Mahindra Finance Core Application stack migration from On-premise to Google Cloud with **99.9% uptime**

HIGHLIGHTS

25+ Servers Migrated

Pub-Sub for Automation

Zero Downtime Migration Strategy

"It has been a wonderful experience to have team Computers as our GCP Migration & implementation partner. It was our first step towards Google Cloud Platform and the Team helped us from the scratch till the end to ensure a smooth and seamless migration. For any challenges, the Team is always ready on their toes to get things sorted out at the earliest, and help us with managing our cloud infra."

Abdul Khalid,
Senior General Manager - Information Technology, Mahindra Finance

SUMMARY

Team Computers helped Mahindra and Mahindra Finance to migrate its core application stack running in traditional data centers to GCP within a short span of under one month. After using and realizing the benefits of moving to GCP for around a year, all other core applications stack migrated smoothly.

THE CLIENT

Mahindra & Mahindra Financial Services Limited (Mahindra Finance) is one of India's leading NBFCs operating in Rural & Semi-Urban india with a customer base of more than 7.5 million happy customers.

With over 33,000 employees, Mahindra Finance has a presence in every state in India and a footprint in 85% of its districts. Initially set up as a captive finance company to finance Mahindra vehicles, Mahindra Finance has come a long way by extending its finance solutions not only to other Mahindra products like tractors, two wheelers, commercial vehicles and pre-owned vehicles, but also to vehicles of other leading OEMs. It has also diversified its product portfolio and offers products like SME Finance & Mutual Funds through its subsidiaries Mahindra Insurance Brokers Ltd., Mahindra Rural Housing Finance Ltd. & Mahindra Manulife Investment Management Private Limited, respectively.

BUSINESS PAIN AND CHALLANGES

While running all operations from a traditional data center, Mahindra Finance had to spend considerable time and effort in the procurement, upgradation and maintenance of servers. In addition, the infrastructure could not effectively handle traffic fluctuations, thereby impacting business negatively.

Also, Mahindra Finance was unable to maintain uptime on their end to end automation application hosted on premise. This caused a lot of business continuity issues and thus affecting the overall productivity. Mahindra Finance also wanted to reduce the administrative efforts and focus on the business.

Over time, Mahindra Finance realized that moving to cloud would be a more scalable, reliable, secure, and cost-effective solution.

BUSINESS SOLUTION

Mahindra Finance was running around **70 servers with 5+ databases**, applications that needed to be migrated in phases.

As the pandemic hit the entire globe, the need for the cloud was realized immediately by Mahindra Finance and finally one of the mission critical applications was migrated to Google Cloud by leveraging various services of GCP.

Team Computers worked with Mahindra Finance to prepare an overall migration plan, including **landing-zone setup, designing run and operate model** (for deployments, monitoring, backups, configuration management etc.) on GCP and categorize all applications in different migration phases ensuring **near zero downtime** of the application.

After creating the landing zone in GCP, all the **data was replicated parallelly** and cut over was planned only after data was completely migrated and was **in sync with the on-prem DB**. The connectivity between the application sitting on GCP Infra and On-prem DC was smooth and achieved with the provisioning of redundant Partner Interconnect.

After doing the load test on the parallel setup of GCP while keeping the tab on scalability and performance , the application was declared live over cloud. This approach ensured that in case of any hiccups/unforeseen issue, the traffic could be diverted back to the on-prem DC.

Later on infrastructure **cost was optimized** by using the host of GCP Services.

SOLUTION OVERVIEW

- Implemented a hybrid approach for deployments, roll-backs, and database replication
- Private network connectivity was established between existing data centers using GCP Partner Interconnect.
- Deployed applications across multiple availability zones for high availability.
- Implemented advanced security mechanisms leveraging GCP Global and internal Load balancers, F5 WAF and Checkpoint Firewalls along with security groups
- Used Cloud Functions with Pub/Sub for Automation.
- Leveraged Cloud Storage for low cost backups and long term archival needs.

BUSINESS OUTCOMES / RESULTS

- Team Computers helped to complete the migration activity of one of the **most critical applications** within a short span of one month.

- Mahindra Finance enjoyed the performance of highly optimized hardware sitting behind the Google Compute Engine Instance with **99.9% uptime.**

- MF also realized that the **total cost of ownership was reduced** when compared to on-prem DC.

- The **time to provision and deploy new services/applications was reduced** to minutes instead of days.

GCP STACK

Compute Engine	Cloud Functions	Cloud Storage	Cloud Logging
Cloud Load Balancing	Cloud PUB/SUB	Operation Manager	Persistent Disk

OTHER TECHNOLOGY STACK

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CHECK POINT

Team Computers can be your trusted IT solution partner with 34+ years of experience, who understands all your IT needs covering Hardware Software, Service, Cloud, Analytics, mobility and attitude of sewa. Are you looking for Cloud Services Partner to improve your IT Infrastructure spends and management?

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