

Global Payments, *Reimagined*

How Multi-Level Virtual Accounts (VA) Powered a Real-Time Digital Ecosystem





SOLUTION CATEGORY

This project represents a landmark implementation in the category of Virtual Account Management (VAM) for Complex Ecosystems. As a cornerstone of modern Transaction Banking & Global Cash Management, **the solution leverages a sophisticated multi-level VA structure to enable advanced treasury functions, including Payments on Behalf Of (POBO) and Collections on Behalf Of (COBO)**. The entire framework is powered by an API-led Banking architecture, facilitating deep Open Banking Integration with the client's ecosystem. This creates a comprehensive digital experience that automates the full transaction lifecycle, from Digital Corporate Onboarding & Account Management to seamless Electronic Invoice Presentment and Payment (EIPP).

CLIENT INFORMATION

Our client is a **prominent wholesale bank, headquartered in the Middle East with over 40 years of banking legacy**. The bank is actively operational in 25 markets and has a solid physical presence in 15 countries, ranging from New York, London, and Singapore to São Paulo, DIFC, Manama, Cairo, and Amman. Renowned for their innovative cash management and wholesale banking solutions, the bank has built a reputation for agility, global reach, and localized expertise.

CHALLENGES FACED BY OUR CLIENT

Our Client was presented with a mandate of unprecedented scale and complexity by the Official IT Service Provider for the Saudi Arabia Ministry of Hajj & Umrah. **The objective was to build a completely digital, real time, and globally accessible payments ecosystem for the entire Umrah pilgrimage.**

The existing banking infrastructure was fundamentally incapable of handling this request, presenting several critical challenges rooted in the limitations of traditional bank accounts:

Impossible Account Management & Scale

The ecosystem involved over 600 Umrah Operators and more than 7,000 global External Agents. The prospect of opening, managing, and maintaining thousands of individual physical bank accounts was operationally and financially unfeasible. It would create an administrative nightmare and could not scale.



The Core Challenge of Reconciliation

The primary obstacle was payment identification. If all 7,000+ agents paid into a single or even a few master accounts, the bank's client would face a "black hole" of undifferentiated credits. It would be impossible to determine in real-time who paid, for what purpose, and for how much. This made automated reconciliation, a core project requirement, an impossibility with traditional accounts.



Lack of Granular, Real-Time Control

The time-sensitive nature of pilgrimage bookings demanded instant payment confirmation to trigger voucher issuance. A traditional system could not provide real-time balance visibility at the individual agent level. Delays would halt the entire process. A solution was needed that could instantly reflect credits to a unique identifier.



The Need for Instant, Digital Onboarding

The global and dynamic nature of the agent network required a way to create new payment accounts on the fly. The manual, paper intensive process of opening traditional bank accounts was far too slow and cumbersome. The solution had to be 100% digital, from creation to transaction, demanding a Virtual Account structure that could be generated programmatically via API.





SOLUTION PROVIDED BY MINDGATE

Mindgate recognized that a multi-level Virtual Account Management (VAM) architecture was the only way to solve these complex challenges. We architected and delivered a pioneering solution using our platform, which became the engine for Our Client's new flagship transaction banking service.

End-to-End Solution Delivered by Mindgate

The core of the solution was a sophisticated, hierarchical Virtual Account structure that mirrored the business's operational reality, all linked to a single master physical account.

The Power of Multi-Level VAM

We designed a structure that virtualized the entire account hierarchy. This eliminated the need for thousands of physical accounts, replacing them with lightweight, instantly-creatable Virtual Accounts (VAs). Each VA acts as a unique ledger and identifier, enabling perfect tracking and reconciliation.

Hierarchical Structure for Control & Segregation

Level 1 (Operators - POBO/COBO)

Each of the 600+ Umrah Operators was assigned a master VA. This VA functioned as a hub, performing both COBO by receiving funds from their agent network, and POBO by consolidating these funds to pay the Ministry for vouchers.

How the Solution Addressed Specific Pain Points

Solving Reconciliation with VAs

The unique VA number assigned to every agent became the ultimate source of truth. It eradicated payment ambiguity entirely, allowing for 100% automated, real-time reconciliation at the most granular level.



Level 2

(External Agents - COBO)

Under each Operator's VA, over 7,000 individual "child" VAs were created programmatically. Each of these VAs was assigned to a specific External Agent, serving a pure COBO function. When an agent made a payment, it was credited to their unique VA, instantly identifying the remitter and purpose.

