

Exotel Scaled Its Cloud Database and Reduced Storage by 57%



Overview

Exotel is an Indian cloud communications platform operating at enterprise scale. They process billions of annual interactions. To support this rapid growth, the company needed to resolve database capacity constraints that threatened platform stability. Partnering with Mydbops, Exotel modernized its data architecture to secure cost-effective scaling, eliminate system performance risks, and ensure uninterrupted daily operations for thousands of enterprise clients.



57%

Storage Reduction

Active database size shrank from 14TB to a lean 6TB

45%

Lower CPU Overhead

CPU consumption during database writes dropped significantly.

4X

Write Performance

Enabled through parallel and crash-safe replication setups.

5X

Data Handling

Overall improvement in managing massive growing datasets.

MySQL

Consulting Services

About exotel

Exotel is a secure and reliable business communication platform on the cloud. Designed to be simple to set up with no additional physical infrastructure or equipment required, it allows sales and support teams to work productively from any location. Exotel serves over 7000 enterprise clients and processes over 25 billion customer interactions annually across Asia, the Middle East, and Africa, solidifying its position as one of the largest cloud communication networks in the region.

Deployment Type
Cloud-Based Deployment

Database Stack / Services Used
MySQL, ProxySQL, Native Replication

Objective / Outcome
57% Storage Reduction & 45% CPU Load Relief

Business Challenges

Overview

As Exotel's call and messaging volumes grew, their core database environment faced critical scalability bottlenecks:

- Approaching Infrastructure Thresholds:** The database size swelled to nearly 14 TB, reaching the physical storage limits of their AWS EC2 instances.
- Severe Resource Strains:** High-frequency write operations caused heavy CPU spikes, limiting the system's processing headroom.
- Query Latency:** Overloaded tables resulted in slower query responses, threatening the speed and reliability of the platform's user-facing services.
- Lack of Automated Scale:** The team lacked an automated system to manage long-term database growth while maintaining continuous database stability.

Goals

- Build a structured partition model to automatically archive historical data to cost-effective AWS S3 storage.
- Lower CPU utilization on write operations to ensure predictable performance.
- Transition the legacy database version to a modern, supported release to enable parallel database replication without service interruption.

Solution Provided by Mydbops

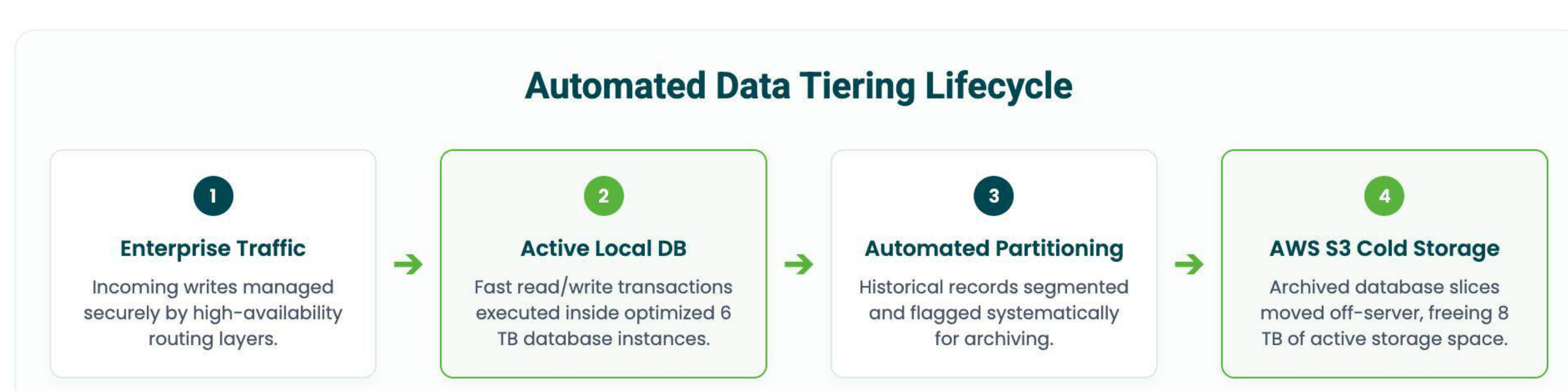
To resolve these challenges, Mydbops consulting engineers implemented a staged database optimization plan:

Workload-Aware Partitioning:

Designed and executed a custom database partitioning approach to separate active data from historical records.

Database Version Modernization:

Upgraded the core database environment from MySQL 5.5 to the latest stable release. This allowed the platform to leverage advanced parallel and crash-safe replication capabilities.



Zero-Downtime Database Cutover:

All structural database changes were completed on a parallel environment. The final cutover to the new system was executed with minimal downtime, protecting business continuity.

End-to-End Monitoring:

Deployed Prometheus and Grafana dashboards to monitor internal database performance and prevent operational issues.

Operational Infrastructure Transition

PREVIOUS STATE

Scaling Bottlenecks

- ✗ **14 TB Active Footprint:** Storage limits approaching full capacity on cloud instances.
- ✗ **High CPU Load on Writes:** Heavy write queries causing severe resource spikes during peak traffic.
- ✗ **Response Latency:** Bulk data sizes creating slower queries and risking agent delay.

OPTIMIZED STATE

Efficient & Auto-Scaling

- ✓ **6 TB Managed Footprint:** Legacy records archived automatically to secure, low-cost S3 buckets.
- ✓ **45% CPU Utilization Relief:** Upgraded replication handles transaction loads easily.
- ✓ **Faster Query Times:** Leaner database design boosts operational responsiveness.

Results & Impact

Key Outcomes

Significant Storage Savings:

Archiving historical partition files directly to AWS S3 reduced the active database footprint by 57% (down to 6TB from 14TB), eliminating the risk of hitting EC2 storage limits and optimizing long-term hosting expenses.

Improved System Stability:

Slashing database CPU consumption by 45% cleared processing queues, ensuring the platform remains stable during unexpected call traffic spikes.

Resource Optimization Breakdown

Active Database Storage Size



Server CPU Load During Peak Writes



Faster Response Times:

By organizing active data into lean, partitioned sets, query response times improved, allowing internal teams and support agents to pull up records faster.

Protected Against Vendor Lock-In:

By optimizing the open-source MySQL and ProxySQL stack, the team achieved a 4X write performance boost and a 5X improvement in data handling capacity without committing to expensive proprietary database vendors.

Scaling to 25 Billion Conversations

Exotel manages cloud communications for over 7000 enterprise customers, orchestrating over 25 billion customer interactions annually. As transaction volumes soared, their primary databases grew to nearly 14 TB, hitting the physical limits of their cloud servers. This data strain caused severe CPU load during peak hours, threatening the fast, dependable query response times required to support global business communications. To sustain momentum, Exotel needed a long-term scaling strategy that avoided expensive hardware upgrades or proprietary software lock-in.

The Mydbops Partnership: Collaborative Growth

Exotel partnered with Mydbops, integrating database consultants directly into their workflow. Acting as a remote extension of the team, Mydbops designed an automated partitioning lifecycle, moving older records to cost-effective S3 storage and safely shrinking the active database size to a lean 6 TB. By upgrading the core architecture in a parallel environment, they managed the final cutover with minimal downtime. Mydbops continues to support Exotel with 24/7 remote DBA services and real-time monitoring, ensuring a highly available platform ready to absorb future global growth.

Is your business facing data growth and scaling bottlenecks?

Partner with our remote database experts to optimize your performance, reduce infrastructure costs, and keep your business running smoothly without proprietary vendor lock-in.

[Schedule a Database Consultation with Mydbops](#)