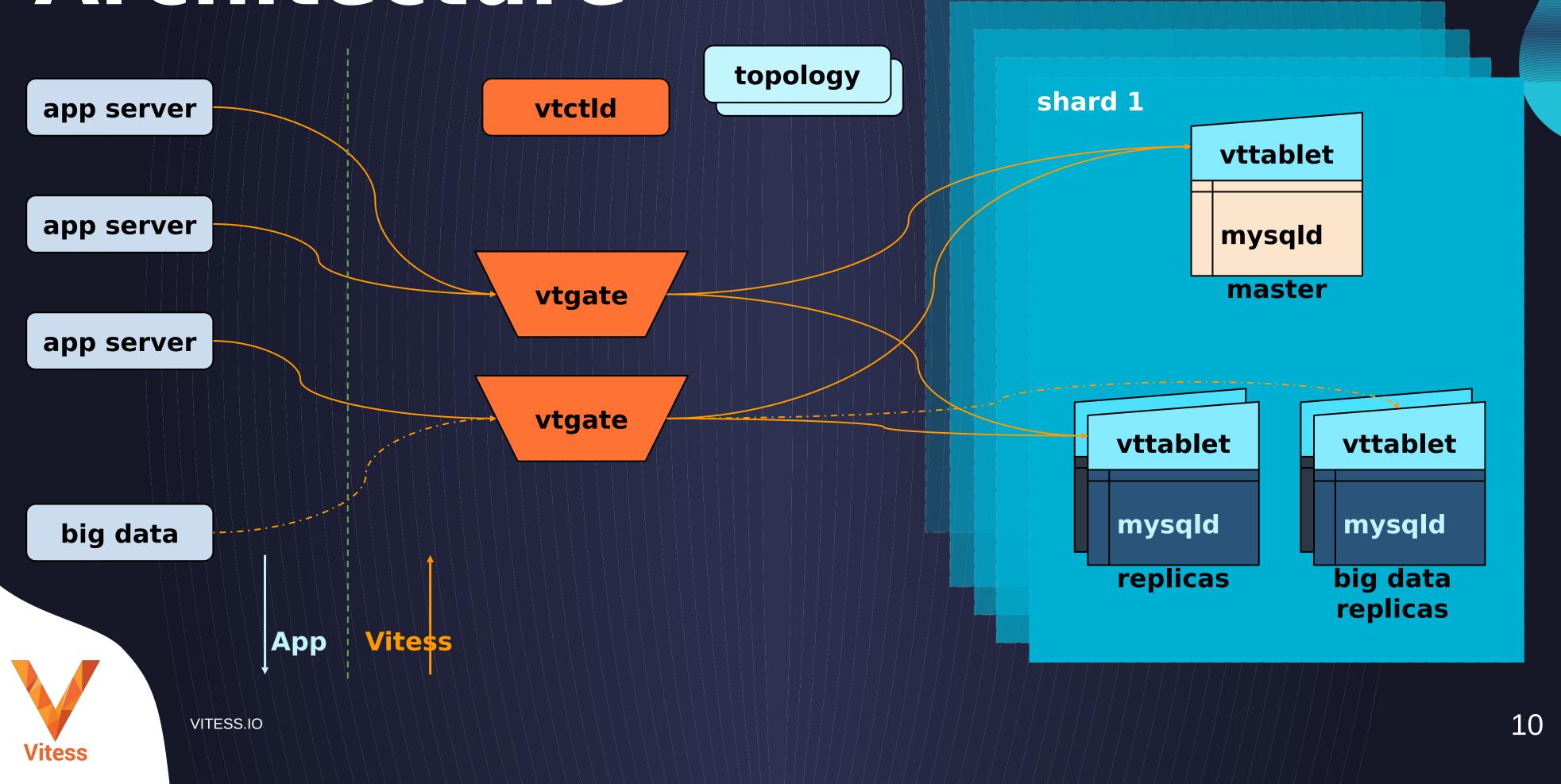




VITESS.IO

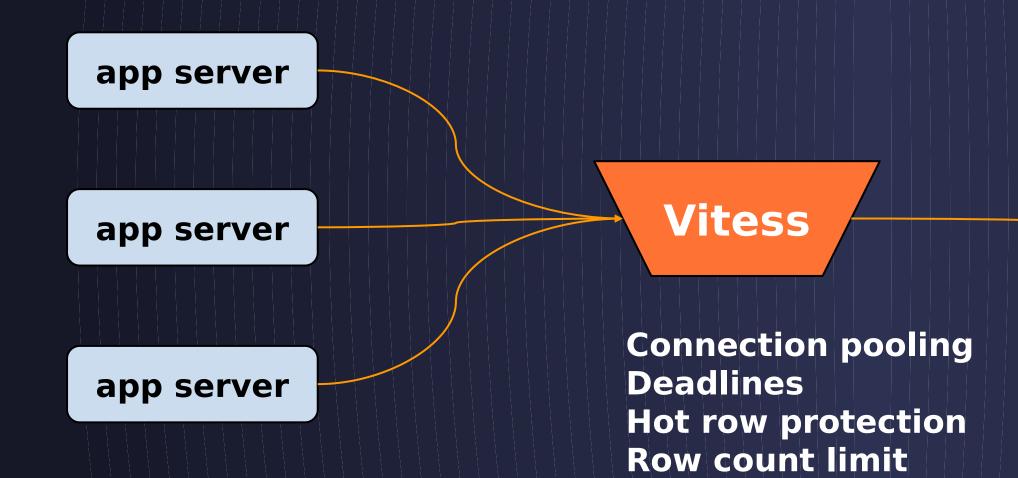
One does not simply... move MySQL to Kubernetes...

