

# Vitess

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**CLOUD NATIVE**  
COMPUTING FOUNDATION

@vitessio

# What is Vitess

- Sharding middleware for MySQL
- Massively scalable
- HA
- Cloud-native



A rocket is being launched from a space station, with a large plume of white smoke and fire at the base. The scene is set against a clear blue sky. In the foreground, there are several tall, metal lattice towers. The overall image has a dark, slightly purple tint, especially at the bottom and sides.

Vitess stats

Started **2010**

**7,500+** stars

**16,000+** commits

Marquee adopters

**100+** contributors

**800+** Slack members

**1000+** forks

# Key adopters

 **slack** 25% Migrated to Vitess



10,000+ Tablets on Kubernetes

 **Square** Cash App fully runs on Vitess

 **Pinterest** All of advertising campaign management





jack  @jack · Dec 8



# Top Charts

Free Apps

Paid Apps



1 Cash App

Send, Spend Money,  
Buy Bitcoin

OPEN



2 YouTube: Watch,  
Listen, Stream

Videos, Music and Live Streams

OPEN



3 BURGER KING® App

Coupons & Mobile Order

GET



4 Instagram

Photo & Video



 326

 509

 3.2K



# The Community



What makes Vitess cloud native?



# 2015



## Google Cloud Platform Blog

Product updates, customer stories, and tips and tricks on Google Cloud Platform

### Scaling MySQL in the cloud with Vitess and Kubernetes

Friday, March 20, 2015

Your new website is growing exponentially. After a few rounds of high fives, you start scaling to meet this unexpected demand. While you can always add more front-end

kubernetes release date



All

News

Images

Videos

Shopping

More

Settings

Tools

About 6,630,000 results (0.49 seconds)

Kubernetes / Initial release dates

July 21, 2015



kubernetes





**Kelsey Hightower** ✓

@kelseyhightower

Following

I'm always going to recommend people exercise extreme caution when running stateful workloads on Kubernetes. Most people who are asking "can I run stateful workloads on Kubernetes" don't have much experience with Kubernetes and often times the workload they are asking about.

12:10 AM - 24 Mar 2019

283 Retweets 895 Likes



30 283 895



Tweet your reply



**Kelsey Hightower** ✓ @kelseyhightower · Mar 24

Some people believe that rubbing Kubernetes on a stateful workload turns it into a fully managed database offering rivaling RDS. This is false. Maybe with enough effort, and additional components, and an SRE team, you can build RDS on top of Kubernetes.

