ByteRisto

Revolutionize Your Restaurant

Agenda Overview

Key Topics of Presentation

The Problem

Many restaurants face **operational inefficiencies** due to monolithic systems, which hinder agility, increase maintenance costs, and complicate upgrades, ultimately affecting customer satisfaction and business growth.

The Solution

ByteRisto offers a **unified platform** that integrates all restaurant management functionalities, ensuring full digitalization, enhanced operational efficiency, and a future-proof architecture through the implementation of microservices.

Microservices

Leveraging a **microservices architecture**, ByteRisto provides independent services that enhance scalability and resilience, allowing each component to function autonomously and adaptively under varying workloads.

The Problem

Challenges in Modern Restaurant Management

Monolithic Systems

Monolithic systems lead to **costly maintenance** and risky upgrades, creating operational challenges. Restaurants often find themselves tied to outdated software that lacks flexibility in meeting evolving market demands.

Inefficient Order Management

Inefficient order management processes result in **manual errors** and delays, significantly impacting customer satisfaction. Restaurants struggle to track orders efficiently, leading to lost sales and frustrated patrons.

Scalability Issues

Legacy systems exhibit **poor scalability**, failing to handle peak loads effectively. During busy times, these systems can crash, resulting in decreased service quality and potential revenue loss for restaurants.

The Solution

Streamlining Restaurant Operations Efficiently

All-in-one Management

ByteRisto offers a **comprehensive management platform** that integrates menu creation, order workflows, and payment processing, providing a seamless experience for both staff and customers.

Full Digitalization

The system enables **complete digital transformation**, automating routine tasks and reducing manual errors, which enhances operational efficiency and improves customer satisfaction significantly across the restaurant.
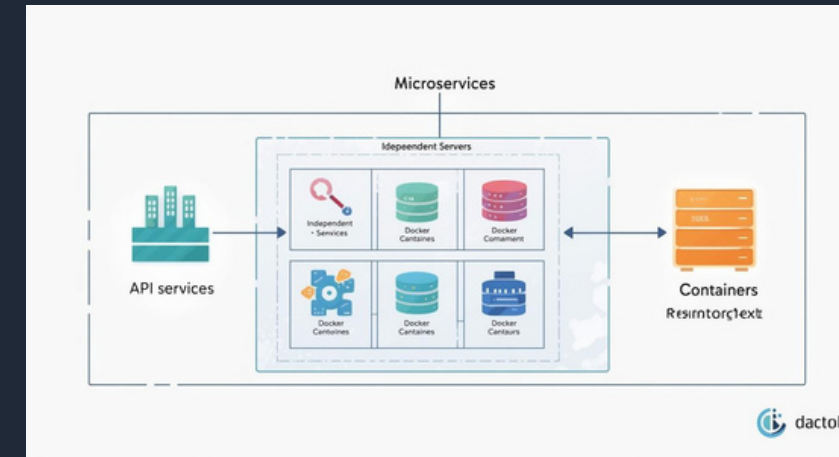
Future-proof Tech

Designed with **modern technologies**, ByteRisto utilizes Python Flask microservices and Docker, ensuring that the system can scale easily and adapt to future technological advancements efficiently.
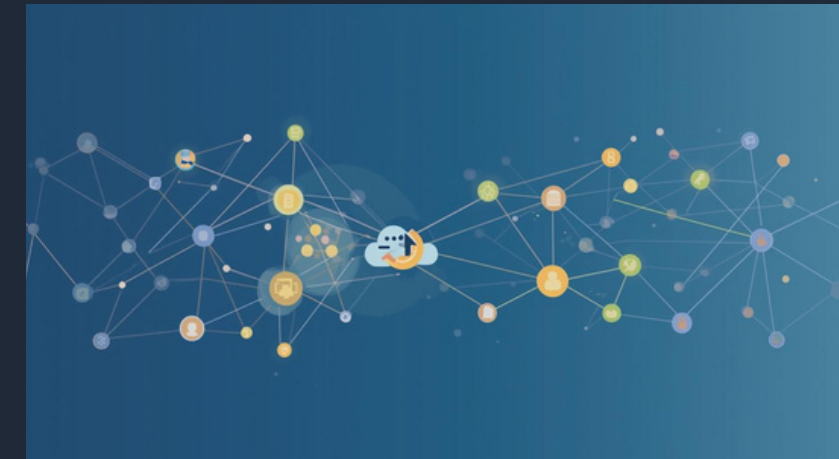
Architecture of ByteRisto Microservices System

Independent Services

Each service operates autonomously using Python Flask for lightweight, high performance.

API Gateway

Acts as the unified entry point (Port 3000) for efficient centralized routing to services.

Docker Deployment

Containerization ensures consistent environments for services.

Data Isolation

Ensuring Performance and Resilience

Dedicated Databases

Each microservice operates with its own dedicated PostgreSQL database instance.

Scalability Benefits & Performance Optimization

The dedicated database-per-service approach allows for scalable growth.

