

Solution Brief: Superior Fintech Applications with MySQL HeatWave



Accelerate time-to-market, boost performance,
reduce costs, and improve customer
experience

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Introduction

The rise of financial technology, commonly known as fintech, has been a transformative force in the financial industry, reshaping the landscape of how financial services are delivered and consumed. Over the past decade, fintech has experienced an unprecedented surge, fueled by advancements in technology, changing consumer preferences, and a growing demand for more accessible and efficient financial solutions.

According to a [report](#) from Boston Consulting Group and QED Investors, fintech revenues are projected to grow sixfold from \$245 billion to \$1.5 trillion by 2030, with banking fintech expected to represent almost 25% of all banking valuations worldwide.

Traditionally, the financial sector was characterized by established institutions and lengthy, often complex processes. Fintech emerged as a disruptive influence, leveraging innovations such as mobile applications, artificial intelligence, blockchain, and data analytics to streamline financial services. This shift has democratized access to financial tools, making them more inclusive and adaptable to the needs of a diverse and globalized population.

From online payments and credit solutions to digital wallets, robo-advisors, and peer-to-peer lending, the fintech ecosystem has spawned a myriad of solutions that offer speed, convenience, and often reduced costs. Startups and established tech companies alike have entered the space, challenging traditional financial institutions and prompting them to innovate to stay competitive.

Many governments and regulatory bodies recognize the potential benefits of fintech and have introduced policies to foster innovation and competition in the financial sector. This has created a more favorable environment for fintech companies to operate and expand.

To succeed, fintech companies tend to serve an underserved segment of the population and/or to deliver a cost-effective service faster and with greater convenience than what customers are accustomed to from traditional financial institutions. As a result, the technology they rely on is paramount as it often determines their ability to deliver an innovative solution exhibiting the performance, scalability, security, reliability, and cost-efficiency that will sway customers.

MySQL HeatWave has become a popular choice among fintechs. HeatWave provides automated, integrated, and secure generative AI and machine learning (ML) in one cloud service for transactions and lakehouse scale analytics. It's available on OCI, AWS, and Azure.

In this brief, we will review how MySQL HeatWave, especially the MySQL and MySQL HeatWave AutoML capabilities, enable fintech companies to succeed. We'll then provide an overview of MySQL HeatWave.

Fintechs improve results and reduce costs with MySQL HeatWave

Let's consider why 4 fintech startups migrated to MySQL HeatWave, and the results they achieved:

Broctagon Fintech Group migrated its flagship Forex CRM to MySQL HeatWave

[Broctagon](#) is a Fintech ISV that provides multi-asset liquidity and brokerage technology such as customer relationship management (CRM) solutions to foreign exchange industry (Forex) brokers. Broctagon's Forex CRM equips retail brokerage firms with a solution that integrates multiple trading platforms and facilitates rapid market expansion with advanced affiliate capabilities. Broctagon began hosting its CRM on Amazon Aurora, serving each customer with its own cluster. Over time, with a rapid increase in client base and thus data size, the company found

that the cost of scaling up for enhanced performance was becoming prohibitive. The company decided to migrate to MySQL HeatWave on OCI and achieved the following:

- Improved performance by 30%.
- Reduced costs by 35%.
- Provides its CRM users with real-time trading account information and trade history data—syncing data directly from different external sources such as the MetaTrader 4, MetaTrader 5, and cTrader platforms.
- Freed developers from heavy administrative work by automating updates, backups, monitoring, and more, channeling their focus to the development of new functions that are frequently rolled out.

The company plans to leverage MySQL HeatWave AutoML to help Forex brokers attract and retain traders with useful recommendations based on their trading data.

“We can connect MySQL HeatWave to all the trading platforms, dashboards, and reports, delivering them through one pane of glass, saving us operational and developmental time and money, while ensuring the highest data quality.”

—**Michael Mai**, Technical Lead, Broctagon Fintech Group

Aicoll improved loan default prediction using HeatWave AutoML

[Aicoll](#) - Artificial Intelligence Collection System - provides AI solutions for managing the risk of customers defaulting on loans. In Colombia, 60% of institutions providing loans in the retail, microservices, or cooperative finance sectors are not equipped with this technology. Aicoll needed an automated way to massage all the data into ML models that would allow its customers to create predictions covering the credit life cycle from loan origination to debt default. The company migrated from MySQL on-premises to MySQL HeatWave and takes advantage of the built-in MySQL HeatWave AutoML. Aicoll obtained the following results:

- Reduced the time to build ML models from three months to one week.
- Accelerated data preparation from one day to minutes.
- Executes ML-generated default predictions for millions of users in real-time, without having to extract data outside of the MySQL Database.
- Empowered their operations team to independently create new ML models.
- Improved liquidity by 20% across their client portfolios.

“Without a doubt, Oracle has helped us sell our loan default solutions to credit institutions throughout Colombia and beyond thanks to the automated machine learning engine within MySQL HeatWave, and to the high availability and scalability of Oracle Cloud Infrastructure.”

