Accelerate Data Modernization with Yugabyte Services

Leverage deep experience with distributed databases and microservices-based architectures

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Distributed SQL Database Architecture

Modern growth companies share a common characteristic: the data-centric mentality. While most organizations have invested in both cloud infrastructure and advanced app modernization initiatives, the differentiated companies realize that those initiatives also require an upgrade to the critical data layer that sits between those investments—the only way to deliver a scalable, flexible app stack end-to-end. However, we recognize that deep data layer expertise is hard to find and takes time to develop.

To address that gap, Yugabyte DB Modernization Services have been specifically built to help organizations confidently and successfully embark on a database modernization initiative. The goal is to partner with you to enable a seamless migration that minimizes any disruptions to your users and customers and sets you on a path to enjoy a modern data architecture that can help your business accelerate productivity, reduce costs and lower your risks. The team will help not only implement a new distributed database solution, but they will also help establish best practices and help your teams grow and expand their skills and effectiveness.

The Yugabyte team brings a number of key capabilities to your organization:

Deep experience with distributed database deployments and operations and microservices-based architectures

Robust team of industry professionals with skill sets spanning wide variety of database technologies in a huge array of contexts and organizations, including database and cloud migrations

Proven process with the flexibility to adjust to help meet the desired outcomes of your specific organization
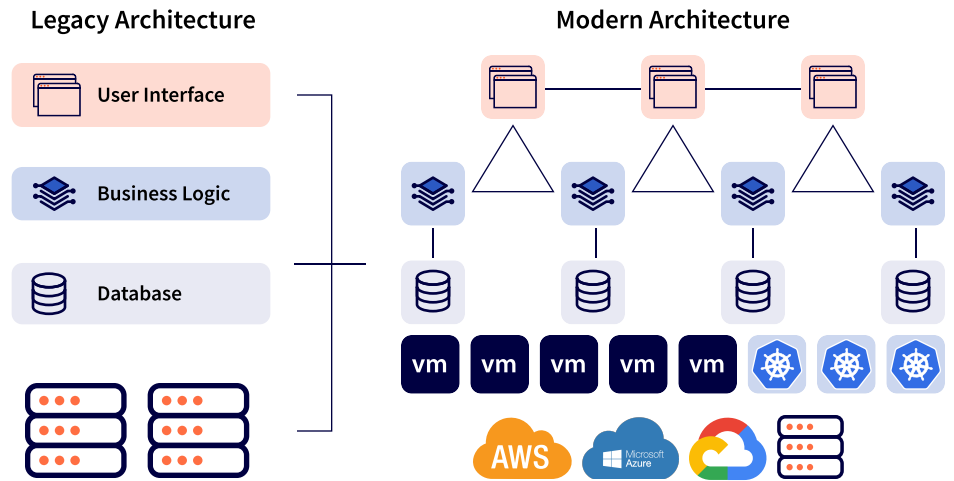
Partnerships and expertise with 3rd party and open source tools to accelerate your migrations

Proven Process

We believe there are a few key points to any successful database modernization initiative. First, the overall strategy must be aligned with your organization's cloud and app modernization plans. By getting a strong understanding of your business, we'll analyze the risks and build a plan to maximize the benefits and minimize the costs to your business. In addition, the data layer sits in the critical path between those two. If you are investing in flexible infrastructure and an agile application stack, then all of those benefits will suffer with a legacy, traditional data layer in between. Legacy solutions reduce flexibility with limited or complex scaling, slow down productivity by forcing more complex applications to overcome limitations, and increase risk due to dependencies on more 3rd party solutions or bolted-on features.

And second, successful database modernizations require a strategic approach that takes into account updates to application and business logic, data and schema migration, data accuracy and security, thorough testing, performance optimizations for distributed databases and fail-safe strategies.

Database Modernization with Yugabyte

Legacy Architecture   **Modern Architecture**

Keys to Successful Database Modernization

- Overall strategy must be aligned with your organization's cloud and app modernization plans

- Requires a strategic approach that takes into account updates to application and business logic, data and schema migration, operational practices, team skills, and processes

Keeping these two points in mind, Yugabyte follows an iterative methodology for database modernization that includes 3 key phases:

