



## Case Study

# GDS SYSTEM SOFTWARE TESTING



<https://luvina.net/>



# PROJECT OVERVIEW

LUVINA SOFTWARE



# PROJECT OVERVIEW

A leading Global Distribution System (GDS) provider in Japan, specializing in IT solutions for the airline travel industry, sought a **skilled and aviation-savvy QA team** to continuously test their system releases. The objective was to accelerate their product rollout, scale operations rapidly, and maintain their competitive edge in a fast-evolving market.

- **Location:** Japan
- **Industry:** Airline / Travel Technology
- **Duration:** 2014 – Present
- **Team Size (as of Jan 2025):** 2MM onsite + 5.75MM offshore
- **Service:** Software Testing
- **Key Technologies:** Sabre API, Travel Fusion API, XML, Postman, Sabre RED 360

# PROJECT OVERVIEW

## ABOUT THE CLIENT

Our client is a large **GDS provider** in Japan, delivering cutting-edge IT solutions to airline service companies.

Their systems play a central role in enabling travel agents (TAs) to access and book flights, making them an essential partner for airlines entering the Japanese market. With an expansive portfolio of products and modules, they support a wide range of travel operations for agents and providers alike.

## CHALLENGES

- **Shortage of Aviation Testing Experts:** Recruiting QA engineers with both domain expertise and IT knowledge in Japan was difficult.
- **Limited Internal IT Resources:** The client lacked a dedicated API testing team and faced capacity constraints.
- **Post-COVID Market Pressure:** Competition from online travel agencies (OTAs) intensified, requiring the client to accelerate product development and innovation.

## OBJECTIVES

- Build a cost-effective, dedicated QA team.
- Rapidly launch new API-based products (Sabre, Travel Fusion).
- Scale up testing capacity to support growth and compete with online travel platforms.



# PROJECT OVERVIEW

## LUVINA'S SOLUTION

- Developed and proposed a comprehensive API **testing strategy** for Sabre and Travel Fusion, including test plans, test cases, business flow, and output validation.
- **Built a professional testing team** with both technical expertise and strong knowledge of the airline industry.
- Provided **training and continuity planning** to ensure stable delivery even with team changes.

## STRATEGY

- **Enhanced Communication:** Fostered close collaboration with the client to speed up product launches.
- **Proactive Support:** Took initiative beyond assigned tasks to reduce client workload and accelerate delivery.
- **Knowledge Transfer:** Trained backup personnel to ensure seamless operations.

# PROJECT OVERVIEW

## ACHIEVEMENTS

- **Successfully deployed over 60 airline carriers**, including 25 new integrations and 35 functionality upgrades.
- **Investigated and validated more than 200 APIs** from Sabre and Travel Fusion, covering services such as flight booking, payment, hotel, and car rentals.
- Delivered a stable, professional testing team, outperforming previous offshore partners from India.
- **Helped reduce operational costs by ~50%** compared to Indian offshore vendors.
- Consistently supported carrier deployment goals, enhancing the client's competitiveness in the market.
- Contributed to the successful development of:
  - **A LCC (Low-Cost Carrier) booking system** using Travel Fusion API.
  - A comprehensive **NDC Suite travel solution** using Sabre API.

*Luvina delivered a stable, high-quality QA team that outperformed previous offshore vendors and ensured smooth carrier deployments.*

*Through the project, Luvina built and owned deep know-how in GDS workflows (Sabre, Amadeus, Travel Fusion) and airline booking system development.*



ACHIEVEMENT

# PROJECT OVERVIEW

## Example:

Using Sabre RED 360 to test finding flight tickets price function.

The screenshot shows the Sabre RED 360 interface for a flight search from DFW (Dallas) to ORD (Chicago) for the dates Mon, 20 Feb to Fri, 24 Feb. The search results are displayed in a list format, with each row representing a different flight option. The interface includes a top navigation bar with tabs for Profile, Air, Hotel, Car, PNR, and Proposal. A right-hand sidebar shows a Trip Summary for PNR 1.1 JOHNSON, BRAD (ADT). The main content area displays flight details, including airline, flight numbers, departure and arrival times, and prices for different fare classes. Two rows of results are highlighted with red boxes, showing different fare classes and their corresponding prices.

Option	Fare Class	Price (USD)
Option 5 (UA 380/2230)	Basic Economy	227.79
	Economy	277.80
	Economy Plus	467.81
	Economy Fully Refundable	367.80
Option 6 (UA 380/2230)	Basic Economy	266.05
	Economy	277.80
	Economy Flexible	386.10
	Economy Unrestricted	681.80
Option 7 (UA 380/2313/2628)	Basic Economy	277.09
	Economy	307.11
	Economy Plus	821.11
	Economy Fully Refundable	397.11



LUVINA SOFTWARE

# USER JOURNEY



# USER JOURNEY

<b>Before Luvina</b> The client handled all QA activities in-house, including:	<b>With Luvina</b> Luvina took over end-to-end testing responsibilities, enabling the client to:
Managing communication with airlines, hosts, and travel agents (TAs).	<ul style="list-style-type: none"><li>• Simply introduce Luvina to stakeholders and monitor progress.</li><li>• Communicate in both English and Japanese.</li></ul>
Tracking timelines and verifying output from offshore teams.	Rely on Luvina for direct coordination, reducing review effort by 60%.
Manually preparing documentation and handling technical issues without IT expertise.	Focus on strategic tasks while delegating technical testing to a trusted partner.

# USER JOURNEY

## API TESTING

### Before Luvina's Involvement

API issues required the client to create support tickets or email providers, causing delays.

API documentation was created manually at a slow pace (approx. 500 lines of XML/day).

Testing plans were business-focused, lacking technical depth.

The team used limited and proprietary testing tools with low usability.

### After Luvina's Involvement

Luvina proactively troubleshoots technical API errors, reducing dependency on providers.

Automated documentation processes boosted productivity.

Combined technical and business perspectives in testing to ensure end-to-end quality.

Transitioned to Postman, a widely adopted and powerful tool for better performance and maintainability.

# Thank You

## CONTACT US



<https://luvina.net/>



[info@luvina.net](mailto:info@luvina.net)



Tel: (84) (24) 3793 1103 (ext 0)

Fax: (84) (24) 3793 1106

## OUR OFFICES

**Headquarter in Hanoi, Vietnam:** 4F, Hoa Binh Tower, 106 Hoang Quoc Viet Str., Nghia Do Ward, Hanoi City, Vietnam.

**Branch in Da Nang, Vietnam:** 18F, 2 Quang Trung Str., Hai Chau Ward, Da Nang City, Vietnam.

**Branch in HCM City, Vietnam:** 38/1 Nguyen Van Troi Str., Cau Kieu Ward, Ho Chi Minh City, Vietnam.

**Branch in Japan:** R612, Kanagawa Science Park (KSP), 3-2-1 Sakado, Takatsu-ku, Kawasaki-shi.

**Representative office:** 138N Almaden Blvd, Unit 125, San Jose, California 95110-2720, United States.

**Representative office:** 1464 E Whitestone Blvd, Cedar Park, TX 78613, United States.