

The background of the slide is a dark, high-contrast photograph. It features a close-up of a laptop keyboard on the right side, with keys visible. On the left side, there is a camera lens, possibly from a DSLR, resting on a dark surface. The overall lighting is dim, creating a professional and tech-oriented atmosphere.

E-COMMERCE PLATFORM

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PROJET MICROSERVICE 4EME INFO G4

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- Key Learnings



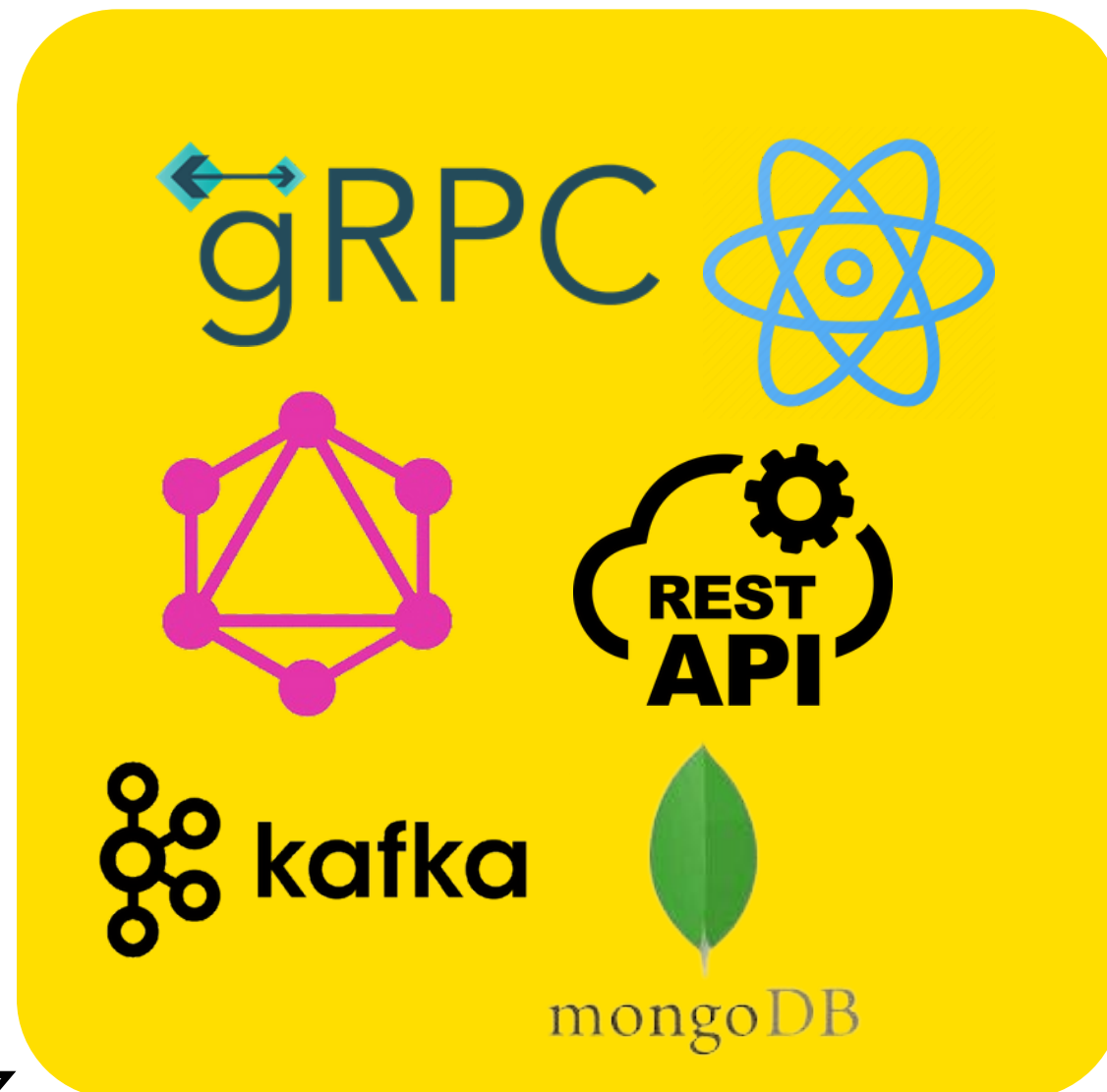


01

Introduction

Project Preview and Technologies Used

INTRODUCTION



Project Overview:

The online sales project is a robust e-commerce platform designed to facilitate seamless shopping experiences, featuring user-friendly interfaces, secure payment gateways, and personalized product recommendations.

