

Fast, Reliable, and Secure: How YugabyteDB Powers Customer Portfolio and Dashboard

Customer Portfolio and Dashboard

Customer-facing portfolio dashboards are the digital front door to financial services. After logging in, customers expect to see account balances, investment positions, recent transactions, personalized recommendations, and consolidated views across multiple products, all updated in real-time.

For brokerages, wealth management firms, and digital banks, these dashboards must retrieve and aggregate data from numerous systems, apply business logic, and render personalized views in milliseconds. Dashboards handle millions of concurrent users during peak hours, especially around market events and end-of-quarter periods.

The Challenge

Building high-performance, highly available portfolio dashboards presents significant technical hurdles:

- **Slow time to market:** Legacy system complexity and operational overhead slows feature development. Competitive fintechs may ship new features weekly, while traditional firms take months
- **Third-party replication costs:** Achieving high availability with legacy databases requires expensive third-party replication solutions that are inconsistent and difficult to manage
- **Cloud adoption barriers:** Legacy mainframe and VSAM systems cannot leverage public cloud economics, limiting scalability and increasing costs
- **Performance degradation under load:** During market volatility or end-of-quarter, user concurrency spikes cause latency increases, replication lag, and concurrency issues that degrade user experience
- **High operational costs:** Licensing, infrastructure, personnel, backup, security, and compliance costs for legacy systems are huge and growing
- **Lack of automation:** Day 2 operations (backups, failovers, scaling, and monitoring) require extensive manual intervention
- **Data integration complexity:** Mapping and transforming data between mainframe systems (VSAM files) and modern databases (DB2, Postgres) requires custom ETL, introduces bugs, and hits file size limitations

Why Choose YugabyteDB for Customer Portfolio and Dashboard?

YugabyteDB provides the modern data platform that portfolio dashboards demand:

Multi-Datacenter Active-Active Deployment

Deploy YugabyteDB across multiple data centers with active-active replication. Users connect to the nearest data center for low latency (<100ms even across continents). If an entire data center fails, traffic automatically routes to healthy data centers without data loss or user disruption. Guaranteed 99.99% availability becomes achievable.

High Throughput for Concurrent Users

Portfolio dashboards must handle massive concurrency as hundreds of thousands of simultaneous users check positions during market opens or after major news. YugabyteDB delivers >100,000 reads per second across regions without performance degradation. Add nodes to increase throughput as the user base grows.

Low Latency for Great User Experience

First impressions matter. Users expect dashboards to load instantly. YugabyteDB's distributed architecture and follower reads ensure sub-100ms latency for data retrieval. Combined with efficient query execution and in-memory caching, dashboards feel instantaneous even for complex portfolio aggregations.

Observability for Peak Events

Built-in monitoring enables operations teams to track key performance metrics, set alerting thresholds, and visualize database behavior, especially critical during market volatility, earnings seasons, and other high-traffic events. Proactive monitoring prevents incidents before they impact users.

Enterprise Security Integration

YugabyteDB integrates seamlessly with enterprise security infrastructure:

- **LDAP/Active Directory** for user authentication
- **SSO and SAML** support for federated identity management
- **TLS encryption** using certificates from approved PKI systems like Venafi Trust Protection Platform
- **Integration with data encryption platforms** like Vormetric for field-level encryption of sensitive customer data

This enables portfolio dashboards to meet strict security and compliance requirements without custom security implementations.

Simplified Operations

Replace complex operational runbooks with automation. YugabyteDB handles replication, failover, backups, and rebalancing automatically. Operations teams spend less time firefighting and more time on strategic initiatives. Time to market for new features improves dramatically.

Cloud-Native Architecture

Migrate from mainframe VSAM and DB2 systems to a modern cloud-native database. Deploy on-premises initially, then migrate to AWS, Azure, or GCP as your cloud strategy evolves. YugabyteDB's consistent experience across environments eliminates migration risks.

Cost Optimization

Replace expensive mainframe licensing, third-party replication tools, and oversized hardware with cost-effective distributed infrastructure. YugabyteDB's ability to scale horizontally using commodity hardware or cloud instances dramatically reduces infrastructure costs. Elastic scaling ensures you pay only for the capacity you actually need.

Faster Innovation

By eliminating operational complexity and providing PostgreSQL-compatible APIs, YugabyteDB accelerates development. Engineering teams spend more time building customer-facing features and less time wrestling with database limitations, replication lag, and performance tuning.

“YugabyteDB provides us with always-on reliability, global data residency, and effortless AI-driven scalability. It’s been essential to delivering a fast, compliant accounting platform for our customers around the world.”

- Tofu VP of Engineering



Get Started Today

Ready to modernize your bill pay workloads? YugabyteDB offers multiple deployment options:

- **YugabyteDB Aeon:** Fully managed in our cloud or bring-your-own-cloud database-as-a-service with automated operations, monitoring, and support.
- **YugabyteDB Anywhere:** Self-managed enterprise platform for deploying across your own infrastructure. Delivered on-premises, cloud, or hybrid environments.
- **Open Source:** Download and run YugabyteDB's open-source version for development, testing, or production.

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