

RailYatri accelerates performance with cloud modernization

Case Study | RailYatri



Client profile

RailYatri is a leading travel-tech platform focused on simplifying intercity travel for millions of Indians. What began with a mission to make rail journeys easier has evolved into a comprehensive multi-modal mobility ecosystem. Today, through its train-information and ticket-booking platform RailYatri and its technology-enabled intercity bus network IntrCity SmartBus, the company serves travellers across 230+ cities in India.

Known for delivering reliable, data-driven travel experiences, RailYatri integrates real-time travel information, multimodal ticketing, and connected fleet operations to create a seamless journey for passengers. With millions of searches and bookings every month, the platform continues to simplify long-distance travel while supporting transport partners with technology-led solutions that enhance efficiency and service quality.

Following post-pandemic growth of 15% to 20% monthly, RailYatri's existing on-premises and cloud setup struggled to keep up with 24x7 demand from an expanding customer base. We worked with the business to modernize their systems, providing scalable, reliable cloud infrastructure that supports real-time analytics and AI-powered services. As a result, RailYatri has been able to boost performance, enhance insights and improve the customer experience.



NTT DATA enabled us to modernize our core travel operations effectively. Their team helped us scale booking services, implement real-time analytics and integrate AI-driven features for customer updates. With this solution, we can operate more reliably, respond quickly to demand and deliver a seamless travel experience for millions of passengers across our network.”

Kalpesh Vaghani, SVP Technology, RailYatri

60% faster provisioning with Compute Engine

24x7 availability of booking services

Business need

Streamline travel operations with scalable cloud solutions

RailYatri's legacy infrastructure struggled to support rapid user growth, 24x7 booking operations and customer demand for instant travel information. Limited scalability, slow provisioning and fragmented data systems affected performance and delayed the production of critical insights. Manual support workflows further reduced efficiency, making it difficult to deliver the seamless, unified booking experience passengers expected.

NTT DATA addressed these challenges by implementing a robust cloud-native platform with dynamic scaling, faster provisioning and centralized real-time analytics. Google Cloud's Compute Engine enables consistent performance during traffic surges, BigQuery unlocked instant operational insights, and Cloud Speech APIs automated customer interactions. This modernized platform enhanced reliability, streamlined operations and elevated the overall travel experience for customers.

Solution

Transforming travel operations with cloud and AI-powered solutions

RailYatri partnered with NTT DATA to modernize its train and intercity-bus booking operations and real-time travel analytics. A phased, cloud-native approach automated routine workflows, streamlined data processing and delivered actionable insights across platforms.

Our expertise and collaborative approach addressed RailYatri's operational challenges, leading to the design of AI- and cloud-powered solutions that aligned with the company's technology vision.

The solution encompasses:

- **Real-time data analytics:**
BigQuery manages operational and booking data to provide up-to-date insights.
- **Interactive dashboards:**
Looker dashboards track booking trends, revenue patterns and service performance to support data-driven decision-making.
- **Scalable infrastructure:**
Google Compute Engine enables faster provisioning and dynamic scaling to handle traffic spikes.
- **AI-powered customer experience:**
Google Cloud Speech-to-Text transcribes support calls for analysis, while Cloud Text-to-Speech automates travel updates.
- **Advanced booking alerts:**
This feature sends real-time notifications during high-demand travel periods.
- **Reliable cloud-native operations:**
Migrating databases and core services to Google Cloud provides a stable backend and 24x7 availability.

This integrated approach enabled RailYatri to reliably scale travel operations, deliver real-time insights, and provide passengers with a seamless, data-driven booking and travel experience.

“ We handle millions of train and bus searches and bookings every month, and with growing traffic, real-time travel updates, and peak-season demand, it became important for us to further strengthen our systems. We were looking for a scalable, always-on platform that could enhance performance, centralize data, and continue delivering a seamless and reliable experience to our passengers.”

Aparajita Mukhopadhyay, Chief Operating Officer, RailYatri

Outcomes

Faster bookings and smarter operations on a scalable travel platform

Faster booking operations and reduced lead times:

RailYatri achieved nearly 60% faster infrastructure provisioning using Compute Engine, enabling quicker scaling and smoother booking experiences during peak travel periods.

Improved customer service efficiency:

By using Google Cloud Speech-to-Text and Text-to-Speech, the platform automated call transcription and travel announcements, reducing manual effort and improving the speed and quality of customer interactions.

Scalable, resilient infrastructure:

Migrating core services and databases to Compute Engine virtual machines (VMs) created a stable, cloud-native backend that reliably supports 24x7 booking operations, even during high-demand travel seasons.

Enhanced data-driven insights:

BigQuery delivers real-time analyses of bookings, user behavior and operational trends, while Looker Studio dashboards help teams monitor revenue, performance and business metrics to guide strategic decisions.

Reliable, always-on travel services:

The cloud-native architecture enables consistent uptime and performance, enabling passengers to access information about schedules, availability and bookings without disruption.

Improved passenger experience during peak demand:

The introduction of the Advanced Resource Period feature provides real-time alerts for high-demand slots, helping passengers secure tickets more efficiently during busy travel periods.



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