RYANAIR

Solution Overview

Solution
Citrix

Client
Ryanair

Industry
Transportation

Key Benefits:

- Dynamic load-balancing manages traffic spikes
- Custom URL Redirects support agile marketing
- Doing more with less

Citrix Products:

- Citrix NetScaler®

Seamless performance for Ryanair.com

Ryanair, "Europe's favourite airline", flies a fleet of over 300 planes to 189 destinations in 30 countries. With a team of over 9,500 aviation professionals, Ryanair will carry 90 million customers this year; an average of 250,000 seats per day.

Ryanair.com, and its associated bookings engine bookryanair.com, are critical to the business. Together, the sites experience 50 million page views and 1.2 million unique users each day.

Head of Infrastructure Declan Costello is responsible for the network, server, storage and data centre systems that run Ryanair's website and head office. His team of eleven are responsible for five data centres, three that support the website and two that support Ryanair's head office functions.

The Challenge: Delivering a business critical but agile website

Between 98 and 99 per cent of Ryanair's sales are made through its website. As Declan explains, "The website is absolutely critical to Ryanair – without it we may have planes ready to fly but would have no paying customers". Therefore, stability and resilience are vital. As well as handling very high volumes of traffic, the website also experiences significant spikes in demand.

"In the mornings, we have a high look-versus-book ratio. Then in the evenings, from 7 o'clock to 10 o'clock, we have very high bookings," explains Declan. Monday and Tuesday evenings are particularly busy. The business also has irregular spikes in web traffic whenever it runs promotions.

Sales promotions and other marketing activities rely on creating or repurposing specific URLs, often at short notice. However, the site's strict deployment cycle can cause delays. Business agility cannot compromise site reliability.

The Solution: Citrix NetScaler® provides resilient agility

Ryanair has used Citrix NetScaler® technology for the past eight years. The firm has refreshed the hardware three times over this period and currently runs six NetScalers as high-availability pairs in each of the website's data centres. It also uses Citrix NetScaler for testing at its head office.

"We use NetScaler's Global Server Load Balancing (GSLB) functionality to manage all load-balancing within each data centre," explains Declan. "We're also using GSLB to manage traffic between data centres and seamlessly move traffic from one data centre to another when we need to."

For further information:

Zinopy Ltd.
Suite 12-13
Plaza 256
Blanchardstown Corporate Park 2
Ballycoolin
Dublin 15
Ireland

Tel: +353 1 897 6750
Fax: +353 1 897 6751
info@zinopy.ie

Ryanair works closely with Citrix Platinum Solution Advisor, Zinopy Ltd. Zinopy, with expertise in web and cloud technologies, supplies Ryanair with its Citrix technology. Having developed significant skills over the time, the airline also works directly with Citrix for further technical advice.

As Aidan McAvoy, Sales Director, Zinopy Ltd highlights: "Ryanair is one of the most dynamic and progressive exponents of business technology adoption in Ireland – including Citrix NetScaler. Zinopy is proud of its association with such a forward-thinking organisation".

Benefits:

Dynamic load balancing supports record bookings

Ryanair's website data centres are configured so that each can handle the site's full load but traffic can be shared or balanced across all three. The site recently enjoyed a significant spike in traffic following a successful promotion. "We had the single biggest day on our website for seat sales and our infrastructure was fine. Our servers were fine, the load balancing was fine and we had capacity to spare," says Declan.

Providing the business with marketing agility

Declan's team uses NetScaler's custom re-write and responder-rules functionality to provide a fast response to business requests for website support. Where a marketing promotion requires a dedicated webpage address or to re-direct an existing address, the team can quickly accommodate this using NetScaler and avoid diverting valuable developers onto a lengthy deployment cycle. A task that might otherwise take two or three hours of developers' time and which would be delayed pending a suitable slot in the deployment cycle can now go live in just twenty minutes.

Enabling dynamic deployment and achieving more with less

Typically, Ryanair's data centres are configured as one active, one passive and one spare. When deploying changes to the website, Declan's team use NetScaler to switch between data centres or between banks of servers, allowing updates to be made in an agile fashion, with no site downtime, whilst always having a roll-back version as back-up.

"Without Netscaler", says Declan, "Ryanair would not be able to service the demands of our customers for constant low fares. Netscaler allows us to do far more with our websites than would be possible without major expansion in web farm numbers.

"Without NetScaler," continues Declan, "customers would not be able to book on our website. Without putting NetScaler technology between the customer and the web servers, the servers would not be able to manage the load. We would need far more web servers to cope. NetScaler allows us to do more with less."

Looking ahead

Declan and his team continue to expand their use of NetScaler technology. As the new web platform is built out, increased reliance on core Netscaler functions will enable Ryanair to keep pace with marketing requirements for expanded traffic in the future.

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