21 151 488



**Sugu Sougoumarane** @ssougou · Mar 24

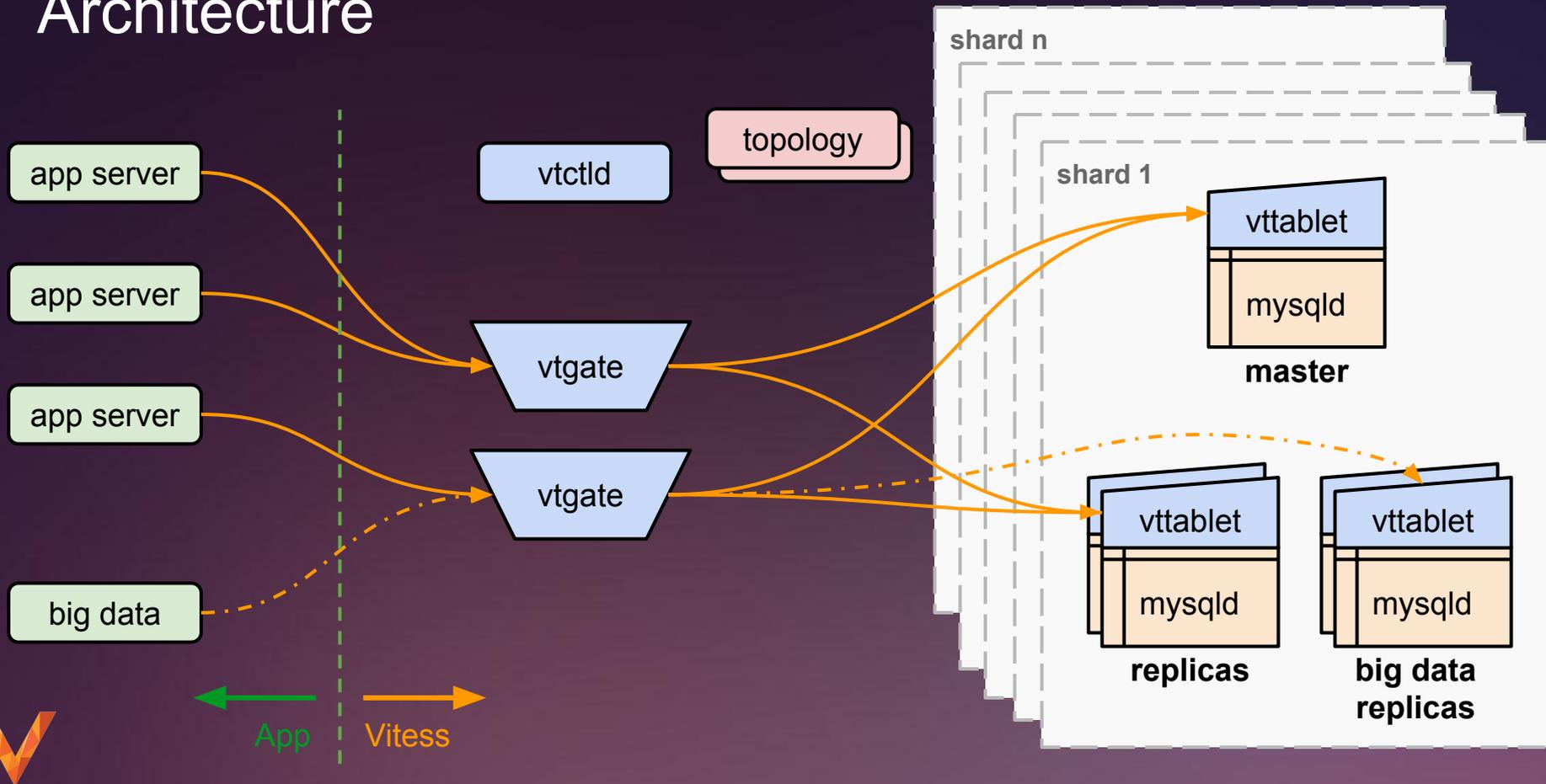
Replying to @kelseyhightower

@vitessio fills this gap. @HubSpot and @JD\_Corporate have been running stateful workloads on it for over two years now. But it will be nice if Kubernetes put more thought into this problem area :).

