



## SOFTWAREONE DELIVERS SAVINGS IN THE AWS CLOUD

Transoceanica gains functionality, scalability and customer satisfaction using SoftwareONE consulting for AWS Lambda

### A NEW PLAN

Transoceanica management began developing a new platform plan using AWS Lambda with an eye toward multiple improvements that included:

- A single system to simultaneously manage up to 6 warehouses
- System scalability and fault tolerance
- Real-time capacity utilization reporting of any warehouse
- Container & carrier scheduling management to resolve local traffic congestion
- Provisions to book an appointment and pay shipment fees online
- User notification of route changes and delay information

### SUMMARY

Transoceanica used an automated tracking system to track commercial containers. However, the system had limited functionality. It wasn't scalable and couldn't generate customer notifications. Lack of schedule coordination led to complaints and constant traffic congestion. SoftwareONE consulting helped to develop a new, efficient, and cost effective system that runs in the AWS cloud. The result is reduced management overhead and substantially lower licensing expenses. Advanced tracking capabilities enable multiple new functions, automation, and a ninety-nine percent reduction in operating expenses.

### ABOUT

Tercon Container Terminals is a national company, part of the [Transoceanic Group](#), which provides high-quality storage and repair to both dry and refrigerated containers. It currently provides services to four international shipping lines and two international container leasing companies.

### CHALLENGE

Moving and tracking commercial containers is at the core of Transoceanica's business. However, the company's tracking system had limited functionality. Once a consignment was booked and a ticket generated, the system was unable to create customer notifications of changes in schedules or routes. Because the system was not scalable, it was available to only one booking agency per warehouse and limited only to Transoceanica users. Also, the system was not integrated with their partner warehouses and had no information about capacity utilization for any warehouse. The home-grown system was hosted on-premises and ran on Linux using an Oracle database. A decision to develop a new system became even more urgent when the Guayaquil city government complained of constant traffic congestion caused by the lack of delivery coordination and wanted the problem solved by the end of March 2018.

## SOLUTION

The development team created the logic for the new system using Java and node.js. However, they did not have the necessary infrastructure required to grow and meet new demands for as many as 30,000 import/export container movements and 1,500 daily agency transactions. Also, their scheduled deadline was threatened because no budget for new infrastructure or Oracle licensing had been considered for the 2018 budget.

Transoceanica's CIO turned to SoftwareONE for an evaluation of cost-effective alternatives. SoftwareONE proposed a three-phase optimized cloud strategy that would move the new platform to Amazon Web Services (AWS). It was a convincing business analysis with estimated cost savings of almost ninety-nine percent over three years when compared to hosting on-premises.

After additional conversations and database optimization analysis, the new SoftwareONE plan proposed migrating the Oracle database to Amazon's Relational Database Service (RDS) Postgres. The system would be easily scalable and entirely fault tolerant. Using RDS not only reduced database management costs, but it also saved on the licensing expenses. With the serverless system in place, requests would be made through API calls which enabled tracking to which warehouse originated the request and how many functions were called so that chargebacks could be efficiently processed at month end.

To assure the most successful and rapid deployment, SoftwareONE held over 80 hours of workshops for Transoceanica's operations and application development teams. SoftwareONE also supported the development team throughout the transformation to Lambda, including migration of their database from Oracle to Postgres. Beyond implementation, the sessions detailed how to re-use portions of the existing authentication backend code to be deployed in Lambda. The workshops also covered architectural best practices, the API Gateway, RDS Postgres, Cloud Watch, and Simple Email Services (SES).

## BENEFITS

- Costs are ninety-nine percent reduced
- Running in the AWS cloud, the new system is scalable and handles peak traffic with ease
- AWS Lambda provides automated provisioning
- The system is fault-tolerant, and data backups are automated
- End-users receive real-time updates and can track their containers while agency systems can integrate with warehouses
- Notices can be generated for any equipment incidents or delays on turns
- End users can schedule and make payments online
- Carriers can coordinate schedules from mobile devices and eliminate long lines of trucks and traffic problems
- End users can choose preferred warehouse locations
- Management is centralized for six warehouses, and real-time usage data helps to predict capacity based on bookings
- The time-to-market of new functionalities or changes has been significantly reduced, giving users a new, faster, systems experience