MariaDB

CHARTING A PATH TO FINANCIAL SERVICES MODERNIZATION

Financial services institutions are facing massive market pressures: competition from fintech startups, customer expectations for 24x7 access from anywhere, evolving global regulatory requirements and the need to open new revenue streams. The sophistication of a financial services organization's digital capabilities is *the* determining factor for success or failure today.

WHAT'S HOLDING BACK FINANCIAL SERVICES ORGS – AND WHAT TO DO ABOUT IT

Incumbent institutions have distinct advantages that favor their success: brand recognition and trust, substantial infrastructure and a solid customer base. But they also can be reluctant to change, rely on legacy technology that makes scaling cumbersome and expensive, and fail to leverage the vast amount of data available to them.

To overcome these blockers and modernize for growth, established financial services organizations should:

Adopt a multi-cloud/hybrid cloud strategy.
As you transition to the cloud, for the time being you'll still have some portion of your data and applications on premises, and you need to move the management and data plane associated with those apps across multiple cloud and on-prem infrastructures to meet your specific needs. The best cloud database services can span multiple public clouds to make your multi-cloud strategy seamless.

Add operational analytics capabilities.
Performing real-time operational analytical queries on transactional data – including customer profiles, preferences and product usage – not only improves operational efficiency but helps grow revenue by providing the insight you need to offer the right products to the right audience at the right time.

Use distributed processing capabilities for scale.
Distributed data processing lets you add or remove data nodes dynamically for applications with performance requirements that may exceed the capabilities of replicated and clustered databases, and applications that experience short-term surges and need additional database capacity to satisfy SLAs.

3 CORE CAPABILITIES FOR MODERNIZING FINANCIAL SERVICES

We've covered the big-picture aspects of modernization, but success depends on the details. To thrive, institutions must execute secure, reliable and compliant transactions at scale – while taking control of data to inform decision making and exceed customer expectations. Pulling that off requires three core capabilities:

1. **High-volume transaction processing**
   To support features ranging from mobile banking, payment processing and wire transfers to trading, cryptocurrency and identity authentication, your database must support a high volume of concurrent transactions coming from anywhere in your country, or perhaps anywhere in the world.

2. **Customer experience management**
   What's the key to becoming customer-centric while identifying new market opportunities? Analytics. Drawing insights from real-time and historical data enables personalized experiences, and lets you recommend the next best offer or action – leading to higher customer lifetime value. Use of analytics directly in the database environment instead of reliance on outdated enterprise data warehouses can reduce undue burden from both an expense and a time-to-value standpoint.

3. **Fraud detection**
   The customer experience you create won't mean much without trust, so the third piece of the modernization puzzle is automated, data-informed fraud detection. Analyzing customer information such as address, income and financial transactions (credit card purchases, mortgage payments, etc.) lets your organization identify irregularities and fraudulent activity. Leveraging this information contextually by joining geospatial, temporal and other data in real time improves accuracy and minimizes false positives and negatives – making for higher customer satisfaction and reduced fraud-related losses.

So, what's the best way to deliver all of these capabilities while addressing the blockers discussed above?

MariaDB SkySQL for Financial Services Modernization

Financial services institutions worldwide depend on MariaDB SkySQL to support the three core capabilities for modernization. SkySQL is a fully managed cloud database service engineered to support organizations operating at any scale, for any workload – from systems of record (OLTP) to analytics (OLAP) – and on AWS and Google Cloud plus hybrid-cloud deployments. Here's how:

SkySQL delivers high-volume concurrent transactions.

- Multi-writer capabilities mean capacity and throughput are virtually unlimited; additional database nodes can be added anytime to increase capacity and scale.

- In the event of a failure, failover to another instance is fast, transparent to the client and automatic – making SkySQL an indestructible system of record.

- Using a single console, deploy and manage databases across Amazon Web Services and Google Cloud at scale, with continuous availability and redundancies across zones and regions

- Scale from thousands to millions of transactions per second.

- Scale up and scale out without custom coding.

Achieved five 9s availability and saved 80% in database costs, opening up budget to create new services and acquire new customers.

SkySQL makes fraud detection smarter.

- Store large amounts of data, up to petabytes, in a columnar format for real-time analytics.

- Deliver sub-second query results from billions of rows of data – say goodbye to latency issues.

- Reduce administrative overhead thanks to the use of standard SQL; no custom coding.

- Get real-time insights using standard SQL against highly consistent data structured for operational analytics.

> let's make payment happen **CCV** *Replaced aging on-prem hardware plus three MS SQL, DB2, and Oracle databases with SkySQL after benchmark testing exceeded the requirement of 4,000 transactions per second for two hours.*

SkySQL enables a comprehensive customer experience.

- Handle customer demands at any scale thanks to columnar storage or columnar indexing within a distributed SQL environment.

- Draw split-second insights from historical data for smarter transactions.

- Leverage transactions as an opportunity for fast, targeted cross-selling and up-selling.

> **❌ DBS** *Moved mission-critical apps from Oracle to MariaDB SkySQL – achieving millions of dollars in net savings.*

	Transactions	Fraud Detection	Customer Experience
Heavy Writes	✔		✔
Heavy Reads		✔	✔
Latency Constraints	✔	✔	✔
Sub-Second Queries	✔	✔	✔
Distributed Processing	✔	✔	
JSON (Semi-Structured Data)		✔	✔
Scale	✔		
OLTP	✔		✔
OLAP		✔	✔

TAKE YOUR FIRST STEPS TOWARD MODERNIZATION

Work with MariaDB's architects to chart a pragmatic overhaul of your operational data platform.

Or dive in today and contact us.