

Credgenics Cuts Latency 4x & Boosts CPU Efficiency 30% on TiDB



Client Overview

Credgenics is the leading provider of Loan Collections and Debt Resolution technology, serving banks, FinTechs, and financial institutions worldwide. Recognized as the #1 Best Selling Loan Collections Platform in India for three consecutive years, their AI-powered SaaS platform manages the end-to-end collections lifecycle. In FY24, Credgenics handled over 98 million loan accounts, helping lenders increase resolution rates by 20%, improve collections by 25%, and reduce collections costs by 40%.

4x

Query Latency Reduction

Average query latency was reduced from 200ms to 50ms

30%

Increase in CPU Efficiency

Freed critical processing power by cutting TiKV CPU use

100%

System Stability

Achieved peak reliability by eliminating disruptive I/O spikes

33%

Increase in Cost Efficiency

Achieved by lowering provisioned IOPS from 12,000 to 8,000

TiDB

Consulting Services



The major benefit came from adopting TiDB, which has shown noticeable performance improvements. The overall experience has been very positive; we appreciated the supportive and cooperative approach of the Mydbops team, especially during the TiDB upgrade process. The 75% reduction in query latency has had a significant, positive impact on our business.

Naveen Malhotra
Database Administrator & Architect, Credgenics, India

Deployment Type	Database Stack / Services Used	Objective / Outcome
Cloud-Based Deployment	TiDB Cluster (v7.5.0)	Query latency - 200ms → 50ms

Business Challenges

Overview

The performance of Credgenics' real-time analytics platform was limited by its TiDB cluster. This situation led to operational inefficiencies, reliability concerns, and a direct impact on the user experience.

- High Query Latency:** Slow dashboard performance affected user experience and the utility of the real-time data presented. For a SaaS platform, this directly impacts customer satisfaction and puts ARR at risk from potential churn.
- System Instability:** Frequent I/O spikes and high CPU usage created an unreliable environment, posing a risk of service degradation during peak business hours.
- Scaling Limitations:** With storage utilization at 70% and key components under-provisioned, the existing architecture was not equipped to support future data growth. The inability to scale confidently meant that onboarding larger clients or handling increased data volume was a business risk, placing a ceiling on potential ARR expansion.

Goals

The key objectives the client was aiming to achieve:

- ➔ **Improve Performance:** Reduce query latency to ensure a responsive user experience.
- ➔ **Increase Reliability:** Resolve CPU and I/O bottlenecks to create a stable database environment.
- ➔ **Plan for Scalability:** Reconfigure the cluster to handle future data volume and workload increases.
- ➔ **Optimize Costs:** Right-size infrastructure, specifically storage I/O, to reduce operational expenses.
- ➔ **Implement Best Practices:** Upgrade the cluster and apply standard practices for security, performance, and operations.

Solution Provided by Mydbops

Mydbops partnered with Credgenics to optimize their TiDB cluster, ensuring the successful adoption of the technology for their real-time analytics workload. The solution focused on a collaborative version upgrade, deep configuration tuning, and strategic scaling recommendations.