—**Yelitza Romero**, CEO, Artificial Intelligence Collection System S.A.S

Credify experienced 4X faster time to market for its instant loan application with MySQL HeatWave

To meet their financial needs, 77% of India's workforce relies on personal loans. By offering Creditt, an instant loan application that uses non-traditional credit scoring and artificial intelligence, [Credify Technologies](#) has become a key player in driving financial inclusion. The company's applications and MySQL databases were previously hosted on HostGator. The management team recognized the need to upgrade the company's technology platform to scale to demand, strengthen compliance processes, and accelerate decision-making. Credify evaluated Amazon RDS, Aurora, and MySQL HeatWave, and selected MySQL HeatWave as the most technically and commercially viable

solution. For example, application performance was 4X higher with MySQL HeatWave vs. Amazon RDS. Credify achieved the following:

- Migrated its applications and data to MySQL HeatWave on OCI in only 8 days.
- Accelerated time-to-market by 4X, being able to focus on core development.
- Saved 25% of the time needed to prepare data for Lines of Business owners.
- Increased its ability to scale to demand, with a threefold increase in loan origination capacity.
- Established end-to-end data security. As a result, Credify enjoys stronger compliance with the Reserve Bank of India's data regulations and protection laws.

“Oracle’s MySQL HeatWave is truly a game changer. It delivers faster performance than other MySQL cloud services while eliminating data copies and ETLs. And the cost of MySQL HeatWave is a fraction of other cloud providers.”

—**Namra Parikh**, Cofounder and CTO, Credify Technologies

Tamara cut costs and improved the performance of its “buy now, pay later” solution using MySQL HeatWave

[Tamara](#) is a leading fintech in the Middle East and North Africa with a “buy now, pay later” solution. As a startup, Tamara needed to find a platform for application development and data management that was cost-effective, easy to use, and scalable. The company was growing fast and quickly adding data sources. Demand for its detailed, segmented business analysis was increasing from business users and merchants. Tamara migrated to MySQL HeatWave from another cloud provider and obtained the following results:

- The IT staff no longer needs ETL tools to move data from MySQL Database.
- With real-time intelligence, Tamara can better analyze and understand customer behavior to continuously improve its application with rapid development.
- Reduced costs by more than 60%.
- 3X performance improvement.

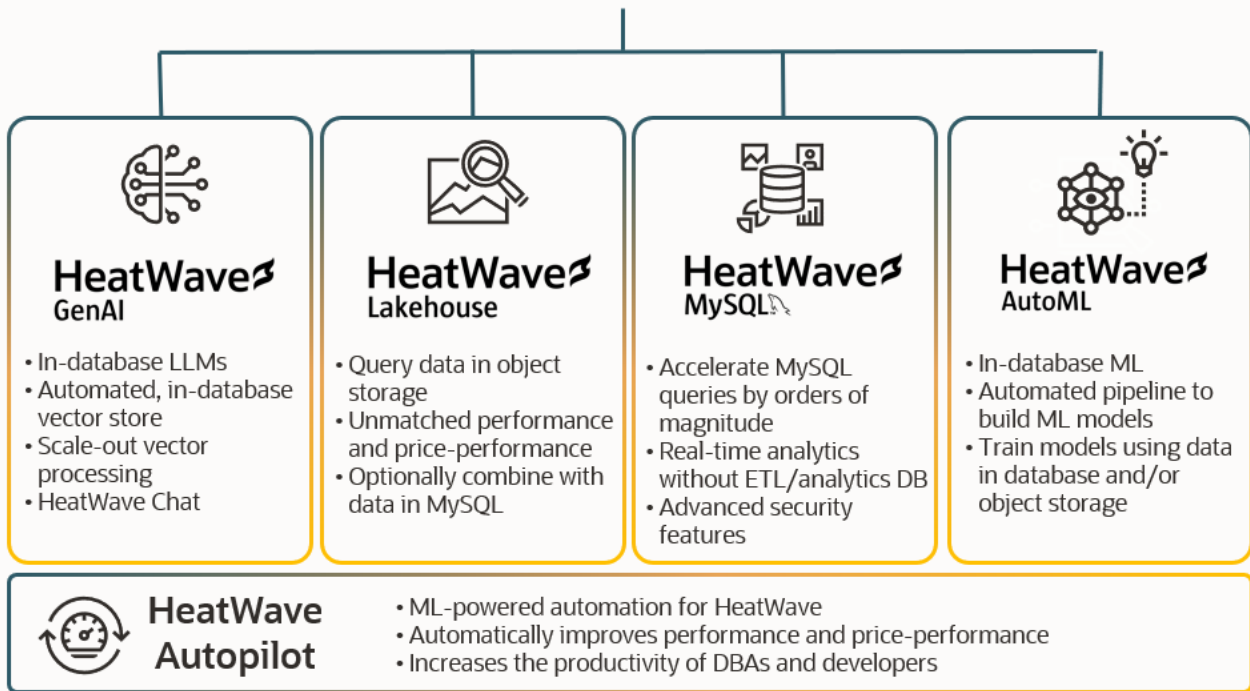
“We migrated our production workload from another cloud solution to MySQL HeatWave. Doing so reduced our costs by 60% and tripled the speed for many of our complex queries, which were not executing in a reasonable amount of time before Oracle Cloud. The real-time intelligence helps us better understand customer behavior to continuously enhance our application.”