API-Driven Automation

The entire system was designed to be "headless." The Official IT Service Provider's eUmrah portal used Mindgate's APIs to manage the entire VA lifecycle, creating VAs for new agents, inquiring about real-time balances to approve transactions, and receiving instant payment confirmations.

Enabling Real-Time Operations

As soon as a payment hit an agent's VA, the balance was reflected instantly across the entire system. This real-time credit confirmation allowed the IT Provider's system to immediately issue the Umrah voucher, fulfilling the 24/7 operational demand.

Mastering Complexity

The multi-level VA hierarchy provided perfect segregation and visibility of funds. Operators could see collections from their specific agent network, and the Ministry's IT provider had a clear view of consolidated payments, all while funds remained pooled in a single physical account for the bank.

IMPLEMENTATION PROCESS

The project was executed with exceptional speed and precision, achieving a record time go live for a solution of this scale. Mindgate's approach was collaborative and agile, compressing a complex deployment into a single, focused process. The journey began with intensive discovery workshops involving Mindgate, the bank's transaction banking team, and the Ministry's IT Provider to meticulously map every financial flow and API endpoint. This blueprint guided our agile development sprints, where we customized the core platform and built the bespoke APIs and dedicated Umrah portal module. The critical phase was a rigorous, three-way User Acceptance Testing (UAT) that ensured flawless, real-time data exchange between our VAM engine, the bank's core systems, and the eUmrah portal. This seamless integration allowed for a smooth, programmatic rollout, onboarding thousands of global operators and agents digitally without disruption.

RESULTS & OUTCOMES

The implementation of Mindgate's VAM solution was transformative, establishing our client as an undisputed leader in digital transaction banking and demonstrating the immense power of our platform.



Unprecedented Scale Handled with Ease

Successfully onboarded 600+ operators and 7,000+ agents, proving the solution's ability to manage complex, multi-layered ecosystems.



Radical Efficiency & Automation

Achieved near straight through processing (STP) for reconciliation, completely eliminating manual processes and associated costs.



Enhanced Customer Experience

Delivered full, real time visibility of funds to all parties, leading to a reduction in service queries by over 70%.



Future-Proof, Scalable Architecture

The solution was not just built for the initial launch; it was architected for exponential growth. The platform is designed to handle any volume of transactions, seamlessly accommodating a future increase to tens of thousands of agents and millions of transactions without any degradation in performance. This provides the bank with a truly future-proof asset.

CLIENT FEEDBACK & FUTURE PLANS

The feedback from Our Client has been exceptional, highlighting the success of the solution and the strength of our strategic partnership.

Future Plans

The resounding success and proven scalability of the Umrah project have provided the bank with a powerful and flexible blueprint for future growth. The VAM platform is now seen as a core engine for innovation, giving the bank the confidence to aggressively pursue clients in other high volume, complex sectors.

The Bank is Actively Replicating this Model for



The Insurance Sector

Onboarding a major insurance client to issue a unique VA for every policy, automating premium collections and claims processing on a massive scale.



Fintech & Digital Wallets

Partnering with a leading digital wallet provider, using the VAM solution to power individual wallet accounts and prepaid cards, knowing the architecture can handle millions of micro transactions flawlessly.



The Escrow Sector

Extending into real estate, the platform now offers digital escrow services by integrating VAM and EIPP. This automates the safeguarding of funds between developers and buyers, tracking instalments in dedicated virtual accounts to ensure project financial integrity.

CONCLUSION

A Partnership for Future-Ready Banking

The successful implementation of this revolutionary Digital Payment's ecosystem stands as a testament to the power of strategic partnership and cutting-edge technology. **This project is a prime example of how complex, real-world challenges can be solved with innovative thinking and a robust, scalable platform.**

At Mindgate Solutions, we are engineered to support many such complex requirements, not only in Virtual Account Management but across the entire spectrum of Cash Management product needs. Our platform's proven ability to handle any volume of transactions, combined with its inherent flexibility, makes it the ideal cornerstone for a bank's strategy to digitize business processes for all its key corporates.

By leveraging our technology, our client has secured a decisive competitive edge for years to come. This solution has been instrumental in solidifying the bank's position as the 'go-to bank' for innovative and robust digital cash management solutions in the competitive Transaction Banking space. We are proud to be the engine behind our client's success and remain committed to co-creating the future of digital finance.

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