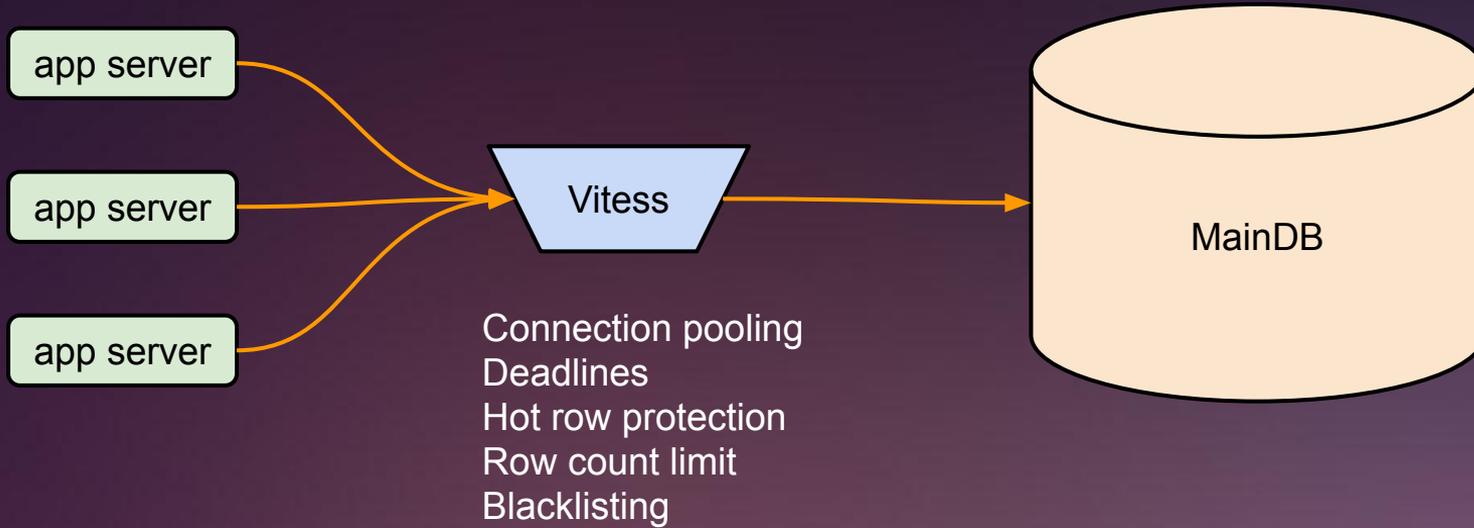
2 1 11



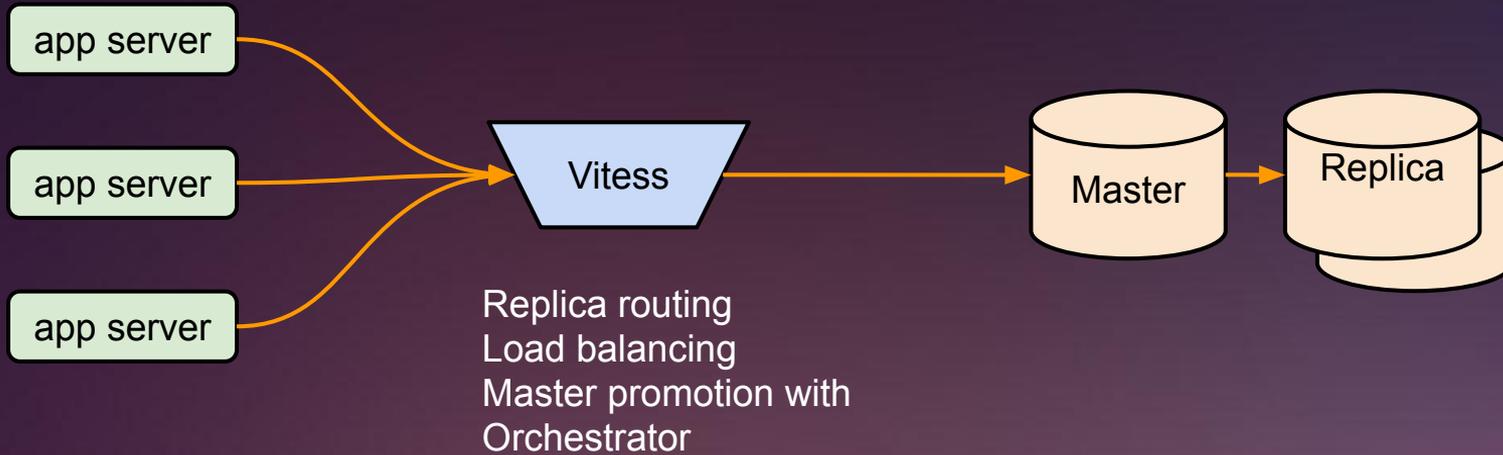
# Architecture



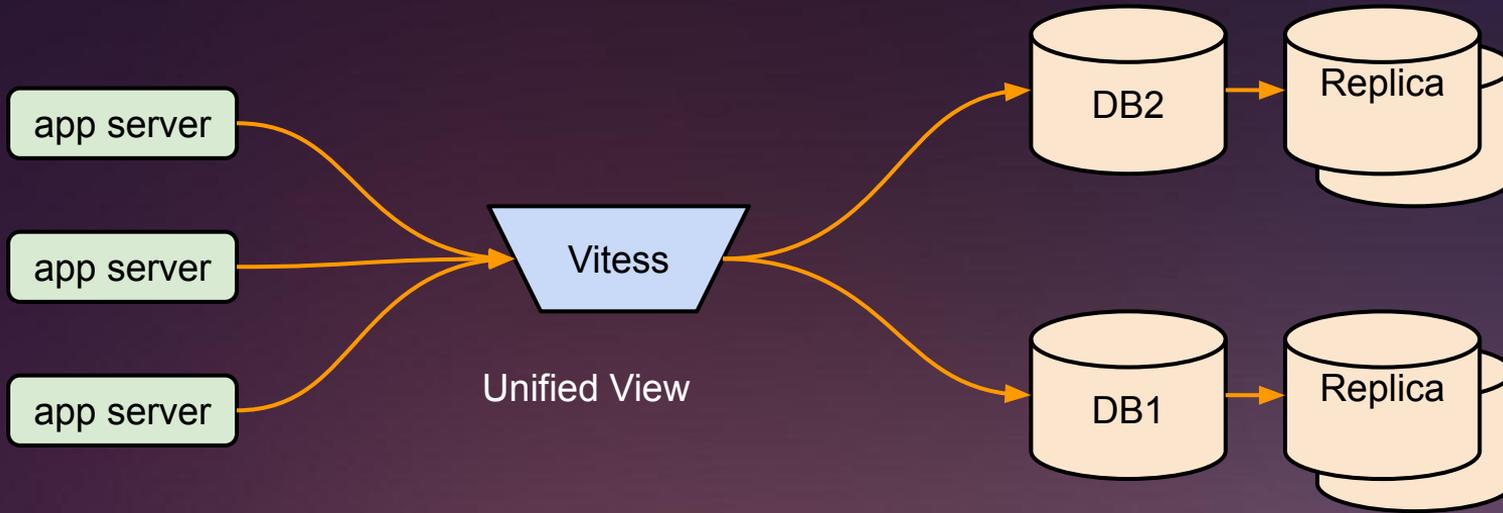
# Starting with Vitess



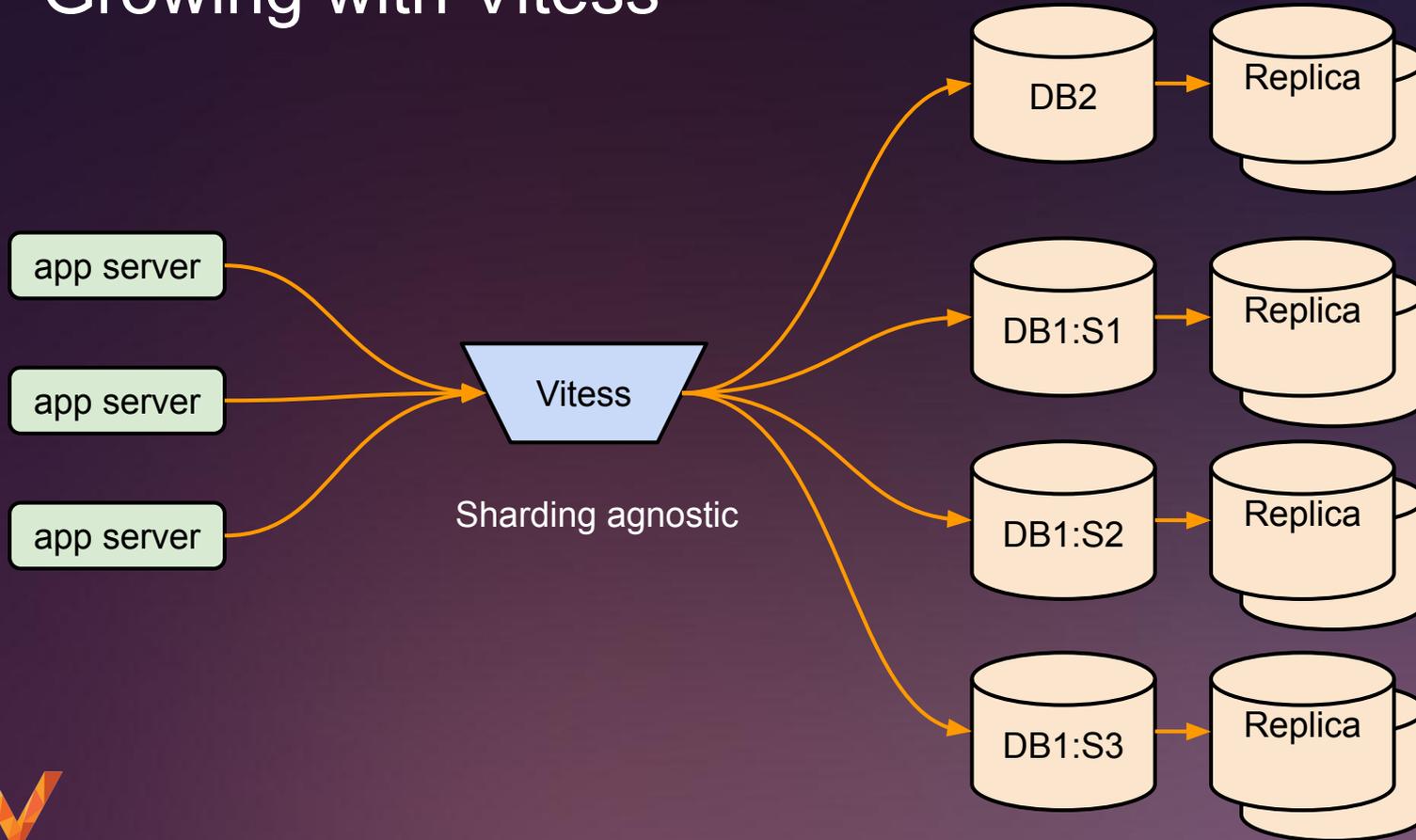