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Communication Flow

Streamlined Request Management Process
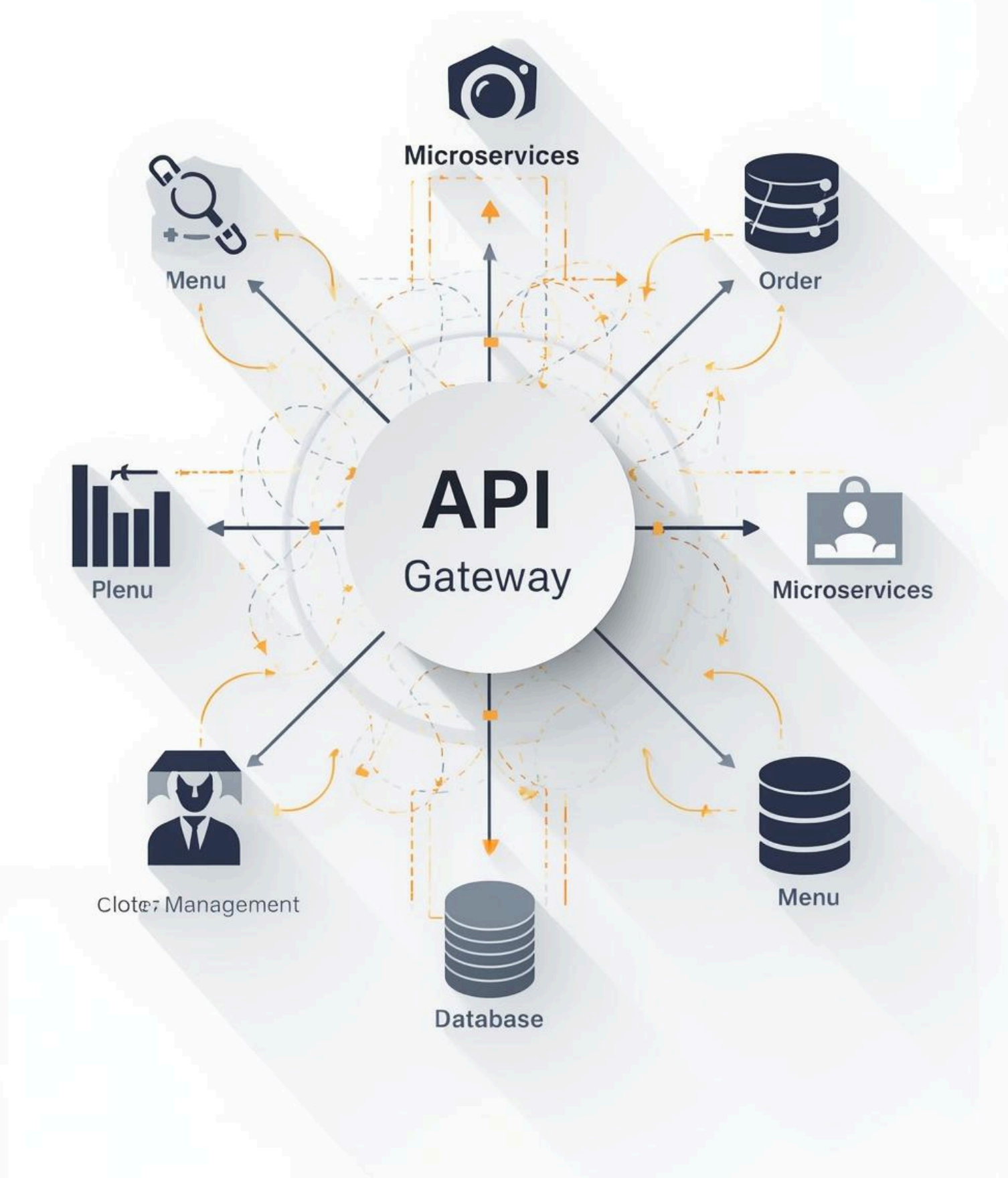
API Gateway

The API Gateway acts as a unified entry point for all requests, routing them to the appropriate microservices. This centralized management enhances security and simplifies traffic control for system stability.

Dynamic Routing

Dynamic routing enables the API Gateway to direct requests based on specific paths, such as /api/orders. This mechanism simplifies client access while ensuring cohesive operation and monitoring across services.

Network API Gateway
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Impact and Benefits

Unlocking Restaurant Management Potential

Scalability

ByteRisto offers **native scalability**, allowing individual services to expand seamlessly as business demand increases, ensuring that operational efficiency is maintained during peak hours without degradation of performance.

Resilience

The system's architecture promotes **high resilience**, as isolated components prevent failures from affecting the entire system, thereby ensuring uninterrupted service and enhancing customer satisfaction during critical operations.

Agility

With ByteRisto, restaurants benefit from **development agility**, facilitating rapid, focused deployments and updates for each service, which significantly reduces time-to-market for new features and optimizations.

Thank you!

The team