



Distributed SQL Summit



yugabyteDB

# Workshop: Migrate from MySQL to Highly Available PostgreSQL with YugabyteDB

September 12, 2023  
11:30am PT

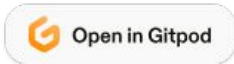


**SETH LUERSEN**

Director, Yugabyte University,  
**Yugabyte**

# About this Workshop

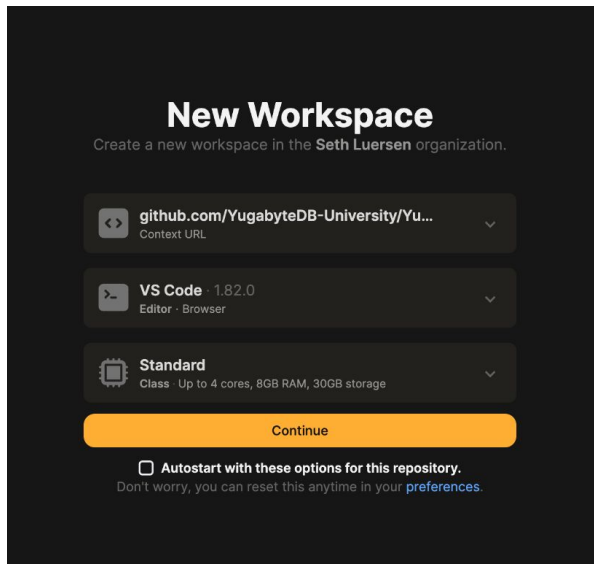
## Hands-on in Gitpod



<https://github.com/YugabyteDB-University/YugabyteDB-Voyager>

VS Code → Editor Browser

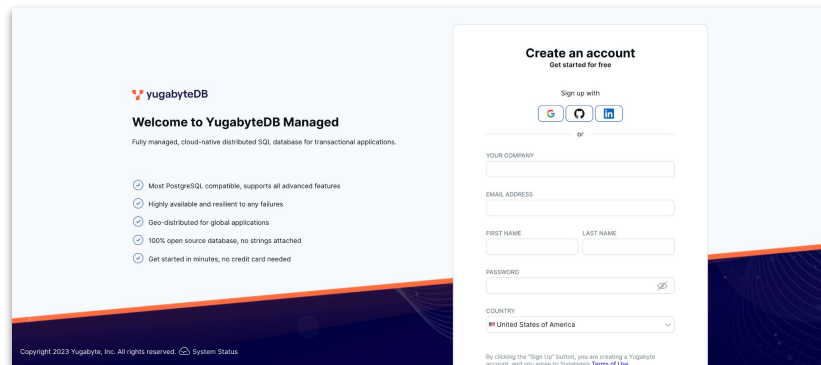
Standard → Up to 4 cores



# What you will need

## YugabyteDB Managed sandbox

<https://cloud.yugabyte.com>



The image shows the sign-up page for YugabyteDB Managed. On the left, there is a welcome message and a list of features: Most PostgreSQL compatible, supports all advanced features; Highly available and resilient to any failures; Geo-distributed for global applications; 100% open source database, no strings attached; and Get started in minutes, no credit card needed. On the right, there is a 'Create an account' form with fields for 'YOUR COMPANY', 'EMAIL ADDRESS', 'FIRST NAME', 'LAST NAME', 'PASSWORD', and 'COUNTRY' (set to United States of America). There are also social login buttons for Google, GitHub, and LinkedIn.

**YugabyteDB**

**Welcome to YugabyteDB Managed**

Fully managed, cloud-native distributed SQL database for transactional applications.

- ☐ Most PostgreSQL compatible, supports all advanced features
- ☐ Highly available and resilient to any failures
- ☐ Geo-distributed for global applications
- ☐ 100% open source database, no strings attached
- ☐ Get started in minutes, no credit card needed