# Architecture



#### shard n

# **Starting with Vitess**



Blacklisting



VITESS.IO

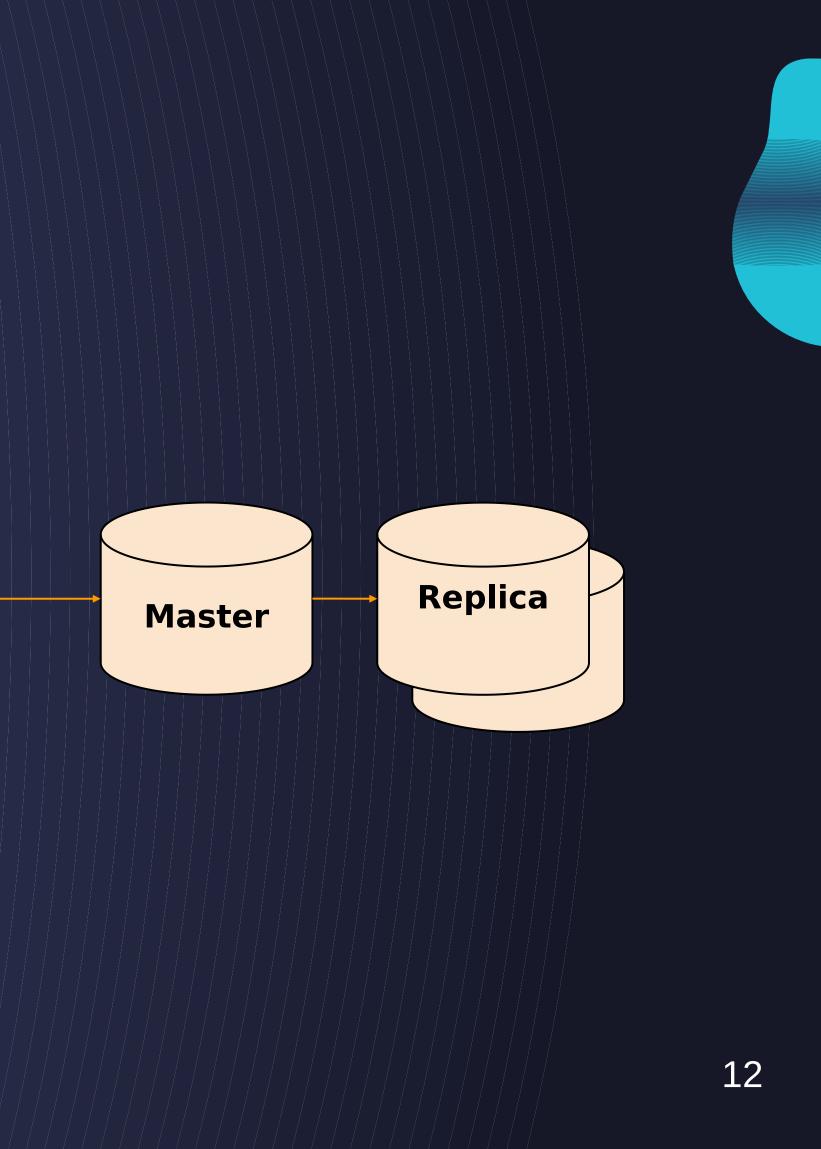
