








Case Study:

Multi Tenant Architecture Using Scala



Company overview

-  **Client name:** CaMaster (Lq Consultants)
-  **Services:** PlatForm Engineering
-  **Technology:** Scala, Microservice, Angular
-  **Industry:** Legal and Compliances
-  **Location:** Canada

- Ask clients simple questions about their finances to determine applicable compliances and sub-compliances.
- Store the collected data securely and calculate: Compliance due dates. Grace periods based on government relief updates.
- Provide a feature for users to set custom reminders for deadlines.
- Display all client data on a centralized dashboard.

we helped a financial client to build a robust platform for automating financial compliance tracking and management for their clients

The challenges

- **Dynamic Compliance Rules:** The platform needed to accommodate frequently changing compliance requirements.
- **Data Security and Privacy:** Ensure strict isolation and encryption for sensitive financial data.
- **Scalability:** Allow multiple CA firms and their clients to use the platform without performance degradation.
- **Custom Reminders:** Enable flexible, user-defined notifications.
- **Multi-Tenant Transition:** Redesign the system to support multiple independent firms with minimal disruption.
- **Integration of Advanced Features:** Include authorization, encryption, microservices, async processing, batch operations, etc.
- **Notifications:** Provide email and WhatsApp notifications for missing documents and reminders.
- **Policy Integration:** Fetch government data and policies to offer tax relief benefits automatically.

For more details, please send your inquiry to info@pizenith.com

or visit our website www.pizenith.com

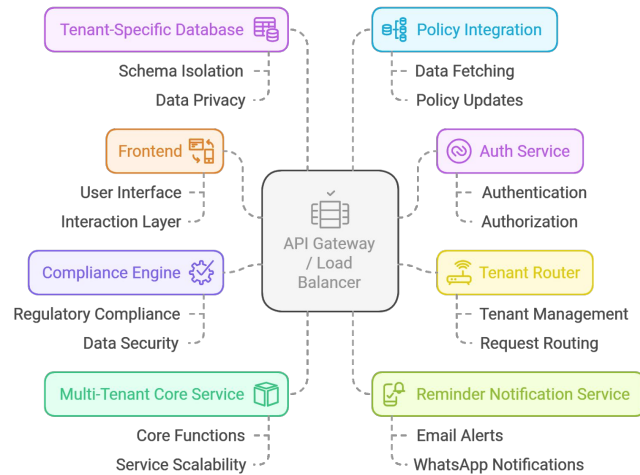
Optimizing Data Warehousing on BigQuery GCP

Outcome

- Delivered a single-tenant system that streamlined compliance management for the CA firm.
- Reduced manual effort by 60% and improved client satisfaction through automated reminders and a user-friendly dashboard.
- Post Multi-Tenant Transition:
- Enabled the platform to support multiple CA firms with seamless onboarding and isolated operations.
- Scaled to handle thousands of tenants and millions of client records without performance degradation.
- Integrated email and WhatsApp notifications for better client engagement.
- Incorporated policy updates to provide accurate tax relief benefits.
- Achieved 99.9% uptime with fault-tolerant microservices.

The approach

Architecture Diagram of a Multi-Tenant System



The solution

- **Dynamic Questionnaire Engine:**
 - A configurable engine to generate questions based on predefined compliance rules.
 - Mapping of answers to applicable compliances and sub-compliances.
- **Compliance Tracker:**
 - Logic to compute due dates and grace periods based on government relief updates.
 - Integration with external data sources to fetch the latest policies and taxation benefits.
- **Reminder and Notification System:**
 - Integrated notification service supporting email and WhatsApp alerts for missing documents and compliance deadlines.
- **Dashboard:**
 - Centralized view of all client data, compliance statuses, and pending tasks.