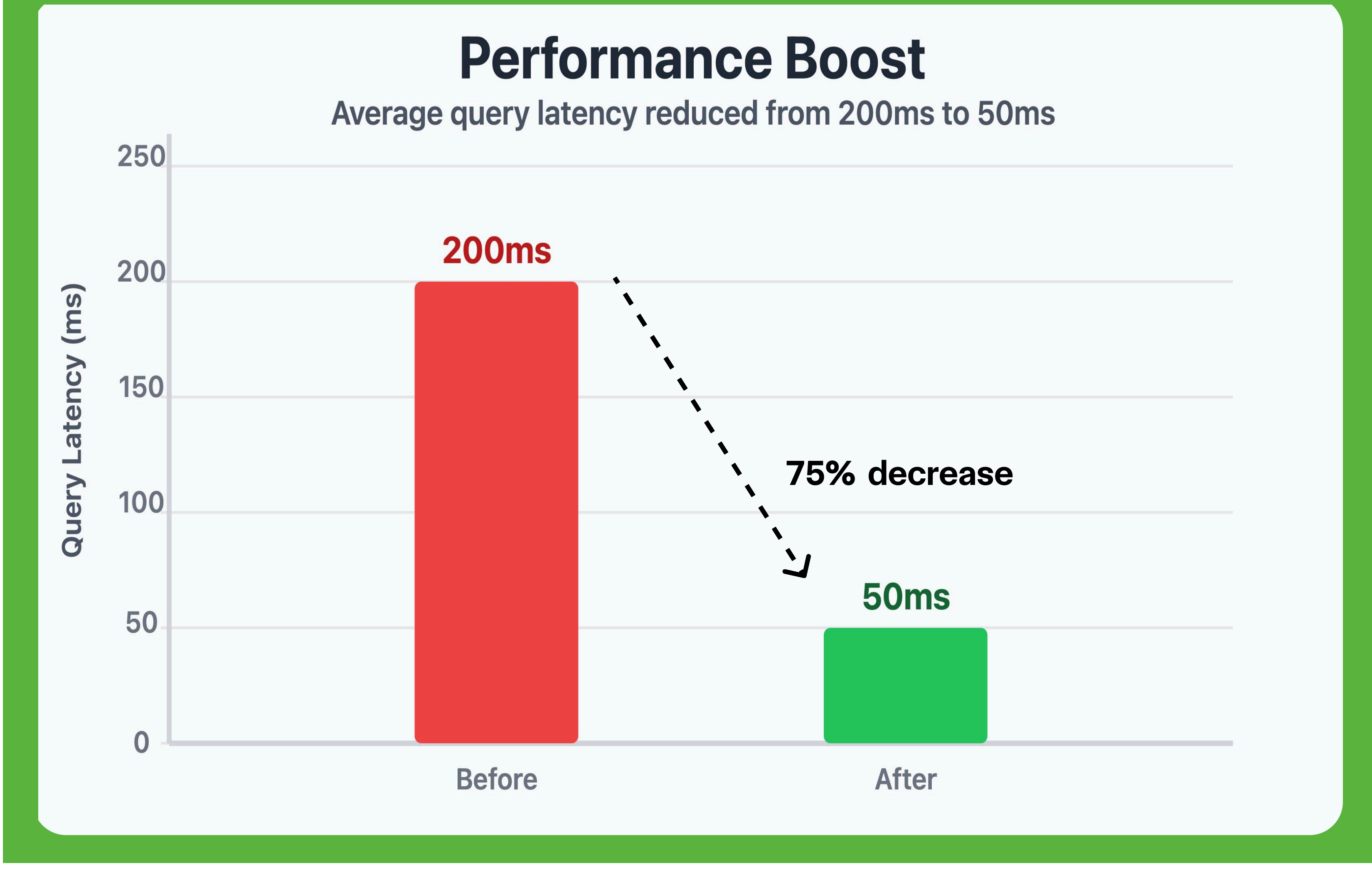
- **Analysis**

Mydbops conducted an **audit of the TiDB architecture**, system metrics, storage, traffic patterns, and configurations. The audit identified the **root causes** of latency, including TiKV congestion and suboptimal thread pool configurations.
- **Version Upgrade & Tuning**

A major version upgrade was performed in close collaboration with the Credgenics team to ensure a smooth and supportive transition. Mydbops also applied specific configuration changes to **TiKV** (modifying region-max-size and tuning raft/gRPC threads) to resolve core performance issues.
- **Scaling and Modernization Plan**

Mydbops provided an actionable scaling plan. This included adding a fourth TiKV node to rebalance storage, upgrading the PD node for improved cluster management, and recommending a **migration to AWS Graviton instances** to improve the price-performance ratio.
- **Cost Optimization**

I/O analysis showed that provisioned IOPS for TiKV nodes were higher than peak usage. A recommendation to **reduce IOPS by 33%** was implemented, leading to direct cost savings.



Results & Impact

Key Outcomes

- 75% Reduction in Query Latency**

By tuning TiDB and TiKV parameters and performing a version upgrade, average query latency was reduced from **200ms** to **50ms**. This made the real-time analytics dashboard more responsive.
- Improved CPU Efficiency and System Stability**

Optimizing TiKV configurations and flow control mechanisms reduced the overall CPU load. This tuning also eliminated the I/O spikes and transport errors, resulting in a more reliable system.
- A Clear Roadmap for Scaling and Cost Management**