### **MainDB**

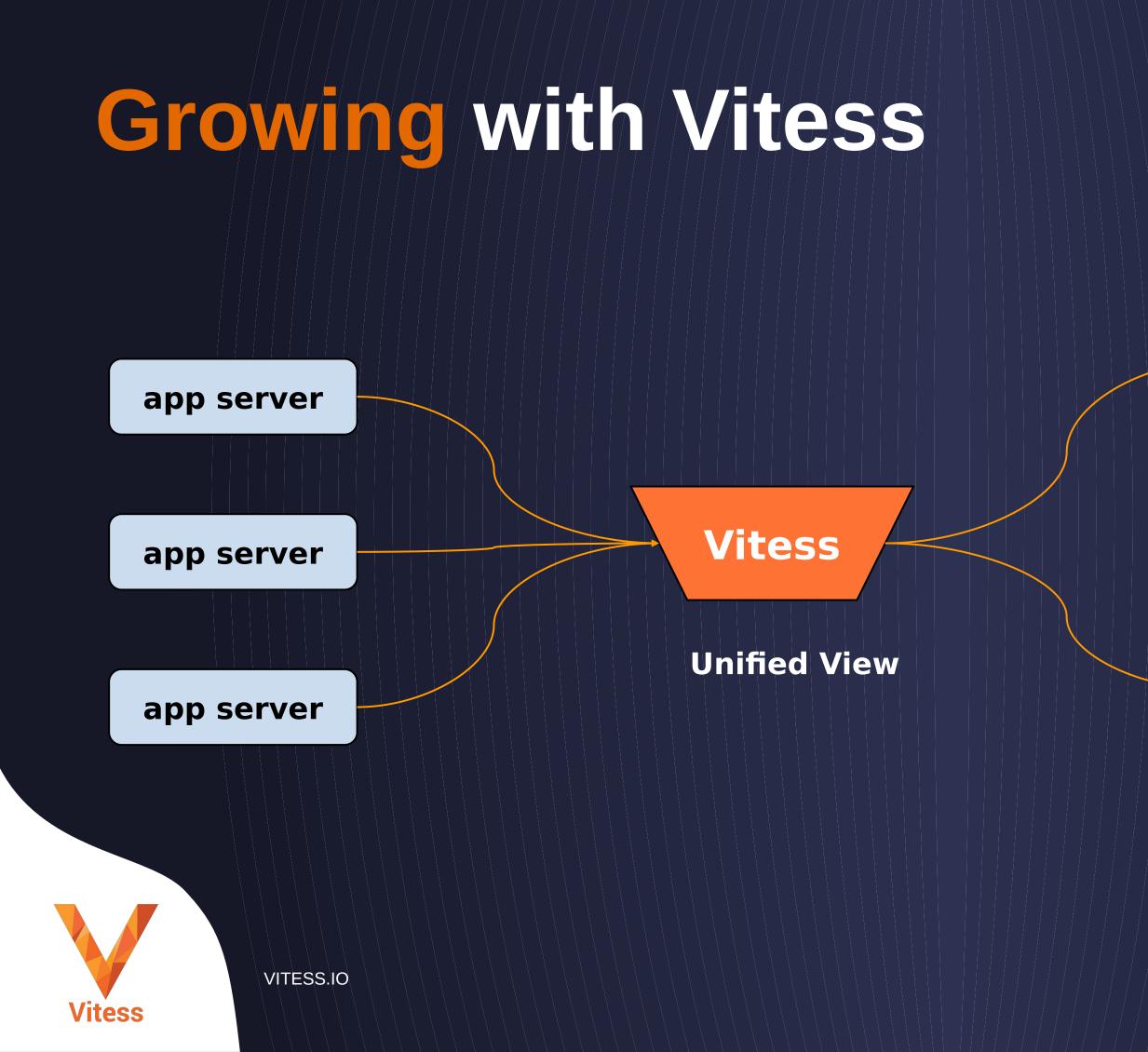
# Growing with Vitess

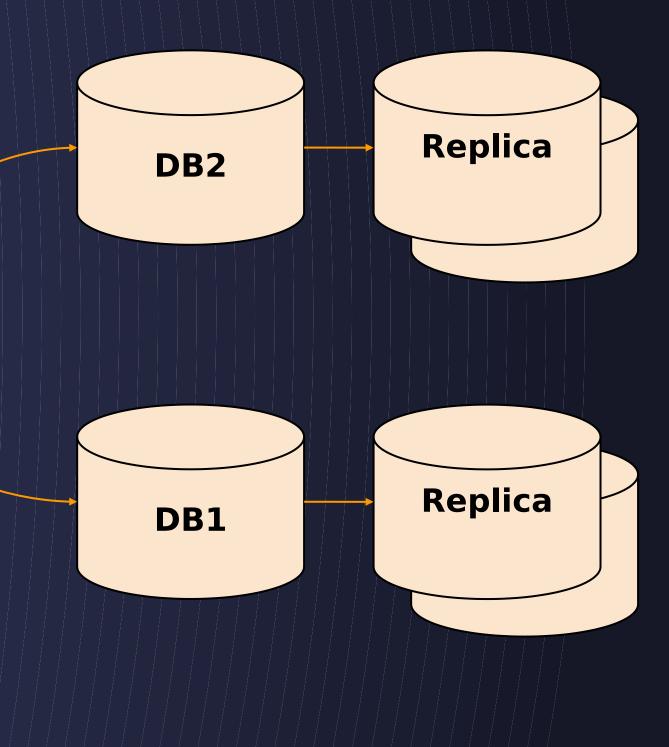