Technology migration

Operational enablement

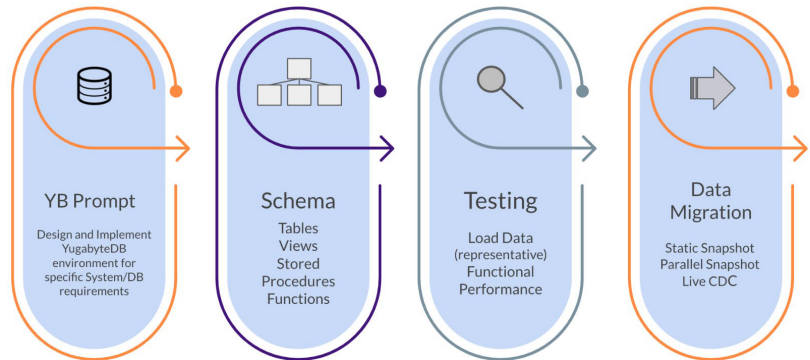Continuous support

Available Modernization Services

We've built the YugabyteDB Modernization practice from the ground up take our team's experiences and our learnings from YugabyteDB customers to provide world-class guidance and advice on completing a successful database modernization initiative. The Yugabyte Customer Success (YCS) team offers the following services:

Yugabyte Fit:

> Catalog systems and database migration candidates, evaluate fit with YugabyteDB operational characteristics, assess complexity and recommend migration or modernization plan.

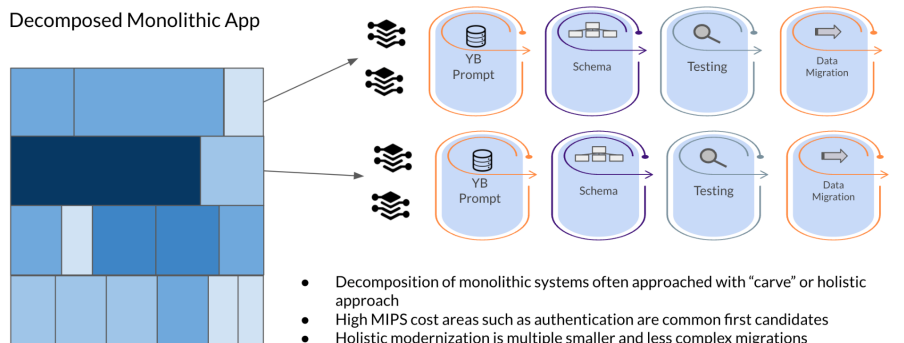## Database Modernization Replatform

> Provide help on how to perform SQL and NoSQL migrations to YugabyteDB on public, private or hybrid environments with minimal application and schema changes. Utilizes Postgres compatibility of YSQL and a variety of schema migration tools. While providing a faster path to database modernization, replatform means your application will go through minimal changes and any existing challenges or limitations will not change.

Database Modernization Refactor

> Provide guidance on best practices in re-architecting an application and its associated databases. Deconstruct monolithic databases, separate applications and utilize YugabyteDB as your business critical microservice database. While a more complex process, refactoring provides you a chance to modify the application to better support and take advantage of the cloud environment, which can help the application run more efficiently, acquire new functionality, and improve long term maintenance and flexibility.

Decomposed Monolithic App

- Decomposition of monolithic systems often approached with "carve" or holistic approach
- High MIPS cost areas such as authentication are common first candidates
- Holistic modernization is multiple smaller and less complex migrations
- Holistic modernization is often facilitated (made possible by) supported by live CDC

YugabyteDB Migration Engine

> YugabyteDB Migration Engine is a software tool in development today, currently available as an open source tool on GitHub and being deployed with targeted customer migrations. The Migration Engine bundles and streamlines all stages of bringing a source to YugabyteDB, including analysis, conversion, migration, and cutover. The advanced tool is designed to help greatly reduce the gap between other currently available conversion tools and YugabyteDB ready deployments.

Customer Example

Yugabyte Customer Success has partnered with numerous Yugabyte customers to support them in their modernization journey.As of February 2022, we've seen 40+ applications successfully modernized, representing 140+ TB of data and tens of thousands of database objects.

Some key customer examples include:

Kroger

> Kroger embraced YugabyteDB as their primary distributed database as they looked to completely modernize their digital environment for the modern era of retail. Working closely with YugaByte Customer Success Team, they migrated 9 applications to YugabyteDB, all in production. They have 32 additional applications in the migration queue based on early results and success of already migrating a high impact, mission critical application for their inventory.

Global Top 5 Automaker:

> This automaker migrated a critical multi-continent vehicle telemetry system to YugabyteDB. For their migration, we pulled 125+ TB from multiple sources, including legacy Oracle and Apache Cassandra databases. We worked together to refactor the application and data models to best optimize them for a modern, distributed SQL platform. The migration was performed live with blue/green traffic routing approach given the mission critical nature.

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Next Steps To Get Started

If you have applications that are in urgent need of modernization or you simply want to better understand options as you look ahead to how you can leverage a scalable, resilient database without doing a complete restart, then reach out to the Yugabyte team at www.yugabyte.com/contact/.

You can find more information at www.yugabyte.com.