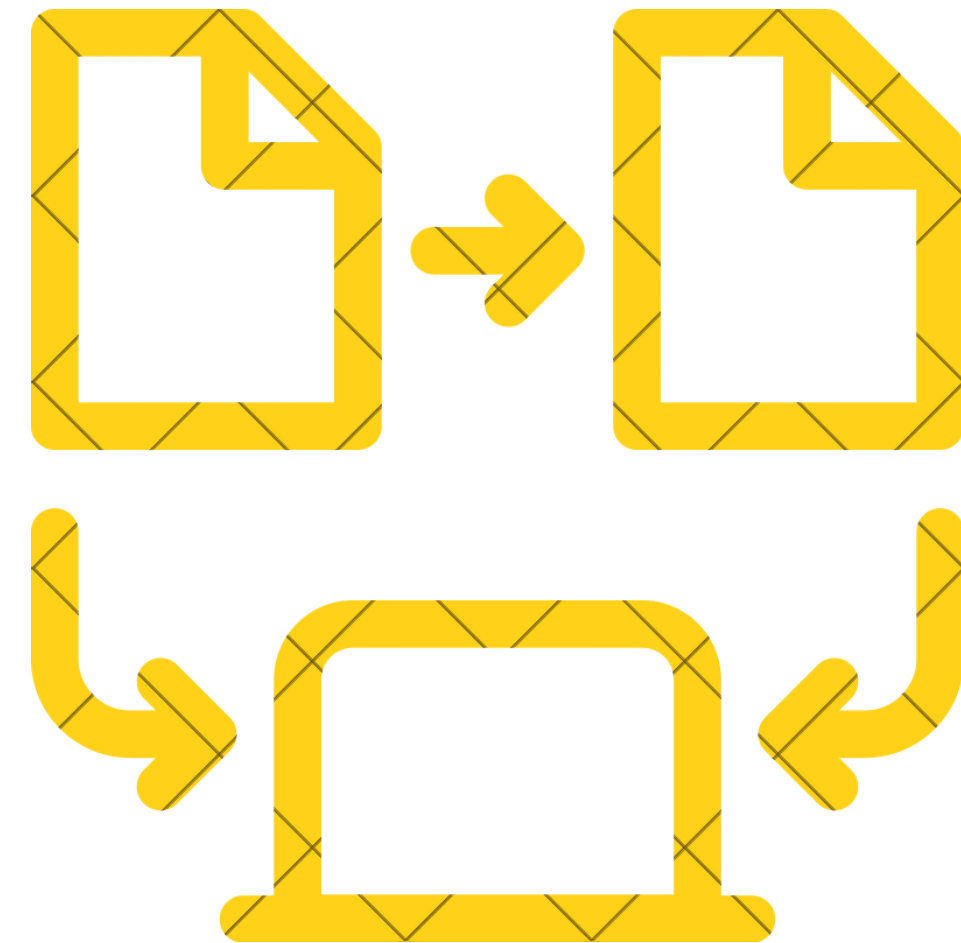
Technologies Used:

The project employs MongoDB for efficient data storage, Express for server-side development, and GraphQL for versatile data querying. It leverages Kafka for real-time order processing and gRPC for high-performance inter-service communication, built on a microservices architecture to ensure scalability and maintainability.