**Create an account**  
Get started for free

Sign up with

or

YOUR COMPANY

EMAIL ADDRESS

FIRST NAME  LAST NAME

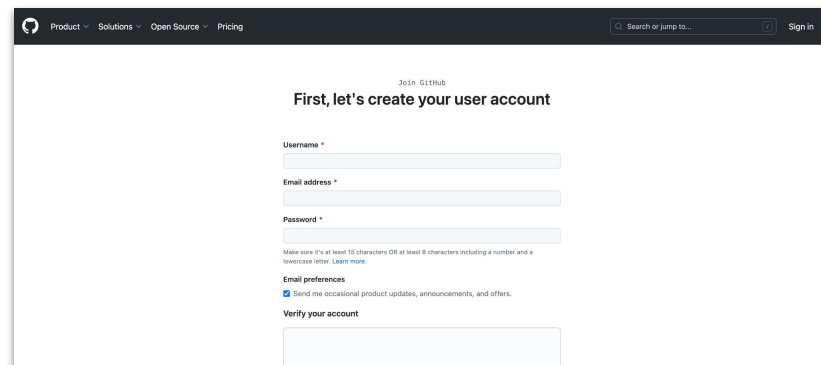
PASSWORD

COUNTRY

By clicking the "Sign Up" button, you are creating a "Yugabyte account" and you agree to the [Terms of Use](#).

## Github Account

<https://github.com/join>



The image shows the GitHub sign-up page. At the top, there is a navigation bar with links for Product, Solutions, Open Source, and Pricing. Below this, there is a 'Join GitHub' section with the heading 'First, let's create your user account'. The form includes fields for 'Username', 'Email address', and 'Password'. There is a note about password requirements: 'Make sure it's at least 15 characters OR at least 8 characters including a number and a lowercase letter. Learn more.' Below the password field, there is a section for 'Email preferences' with a checked box for 'Send me occasional product updates, announcements, and offers.' At the bottom, there is a 'Verify your account' section with a text input field.

Product Solutions Open Source Pricing

Search or jump to... Sign in

Join GitHub

**First, let's create your user account**

Username \*

Email address \*

Password \*

Make sure it's at least 15 characters OR at least 8 characters including a number and a lowercase letter. [Learn more](#).

**Email preferences**

☒ Send me occasional product updates, announcements, and offers.

**Verify your account**

# Gitpod Workspace

EXPLORER

YUGABYTEDB-VOYAGER

assets

sakila-db

utils

.gitignore

.gitpod.DockerFile

.gitpod.yml 2

01\_Lab\_Setup.ipynb

02\_Migration\_Workf...

03\_Migration\_Workf...

04\_Migration\_Workf...

05\_Migration\_Workf...

06\_Migrate\_to\_Yuga...

07\_Demystifying-Ta...

env\_vars.env

README.md

scrape1.txt

01\_Lab\_Setup.ipynb

+ Code + Markdown ▶ Run All ⌵ Clear All Outputs ⌵ Outline ...


Select Kernel

✎

📄

⋮

🗑



**Migrate from MySQL to Distributed, Highly Available PostgreSQL!**

Registration is free [Distributed SQL Summit](#).

## About this notebook environment

PROBLEMS 2

OUTPUT

TERMINAL

PORTS

JUPYTER

DEBUG CONSOLE

run: bash + ⌵ 📄 🗑 ⋮ ^ ✕

gitpod /workspace/YugabyteDB-Voyager (main) \$


Gitpod

🔗 main ↻ ⓧ 0 ⚠ 2


🔗 Share

Cell 1 of 28 Layout: U.S. Ports: 7000, 8200, 7100, 9042, 9100, 3306, 5433, 13000, 12000, 6379, 11000, 33060, 45587

