Ryanair's Ops Team Relies on New Relic to Deliver Passengers and Performance

RYANAIR

INDUSTRY
Airline

LOCATION
Dublin, Republic of Ireland

EMPLOYEES
11,500

PRODUCTS
New Relic APM and New Relic Insights

WHY NEW RELIC
Analytic flexibility, customisable views, and a powerful query language to get answers in milliseconds

RESULTS
- Strategic tool that allows operations to understand system health, triage issues, and share real-time metrics with non-technical business units for a holistic understanding of the health of digital properties

- Allows operations to understand and pinpoint issues in minutes that previously would have taken hours

- Enabled a four-person team to transform a monolithic stack to a web application and microservices-based architecture without requiring increased headcount

Want to go from Lisbon to Warsaw? How about Edinburgh to Oslo? Ryanair can get you there—and just about anywhere in between. With 600,000 flights per year, Ryanair is Europe's number one airline for low prices and high punctuality.

After launching its first route in 1985 with a 15-seater aircraft, today Ryanair carries nearly 120 million passengers annually on more than 1,800 daily flights, connecting more than 200 destinations in 34 countries.

With prices like $6.23 (€5.76) for a one-way fare from London to Strasbourg, it's no wonder that more than 1.3 million people visit the Ryanair website every day. For Declan Costello, infrastructure and operations manager at Ryanair, the website is one of his team's top priorities. After all, if something isn't working correctly on the Ryanair site, passengers can't book flight segments, check in for flights, rent cars, or print boarding passes.

Inside view needed

Not too long ago, Costello and his team had little insight into performance and troubleshooting for the website. By looking at load times for webpages, the team of four responsible for the site could tell that something was wrong but not much else. 'We knew the site had slowed down or stopped, but we didn't have a clue where the problem was, nor did we have the data to figure it out', he says.

The Ryanair website interfaces with the company's own backend systems as well as third-party services such as those for car rentals, hotel booking, parking, and other travel offerings that Ryanair also sells. So when something happened anywhere in that ecosystem, Costello's team had to try to deduce what was happening. 'We'd go into a frenzy and start testing the site to try to figure out which page was slowing everything down or erroring out or timing out', explains Costello.

Getting real-time data, every minute of every day

An architect on Costello's team heard about the New Relic Digital Intelligence Platform and decided to test it on the Ryanair mobile website. New Relic passed the test with flying colours and Ryanair quickly deployed it on the main website as well. It soon became the single source of performance data for not only Costello's team, but across IT and the business.

'We turned off the other monitors we were using because New Relic is our single, global source of truth for the website', says Costello. 'I use New Relic every minute of every day.' One wall of the Ryanair office shows New Relic real-time dashboards on nine different screens, plus there are other screens across the office also displaying useful real-time data from New Relic Insights.

Besides operations, all of the developers at Ryanair also have access to New Relic. Costello explains that 'every environment is fully instrumented in the same way as our production environment, all the way through development, integration, user acceptance testing, pre-production, staging, and production environments.'

New Relic has made us all better and faster at doing our jobs. Without New Relic, it would be impossible to troubleshoot this environment.

Declan Costello
Infrastructure and Operations Manager, Ryanair

Visualising the metric everyone wants to know

What is everyone watching when they look at the New Relic dashboards? The top metric across the company is the number of seats or segments sold. 'Everyone watches that number, from the commercial yields team to the C suite', says Costello. 'They're watching it day in and day out on their mobile phones and one executive has it on his wall.'

Before New Relic, getting that figure required taking data from an email that came from the backend booking engine every 30 minutes and then entering the figure into a spreadsheet. 'Someone would build that spreadsheet hour by hour throughout the day', says Costello. Now, the information is available at a glance in real time.

Going beyond troubleshooting website performance

In addition to segments sold, Ryanair tracks many other metrics including online check-ins, flight availability searches, payment response times, new MyRyanair account signups, failed logins, payment approval rates, error rates, and more across both the main website and the mobile one. These metrics help Costello's team and the broader business

- **Uncover trends and patterns:** Using the timepicker in New Relic Insights, Ryanair can quickly and easily compare metrics over different time periods. 'For example, we can see that both our number of seats sold and check-ins dipped at the same time on the same day last week', says Costello.

- **Identify performance issues with third-party services:** Whether it's a bank with slow approval time for credit cards, a faulty IP address at PayPal, or a booking engine for a car rental company causing slow calls, using the New Relic query language (NRQL), Costello's team can ask a series of complex questions in rapid succession about the system, and quickly build context and iterate until they discover clues about where the problem might lie.

- **Detect cyber attacks:** Screen scrapers that can slow down overall performance are a huge problem for Ryanair, but New Relic helps the operations team track screen scrapers and ensure the company's anti-scraping technology blocks the attack.

- **Discover increases in payment fraud attempts:** Tracking the percentage of payments pending versus approvals helps Ryanair identify increases in fraud attempts or unintended consequences of changes to fraud detection technology. This is one area where Costello relies on New Relic NRQL alerts to notify his team when payment metrics surpass thresholds.

Making the team better, faster, scalable, and more self-sufficient

Thanks to the New Relic Digital Intelligence Platform, Costello believes that his operations team is more self-sufficient than they were in the past. Rather than relying on a software architect to tell them which particular part of the site or which third party was at fault, the team can monitor performance and diagnose problems in real time. 'New Relic has made us all better and faster at doing our jobs', says Costello.

It has also enabled the Ryanair IT operations team to take on far more responsibility and support more customer-facing infrastructure with the same small group of four people. 'Before we had just one website to monitor, but now we have five websites with nine different microservices all interlaced and talking to each other within the website', says Costello. 'Without New Relic, it would be impossible to troubleshoot this environment.' But now with New Relic the Ryanair website can continue delivering on the company's motto 'Always Getting Better', with full-stack visibility and digital intelligence that delivers an improved customer experience.