# Growing with Vitess



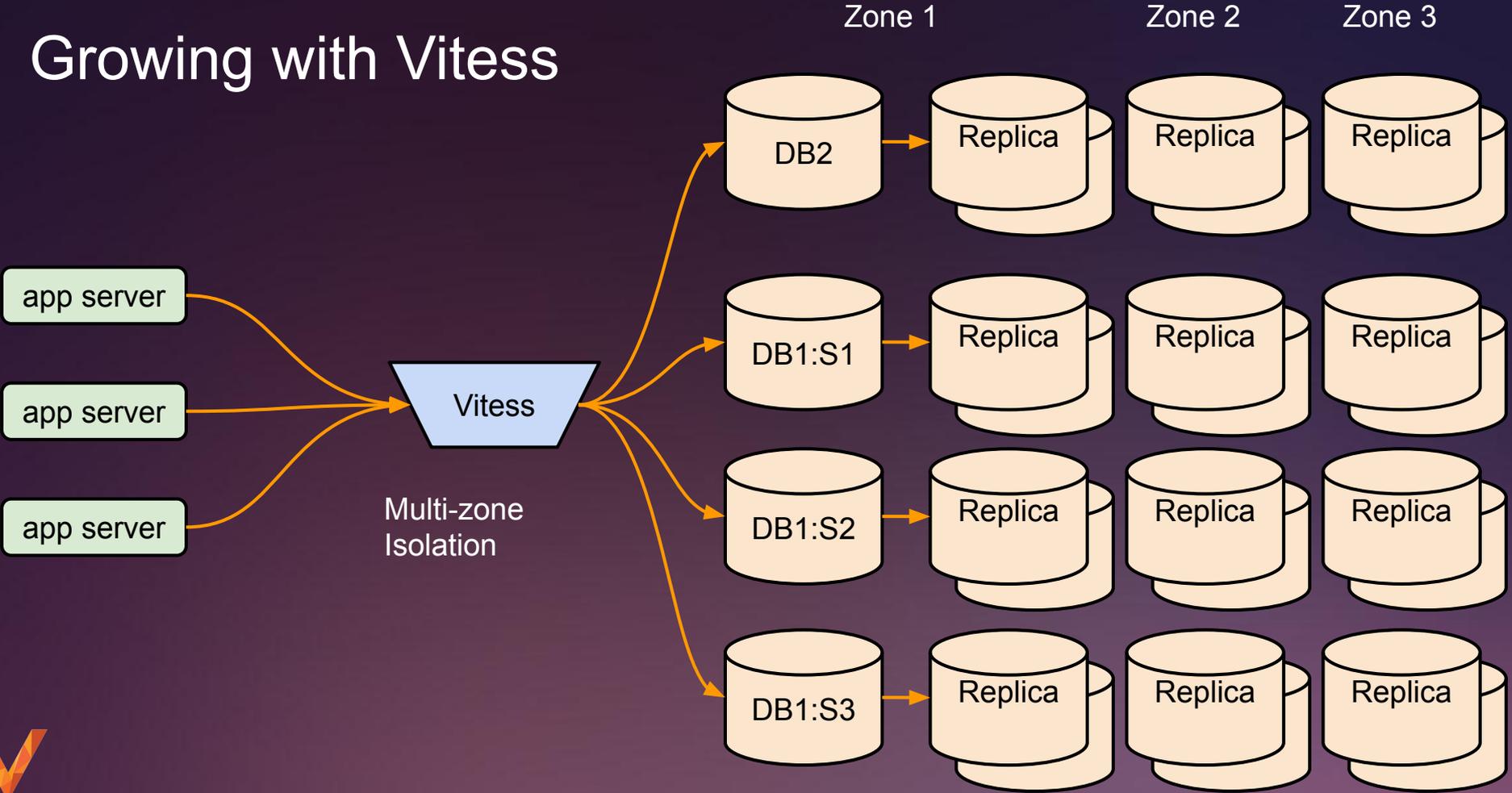
# Growing with Vitess



# Growing with Vitess



# Growing with Vitess



# Resources

- <https://github.com/vitessio/vitess/tree/master/helm>
- <https://github.com/vitessio/vitess-operator>
- <https://github.com/vitessio/vitess/tree/master/examples/helm>
- <https://vitess.io/docs/tutorials/kubernetes/>