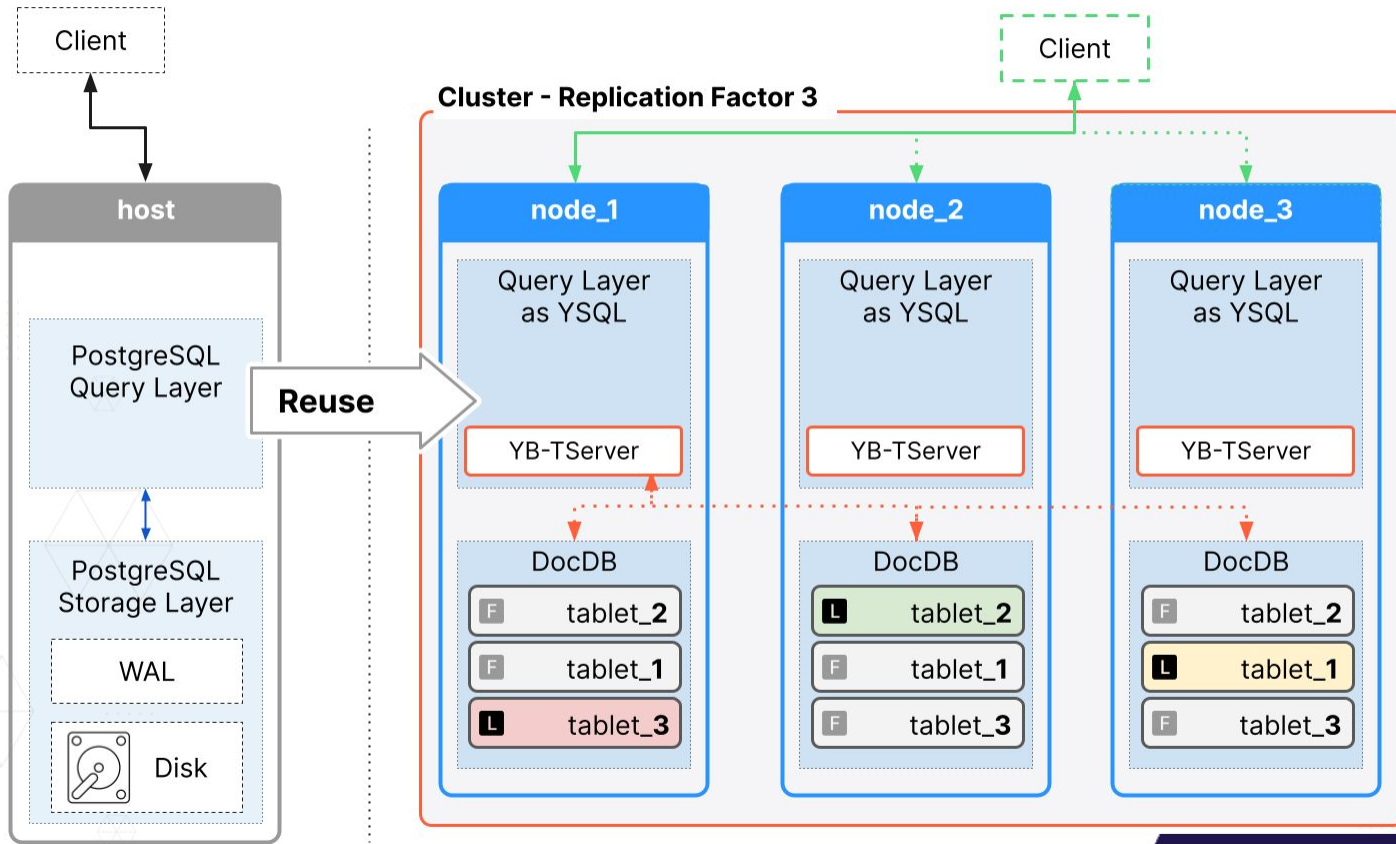
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Distributed SQL Summit