**Backup Restore** 

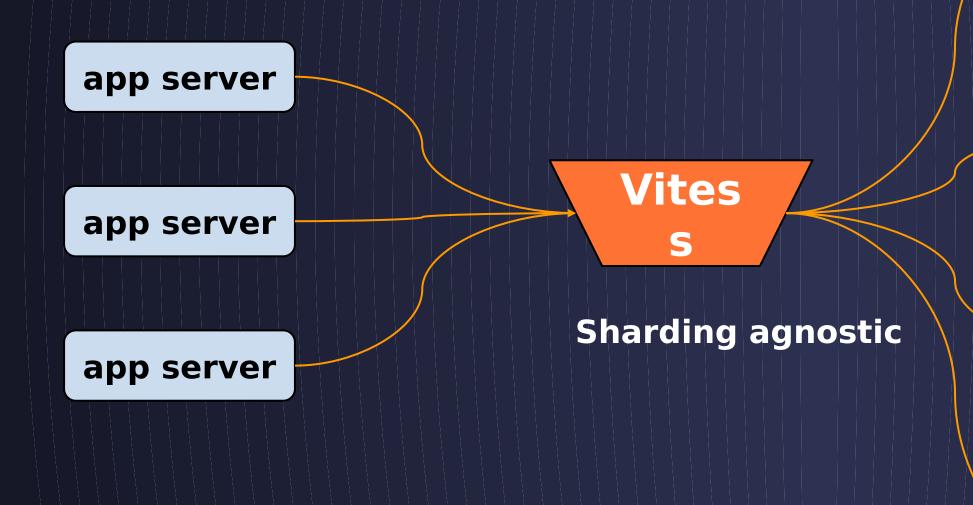




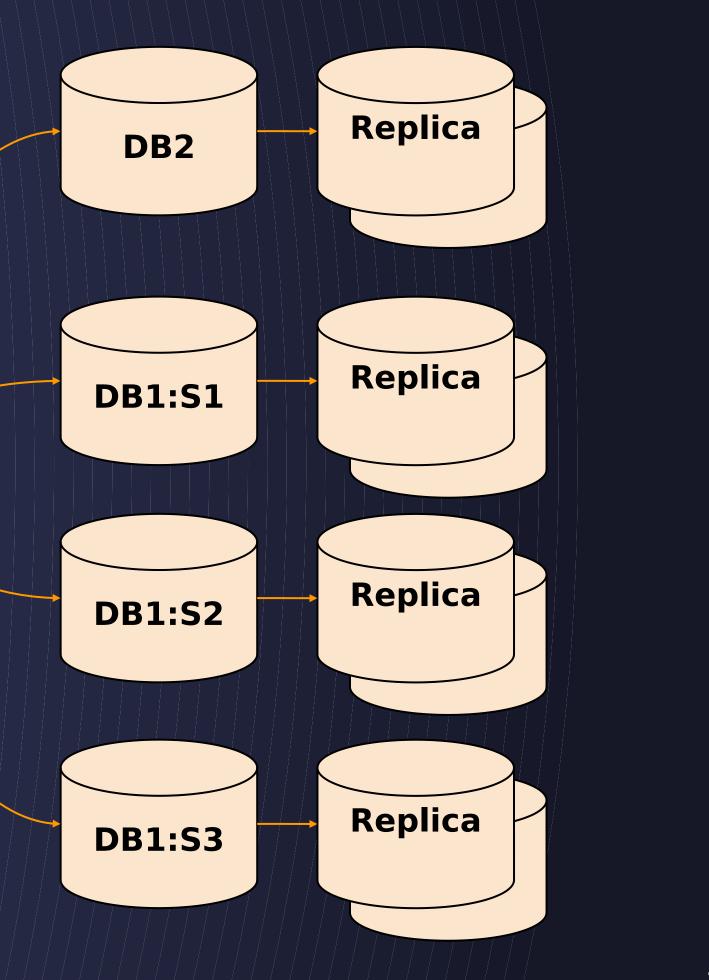