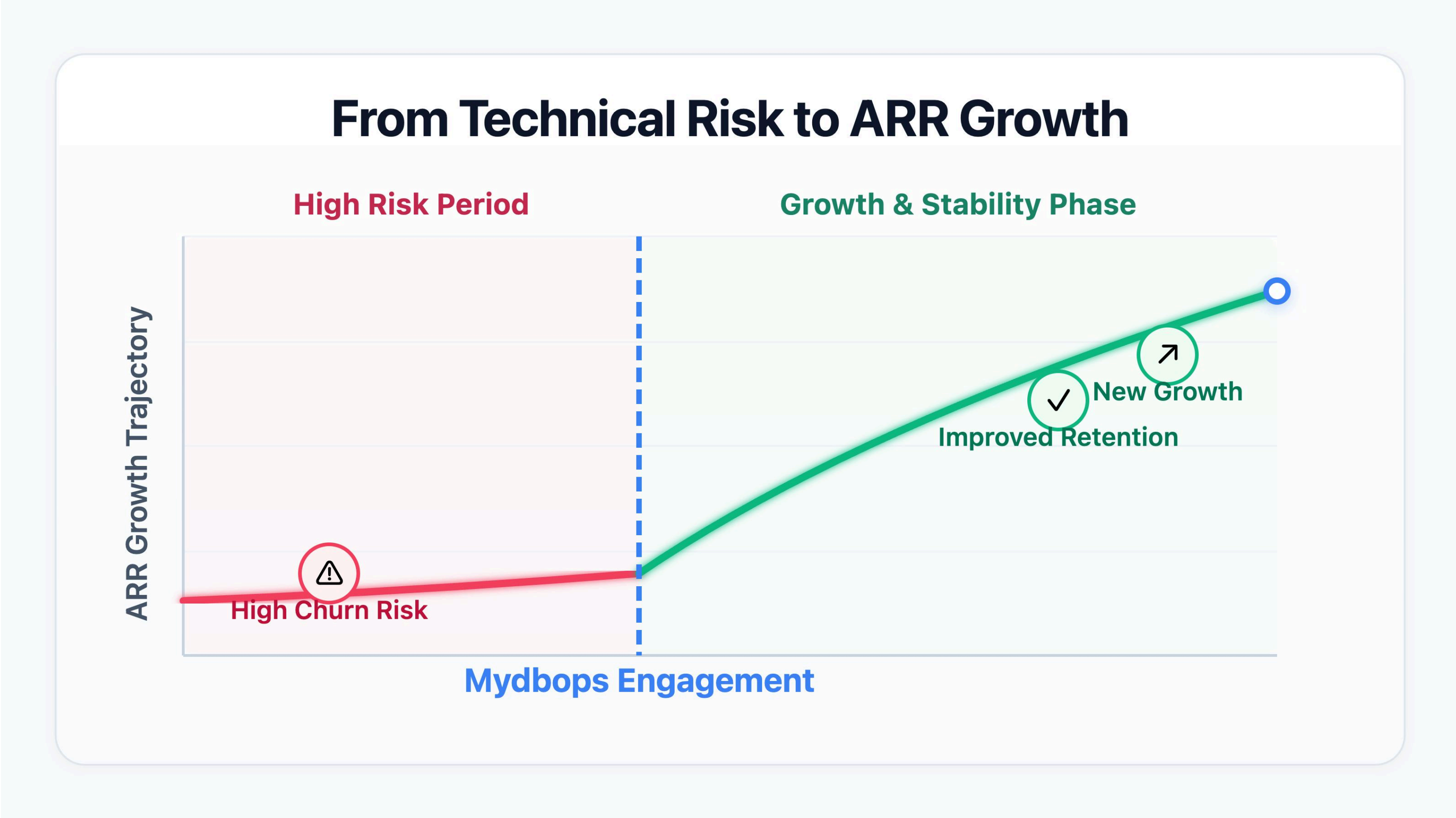
Credgenics received an expert-validated plan to scale storage and compute. The plan included actionable recommendations to reduce costs through IOPS right-sizing and migration to more efficient AWS Graviton instances.
- Protecting and Enabling ARR Growth**

For a SaaS leader like Credgenics, ARR is the most critical business metric. The performance of their platform is foundational to customer retention and acquisition. By creating a faster, more stable real-time analytics experience, Mydbops helped Credgenics protect its existing revenue streams from churn. More importantly, the scalable and reliable platform now serves as a solid foundation upon which to build **future ARR** by confidently onboarding new, larger clients.
- Total Cost of Ownership (TCO)**

The project identified a 33% potential reduction in **recurring monthly IOPS costs**. The recommendation to migrate to AWS Graviton instances provides a path for further long-term savings.
- Operational Efficiency**

The resolution of performance bottlenecks and critical errors reduced the frequency of alerts and time spent on reactive maintenance. This allowed the Credgenics engineering team to focus more on product development.
- Supporting Business Growth**

A more performant and stable TiDB cluster gives Credgenics the technical foundation to ingest more data, support more users, and expand its analytics features.



Preparing for Future Growth

The project prepared Credgenics for future growth. They now have a scalable TiDB architecture and can consider additional ecosystem components like TiProxy for connection management as their needs evolve.

Your Platform's Performance is Your Business's Foundation. Let's Make It Unbreakable.

Like Credgenics, you know that latency spikes, system instability, and scaling limits are more than just technical headaches. They are direct risks to your user experience, your team's morale, and your bottom line. Constant firefighting burns out your best people and stalls innovation.

Our approach is built on partnership. We work alongside your team to provide a seamless, supportive experience, turning your database from a source of stress into a high-performance asset you can depend on. Imagine a future where you can onboard new clients with confidence and your engineers are free to build what's next, knowing the platform beneath them is stable, scalable, and secure. **That is the peace of mind we deliver.**

Ready to partner with a team trusted by the leaders?

[Talk to an Optimization Expert](#)