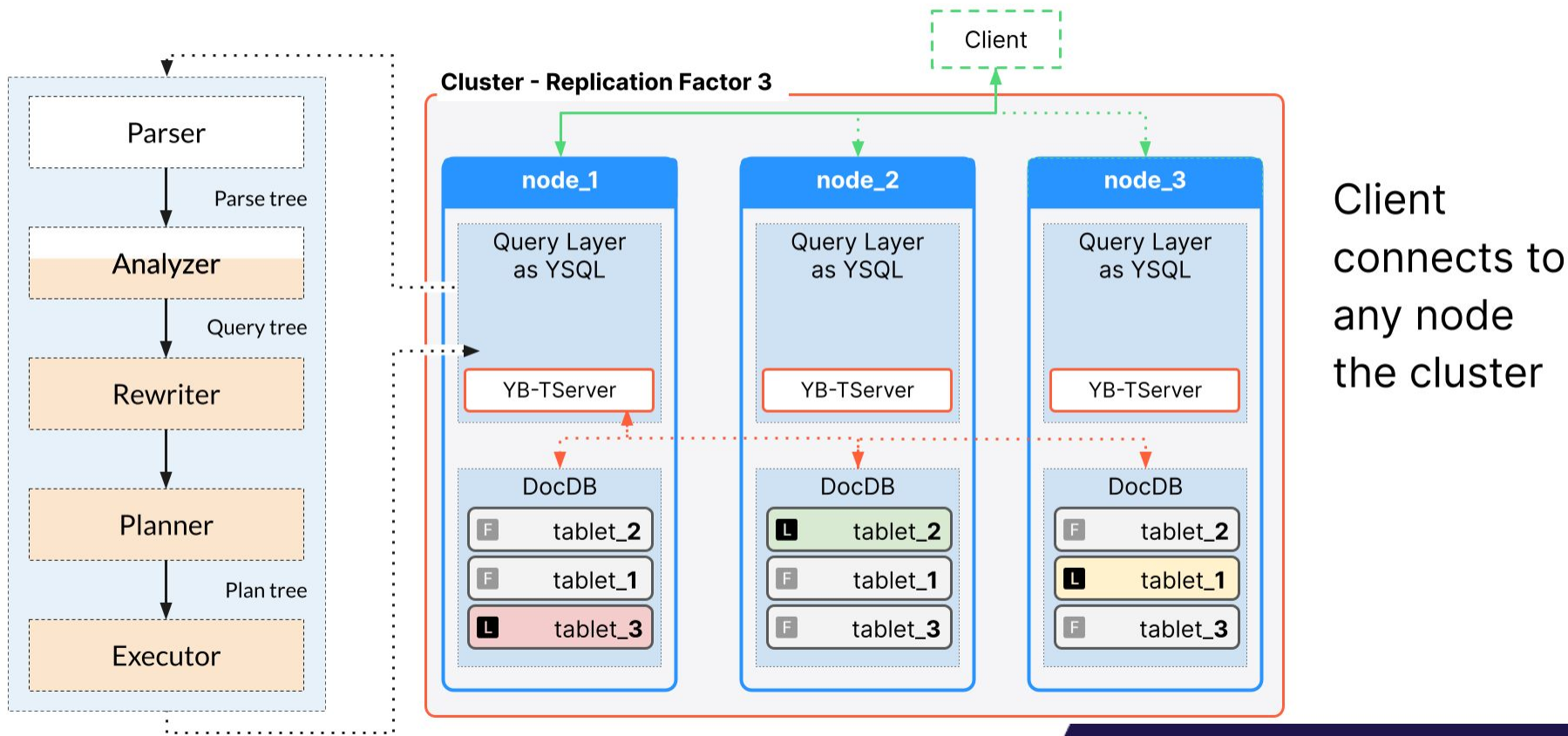
 **yugabyteDB**

# About Highly Available PostgreSQL (1)



Client connects to any node the cluster

# About Highly Available PostgreSQL (1)



# About YugabyteDB Voyager

## 1.4 Feature

- MySQL, PostgreSQL, Oracle
- Offline migration

## 1.5 Feature -- New!

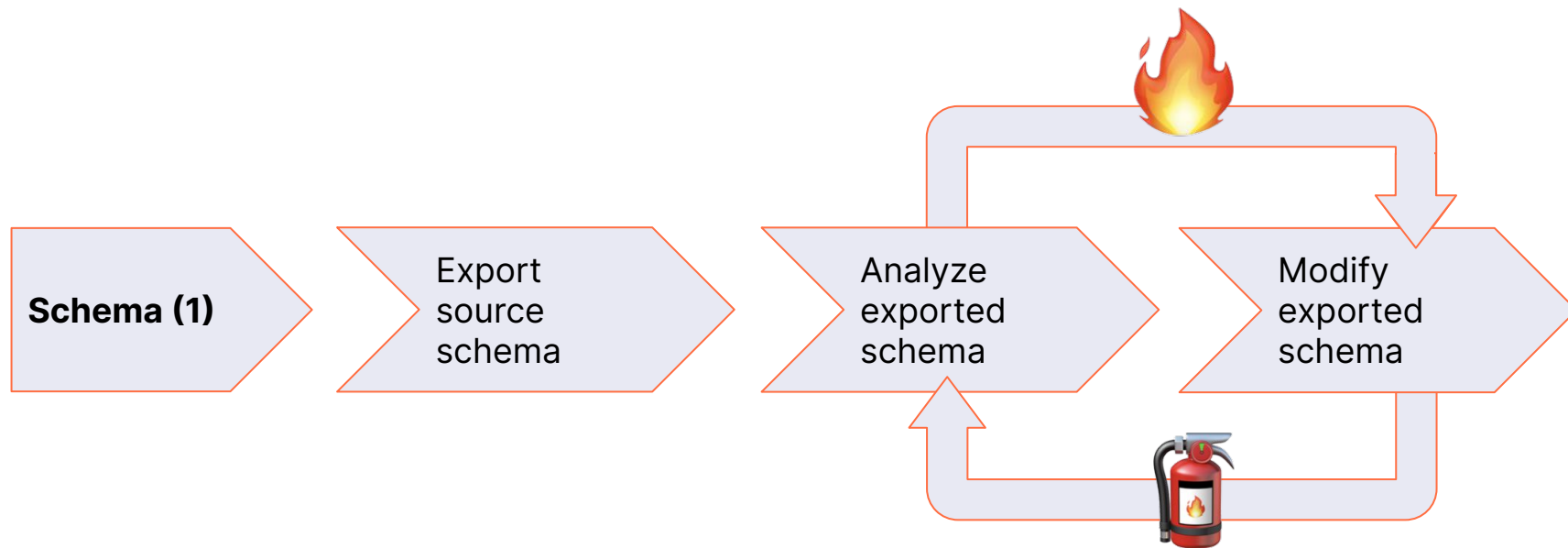
- **Online** migration for Oracle!