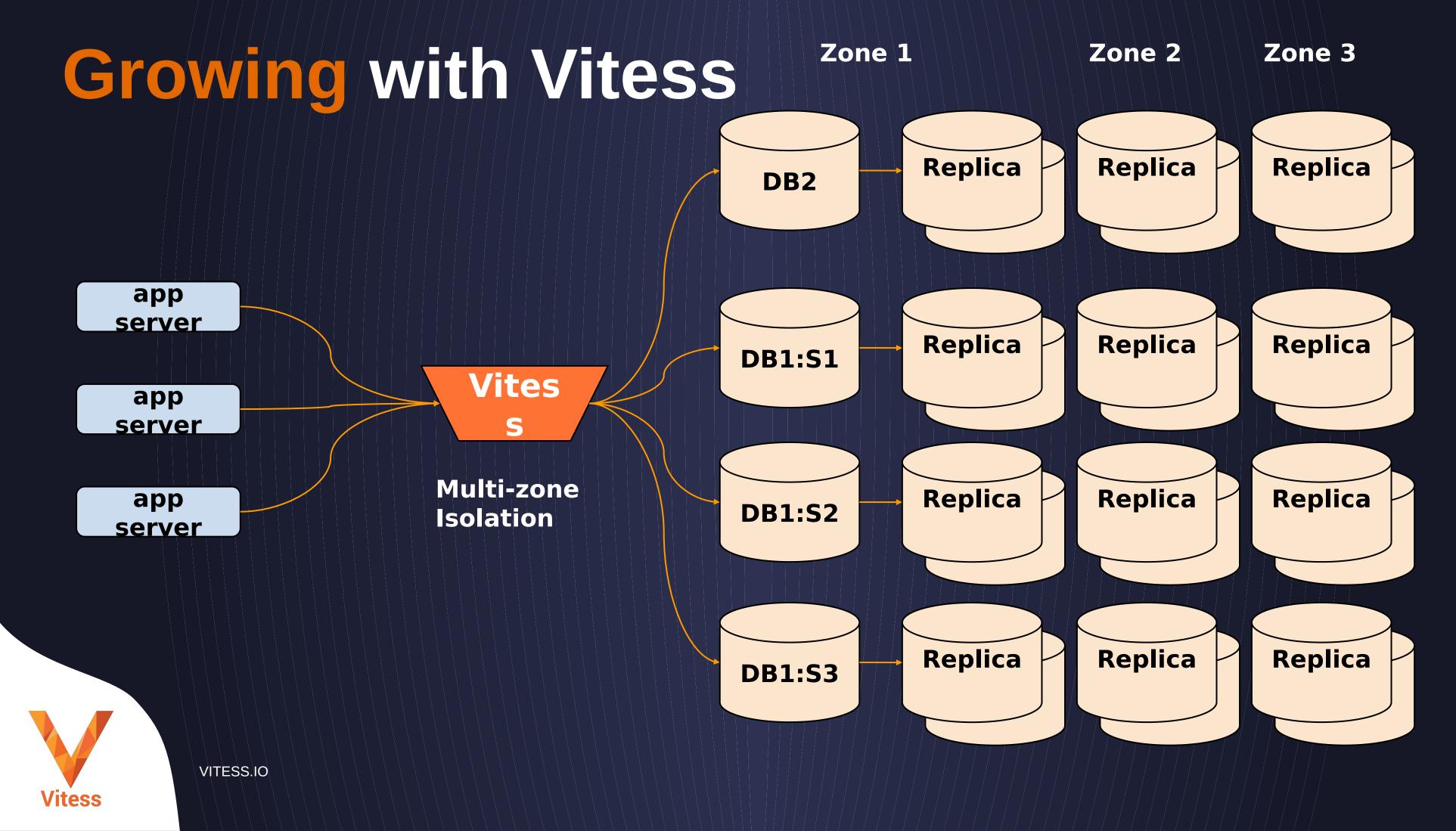


# **Growing with Vitess**









# Run Vitess on Kubernetes

### Build your own

### Helm