—**Chien Hoang**, Director of Engineering, Tamara

MySQL HeatWave overview

It provides automated, integrated, and secure generative AI and machine learning in one cloud service for transactions and lakehouse scale analytics.

HeatWave[®]



Solution for your different workloads

You can use all the built-in MySQL HeatWave capabilities, at no additional cost, for your different workloads.

- [HeatWave GenAI](#) provides integrated, automated, and secure generative AI with in-database large language models (LLMs); an automated, in-database vector store; scale-out vector processing; and the ability to have contextual conversations in natural language—letting you take advantage of generative AI without AI expertise and data movement.

“With in-database LLMs that are ready to go and a fully automated vector store that’s ready for vector processing on day one, HeatWave GenAI takes AI simplicity—and price performance—to a level that its competitors such as Snowflake, Google BigQuery and Databricks can’t remotely begin to approach.”

—**Steve McDowell**, Principal Analyst and Founding Partner, NAND Research

- [HeatWave Lakehouse](#) lets you query data in object storage in a variety of file formats such as CSV, Parquet, Avro, JSON, and exports from other databases with unmatched performance and price-performance, and optionally combine it with transactional data in MySQL databases. Data in object storage is not copied to the MySQL database since query processing is done entirely within the HeatWave engine, so you can take advantage of HeatWave Lakehouse for non-MySQL workloads as well as MySQL-compatible workloads.

“Organizations looking for the best value in the cloud data lakehouse landscape must seriously consider HeatWave Lakehouse.”

—**Carl Olofson**, Research Vice President, Data Management Software, IDC

- [MySQL HeatWave](#) is a fully managed database service, and the only cloud service built on MySQL Enterprise Edition, with advanced security features for encryption, data masking, authentication, and a database firewall. It improves MySQL query performance by orders of magnitude and enables you to get

real-time analytics on your transactional data in MySQL—without the complexity, latency, risks, and cost of ETL duplication to a separate analytics database.

“MySQL HeatWave represents the fiscally responsible approach to cloud databases while AWS Redshift and Snowflake represent the fiscally reckless approach.”

—**Ron Westfall**, Senior Analyst and Research Director, The Futurum Group

- [HeatWave AutoML](#) lets you build, train, and explain machine learning models without ML expertise and data movement, using data stored either in MySQL Database or object storage. HeatWave AutoML automates the machine learning lifecycle, including algorithm selection, intelligent data sampling for model training, feature selection, and hyperparameter optimization. It supports anomaly detection, forecasting, classification, regression, and recommender system tasks.

“I believe the automation built into HeatWave AutoML will make it tangibly easier for customers to use, extending ML beyond the realm of data scientists.”

—**Matt Kimball**, Vice President and Principal Analyst, Moor Insights & Strategy

- MySQL HeatWave also includes **Autopilot**, which provides workload-aware, machine learning–powered automation. It improves performance and scalability without requiring database tuning expertise, increases the productivity of developers and DBAs, and helps eliminate human errors. HeatWave Autopilot automates many of the most important and often challenging aspects of achieving high query performance at scale—including provisioning, data loading, query execution, and failure handling as well as capabilities for OLTP workloads, such as auto-indexing.

Available in multiple public clouds

You can deploy MySQL HeatWave in your choice of public clouds: OCI, AWS, or Microsoft Azure.

- It runs natively on AWS. AWS customers can reduce complexity by replacing up to six AWS services with MySQL HeatWave.
- It is available to Azure customers via the [Oracle interconnect for Azure](#). Azure customers can use MySQL HeatWave running on OCI as if it were an Azure resource.

You can also use MySQL HeatWave in your data center with [OCI Dedicated Region](#)

“For cost-conscious IT teams and developers, MySQL HeatWave on AWS represents a whole new TCO calculation with zero cost for what are add-on services on AWS and no data egress fees.”

—**Marc Staimer**, Senior Analyst, Wikibon

Conclusion

The fintech landscape is highly competitive, and making the right technology choices can allow you to gain a competitive edge. As demonstrated by multiple examples in this brief, MySQL HeatWave helps you deliver a better customer experience. It can help you boost the performance and scalability of your applications, accelerate time-to-market, increase productivity, enhance security, and reduce costs. Whether you're an early stage fintech or an established company, we would be happy to help you evaluate how you could benefit from HeatWave. Don't hesitate to contact an [Oracle representative](#) or an [Oracle partner](#).

MySQL HeatWave resources

- [Learn more about MySQL HeatWave](#)
- [MySQL HeatWave migration program](#)
- [Request a free MySQL HeatWave workshop](#)
- [Try MySQL HeatWave for free](#)

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