# Migration Workflow: Prepare

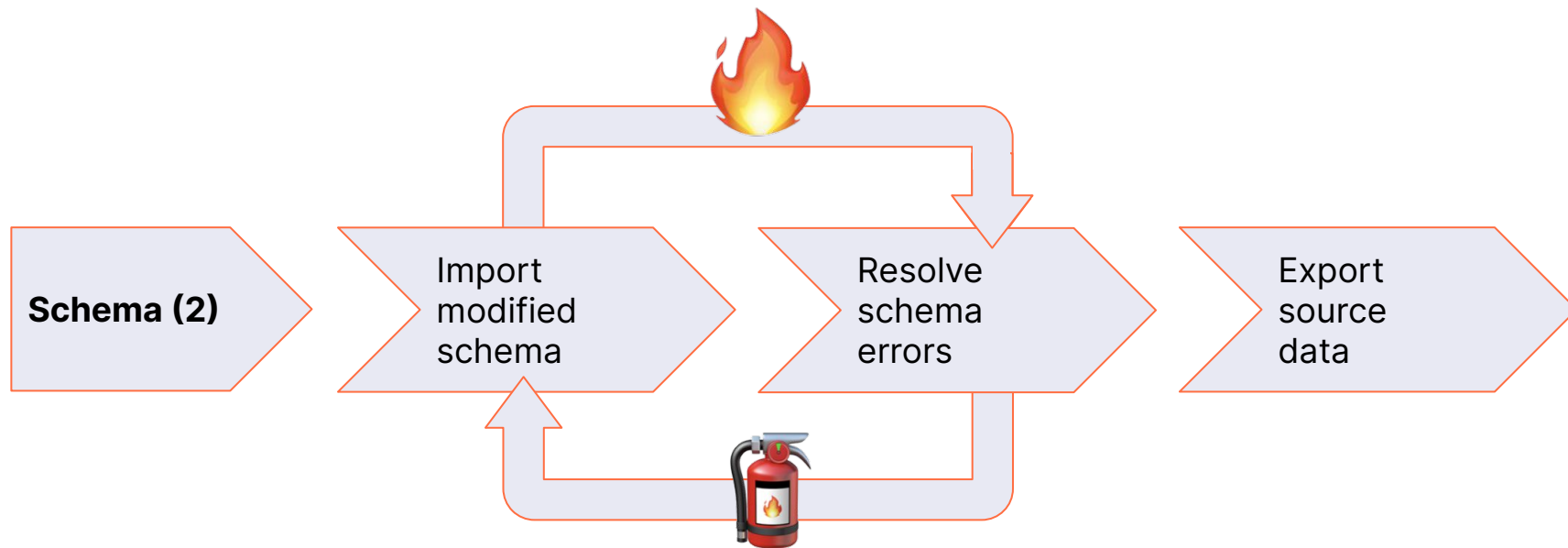




# Migration Workflow: Schema (1)



## Migration Workflow: Schema (2)



# Migration Workflow: Import data



# Migration challenges

## MySQL

- Primary Key
  - Auto Increment
- Tinyint / Smallint / Int as Boolean
- Geography and GIST
- group\_concat()

## YugabyteDB

- Primary key
  - Partition and Clustering keys
  - Serial and Sequence
- Boolean
- No support for GIST, low-level support for geometry
- Options
  - string\_agg()
  - array\_to\_string(array\_agg(), ',')