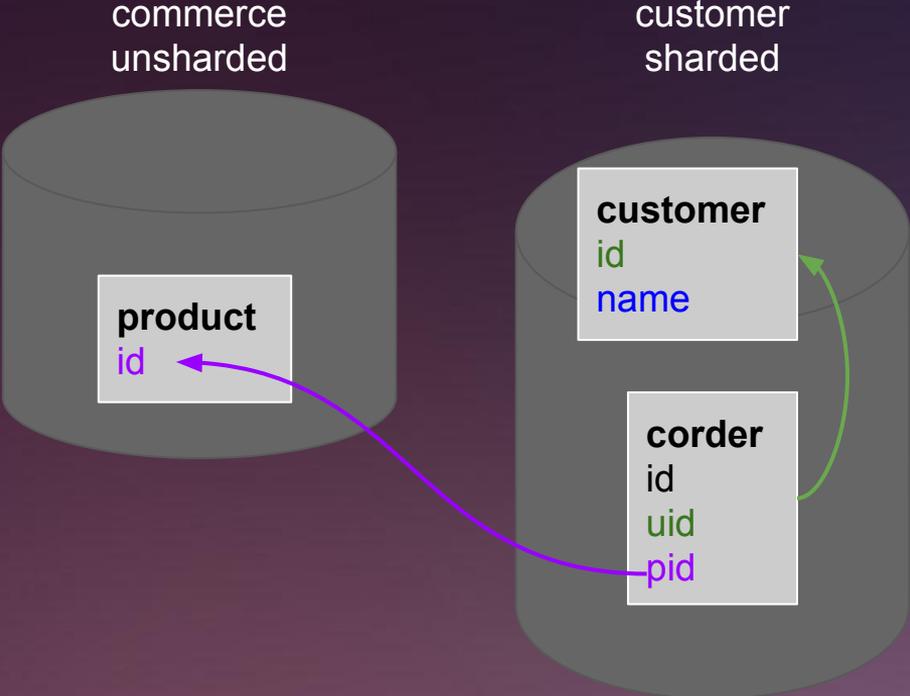


# VReplication

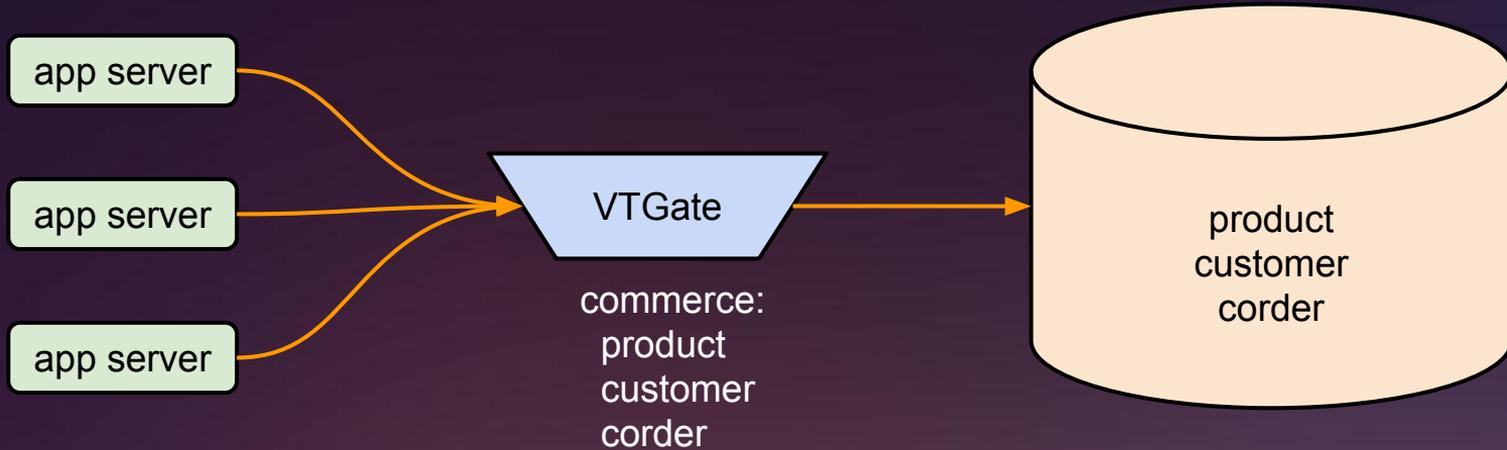
- Powerful
- Flexible
- Composable



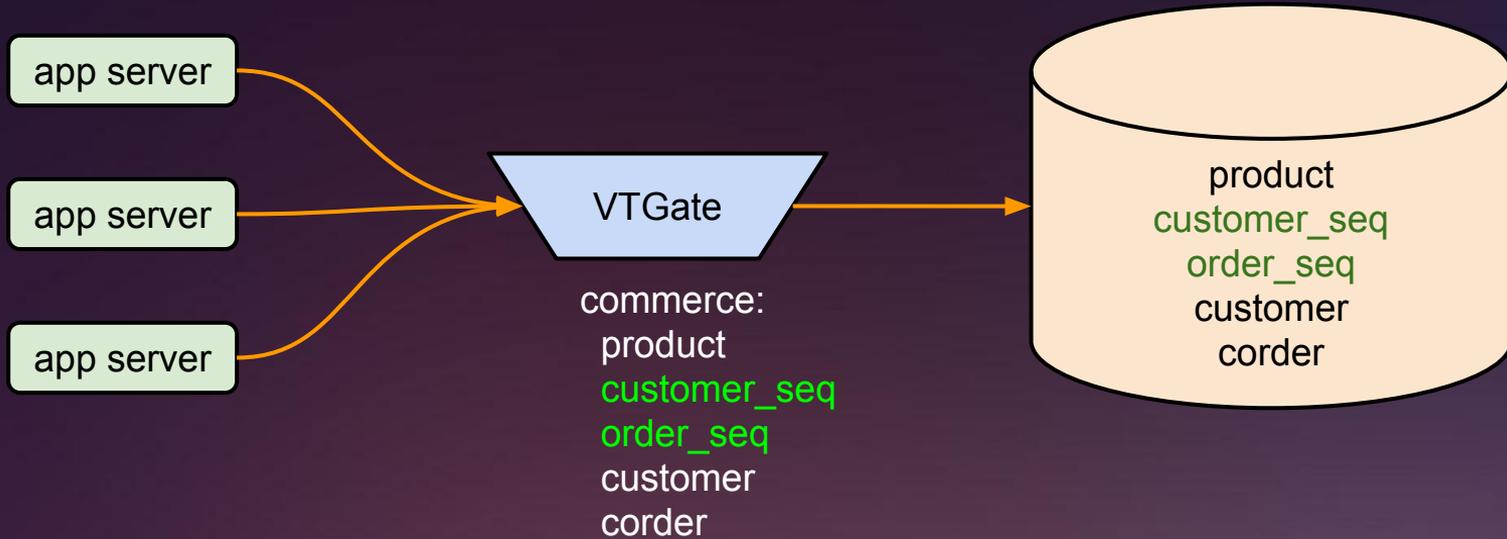
# Demo



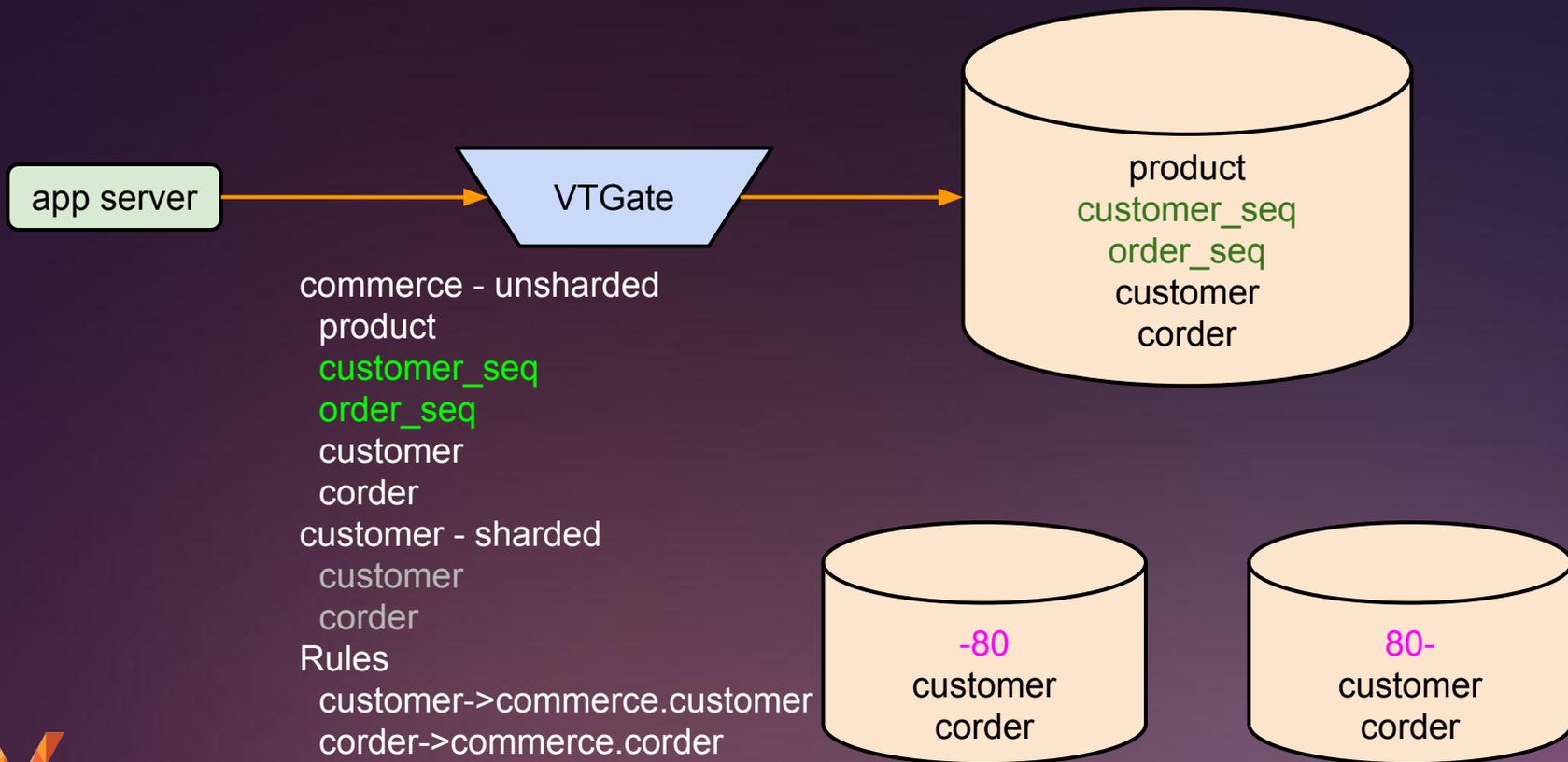
# Resharding 101: initial cluster



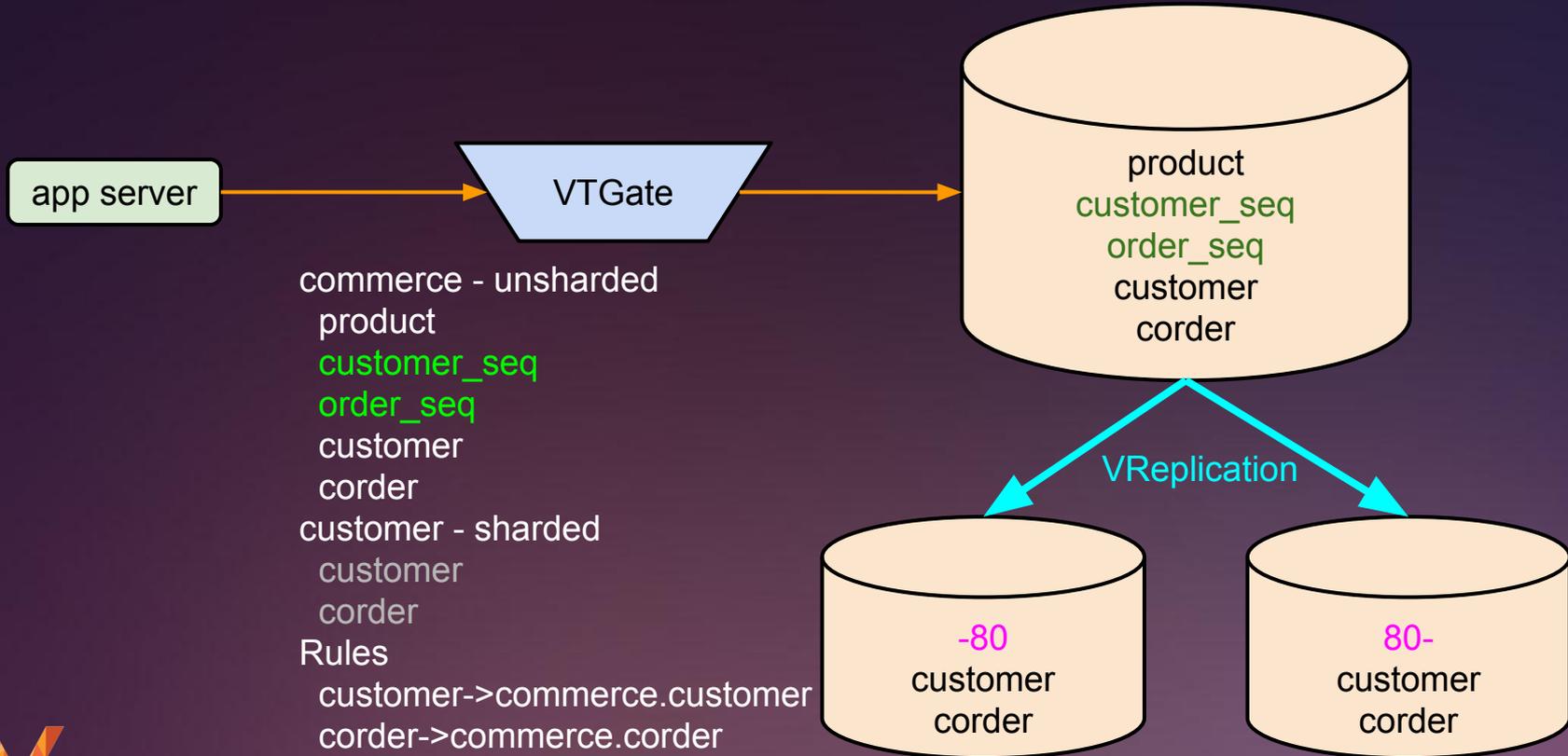
