

Case Study:

# Modernizing the integration and operational layer of a leading restaurant technology provider



**Client:**

A large US SaaS company that provides digital ordering and delivery solutions for restaurants.

## 1. Challenge

The client's platform faced technical and operational challenges that limited scalability and efficiency. Key challenges included:

**Complex integration:**

The platform needed to support over 100 POS, payment, marketplace, and loyalty systems, including legacy POS with outdated protocols. It required significant resources and slowed platform scaling.

**Peak loads:**

Traffic spiked during lunch, dinner, weekends, and key holidays, creating high-demand periods that stressed the system.

**24/7 stability and monitoring:**

Multiple time zones and breakfast networks required round-the-clock reliability, but real-time load and integration status visibility was limited.

**Slow onboarding of new integrations:**

Each new partner required manual work and duplicated logic, which slowed down expansion.

## 2. Solution

ZONE3000 enhanced the client's existing platform to address integration complexity, peak traffic, and operational efficiency. Key improvements included:

**Integration optimization**

Built a modular adapter framework and standardized legacy integrations for POS, payment, and loyalty systems.

**Monitoring and load management**

Enhanced dashboards, alerting, health checks, and automatic retries to improve reliability.

**AI load prediction and anomaly detection**

Implemented AI models to forecast peak order volumes and detect potential issues in integrations.

**Scaling for peak loads**

Optimized order queues, moved services to autoscaling clusters, and restructured order injection.

**Faster partner onboarding**

Developed tooling, automated test environments, and sandbox modes for new partners.

## 3. Technology used

**1 Backend & Integrations:**

Node.js, REST/GraphQL APIs, modular adapter framework for POS, payment, loyalty, and marketplace integrations.



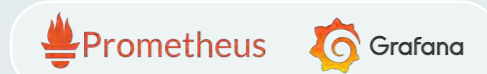
**2 Data & processing:**

PostgreSQL for structured data and Redis for caching high-frequency requests.



**3 Monitoring & operations:**

Prometheus + Grafana for dashboards, health checks, and alerting.



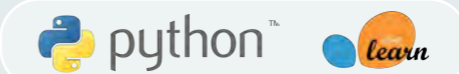
**4 Infrastructure & scaling:**

Docker and Kubernetes for containerization and autoscaling, AWS for cloud infrastructure.



**5 AI / ML:**

Python with Scikit-learn for predictive load forecasting and anomaly detection in integrations.



**6 Frontend/admin tools:**

React for internal dashboards.



## 4. Result

The enhancements delivered measurable improvements in platform performance and operations:

**Improved scalability**

The platform reliably handled peak loads during lunch, dinner, weekends, and holidays.

**Faster partner onboarding**

New POS, payment, and marketplace integrations were implemented more quickly and with less manual effort.

**Enhanced operational visibility**

Dashboards, health checks, and AI-based monitoring provided better insights into integration status and load trends.

**Increased reliability**

Order processing, POS injection, and marketplace synchronization became more stable, reducing errors during high-demand periods.

These results demonstrate how ZONE3000's improvements allowed the client to scale efficiently, maintain stability under heavy load, and leverage AI insights for smarter operational decisions.