charts





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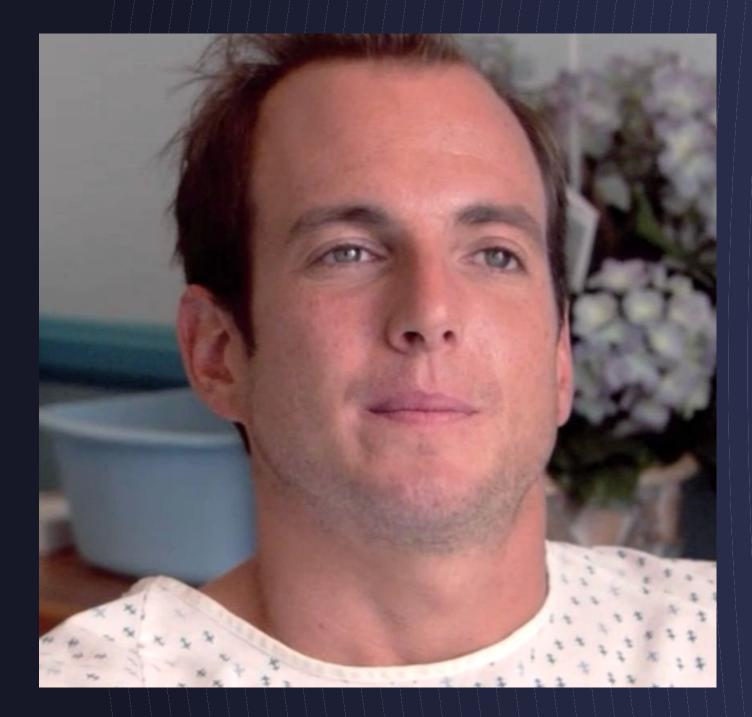
### Planetsca



