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ONICA
a rackspace technology company

Customer Case Study – Transportation

Cando Rail Systems went serverless to improve performance and efficiency

By transforming to a serverless environment, Cando Rail Systems lowered its costs and latency, while enhancing its architecture and security.

Our customer

Cando Rail Services is a fast-growing, international service provider of complete rail solutions. Cando's specialized rail support services optimize the bulk material supply chain, and are a crucial linchpin between industrial customers and Class 1 railways.

The obstacles they faced

Develop a serverless environment to process and push through IoT sensor data from train carriages to customers, implementing CI/CD best practices, and improving cost efficiency, scalability and stability.

How we helped

IoT, Serverless, AWS Cloud, AWS Lambda, Amazon CloudFront, Amazon ECS, Amazon Simple Storage Service (Amazon S3), Amazon RDS, Amazon Elastic Compute Cloud (Amazon EC2), Amazon API Gateway, Amazon Certificate Manager (ACM).

What we achieved together

Working with Onica, a Rackspace Technology company, to develop a serverless environment to improve cost efficiency, scalability, and stability, Cando Rail Services increased deployment speeds and reduced costs —executing in two seconds what once took 90 seconds.





“Onica helped us create a super collaborative, highly functioning team that optimized our entire infrastructure and architecture from the ground up. I feel like we’re in very, very good hands and that we’re set up very well for future success.”

Corrie Banks
Director of Logistics, Cando Rail Services.

Improving Railway IoT Data Processing with Serverless

Cando Rail Services is a fast-growing, international service provider of complete rail solutions. In operation for 42 years, Cando’s specialized rail support services optimize the bulk material supply chain and are a crucial linchpin between industrial customers and Class 1 railways.

A trusted partner of both shippers and Class 1 railways, Cando developed Quasar, an IoT-based supply chain optimization platform to modernize the tracking of railcars and shipments. In the rail transport industry, tracking is still paper centric and the

electronics historically involved include RFID devices that are decades old. Using IoT and the Amazon Web Services (AWS) cloud, Cando plans to modernize and optimize railcar tracking and shipment monitoring, leading to greater revenue for railroads and shippers.

The Challenge

Cando wanted to implement best practices to efficiently process and push through sensor data collected from multiple sources — including the train carriages to the customer. While it was already using AWS, the company wanted a serverless environment, and needed an experienced

partner to help with ongoing optimization, enhancement and support.

Also, while loading 1,000s of records to a browser, Cando was experiencing system crashes and multiple errors, with database failures on a regular basis. It was also experiencing issues with data loading into the browser in a timely fashion, as well as issues with the overall architecture and security protocols.

The company also wanted to follow all security and CI/CD best practices, as well as build new workloads for its Quasar platform.

Cando was looking for a partner, in particular, with strong AWS expertise and

an ability to collaborate with multiple internal and external stakeholders, including development teams and vendors. Based on a recommendation from an industry connection, Cando sought out Onica’s guidance and expertise. It appreciated the company’s industry position as an accomplished AWS Premier Consulting Partner and audited AWS Managed Service Provider.

After completing an audit of the existing Quasar platform architecture, Onica recommended re-architecting everything from the database architecture to Cando’s AWS infrastructure.

The Solution


Onica began by fixing the existing environment to resolve high latency and poor system performance. The second issue addressed was scaling, followed by ongoing costs. This helped drive a serverless solution implementation to achieve lower operational costs.

Having used AWS for a few years, Cando was well versed on the different services offered on the platform, but did not have the expertise it needed to modernize into a serverless-based environment. Onica helped Cando implement a serverless solution with CI/CD and security best practices through an Onica Teams engagement. With the Onica Teams model, Cando gained access to a tier of monthly hours. It was able to leverage a dedicated team of cloud experts, who were assigned to its account. The Onica team members worked closely with Cando's technical team to build, optimize and maintain its AWS environments.

Cando was pleased with how the Onica team handled the issues that arose during the engagement, keeping deliverables on track in a tight timeframe, while still using multiple vendors.

Onica restructured Cando's AWS environment by employing Amazon API Gateway, AWS Lambda, Amazon CloudFront, Amazon ECS, Amazon S3, AWS SNS, Amazon Certificate Manager (ACM), Amazon RDS and Amazon EC2.

Onica also helped optimize Cando's costs by ramping down, giving the customer the flexibility to better manage costs and schedules. This is a large benefit of the Teams engagement model. Additionally, Onica serves as Cando's network operations center on a 24x7x365 basis for continued monitoring and support, helping the company deploy tactics from a cloud-native mindset

A person in a blue shirt is holding a pen and looking at a laptop screen in a server room. The background shows server racks and a window with a view of a building.

“All I have to say is we are really pleased with Onica’s work. Our architecture is not simple. It’s quite complicated. We have old legacy technology that we’re integrating with using AWS cloud-based services.”

Corrie Banks
Director of Logistics, Cando Rail Services

to achieve the maximum business value from the cloud.

From a security perspective, Cando had seven or eight different applications that it was using for monitoring. The Onica team combined the applications, so Cando could manage all of the correct alarming and alerting pieces together.

As part of the roll out of the new serverless platform, the Onica team seamlessly forwarded the data from its existing environment by subscribing its existing AWS SNS topics to the new environment, while also implementing some last-minute changes that included supporting specific services. The Onica team was also able to implement some additional changes that included supporting specific services and meeting the roll out date.

“All I have to say is we are really pleased with Onica’s work. Our architecture is not simple. It’s quite complicated. We have old legacy technology that we’re integrating with using AWS services,” said Corrie Banks, Director of Logistics, Cando Rail Services.

The Outcome

The move to a serverless environment, leveraging infrastructure as code and automation, has led to increased rapidity of deployments, faster change cycles and reduced costs. This has paved the path for Cando to acquire multiple larger customers.

The completed project on AWS has resulted in predictability and reliability, improved performance and better cost management. What once took 90 seconds, now takes less than two seconds.

Onica’s expertise and collaborative approach enables Cando to move fast and achieve reliable and predictable results.

About Rackspace Technology

Rackspace Technology is the multicloud solutions expert. We combine our expertise with the world’s leading technologies — across applications, data and security — to deliver end-to-end solutions. We have a proven record of advising customers based on their business challenges, designing solutions that scale, building and managing those solutions, and optimizing returns into the future.

As a global, multicloud technology services pioneer, we deliver innovative capabilities of the cloud to help customers build new revenue streams, increase efficiency and create incredible experiences. Named a best place to work, year after year according to Fortune, Forbes, and Glassdoor, we attract and develop world-class talent to deliver the best expertise to our customers. Everything we do is wrapped in our obsession with our customers’ success — our Fanatical Experience™ — so they can work faster, smarter and stay ahead of what’s next.

Learn more at www.rackspace.com or call **1-800-961-2888**.

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