# Resharding 301: autoinc->sequences



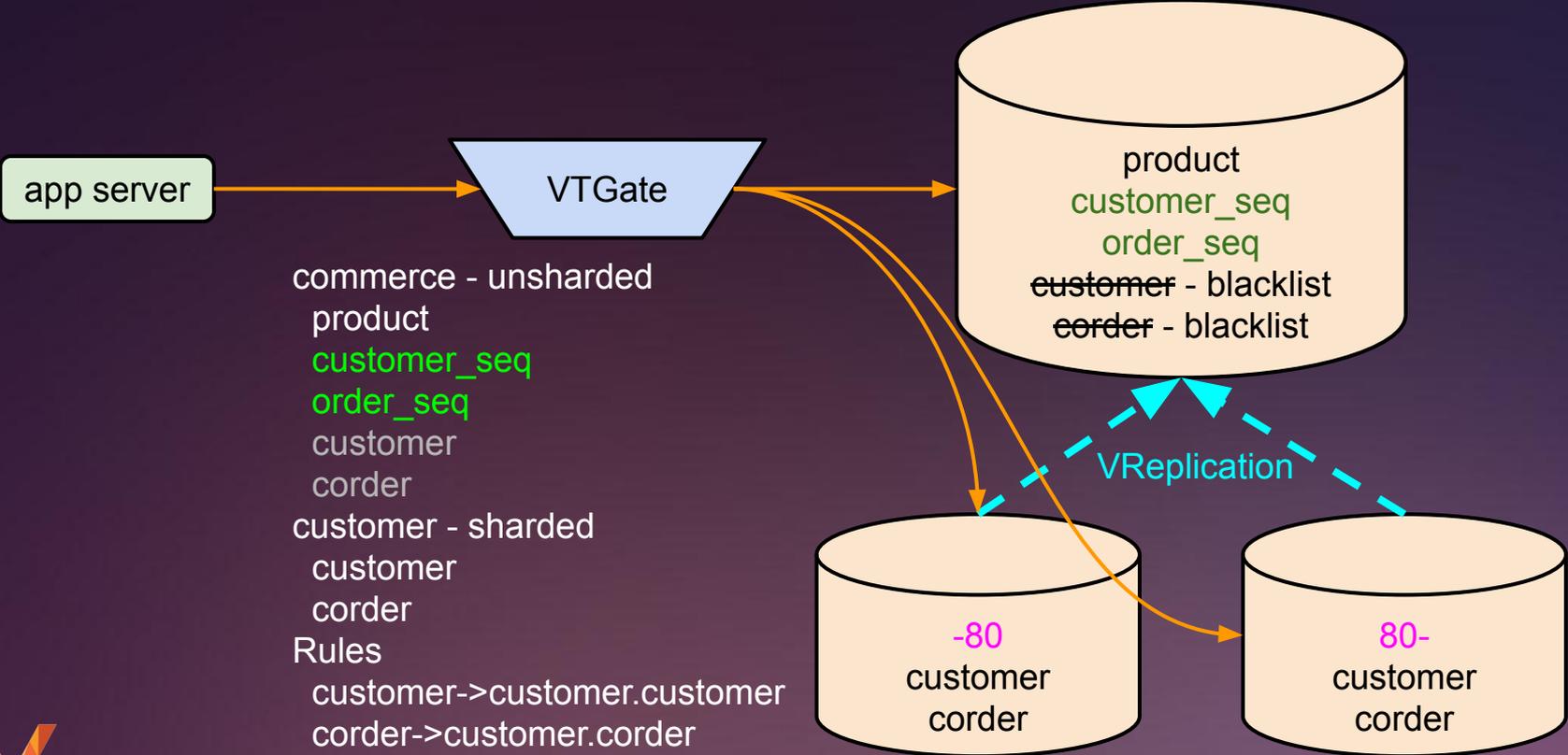
# Resharding 302: customer keyspaces



# Resharding 303: VReplication



# Resharding 305: Cutover



# What's next?

- Tomorrow: Vitess Deep Dive
- Sign into [slack](#) channel at [vitess.io](#)
- Try bringing up a cluster on your laptop or kubernetes
- <https://vitess.io/docs/tutorials/>
- <https://github.com/vitessio/vitess>
- [Square Cash blog posts on sharding with Vitess](#)
-  @sougou @deepthi
-  @vitessio @planetscaledata @ssougou @atechgirl

Questions?