VITESS.IO

Vitess







VITESS.IO

# THE REGRET FEATURE

# "il've made a huge mistake"

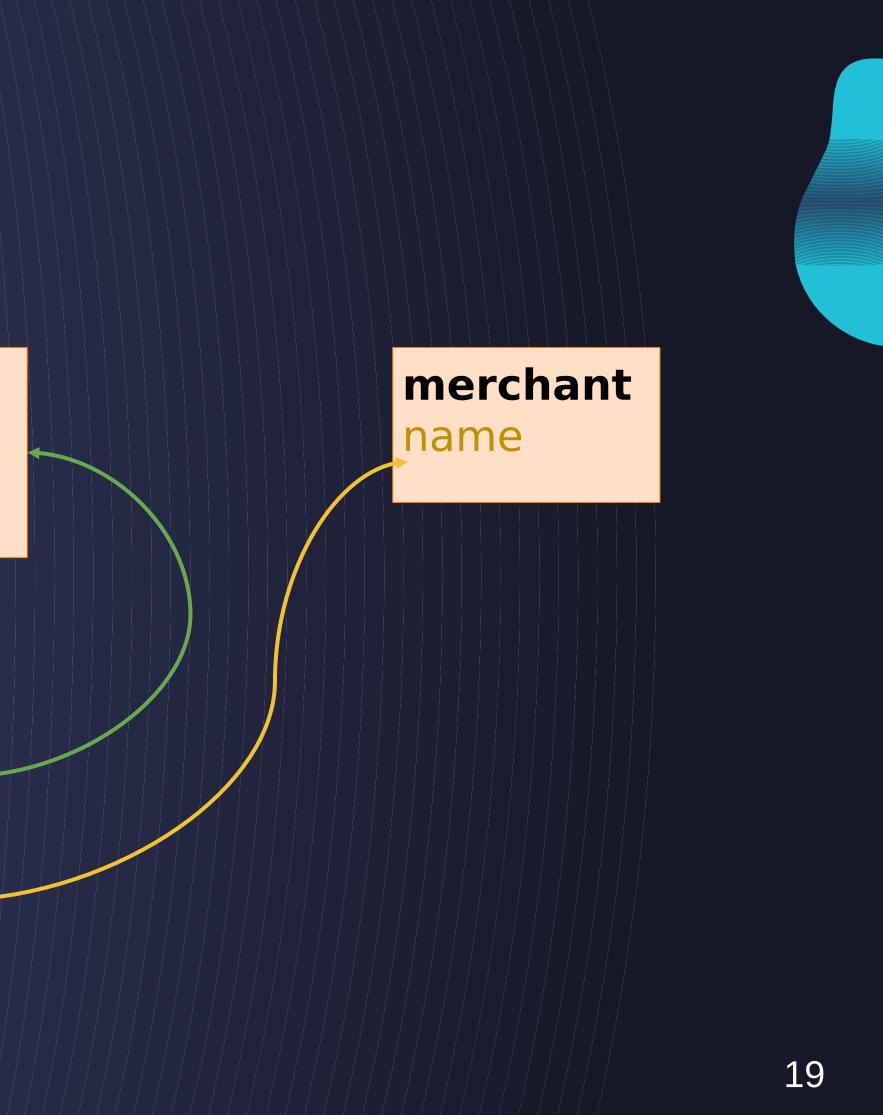
# Marketplace Schema





orders oid cid pid mname





# Sharded

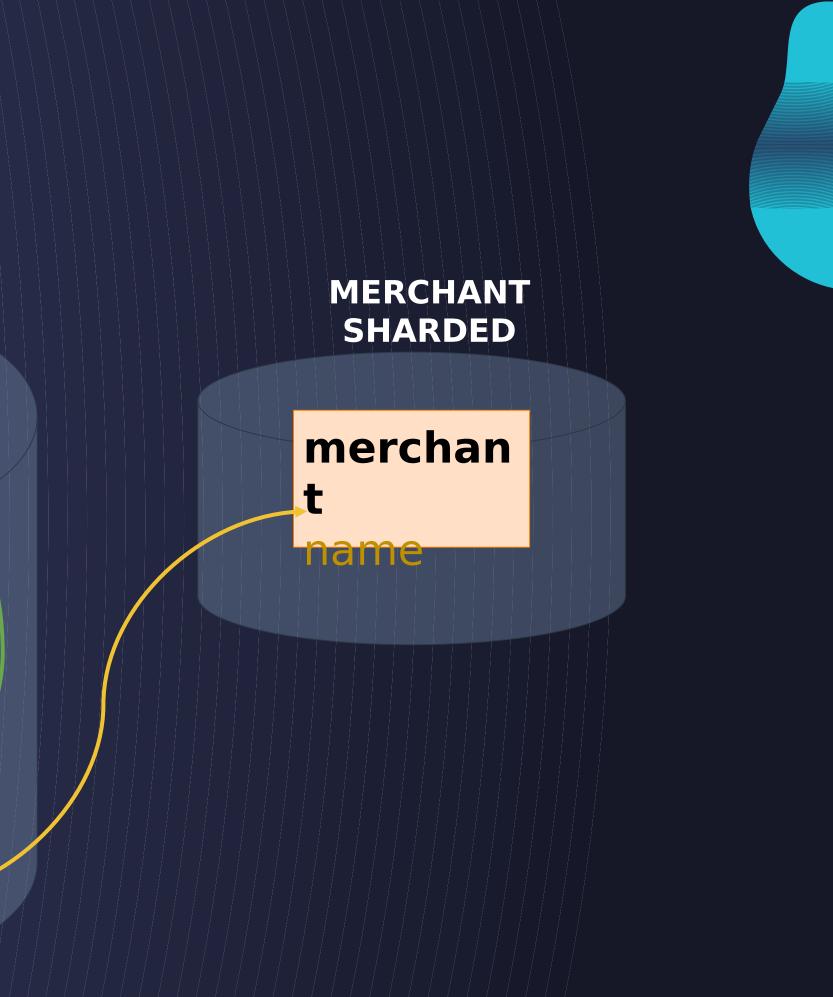
#### PRODUCT UNSHARDED

product pid description CUSTOMER SHARDED

customer cid name

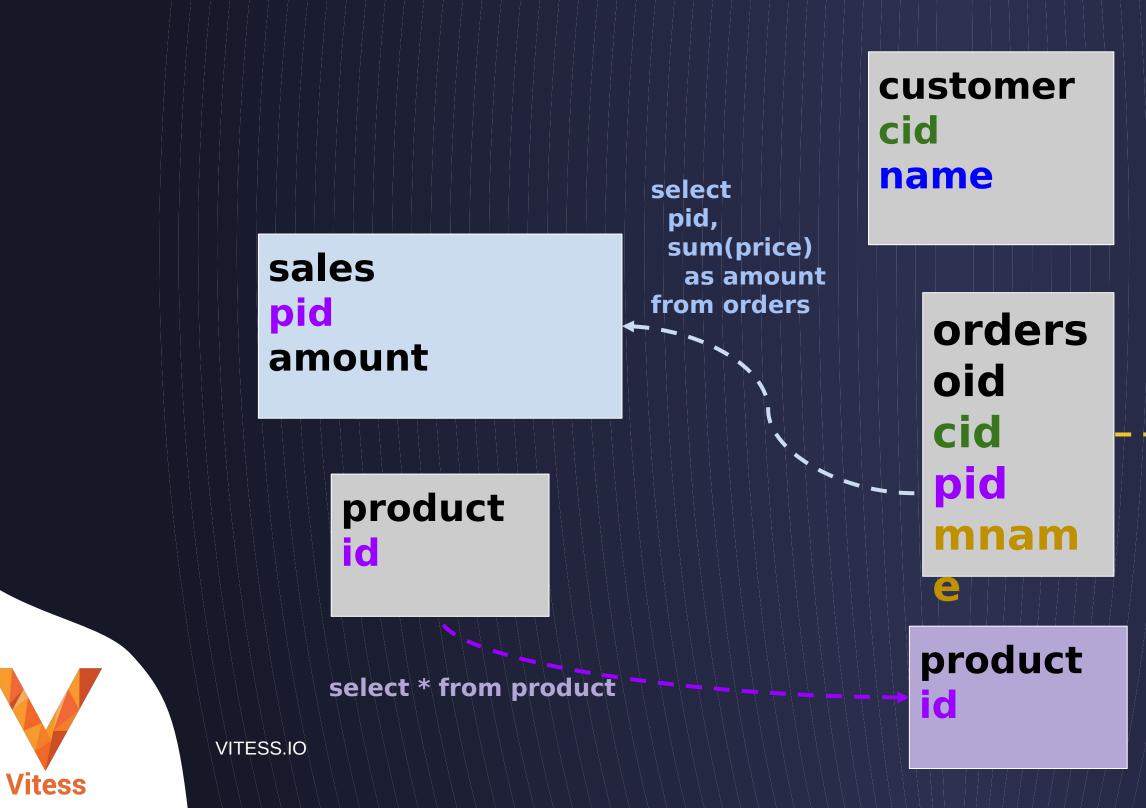
> orders oid cid pid mname





# VReplication

PRODUCT UNSHARDED CUSTOMER SHARDED



#### MERCHANT SHARDED

#### merchant mname

select \*
from orders
where
in\_keyrange(
 mname,
 'unicode\_loose\_md5',
 '-80')

orders oid cid pid mname

# Use Cases

### Materializ ed Views

Real-Time Rollups

### Change Notificatio

Data Migratio

Schema deploym ent



VITESS.IO



### Reshardi ng

Backfilling of Lookup vindexes

# What's

### console.planetscale.com Early Adopter Program





VITESS.IO

### @vitessio @ssougou @sougou @planetscaledata