



# Testing Transformation for a Leading Inflight Internet Service Provider Drives Faster Time to Market

Technology Consulting | Mindtree

## Client Background

The client is a leading global aero-communications service provider offering inflight internet, inflight entertainment, voice and text messaging services to commercial and business aviation markets. It partners with 16 major airlines, equipping more than 2,500 commercial aircrafts with its services. In addition, more than 6,600 business aircrafts use its solutions, including the world's largest fractional ownership fleets.

## The Opportunity

The client's wide-ranging commercial and operational inflight connectivity and business solutions support a seamless inflight internet and inflight entertainment experience for millions of travelers across the globe - positioning the company as an industry leader. Testing inflight services is a complex and tightly coupled activity that must cater to the needs of multiple airlines, each supporting various Airborne Control Processor Unit (ACPU) versions managed across numerous hardware platforms. To add to the complexity, each version is replete with custom configurations and unique data dependencies.

### Some of the key challenges that the client faced included:

- Time consuming coverage of regression test execution across multiple airlines, with each regression suite taking four days
- Risk of incomplete regression testing and lack of thorough coverage across airlines
- Limited internal capability to handle parallel releases for multiple airlines that included multiple Wi-Fi devices and environments
- High cost of testing

The client, therefore, wanted a holistic, end-to-end automation strategy targeting all layers of the solution infrastructure to enable continuous testing - with the goal of accelerating go-to-market.

## Mindtree Approach

Mindtree worked collaboratively with the client on this journey and began the engagement with an assessment to understand the client's continuous testing and automation priorities. We implemented an enterprise-wide scalable automation framework for both UI and middleware services. Mindtree testing experts interacted with the clients' stakeholders to better understand their dashboard reporting needs and provide the right level of visibility into the testing process. Our customized solution helped clearly demonstrate our technology consulting leadership position in the following areas:

- Proven travel industry domain experience with an emphasis on continuous testing.
- Deep understanding of the client's culture and critical applications such as inflight connectivity, entertainment and services.
- Extensive experience with 'shift left testing transformation' initiatives that include process standardization, in-depth understanding of key client business processes such as purchasing a pass to gain access to inflight internet services, payment portal, video services, etc.

## Highlights of the Solution

Mindtree partnered with the client to transform an end of life-cycle quality control organization into an embedded quality engineering team by:

- Performing 'shift left testing' for both inflight connectivity and entertainment.
- Developing a custom, on-demand, 24X7 dashboard to monitor the quality of each component triggered through the Continuous Integration (CI) tool.
- Implementing in-built alerts to help stakeholders take key actions.
- Transforming the testing team from a uni-skilling to a multi-skilling mode - which resulted in manual testers turning into automation engineers within 8 to 12 months
- Streamlining and standardizing key processes and developing centralized (Jira) user guides.
- Establishing an LRU (Line replacement Unit) environment for real time testing (directly simulating the inflight experience), with the capability to simulate 15 simultaneous connections to different airlines.

## Business Outcomes

Mindtree has been partnering with the client's commercial aviation group for over seven years, helping the company realize the following benefits:

- In the very first year, realized a functional UI automation target of 65% and a middleware services automation target of 90% supporting all device types.
- Reduced regression testing timeline by 75%, including comprehensive, higher regression test coverage of all airlines through a robust CI-CD enabled automated regression suite.
- Delivered a 'Defect Detection Efficiency' of >95% enabling zero business downtime.
- Reduced team size by 50% as a result of automation efficiency and process streamlining.

## About Mindtree

Mindtree [NSE: MINDTREE] delivers digital transformation and technology services from ideation to execution, enabling Global 2000 clients to outperform the competition. "Born digital," Mindtree takes an agile, collaborative approach to creating customized solutions across the digital value chain. At the same time, our deep expertise in infrastructure and applications management helps optimize your IT into a strategic asset. Whether you need to differentiate your company, reinvent business functions or accelerate revenue growth, we can get you there. Visit [www.mindtree.com](http://www.mindtree.com) to learn more