02

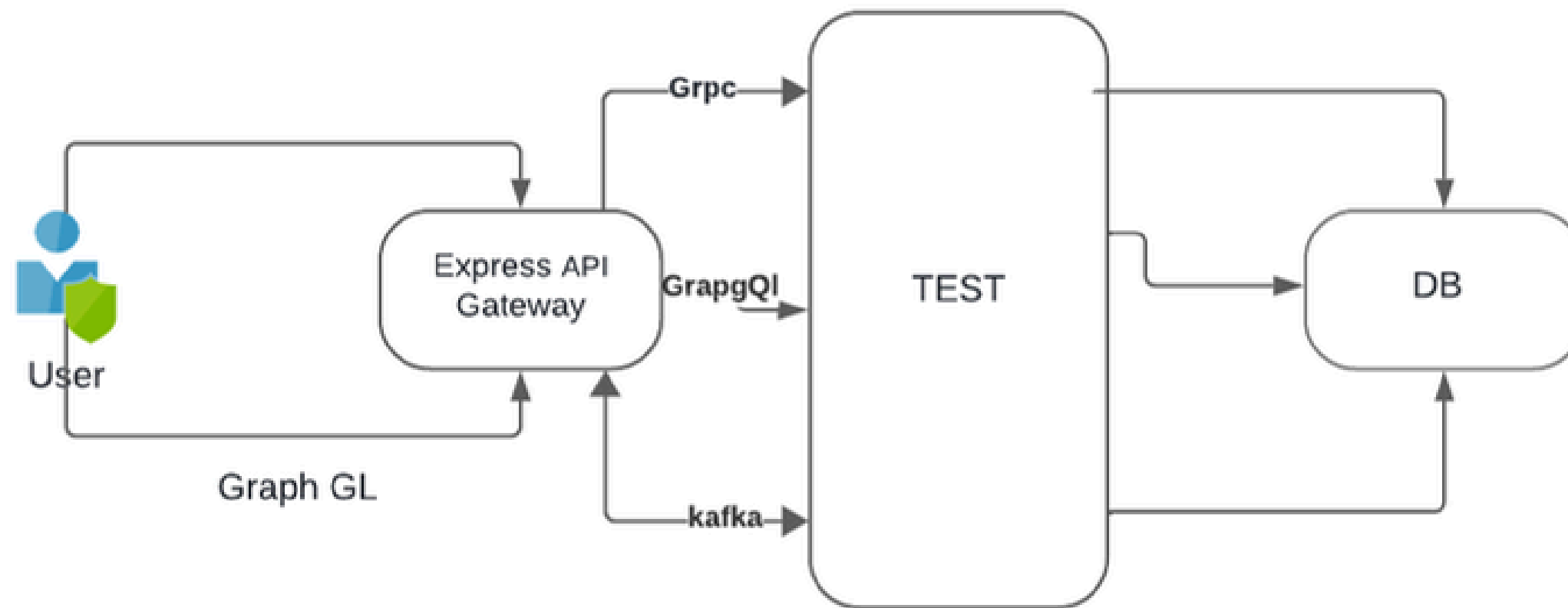
Project Architecture

Microservices Architecture And Express
Gateway Integration



5M

Microservices Architecture and ExpressGateway integration



03

Data Management

MongoDB Integration and Data modeling



User and Product Model

The project uses User and Product models to manage user information and transaction details. CRUD operations are handled by gRPC for the Usermodel and GraphQL for the Product model, ensuring efficient data management.



04

Notification Service

Kafka Integration and Real Time Notification



Notification Service

A **notification service leveraging Kafka and integrated with an API Gateway** efficiently manages and Kafka also facilitates notifications **when products are created, deleted, or updated, keeping users and administrators promptly informed.** This system uses Kafka for real-time messaging to process and distribute notifications, ensuring users are promptly informed about critical information related to their shopping experience.

By fetching relevant data from various microservices through the API Gateway, the notification service can trigger alerts based on predefined criteria. . This approach not only enhances user engagement but also helps in maintaining customer satisfaction by keeping them well-informed about their interactions with the platform.



05


Achievements And Learnings



Technical proficiency through
storage, allowing for flexible
e server-side logic, providing
ta querying, enabling clients
r-driven architecture, ensuring
communication, facilitating fast
es approach for scalability,
ices.
ent requests, enhancing

The online sales platform showcases advanced technical proficiency through its use of modern technologies and best practices:

- **MongoDB:** Utilized for efficient and scalable data storage, allowing for flexible schema design and high availability.
- **Express:** Serves as the backend framework to handle server-side logic, providing a robust and scalable API for client interactions.
- **GraphQL:** Implemented for flexible and efficient data querying, enabling clients to request precisely the data they need.
- **Kafka:** Employed for real-time messaging and event-driven architecture, ensuring rapid and reliable communication between services.
- **gRPC:** Used for high-performance inter-service communication, facilitating fast and secure data exchange between microservices.
- **Microservices Architecture:** Adopts a microservices approach for scalability, maintainability, and independent deployment of services.
- **API Gateway:** Acts as a unified entry point for all client requests, enhancing security, load balancing, and request routing.



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A vertical black line is positioned on the left side of the image. Two yellow circles are present: one in the upper left quadrant and another in the lower right quadrant. The text 'Merci pour votre' is in a regular black font, and 'Attention' is in a bold black font, both centered horizontally.

Merci pour votre
Attention